

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

FORM S-1

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

BULLFROG AI HOLDINGS, INC.

(Exact Name of Registrant as specified in its charter)

Nevada
 (State or other Jurisdiction of
 Incorporation or Organization)

7374
 (Primary Standard Industrial
 Classification Code Number)

84-4786155
 (I.R.S. Employer
 Identification No.)

323 Ellington Blvd, Unit 317
 Gaithersburg, MD 20878
 Tel. (240) 658-6710

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Vininder Singh
 Chief Executive Officer
 Bullfrog AI Holdings, Inc.
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(Name, address, including zip code, and telephone number, including area code, of agent for service)

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Approximate date of commencement of proposed sale to the public:
As soon as practicable after the effective date of this registration statement.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(d) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

Indicate by a check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.:

Large Accelerated Filer
 Non-Accelerated Filer

Accelerated Filer
 Smaller Reporting Company
 Emerging Growth Company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided to Section 7(a)(2)(B)

The registrant hereby amends this registration statement on such date or dates as may be necessary to delay its effective date until the registrant shall file a further amendment which specifically states that this registration statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until the registration statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

This Registration Statement contains two forms of prospectuses: one to be used in connection with the initial public offering of up to 1,317,647 Units through the underwriters named on the cover page of this prospectus (the “IPO Prospectus”) and one to be used in connection with the potential resale by a selling stockholders of up to 1,683,097 shares of common stock (the “Resale Prospectus”). The IPO Prospectus and the Resale Prospectus will be identical in all respects except for the alternate pages for the Resale included herein which are labeled “Alternate Pages for Resale Prospectus.”

The Resale Prospectus is substantively identical to the IPO Prospectus, except for the following principal points:

- they contain different outside and inside front covers;
- they contain different Offering sections in the Prospectus Summary section;
- they contain different Use of Proceeds sections;
- the Capitalization section is deleted from the Resale Prospectus;
- the Dilution section is deleted from the Resale Prospectus;
- A Selling Stockholder section is included in the Resale Prospectus;
- the Underwriting section from the IPO Prospectus is deleted from the Resale a Plan of Distribution is inserted in its place; and
- the Legal Matters section in the Resale Prospectus deletes the reference to counsel for the underwriters.

We have included in this Registration Statement, after the financial statements, a set of alternate pages to reflect the foregoing differences of the Resale Prospectus as compared to the IPO Prospectus.

While the selling stockholders have expressed an intent not to sell the common stock registered pursuant to the Resale Prospectus prior to the closing of or concurrently with the public offering, the sales of our common stock registered in the IPO Prospectus and the Resale Prospectus may result in two offerings taking place sequentially or concurrently, which could affect the price and liquidity of, and demand for, our common stock. This risk and other risks are included in “Risk Factors” beginning on page 8 of the IPO Prospectus.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

SUBJECT TO COMPLETION

DATED OCTOBER 19, 2022

**1,317,647 Units
Each Unit Consisting of
One Share of Common Stock and
One Warrant to Purchase One share of Common Stock**

BULLFROG AI HOLDINGS, Inc.

This is a firm commitment initial public offering of 1,317,647 units (each, a “Unit,” collectively, the “Units”) of Bullfrog AI Holdings, Inc. (the “Company”, “we”, “us”, “our”). We anticipate that the initial public offering price of our Units will be \$6.375 per Unit. Each Unit consists of one share of our common stock and one tradeable warrant to purchase one share of common stock at an anticipated exercise price of \$ per share (each, a “Warrant,” collectively, the “Warrants”). The Units have no stand-alone rights and will not be certificated or issued as stand-alone securities. The shares of common stock and the Warrants underlying the Units are immediately separable and will be issued separately in this offering. Each Warrant offered as part of this offering is immediately exercisable on the date of issuance and will expire five years from the date of issuance.

In connection with this offering, we will complete a 1-for-7 reverse split of our common stock immediately prior to the closing of this offering. All share and per-share information in this prospectus reflects the 1-for-7 reverse split, which has been approved by our Board of Directors and stockholders.

No public market currently exists for our common stock or Warrants. We intend to apply to list our shares of common stock and Warrants for trading on the Nasdaq Capital Market, subject to official notice of issuance, under the symbol “BFAI” and “BFAIW,” respectively. No assurance can be given that our applications will be approved. The consummation of this offering is conditioned on obtaining Nasdaq approval.

We are an emerging growth company under the Jumpstart our Business Startups Act of 2012, or JOBS Act, and, as such, may elect to comply with certain reduced public company reporting requirements for future filings. Investing in our common stock involves a high degree of risk.

The registration statement of which this prospectus forms a part also relates to the registration for resale of an aggregate of 1,682,997 shares of common stock and shares of common stock issuable upon the conversion of certain promissory notes and the exercise of certain warrants.

Investing in our common stock is highly speculative and involves a high degree of risk. See “Risk Factors” beginning on page 8 of this prospectus for a discussion of information that should be considered in connection with an investment in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

	Per Unit	Total
Public offering price	\$	\$
Underwriting discounts and commissions (1)	\$	\$
Proceeds to Bullfrog AI Holdings, Inc. (before expenses)	\$	\$

(1) See “Underwriting” for a description of compensation payable to the underwriters.

We have granted the underwriters an option, exercisable within 45-days after the closing of this offering to purchase 197,647 shares of our common stock at a price of \$6.365

per share and/or Warrants to purchase up to an additional 197,647 shares of common stock at a price of \$0.01 per Warrant to purchase one share of common stock

The underwriters expect to deliver our shares to purchasers in the offering on or about _____, 2022.

WALLACHBETH CAPITAL LLC

VIEWTRADE SECURITIES, INC.

The date of this prospectus is _____, 2022

TABLE OF CONTENTS

PROSPECTUS SUMMARY	1
THE OFFERING	6
SUMMARY SELECTED FINANCIAL AND OTHER DATA	7
RISK FACTORS	8
CAUTIONARY NOTE REGARDING FORWARD LOOKING STATEMENTS	22
USE OF PROCEEDS	23
DIVIDEND POLICY	23
CAPITALIZATION	23
DILUTION	24
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	28
DESCRIPTION OF BUSINESS	31
MANAGEMENT	46
EXECUTIVE COMPENSATION	48
CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS	49
SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS	51
DESCRIPTION OF CAPITAL STOCK	
SHARES ELIGIBLE FOR FUTURE SALE	52
UNDERWRITING	53
DETERMINATION OF OFFERING PRICE	57
EXPERTS	57
LEGAL MATTERS	57
WHERE YOU CAN FIND ADDITIONAL INFORMATION	58
INDEX TO FINANCIAL STATEMENTS	F-1

You should rely only on information contained in this prospectus. We have not, and the underwriters have not, authorized anyone to provide you with additional information or information different from that contained in this prospectus. Neither the delivery of this prospectus nor the sale of our securities means that the information contained in this prospectus is correct after the date of this prospectus. This prospectus is not an offer to sell or the solicitation of an offer to buy our securities in any circumstances under which the offer or solicitation is unlawful or in any state or other jurisdiction where the offer is not permitted.

For investors outside the United States: Neither we nor the underwriters have taken any action that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus must inform themselves about, and observe any restrictions relating to, the offering of the securities covered hereby and the distribution of this prospectus outside of the United States.

The information in this prospectus is accurate only as of the date on the front cover of this prospectus. Our business, financial condition, results of operations and prospects may have changed since those dates.

No person is authorized in connection with this prospectus to give any information or to make any representations about us, the securities offered hereby or any matter discussed in this prospectus, other than the information and representations contained in this prospectus. If any other information or representation is given or made, such information or representation may not be relied upon as having been authorized by us.

Neither we nor the underwriters have done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than the United States. You are required to inform yourself about, and to observe any restrictions relating to, this offering and the distribution of this prospectus.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus. This summary does not contain all of the information you should consider before investing in our common stock. Before investing in our securities, you should carefully read this entire prospectus, including our consolidated financial statements and the related notes thereto and the information set forth under the sections "Risk Factors," "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements and related notes thereto, in each case included in this prospectus. Some of the statements in this prospectus constitute forward-looking statements. See "Cautionary Note Regarding Forward-Looking Statements." Except as otherwise indicated, references to "we", "us", "our", and the "Company" refer to Bullfrog AI Holdings, Inc. and its wholly-owned subsidiaries.

Business Overview

Most new therapeutics will fail at some point in preclinical or clinical development. This is the primary driver of the high cost of developing new therapeutics. A major part of the difficulty in developing new therapeutics is efficient integration of complex and highly dimensional data generated at each stage of development to de-risk subsequent stages of the development process. Artificial Intelligence and Machine Learning (AI/ML) has emerged as a digital solution to help address this problem.

We use artificial intelligence and machine learning to advance medicines for both internal and external projects. We are committed to increasing the probability of success and decreasing the time and cost involved in developing therapeutics. Most current AI/ML platforms still fall short in their ability to synthesize disparate, high-dimensional data for actionable insight. Our platform technology, named, bfLEAP™, is an analytical AI/ML platform derived from technology developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL), which is able to surmount the challenges of scalability and flexibility currently hindering researchers and clinicians by providing a more precise¹, multi-dimensional understanding of their data. We are deploying bfLEAP™ for use at several critical stages of development for internal programs and through

strategic partnerships and collaborations with the intention of streamlining data analytics in therapeutics development, decreasing the overall development costs by decreasing failure rates for new therapeutics, and impacting the lives of countless patients that may otherwise not receive the therapies they need.

The bfLEAP™ platform utilizes both supervised and unsupervised machine learning – as such, it is able to reveal real/meaningful connections in the data without the need for a prior hypothesis. Supervised machine learning uses labeled input and output data, while an unsupervised learning algorithm does not. In supervised learning, the algorithm “learns” from the training dataset by iteratively making predictions on the data and adjusting for the correct answer. Unsupervised learning, also known as unsupervised machine learning, uses machine learning algorithms to analyze and cluster unlabeled datasets. These algorithms discover hidden patterns or data groupings without the need for human intervention. Algorithms used in the bfLEAP™ platform are designed to handle highly imbalanced data sets to successfully identify combinations of factors that are associated with outcomes of interest.

Together with our strategic partners and collaborators, our primary goal is to improve the odds of success at any stage of pre-clinical and clinical therapeutics development. Our primary business model is improving the success and efficiency of drug development which is accomplished either through acquisition of drugs or partnerships and collaborations with companies that are developing drugs. We hope to accomplish this through strategic acquisitions of current clinical stage and failed drugs for in-house development, or through strategic partnerships with biopharmaceutical industry companies. We are able to pursue our drug asset enhancement business by leveraging a powerful and proven AI/ML platform (trade name: bfLEAP™) initially derived from technology developed at JHU-APL. We believe the bfLEAP™ analytics platform is a potentially disruptive tool for analysis of pre-clinical and/or clinical data sets, such as the robust pre-clinical and clinical trial data sets being generated in translational R&D and clinical trial settings. In November 2021, we amended the agreement with JHU-APL to include additional advanced AI technology.

We believe bfLEAP™ will inform/enable decision making throughout the development cycle:

- 1. Discovery Phase – Analyze and categorize discovery phase data to better define highest-value leads from groups of candidates, for advancement to preclinical phase of development. Integrate data from high-throughput screening, pharmacodynamics assays, pharmacokinetics assays, and other key data sets to create the most accurate profile of a pool of therapeutic candidates. There is often a high degree of similarity among closely related therapeutics in a candidate pool – bfLEAP™ is able to harmonize disparate data streams for a more nuanced understanding of each candidate’s characteristics/potency.
- 2. Pre-Clinical Data - Large-scale/multivariate analysis of pre-clinical and/or early-stage clinical data sets. In these settings, bfLEAP could be used to find novel drug targets, elucidate mechanism of action (MOA), predict potential off-target effects/side effects, uncover specific genetic/phenotypic background(s) with highest correlation to therapeutic response, etc. These insights from bfLEAP™ analysis can be used to inform decision making/study design at the subsequent step(s) of therapeutic/diagnostic development, including first-inhuman/Phase I RCTs.

¹In an August 2021 publication in DeepAI.org (<https://deepai.org/publication/random-subspace-mixture-models-for-interpretable-anomaly-detection>), the algorithms used in bfLEAP were compared to 10 of the most popular clustering algorithms in the world using 12 data sets. The end result showed that the algorithms used in bfLEAP had the highest average score when measuring speed and accuracy of prediction. The bfLEAP platform currently has more advanced versions of these algorithms and is applying them in multiple data analytics projects.

1

- 3. Clinical Development - Advanced/multivariate analysis of PhI and/or PhII clinical trials data, to find niche populations of highly responsive patients and/or inform patient selection for later-stage CT(s). This can be used to decrease overall study risk for larger clinical trials - including Phase II trials, and any Phase III Registration Clinical Trials. The bfLEAP™ platform analysis can also be used to more precisely understand complex correlations between therapeutic treatment and adverse events, side effects, and other undesirable responses which could jeopardize clinical trial success.

Our platform is agnostic to the disease indication or treatment modality and therefore we believe that it is of value in the development of biologics or small molecules.

The process for our drug asset enhancement program is to:

- acquire the rights to a drug from a biopharmaceutical industry company or academia;
- use the proprietary bfLEAP™ AI/ML platform to determine a multi-factorial profile for a patient that would best respond to the drug;
- rapidly conduct a clinical trial to validate the drug’s use for the defined “high-responder” population; and
- divest/sell the rescued drug asset with the new information back to a large player in the pharma industry, following positive results of the clinical trial.

As part of our strategy, we will continue evolving our intellectual property, analytical platform and technologies, build a large portfolio of drug candidates, and implement a model that reduces risk and increases the frequency of cash flow from rescued drugs. This strategy will include strategic partnerships, collaborations, and relationships along the entire drug development value chain, as well as acquisitions of the rights to developing failed drugs and possibly the underlying companies.

To date, we have not conducted clinical trials on any pharmaceutical drugs and our platform has not been used to identify a drug candidate that has received regulatory approval for commercialization. However, we currently have a strategic relationship with a leading rare disease non-profit organization for AI/ML analysis of late stage clinical data. We have also positioned the Company to acquire the rights to a series of preclinical and early clinical drug assets from universities, as well as a strategic collaboration with a world renowned research institution to create a HSV1 viral therapeutic platform to engineer immunotherapies for a variety of diseases. In addition, we have signed exclusive worldwide license agreements with Johns Hopkins University for a cancer drug that targets glioblastoma (brain cancer), pancreatic cancer, and other cancers. We have also signed an exclusive worldwide license with George Washington University for another cancer drug that targets hepatocellular carcinoma (liver cancer), and other liver diseases.

Our platform was originally developed by the JHU-APL. JHU-APL uses the same technology for applications related to national defense. Over several years, the software and algorithms have been used to identify relationship, patterns, and anomalies, and make predictions that otherwise may not be found. These discoveries and insights provide an advantage when predicting a target of interest, regardless of industry or sector. We have applied the technology to various clinical data sets and have identified novel relationships that may provide new intellectual property, new drug targets, and other valuable information that may help with patient stratification for a clinical trial thereby improving the odds for success. The platform has not yet aided in the development of a drug that has reached commercialization. However, we own one drug candidate that has completed a phase 1 trial and a second candidate that is in the preclinical stages. Our aim is to use our technology on current and future available data to help us better determine the optimal path for development

While we have not generated significant revenues from our AI/ML operations, we anticipate generating revenue in the future from the following three sources:

Contract Services

Our fee for service partnership offering model is designed for biopharmaceutical companies, as well as other organizations, of all sizes that have challenges analyzing data throughout the drug development process. We provide the customer with an analysis of large complex data sets using our proprietary Artificial Intelligence / Machine Learning platform called bfLEAP™. This platform is designed to predict targets of interest, patterns, relationships, and anomalies. Our service model involves a cash fee plus the potential for rights to new intellectual property generated from the analysis, which can be performed at the discovery, preclinical, or clinical stages of drug development.

Collaborative Arrangements

We plan to enter into collaborative arrangements with biotechnology and pharmaceutical companies who have drugs that are in development or have failed late Phase 2 or Phase 3 trials. The collaborations may also be at the discovery or preclinical stages of drug development. Our revenue will be a combination of fee for service cash payments

and success fees based on achieving certain milestones as determined by each specific arrangement. There may also be fees or legal rights associated with the development of new intellectual property.

Acquisition of Rights to Certain Drugs

We may acquire the rights to drugs that have failed late Phase 2 or Phase 3 trials and generate revenues by using our platform to accurately determine the profile of patients that would respond to the drugs, conduct a clinical trial to test our findings either independently or with a clinical partner, and finally sell the drug back to pharmaceutical companies. We have and may continue acquiring the rights to drugs that have not yet failed any trials. We will use our technology to improve the chances for success, conduct a trial, and divest the asset. When divesting assets, the transaction may involve a combination of upfront payments, milestone payments based on clinical success, and royalties on sales of the product.

Our bfLEAP™ Analytics Platform

We are able to pursue our drug rescue business by leveraging a powerful and proven AI/ML platform (trade name: bfLEAP™) derived from technology developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL). The bfLEAP™ platform is based on an exclusive, world-wide license granted by Johns Hopkins University Applied Physics Laboratory. The license covers three (3) issued patents, as well as a new provisional patent application, non-patent rights to proprietary libraries of algorithms and other trade secrets, which also includes modifications and improvements. On July 8, 2022, the company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the additional technology. The new license provides additional intellectual property rights including patents, copyrights and knowhow to be utilized under the Company's bfLEAP™ analytical AI/ML platform. This license supersedes the previous license. Under the terms of the new License Agreement, JHU will be entitled to eight (8%) percent of net sales for the services provided by the Company to other parties and 3% for internally development drug projects in which the JHU license was utilized. The new license also contains tiered sub licensing fees that start at 50% and reduce to 25% based on revenues.

We believe the bfLEAP™ analytics platform is a potentially disruptive tool for analysis of pre-clinical and/or clinical data sets, such as the robust pre-clinical and clinical trial data sets being generated in translational R&D and clinical trial settings. The input data for bfLEAP™ can include raw data (preclinical and/or clinical readouts), categorical data, sociodemographic data of patients, and various other inputs. Thus, the bfLEAP™ platform is capable of capturing the particular genetic and physical characteristics of patients in an unbiased manner, and contextualizing it against other disparate data sources from patients (e.g. molecular data, physiological data, etc.) for less biased and more meaningful conclusions. It is also uniquely scalable – the bfLEAP™ platform is able to perform analysis on large, high-volume data sets (i.e. 'big data') and also able to analyze highly disparate "short and wide" data as well. In terms of visualization, bfLEAP™ is able to integrate with most commonly used visualization tools for graph analytics.

We believe that the combination of a) scalable analytics (i.e., large data or short/wide data), b) state-of-the-art proprietary algorithms, c) unsupervised machine learning, and d) streamlined data ingestion/visualization makes bfLEAP™ one of the most flexible and powerful new platforms available on the market.

The Company will continue to evolve and improve bfLEAP™, and some of the proceeds from this offering may be used toward that effort either in-house or with development partners like The Johns Hopkins University Applied Physics Lab.

Summary Risk Factors

Our business is subject to numerous risks as described in the section entitled "Risk Factors" and elsewhere in this prospectus. You should carefully consider these risks before making an investment. Some of these risks include:

- We have a limited operating history upon which you can evaluate our performance, and accordingly, our prospects must be considered in light of the risks that any new company encounters.
- In order for the Company to compete and grow, it must attract, recruit, retain and develop the necessary personnel who have the needed experience.
- The development and commercialization of our technology, products, and services is highly competitive.
- The Company's success depends on the experience and skill of the board of directors, its executive officers and key employees.
- We rely on various intellectual property rights, including patents and licenses in order to operate our business.
- From time to time, third parties may claim that one or more of our products or services infringe their intellectual property rights.
- New product development involves a lengthy, expensive and complex process.
- We may not be able to conduct clinical trials necessary to commercialize and sell our proposed products and formulations.
- Our long-term viability and growth will depend upon successful clinical trials.
- We face significant competition from other biotechnology and pharmaceutical companies.
- Our research and development efforts may not succeed in developing commercially successful products and technologies, which may limit our ability to achieve profitability.
- Even if we are able to obtain regulatory approvals for new pharmaceutical products, generic or branded, the success of those products is dependent upon acceptance of such products, particularly by the pharmaceutical industry.

- We extensively outsource our clinical trial activities and usually perform only a small portion of the start-up activities in-house.
- We may not be able to acquire the rights to any failed drugs or we may not be able to rescue failed drugs through analysis due to our technology or the lack of clinical data.

Implications of Being an Emerging Growth Company

As a company with less than \$1.07 billion in revenue during our last completed fiscal year, we qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. An emerging growth company may take advantage of specified reduced reporting requirements that are otherwise applicable generally to public companies. These reduced reporting requirements include:

- an exemption from compliance with the auditor attestation requirement on the effectiveness of our internal control over financial reporting;
- an exemption from compliance with any requirement that the Public Company Accounting Oversight Board may adopt regarding mandatory audit firm rotation or a supplement to the auditor's report providing additional information about the audit and the financial statements;
- an exemption from the requirements to obtain a non-binding advisory vote on executive compensation or a stockholder approval of any golden parachute arrangements;
- extended transition periods for complying with new or revised accounting standards;

- being permitted to present only two years of audited financial statements and only two years of related “Management’s Discussion and Analysis of Financial Condition and Results of Operations”, in addition to any required unaudited interim financial statements in this prospectus; and
- reduced disclosures regarding executive compensation in our periodic reports, proxy statements and registration statements, including in this prospectus.

We will remain an emerging growth company until the earliest to occur of: (i) the end of the first fiscal year in which our annual gross revenue is \$1.07 billion or more; (ii) the end of the first fiscal year in which we are deemed to be a “large accelerated filer,” as defined in the Securities Exchange Act of 1934, as amended, (the “Exchange Act”); (iii) the date on which we have, during the previous three-year period, issued more than \$1.00 billion in non-convertible debt securities; and (iv) the end of the fiscal year during which the fifth anniversary of this offering occurs. We may choose to take advantage of some, but not all, of the available benefits under the JOBS Act. We currently intend to take advantage of the exemptions discussed above. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

We are also a “smaller reporting company,” as defined under SEC Regulation S-K. As such, we also are exempt from the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act and also are subject to less extensive disclosure requirements regarding executive compensation in our periodic reports and proxy statements. We will continue to be deemed a smaller reporting company until our public float exceeds \$75 million on the last day of our second fiscal quarter in the preceding fiscal year.

4

Recent Developments

The Company recently entered into the following licensing agreements:

George Washington University - Beta2-spectrin siRNA License

On January 14, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from George Washington University (GWU) for rights to use siRNA targeting Beta2-spectrin in the treatment of human diseases, including hepatocellular carcinoma (HCC). The license covers methods claimed in three US and worldwide patent applications, and also includes use of this approach for treatment of obesity, non-alcoholic fatty liver disease, and non-alcoholic steatohepatitis. This program is currently in the preclinical stage of development.

In consideration of the rights granted to the Company under the License Agreement GWU received a \$20,000 License Initiation Fee. Under the terms of the License Agreement, GWU will be entitled to a three percent (3%) royalty on net sales subject to quarterly minimums once the first sale has occurred subsequent to regulatory approval, as well sublicense or assignment fees in the event the Company sublicenses or assigns their rights to use the technology. The Company will also reimburse GWU for previously incurred and ongoing patent costs. The Sublicense and Assignment fee amounts decline as the Company advances the clinical development of the licensed technology. The license agreement also contains milestone payments for clinical development through the approval of an NDA and commercialization.

Johns Hopkins University – Mebendazole License

On February 22, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from Johns Hopkins University (JHU) for the use of an improved formulation of Mebendazole for the treatment of any human cancer or neoplastic disease. This formulation shows potent activity in animal models of different types of cancer, and has been evaluated in a Phase I clinical trial in patients with high-grade glioma (NCT01729260). The trial, an open-label dose-escalation study, assessed the safety and efficacy (as measured by progression free survival and overall survival) of the improved formulation with adjuvant temozolomide in 24 patients with newly diagnosed gliomas. Investigators observed no dose-limiting toxicity in patients receiving all but the highest tested dose (200mg/kg/day). Four of the 15 patients receiving the maximum tested dose of 200mg/kg/day experienced dose-limiting toxicity, all of which were reversed by decreasing or eliminating the dose given. There were no serious adverse events attributed to mebendazole at any dose during the trial. The Company is currently formulating a strategy to conduct additional clinical trials with this asset to enable evaluation of safety and efficacy in humans.

The license covers six (6) issued patents and one (1) pending application. In consideration of the rights granted to the Company under the License Agreement JHU will receive a staggered Upfront License Fee of \$250,000. The Company will also reimburse JHU for previously incurred and ongoing patent costs. Under the terms of the License Agreement, JHU will be entitled to three- and one-half percent (3.5%) royalty on net sales by the Company. In addition, the Company is required to pay JHU minimum annual royalty payments of \$5,000 for 2023, \$10,000 for 2024, \$20,000 for 2025, \$30,000 for 2026 and \$50,000 for 2027 and each year after until the first commercial sale after which the annual minimum royalty shall be \$250,000. The license agreement also contains milestone payments for clinical development steps through the approval of an NDA and commercialization

5

Corporate Information

Bullfrog AI Holdings, Inc. was incorporated in the State of Nevada on February 6, 2020. Bullfrog AI Holdings, Inc. is the parent company of Bullfrog AI, Inc. and Bullfrog AI Management, LLC. which were incorporated in Delaware and Maryland, in 2017 and 2021, respectively. All of our operations are currently conducted through Bullfrog AI Holdings, Inc.. The Company’s principal business address is 325 Ellington Blvd, Unit 317, Gaithersburg, MD 20878. Our website address is www.bullfrogai.com. The references to our website in this prospectus are inactive textual references only. The information on our website is neither incorporated by reference into this prospectus nor intended to be used in connection with this offering. All of our operations are currently conducted through Bullfrog AI, Inc.

Planned Reverse Stock Split

Our Board of Directors and stockholders have approved an amendment to our Certificate of Incorporation to effect a 1-for-7 reverse stock split of our common stock in connection with the offering. As a result of the reverse stock split, every 7 shares of our outstanding common stock will be combined and reclassified into one share of our common stock. No fractional shares will be issued in connection with the reverse stock split, and any of our stockholders that will be entitled to receive a fractional share as a result of the reverse stock split will instead receive cash in lieu of the fractional share valued at the per share price of this Offering. The reverse stock split will become effective prior to the effective date of the registration statement (of which this prospectus forms a part). The reverse stock split is intended to allow us to meet the minimum share price requirement of the Nasdaq Capital Market.

Going Concern

The Company intends to overcome the circumstances that impact its ability to remain a going concern through a combination of expanding its revenues and additional equity and debt financing. The Company anticipates raising additional funds through public or private financing, strategic relationships or other arrangements in the near future to support its business operations; however, the Company may not have commitments from third parties for a sufficient amount of additional capital. The Company cannot be certain that any such financing will be available on acceptable terms, or at all, and its failure to raise capital when needed could limit its ability to continue its operations. The Company’s ability to obtain additional funding will determine its ability to continue as a going concern. Failure to secure additional financing in a timely manner and on favorable terms would have a material adverse effect on the Company’s financial performance, results of operations and stock price and may require it to curtail or cease operations, sell off its assets, seek protection from its creditors through bankruptcy proceedings, or otherwise. Furthermore, additional equity financing may be dilutive to the

holders of the Company's common stock, and debt financing, if available, may involve restrictive covenants, and strategic relationships, if necessary, to raise additional funds, and may require that the Company relinquish valuable rights. Please see note 1, in our financial statements, for further information. The Company believes that, following this offering, it will have sufficient capital to sustain its operations for at least the next 15 months, however, there can be no assurance that sufficient funds required during the subsequent year or thereafter will be generated from operations or that funds will be available from external sources such as debt or equity financings or other potential sources.

THE OFFERING

The following summary of the offering contains basic information about the offering and the common stock and is not intended to be complete. It does not contain all the information that is important to you. For a more complete understanding of the common stock, please refer to the section of this prospectus entitled "Description of Capital Stock."

Securities offered by us	1,317,647 Units, each Unit consisting of one share of our common stock and one Warrant to purchase one share of our common stock from the date of issuance until the fifth anniversary of such date for an assumed exercise price of \$[*] per share (___% of the assumed \$6.375 public offering price of one Unit), as adjusted to reflect a 1-for-7 reverse stock split of our common stock that we anticipate will be effected immediately prior to the completion this offering. The actual number of Units we will offer will be determined based on the actual public offering price. The Units will not be certificated or issued in stand-alone form. The shares of our common stock and the Warrants underlying the Units are immediately separable upon issuance and will be issued separately in this offering.
Description of the Warrants.	Each Warrant is exercisable for one share of common stock for an assumed \$[*] per share ([*]% of the assumed \$6.375 public offering price of one Unit) subject to adjustment in the event of stock dividends, stock splits, stock combinations, reclassifications, reorganizations, or similar events affecting our common stock as described herein. A holder may not exercise any portion of a Warrant to the extent that the holder, together with its affiliates and any other person or entity acting as a group, would beneficially own more than 4.99% of our outstanding common stock after exercise, as such percentage ownership is determined in accordance with the terms of the Warrants, except that upon notice from the holder to us, the holder may waive such limitation up to a percentage, not in excess of 9.99%. Each Warrant will be exercisable immediately upon issuance and will expire five (5) years after the initial issuance date. The terms of the Warrants will be governed by a Warrant Agent Agreement, dated as of the effective date of this offering, between us and Vstock Transfer, LLC as the warrant agent (the "Warrant Agent"). This prospectus also relates to the offering of the shares of common stock issuable upon exercise of the Warrants. For more information regarding the Warrants, you should carefully read the section titled "Description of Capital Stock-Warrants" on page [*] of this prospectus.
Common Stock outstanding before this offering:	4,021,935 shares
Common Stock to be outstanding immediately after this offering:	shares ⁽¹⁾
Option to purchase additional shares:	We have granted the underwriters an option, exercisable within 45-days after the closing of this offering to purchase up to an additional 197,647 shares of our common stock at a price of \$6.365 per share and/or Warrants to purchase up to an additional 197,647 shares of common stock at a price of \$0.01 per Warrant to purchase one share of common stock, solely for the purpose of cover over-allotments

6

Use of proceeds:	We expect to receive approximately \$7,384,000 in net proceeds from the sale of our Units offered by us in this offering (approximately \$8,530,600 if the underwriters exercise their over-allotment option in full), after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. We intend to use the net proceeds received from this offering for general and working capital purposes, including but not limited to investing in research and development, including in our technology, the repayment of debt and for working capital and general corporate purposes See "Use of Proceeds" on page 23 for a more complete description of the intended use of proceeds from this offering.
Dividend Policy	Holders of common stock are entitled to receive ratably such dividends, if any, as may be declared by the Board of Directors out of funds legally available. We have not paid any dividends since our inception, and we presently anticipate that all earnings, if any, will be retained for development of our business. Any future disposition of dividends will be at the discretion of our Board of Directors and will depend upon, among other things, our future earnings, operating and financial condition, capital requirements, and other factors.
Risk Factors:	Investing in our securities is highly speculative and involves a high degree of risk. You should carefully consider the information set forth in this prospectus and, in particular, the specific factors set forth in the "Risk Factors" section beginning on page 8 of this prospectus before deciding whether or not to invest in our securities.
Reverse Stock Split	We will complete a 1-for-7 reverse split of our common stock immediately prior to the completion of this offering. The purpose of the reverse stock split is to meet minimum stock price requirement of the Nasdaq Capital Market. All share numbers in this prospectus have been adjusted to give effect to this reverse split.
Proposed Nasdaq Ticker Symbol	We intend to apply to list our common stock on the Nasdaq Capital Market, subject to official notice of issuance, under the symbol "BFAP". We also intend to apply to have our Warrants listed on the Nasdaq Capital Market under the symbol "BFAIW." No assurance can be given that our applications will be approved, or that a trading market will develop for our common stock or Warrants. The consummation of this offering is conditioned on obtaining Nasdaq approval.
Lock-ups	We and our directors, officers and holders of five percent (5%) or more of our outstanding securities have agreed with the underwriters, subject to certain exceptions, not to offer for sale, issue, sell, contract to sell, pledge or otherwise dispose of any of our common stock for a period of 12 months after the completion of this offering. See "Underwriting" on page 53.

(1) Based on 4,021,935 shares of common stock issued and outstanding as of October 5, 2022.

Unless otherwise indicated, the information in this prospectus assumes:

- A public offering price of \$6.375 per Units;
- No exercise by the underwriter of its option to purchase 197,647 additional shares of common stock to cover over-allotments, if any;
- No exercise of the underwriter's warrants;

□ 1,317,647 shares of common stock sold in this offering; and

SUMMARY SELECTED FINANCIAL DATA

The summary selected financial data set forth below should be read together with our financial statements and the related notes to those statements, as well as the “Management’s Discussion and Analysis of Financial Condition and Results of Operations” section of this prospectus. The statements of operations data for the period ended June 30, 2022 has been derived from our reviewed financial statements included elsewhere in this prospectus. The statements of operations data for the period ended December 31, 2021 has been derived from our audited financial statements included elsewhere in this prospectus. Our historical results are not necessarily indicative of the results that may be expected in the future, and the results for the year ended December 31, 2021 are not necessarily indicative of results to be expected for the full year ending December 31, 2022.

Statements of Operations Data

	For the period ended June 30, 2022	For the year ended December 31, 2021
	Unaudited	Audited
Revenues	\$ -	\$ -
Net income (loss)	\$ (1,342,276)	\$ (585,840)
Net income (loss) per share	\$ (0.05)	\$ (0.02)
Weighted average number of shares	27,277,203	26,145,503

Balance Sheet Data

	Actual as of June 30, 2022	Pro Forma ⁽¹⁾ for June 30, 2022	Pro forma as adjusted ⁽²⁾ June 30, 2022
Cash	\$ 238,453	\$ 238,453	\$ 7,622,453
Total assets	\$ 262,034	\$ 262,034	\$ 7,646,034
Total liabilities	\$ 2,154,315	\$ 911,942	\$ 911,942
Total stockholder’s equity (deficit)	\$ (1,892,281)	\$ (649,908)	\$ 6,734,093

- (1) The pro forma balance sheet data gives effect to the issuance of 283,896 shares of common stock that are issuable upon automatic conversion of Convertible Bridge Notes and SAFE Notes, as described elsewhere in this prospectus, and the voluntary conversion of other convertible notes outstanding upon the completion of the IPO.
- (2) The as adjusted balance sheet data gives effect to the issuance and sale of Units in this offering at an assumed offering price of \$6.375 per Unit, as set forth on the cover of this prospectus, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us. The pro forma as adjusted balance sheet data also gives effect to the conversion of our preferred stock, and convertible notes and related accrued interest.

7

RISK FACTORS

An investment in our securities is highly speculative and involves a high degree of risk. In determining whether to purchase the Company’s securities, an investor should carefully consider all of the material risks described below, together with the other information contained in this Prospectus. We cannot assure you that any of the events discussed below will not occur. These events could have a material and adverse impact on our business, financial condition, results of operations and prospects. If that were to happen, the trading price of our common stock could decline, and you could lose all or part of your investment.

Risks Related to Liquidity, the Company’s Business and Industry

We have a limited operating history upon which you can evaluate our performance, and accordingly, our prospects must be considered in light of the risks that any new company encounters.

We were incorporated under the laws of Nevada on February 26, 2020. Accordingly, we have no significant history upon which an evaluation of our prospects and future performance can be made. Our proposed operations are subject to all of the business risks associated with a new enterprise. The likelihood of our creation of a viable business must be considered in light of the problems, expenses, difficulties, complications, and delays frequently encountered in connection with the inception of a business, operation in a competitive industry, and the continued development of our technology and the results of our clinical data. We anticipate that our operating expenses will increase for the near future. There can be no assurances that we will ever operate profitably. You should consider the Company’s business, operations and prospects in light of the risks, expenses and challenges faced as an early-stage company.

If we are unable to attract and retain key management, scientific personnel and advisors, we may not achieve our business objectives.

Our success depends on the availability and contributions of members of our senior management team. The loss of services of any of these individuals could delay, reduce or prevent our drug development and other business objectives. Furthermore, recruiting and retaining qualified scientific personnel to perform drug development work will be critical to our success. We face intense competition for qualified individuals from numerous pharmaceutical and biotechnology companies, universities, governmental entities and other public and private research institutions. We may be unable to attract and retain these individuals, and our failure to do so could materially adversely affect our business and financial condition.

8

The development of our technology, products, and services is highly competitive.

We face competition with respect to any products that we may seek to develop or commercialize in the future. Our competitors include major companies worldwide. Many of our competitors have significantly greater financial, technical and human resources than we have and superior expertise in research and development and marketing approved products/services and thus may be better equipped than us to develop and commercialize products/services. These competitors also compete with us in recruiting and retaining qualified personnel and acquiring technologies. Smaller or early stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies. Accordingly, our competitors may commercialize products more rapidly or effectively than we are able to, which would adversely affect our competitive position, the likelihood that our products/services will achieve initial market acceptance and our ability to generate meaningful additional revenues from our products.

From time to time, third parties may claim that one or more of our products or services infringe their intellectual property rights.

Any dispute or litigation regarding patents or other intellectual property could be costly and time consuming due to the uncertainty of intellectual property litigation and could divert our management and key personnel from our business operations. A claim of intellectual property infringement could force us to enter into a costly or restrictive license agreement, which might not be available under acceptable terms or at all, could require us to redesign our products, which would be costly and time-consuming, and/or could subject us to an injunction against development and sale of certain of our products or services. We may have to pay substantial damages, including damages for past infringement if it is ultimately determined that our products infringe on a third party's proprietary rights. Even if these claims are without merit, defending a lawsuit takes significant time, may be expensive and may divert management's attention from other business concerns. Any public announcements related to litigation or interference proceedings initiated or threatened against us could cause our business to be harmed. Our intellectual property portfolio may not be useful in asserting a counterclaim, or negotiating a license, in response to a claim of intellectual property infringement. In certain of our businesses we rely on third party intellectual property licenses and we cannot ensure that these licenses will be available to us in the future on favorable terms or at all.

Although dependent on certain key personnel, the Company does not have any key man life insurance policies on any such people.

The Company is dependent on Vininder Singh in order to conduct its operations and execute its business plan and the loss of Vininder Singh or any member of the board of directors or executive officer could harm the Company's business, financial condition, cash flow and results of operations.; however, the Company has not purchased any insurance policies with respect to those individuals in the event of their death or disability. Therefore, if Vininder Singh or any member of the board of directors or an executive officer dies or become disabled, the Company will not receive any compensation to assist with such person's absence. The loss of such person could negatively affect the Company and its operations.

The Company's business operations may be materially adversely affected by a pandemic such as the Coronavirus COVID-19 outbreak.

In December 2019, a novel strain of coronavirus was reported to have surfaced in Wuhan, China, which spread throughout other parts of the world, including the United States. On January 30, 2020, the World Health Organization declared the outbreak of the coronavirus disease (COVID- 19) a "Public Health Emergency of International Concern." On January 31, 2020, U.S. Health and Human Services Secretary Alex M. Azar II declared a public health emergency for the United States to aid the U.S. healthcare community in responding to COVID-19, and on March 11, 2020 the World Health Organization characterized the outbreak as a "pandemic." COVID-19 resulted in a widespread health crisis that adversely affected the economies and financial markets worldwide. The Company's business could be materially and adversely affected. The extent to which COVID-19 impacts the Company's business will depend on future developments, which are highly uncertain and cannot be predicted, including new information which may emerge concerning the severity of COVID-19 and the actions to contain COVID-19 or treat its impact, among others. If the disruptions posed by COVID-19 or other matters of global concern continue for an extended period of time, the Company's operations may be materially adversely affected. A chief concern related to such events is that they could cause a disruption to our clinical trials.

9

New product development involves a lengthy, expensive and complex process.

We may be unable to develop or commercialize any product candidates. Moreover, even if we develop such candidates, they may be subject to significant regulatory review, approval and other government regulations. There can be no assurance that our technologies will be capable of developing and commercializing products at all. New product development involves a lengthy, expensive and complex process and we currently have no fully validated diagnostic candidates. In addition, before we can commercialize any new product candidates, we will need to:

- conduct substantial research and development;
- conduct validation studies;
- expend significant funds;
- develop and scale-up our laboratory processes; and
- obtain regulatory approval and acceptance of our product candidates.

This process involves a high degree of risk and takes several years. Our product development efforts may fail for many reasons, including:

- failure of the product at the research or development stage; and
- lack of clinical validation data to support the effectiveness of the product.

Few research and development projects result in commercial products, and perceived viability in early clinical trials often is not replicated in later studies. At any point, we may abandon development of a product candidate or we may be required to expend considerable resources repeating clinical trials, which would adversely impact the timing for generating potential revenues from those product candidates. In addition, as we develop product candidates, we will have to make significant investments in product development, marketing and sales resources.

We may not be able to conduct clinical trials necessary to increase the value of our proposed products and formulations.

In order to conduct clinical trials that are necessary to obtain approval of a product by the FDA, it is necessary to receive clearance from the FDA to conduct such clinical trials. The FDA can halt clinical trials at any time for safety reasons or because we or our clinical investigators do not follow the FDA's requirements for conducting clinical trials. If we are unable to receive clearance to conduct clinical trials or the trials are halted by the FDA, the likelihood of our ability to sell or license our products would be greatly reduced as it is the FDA approval which will enhance the value of our products.

Our ability to resell and/or license our products will depend upon successful clinical trials.

Only a small number of research and development programs result in the development of a product that obtains FDA approval.. Success in preclinical work or early stage clinical trials does not ensure that later stage or larger scale clinical trials will be successful. Conducting clinical trials is a complex, time-consuming and expensive process. Our ability to complete our clinical trials in a timely fashion depends in large part on a number of key factors including protocol design, regulatory and institutional review board approval, the rate of patient enrollment in clinical trials, and compliance with extensive current Good Clinical Practices. If we fail to adequately manage the design, execution and regulatory aspects of our clinical trials, our studies and ultimately our regulatory approvals may be delayed, or we may fail to gain approval for our product candidates. Clinical trials may indicate that our product candidates have harmful side effects or raise other safety concerns that may significantly reduce the likelihood of regulatory approval, result in significant restrictions on use and safety warnings in any approved label, adversely affect placement within the treatment paradigm, or otherwise significantly diminish the commercial potential of the product candidate. Also, positive results in a registrational trial may not be replicated in any subsequent confirmatory trials. Even if later stage clinical trials are successful, regulatory authorities may disagree with our view of the data or require additional studies, and may fail to approve or delay approval of our product candidates or may grant marketing approval that is more restricted than anticipated, including indications for a narrower patient population than expected and the imposition of safety monitoring or educational requirements or risk evaluation and mitigation strategies. In addition, if another Company is the first to file for marketing approval of a competing drug candidate, that Company may ultimately receive marketing exclusivity for its drug candidate, thereby reducing the value of our product.

10

We face significant competition from other biotechnology and pharmaceutical companies.

While we believe that our technology, development experience and scientific knowledge provide competitive advantages, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical, and biotechnology companies, academic institutions and governmental agencies, and public and private research institutions. Many of our existing or potential competitors have substantially greater financial, technical and human resources than we do and significantly greater experience in the development of drug candidates as well as in obtaining regulatory approvals of those drug candidates in the United States and in foreign countries.

Mergers and acquisitions in the pharmaceutical and biotechnology industries could result in even more resources being concentrated among a small number of our competitors. Competition may increase further as a result of advances in the commercial applicability of technologies and greater availability of capital for investment in these industries. Our competitors may succeed in developing, acquiring or licensing, on an exclusive basis, drug candidates that are more effective or less costly than any drug candidate that we may develop.

Our ability to compete successfully will depend largely on our ability to:

- * identify drugs that have suffered set backs in the clinical development and regulatory process which we believe can be assisted by our platform's ability to design a better study group;
- * attract qualified scientific, product development and commercial personnel;
- * obtain patent or other proprietary protection for our drugs and technologies;
- * obtain required regulatory approvals; successfully collaborate with pharmaceutical companies in the discovery, development and commercialization of new drugs; and
- * negotiate competitive pricing and reimbursement with third party payors

The availability of our competitors' technologies could limit the demand, and the price we are able to charge for our services and for any drug candidate we develop. The inability to compete with existing or subsequently introduced drug development technologies would have a material adverse impact on our business, financial condition and prospects.

Established pharmaceutical companies and research institutions may invest heavily to accelerate discovery and development of novel compounds or to in license novel compounds that could make bFLEAP™ less competitive, which would have a material adverse impact on our business.

We may not be able to acquire the rights to any failed drugs or we may not be able to rescue failed drugs through analysis due to our technology or the lack of clinical data.

Our business model is based on the use of AI/ML technology, which technology may not uncover actionable insights or we may not be able to access sufficient clinical data to uncover such insights that lead to a successful project, clinical trial, or product. The failure of such projects, clinical trials or products would result in a loss of revenue from one of our three sources, which could have a material adverse impact on our business as a whole.

We may not succeed in acquiring the rights to failed drugs, which could limit one of our main sources of revenue.

Our business model is partly based on our ability to acquire drugs that have failed to pass Phase 2 or Phase 3 of the FDA approval process; however, there is no guarantee that we will be able to acquire the rights to such drugs, which would significantly impact our ability to generate revenue and as a result would have a material adverse impact on our business.

We intend to invest in early stage experimental technologies which have a high risk of failure.

To continue supporting our business model, we intend to invest in early stage and experimental technologies, some or all of which may not be useful to us. There is a risk that we will invest in technology that will not ultimately contribute to the success of our projects, which could have a material adverse impact on our business.

We are dependent on our collaborative agreements for the development of products and business development, which exposes us to the risk of reliance on the viability of third parties.

In conducting our research and development activities, we currently rely, and will in the future rely, on collaborative agreements with third parties such as manufacturers, contract research organizations, commercial partners, universities, governmental agencies and not-for-profit organizations for both strategic and financial resources. The loss of, or failure to perform by us or our partners under, any applicable agreements or arrangements, or our failure to secure additional agreements for other products in development, would substantially disrupt or delay our research and development and commercialization activities. Any such loss would likely increase our expenses and materially harm our business, financial condition and results of operation.

We extensively outsource our clinical trial activities and usually perform only a small portion of the start-up activities in-house.

We rely on independent third-party contract research organizations (CROs) to perform most of our clinical studies, including document preparation, site identification, screening and preparation, pre-study visits, training, program management and bioanalytical analysis. Many important aspects of the services performed for us by the CROs are out of our direct control. If there is any dispute or disruption in our relationship with our CROs, our clinical trials may be delayed. Moreover, in our regulatory submissions, we rely on the quality and validity of the clinical work performed by third-party CROs. If any of our CROs' processes, methodologies or results were determined to be invalid or inadequate, our own clinical data and results and related regulatory approvals could be adversely impacted.

We are a biotechnology company with no significant revenue. We have incurred operating losses since our inception, and we expect to incur losses for the foreseeable future and may never achieve profitability.

We have incurred significant operating losses since our inception. To date, we have not generated any revenue and we may not generate any revenue from sales of our clinical analytics services or drug candidates for the foreseeable future. We expect to continue to incur significant operating losses and we anticipate that our losses may increase substantially as we expand our drug development programs.

To achieve profitability, we must successfully develop and obtain regulatory approval for one or more of drugs and effectively commercialize any drugs we develop. Even if we succeed in developing and commercializing one or more drug candidates, we may not be able to generate sufficient revenue and we may never be able to achieve or sustain profitability.

We will continue to require additional capital for the foreseeable future. If we are unable to raise additional capital when needed, we may be forced to delay, reduce or eliminate our drug acquisition efforts.

We expect to continue to incur significant operating expenses in connection with our ongoing activities, including conducting clinical trials and seeking regulatory approval of drug candidates. Our ongoing future capital requirements will depend on numerous factors, including:

- the rate of progress, results and costs of completion of clinical trials of drug candidates;
- the size, scope, rate of progress, results and costs of completion of any potential future clinical

- trials and preclinical tests of our drug candidates that we may initiate;
- the costs of obtaining regulatory approval of drug candidates;
- the scope, prioritization and number of drug development programs we pursue;
- the costs for preparing, filing, prosecuting, maintaining and enforcing our intellectual property rights and defending intellectual property-related claims;
- the extent to which we acquire or in-license other products and technologies and the costs to be able to obtain regulatory approval of such products;
- our ability to establish strategic collaborations and licensing or other arrangements on terms favorable to us; and
- competing technological and market developments.

Any additional fundraising efforts may divert our management from their day to day activities, which may adversely affect our ability to identify and acquire new drug candidates and to further the regulatory process of such products. Our ability to raise additional funds will depend, in part, on the success of our product development activities and other factors related to financial, economic and market conditions, many of which are beyond our control. There can be no assurance that we will be able to raise additional capital when needed or on terms that are favorable to us, if at all. If adequate funds are not available on a timely basis, we may be forced to:

- delay, reduce the scope of or eliminate one or more of our drug development programs;

12

- limit the amount of new products that we acquire or relinquish, license or otherwise dispose of rights on terms that are less favorable than if we were able to further the regulatory approval process; or
- liquidate and dissolve the Company.

If our operating plans change, we may require additional capital sooner than planned. Such additional financing may not be available when needed or on terms favorable to us. In addition, we may seek additional capital due to favorable market conditions or strategic considerations, even if we believe we have sufficient funds for our current and future operating plan.

We are increasingly dependent on information technology systems to operate our business and a cyber-attack or other breach of our systems, or those of third parties on whom we may rely, could subject us to liability or interrupt the operation of our business.

We are increasingly dependent on information technology systems to operate our business. A breakdown, invasion, corruption, destruction or interruption of critical information technology systems by employees, others with authorized access to our systems or unauthorized persons could negatively impact operations. In the ordinary course of business, we collect, store and transmit confidential information and it is critical that we do so in a secure manner to maintain the confidentiality and integrity of such information. Additionally, we outsource certain elements of our information technology systems to third parties. As a result of this outsourcing, our third party vendors may or could have access to our confidential information making such systems vulnerable. Data breaches of our information technology systems, or those of our third party vendors, may pose a risk that sensitive data may be exposed to unauthorized persons or to the public. For example, the loss of clinical trial data from completed or ongoing clinical trials or preclinical studies could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. While we believe that we have taken appropriate security measures to protect our data and information technology systems, and have been informed by our third party vendors that they have as well, there can be no assurance that our efforts will prevent breakdowns or breaches in our systems, or those of our third party vendors, that could materially adversely affect our business and financial condition.

We must complete extensive clinical trials to demonstrate the safety and efficacy of our drug candidates. If we are unable to demonstrate the safety and efficacy of our drug candidates, we will not be successful.

The success of our business depends primarily on our ability to further the regulatory approval process to increase the value of our drug candidates. Drug candidates must satisfy rigorous standards of safety and efficacy before they can be approved for sale which greatly enhances their value. To satisfy these standards, we must engage in expensive and lengthy testing of drug candidates.

We may not be able to obtain authority from the FDA or other equivalent foreign regulatory agencies to move on to further efficacy segments of the Phase 2 or Phase 3 clinical trials or commence and complete any clinical trials for any of our drug candidates. Positive results in preclinical studies of a drug candidate may not be predictive of similar results in human clinical trials, and promising results from early clinical trials of a drug candidate may not be replicated in later clinical trials. A number of companies in the pharmaceutical and biotechnology industries have suffered significant setbacks in late-stage clinical trials even after achieving promising results in early-stage development. Accordingly, the results from the preclinical tests or clinical trials for our drug candidates may not be predictive of the results we may obtain in later stage trials. The failure of clinical trials to demonstrate safety and efficacy of one or more of our drug candidates will have a material adverse effect on our business and financial condition.

Delays in the commencement of clinical trials of our drug candidates could result in increased costs to us and delay our ability to successfully license or sell such products.

Our drug candidates will require continued extensive clinical trials to increase the value and desirability of the products. Because of the nature of clinical trials, we do not know whether future planned clinical trials will begin on time, if at all. Delays in the commencement of clinical trials could significantly increase our drug development costs and delay our ability to successfully sell or license our drug candidates. In addition, many of the factors that may cause, or lead to, a delay in the commencement of clinical trials may also ultimately lead to denial of regulatory approval of a drug candidate. The commencement of clinical trials can be delayed for a variety of reasons, including delays in:

- demonstrating sufficient safety and efficacy in past clinical trials to obtain regulatory approval
- to commence a further clinical trial;

13

- convincing the FDA that we have selected valid endpoints for use in proposed clinical trials; and
- obtaining institutional review board approval to conduct a clinical trial at a prospective site.

In addition, the commencement of clinical trials may be delayed due to insufficient patient enrollment, which is a function of many factors, including the size of the patient population, the nature of the protocol, the proximity of patients to clinical sites, the availability of effective treatments for the relevant disease and the eligibility criteria for the clinical trial.

If we are unable to obtain U.S. and/or foreign regulatory approval, we will be unable to resell or license our drug candidates.

Our drug candidates will be subject to extensive governmental regulations relating to, among other things, research, testing, development, manufacturing, safety, efficacy, record keeping, labeling, marketing and distribution of drugs. Rigorous preclinical testing and clinical trials and an extensive regulatory approval process are required in the U.S. and in many foreign jurisdictions prior to the commercial sale of drug candidates. Satisfaction of these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. It is possible that no drug candidate that we present to the FDA will obtain marketing approval which will significantly diminish the value and desirability of our product candidates. In connection with the clinical trials for our drug candidates, we face risks that:

- the drug candidate may not prove to be efficacious;
- the drug candidate may not prove to be safe;
- the drug candidate may not be readily co-administered or combined with other drugs or drug candidates;
- the results may not confirm the positive results from earlier preclinical studies or clinical trials;
- the results may not meet the level of statistical significance required by the FDA or other regulatory agencies; and
- the FDA or other regulatory agencies may require us to carry out additional studies.

We have limited experience in conducting and managing later stage clinical trials necessary to obtain regulatory approvals, including approval by the FDA. However, this risk would be mitigated in the event the Company is successful entering into a co-development agreement with a pharma partner for late stage clinical development. The time required to complete clinical trials and for the FDA and other countries' regulatory review processes is uncertain and typically takes many years. Our analysis of data obtained from preclinical and clinical trials is subject to confirmation and interpretation by regulatory authorities, which could delay, limit or prevent regulatory approval. We may also encounter unanticipated delays or increased costs due to government regulation from future legislation or administrative action or changes in FDA policy during the period of product development, clinical trials, and FDA regulatory review.

We will rely on third parties for manufacturing of our clinical drug supplies; our dependence on these manufacturers may impair the development of our drug candidates.

We have no ability to internally manufacture the drug candidates that we need to conduct our clinical trials for the products that we acquire. For the foreseeable future, we expect to continue to rely on third-party manufacturers and other third parties to produce, package and store sufficient quantities of our drug candidates and any future drug candidates for use in our clinical trials. We may face various risks and uncertainties in connection with our reliance on third-party manufacturers, including:

- reliance on third-party manufactures for regulatory compliance and quality assurance;
- the possibility of breach of the manufacturing agreement by the third-party manufacturer because
- of factors beyond our control;
- the possibility of termination or nonrenewal of our manufacturing agreement by the third-party manufacturer at a time that is costly or inconvenient for us;
- the potential that third-party manufacturers will develop know-how owned by such third-party manufacturer in connection with the production of our drug candidates that is necessary for the
- manufacture of our drug candidates; and
- reliance on third-party manufacturers to assist us in preventing inadvertent disclosure or theft of our proprietary knowledge.

14

Our drug candidates may be complicated and expensive to manufacture. If our third-party manufacturers fail to deliver our drug candidates for clinical use on a timely basis, with sufficient quality, and at commercially reasonable prices, we may be required to delay or suspend clinical trials or otherwise discontinue development of our drug candidates. While we may be able to identify replacement third-party manufacturers or develop our own manufacturing capabilities for these drug candidates, this process would likely cause a delay in the availability of our drug candidates and an increase in costs. In addition, third-party manufacturers may have a limited number of facilities in which our drug candidates can be manufactured, and any interruption of the operation of those facilities due to events such as equipment malfunction or failure or damage to the facility by natural disasters could result in the cancellation of shipments, loss of product in the manufacturing process or a shortfall in available drug candidates.

We may rely on technology solution partners for the development and deployment of our AI technology

Our partners may experience technical, financial, operational, or security issues that reduce or eliminate their ability to support the Company. This could prevent the Company from generating revenue and eliminate our ability to operate.

In addition to the risks listed above, businesses are often subject to risks not foreseen or fully appreciated by the management. It is not possible to foresee all risks that may affect us. Moreover, the Company cannot predict whether the Company will successfully effectuate the Company's current business plan. Each prospective Purchaser is encouraged to carefully analyze the risks and merits of an investment in the Securities and should take into consideration when making such analysis, among other, the Risk Factors discussed above.

Risks Related to Intellectual Property Rights

We rely on various intellectual property rights, including patents and licenses in order to operate our business.

Our intellectual property rights, may not be sufficiently broad or otherwise may not provide us a significant competitive advantage. In addition, the steps that we have taken to maintain and protect our intellectual property may not prevent it from being challenged, invalidated, circumvented or designed-around, particularly in countries where intellectual property rights are not highly developed or protected. In some circumstances, enforcement may not be available to us because an infringer has a dominant intellectual property position or for other business reasons, or countries may require compulsory licensing of our intellectual property. Our failure to obtain or maintain intellectual property rights that convey competitive advantage, adequately protect our intellectual property or detect or prevent circumvention or unauthorized use of such property, could adversely impact our competitive position and results of operations. We also rely on nondisclosure and noncompetition agreements with employees, consultants and other parties to protect, in part, trade secrets and other proprietary rights. There can be no assurance that these agreements will adequately protect our trade secrets and other proprietary rights and will not be breached, that we will have adequate remedies for any breach, that others will not independently develop substantially equivalent proprietary information or that third parties will not otherwise gain access to our trade secrets or other proprietary rights.

As we expand our business, protecting our intellectual property will become increasingly important. The protective steps we have taken may be inadequate to deter our competitors from using our proprietary information. In order to protect or enforce our patent rights, we may be required to initiate litigation against third parties, such as infringement lawsuits. Also, these third parties may assert claims against us with or without provocation. These lawsuits could be expensive, take significant time and could divert management's attention from other business concerns. The law relating to the scope and validity of claims in the technology field in which we operate is still evolving and, consequently, intellectual property positions in our industry are generally uncertain. We cannot assure you that we will prevail in any of these potential suits or that the damages or other remedies awarded, if any, would be commercially valuable.

15

The Company could be negatively impacted if found to have infringed on intellectual property rights.

Technology companies, including many of the Company's competitors, frequently enter into litigation based on allegations of patent infringement or other violations of intellectual property rights. In addition, patent holding companies seek to monetize patents they have purchased or otherwise obtained. As the Company grows, the intellectual property rights claims against it will likely increase. The Company intends to vigorously defend infringement actions in court and before the U.S. International Trade

Commission. The plaintiffs in these actions frequently seek injunctions and substantial damages. Regardless of the scope or validity of such patents or other intellectual property rights, or the merits of any claims by potential or actual litigants, the Company may have to engage in protracted litigation. If the Company is found to infringe one or more patents or other intellectual property rights, regardless of whether it can develop non-infringing technology, it may be required to pay substantial damages or royalties to a third-party, or it may be subject to a temporary or permanent injunction prohibiting the Company from marketing or selling certain products. In certain cases, the Company may consider the desirability of entering into licensing agreements, although no assurance can be given that such licenses can be obtained on acceptable terms or that litigation will not occur. These licenses may also significantly increase the Company's operating expenses. Regardless of the merit of particular claims, litigation may be expensive, time-consuming, disruptive to the Company's operations and distracting to management. In recognition of these considerations, the Company may enter into arrangements to settle litigation. If one or more legal matters were resolved against the Company's consolidated financial statements for that reporting period could be materially adversely affected. Further, such an outcome could result in significant compensatory, punitive or trebled monetary damages, disgorgement of revenue or profits, remedial corporate measures or injunctive relief against the Company that could adversely affect its financial condition and results of operations.

We rely heavily on our technology and intellectual property, but we may be unable to adequately or cost-effectively protect or enforce our intellectual property rights, thereby weakening our competitive position and increasing operating costs.

To protect our rights in our services and technology, we rely on a combination of copyright and trademark laws, patents, trade secrets, confidentiality agreements and protective contractual provisions. We also rely on laws pertaining to trademarks and domain names to protect the value of our corporate brands and reputation. Despite our efforts to protect our proprietary rights, unauthorized parties may copy aspects of our services or technology, obtain and use information, marks, or technology that we regard as proprietary, or otherwise violate or infringe our intellectual property rights. In addition, it is possible that others could independently develop substantially equivalent intellectual property. If we do not effectively protect our intellectual property, or if others independently develop substantially equivalent intellectual property, our competitive position could be weakened.

Effectively policing the unauthorized use of our services and technology is time-consuming and costly, and the steps taken by us may not prevent misappropriation of our technology or other proprietary assets. The efforts we have taken to protect our proprietary rights may not be sufficient or effective, and unauthorized parties may copy aspects of our services, use similar marks or domain names, or obtain and use information, marks, or technology that we regard as proprietary. We may have to litigate to enforce our intellectual property rights, to protect our trade secrets, or to determine the validity and scope of others' proprietary rights, which are sometimes not clear or may change. Litigation can be time consuming and expensive, and the outcome can be difficult to predict.

We rely on agreements with third parties to provide certain services, goods, technology, and intellectual property rights necessary to enable us to implement some of our applications.

Our ability to implement and provide our applications and services to our clients depends, in part, on services, goods, technology, and intellectual property rights owned or controlled by third parties. These third parties may become unable to or refuse to continue to provide these services, goods, technology, or intellectual property rights on commercially reasonable terms consistent with our business practices, or otherwise discontinue a service important for us to continue to operate our applications. If we fail to replace these services, goods, technologies, or intellectual property rights in a timely manner or on commercially reasonable terms, our operating results and financial condition could be harmed. In addition, we exercise limited control over our third-party vendors, which increases our vulnerability to problems with technology and services those vendors provide. If the services, technology, or intellectual property of third parties were to fail to perform as expected, it could subject us to potential liability, adversely affect our renewal rates, and have an adverse effect on our financial condition and results of operations.

If any third-party owners of intellectual property we may license in the future do not properly maintain or enforce the patents underlying such licenses, our competitive position and business prospects will be harmed.

We may enter into licenses for third-party intellectual property in the future. Our success will depend in part on the ability of our licensors to obtain, maintain and enforce patent protection for their intellectual property, in particular, those patents to which we have secured exclusive rights.

If applicable, our licensors may not successfully prosecute the patent applications to which we are licensed. Even if patents issue in respect of any such patent applications, our licensors may fail to maintain these patents, may determine not to pursue litigation against other companies that are infringing these patents, or may pursue such litigation less aggressively than we would. In addition, our licensors may terminate their agreements with us in the event we breach the applicable license agreement and fail to cure the breach within a specified period of time. Without protection for the intellectual property we license, other companies might be able to offer substantially identical products for sale, which could materially adversely affect our competitive business position, business prospects and financial condition.

Because our research and development of drug candidates often incorporates compounds and other information that is the intellectual property of third parties, we depend on continued access to such intellectual property to conduct and complete our preclinical and clinical research and commercialize the drug candidates that result from this research. We expect that future licenses would impose, numerous obligations on us. For example, under our existing and future license agreements, we may be required to pay (i) annual maintenance fees until a drug candidate is sold for the first time, (ii) running royalties on net sales of drug candidates, (iii) minimum annual royalties after a drug candidate is sold for the first time, and (iv) one-time payments upon the achievement of specified milestones. We may also be required to reimburse patent costs incurred by the licensor, or we may be obligated to pay additional royalties, at specified rates, based on net sales of our drug candidates that incorporate the licensed intellectual property rights. We may also be obligated under some of these agreements to pay a percentage of any future sublicensing revenues that we may receive. Future license agreements may also include payment obligations such as milestone payments or minimum expenditures for research and development. We expect that any future licenses would contain reporting, insurance and indemnification requirements. We are actively reviewing and preparing additional patent applications to expand our patent portfolio, but there can be no assurances that patents related to our existing patent applications or any applications we may file in the future will be issued or that any issued patents will provide meaningful protection for our drug candidates, which could materially adversely affect our competitive business position, business prospects and financial condition.

Confidentiality agreements with employees and others may not adequately prevent disclosure of trade secrets and other proprietary information and may not adequately protect our intellectual property.

We rely on trade secrets to protect our technology, especially where we do not believe patent protection is appropriate or obtainable. However, trade secrets are difficult to protect. In order to protect our proprietary technology and processes, we also rely in part on confidentiality and intellectual property assignment agreements with our corporate partners, employees, consultants, outside scientific collaborators and sponsored researchers and other advisors. These agreements may not effectively prevent disclosure of confidential information nor result in the effective assignment to us of intellectual property, and may not provide an adequate remedy in the event of unauthorized disclosure of confidential information or other breaches of the agreements. In addition, others may independently discover our trade secrets and proprietary information, and in such case we could not assert any trade secret rights against such party. Enforcing a claim that a party illegally obtained and is using our trade secrets is difficult, expensive and time-consuming, and the outcome is unpredictable. In addition, courts outside the U.S. may be less willing to protect trade secrets. Costly and time-consuming litigation could be necessary to seek to enforce and determine the scope of our proprietary rights, and failure to obtain or maintain trade secret protection could materially adversely affect our business and financial condition.

Risks Related to Ownership of Our Securities and this Offering

Our management will have broad discretion over the use of any net proceeds from this offering and you may not agree with how we use the proceeds, and the proceeds may not be invested successfully.

Our management will have broad discretion as to the use of any net proceeds from this offering and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you will be relying on the judgment of our management with regard to the use of any proceeds from this offering and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for you.

Investors in this offering may experience future dilution as a result of this and future equity offerings.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. Investors purchasing our shares or other securities in the future could have rights superior to existing common stockholders, and the price per share at which we sell additional shares of our common stock or other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering.

17

An active trading market for our common stock or Warrants may not develop, and you may not be able to sell your common stock at or above the initial public offering price.

Prior to the consummation of this offering, there has been no public market for our common stock or Warrants. An active trading market for shares of our common stock or Warrants may never develop or be sustained following this offering. If an active trading market does not develop, you may have difficulty selling your shares of common stock or Warrants at an attractive price, or at all. The price for our Units in this offering will be determined by negotiations between us and the underwriters, and it may not be indicative of prices that will prevail in the open market following this offering. Consequently, you may not be able to sell your common stock or Warrants at or above the initial public offering price or at any other price or at the time that you would like to sell. An inactive market may also impair our ability to raise capital by selling our common stock, and it may impair our ability to attract and motivate our employees through equity incentive awards and our ability to acquire other companies, products or technologies by using our common stock as consideration.

The price of our common stock may fluctuate substantially.

You should consider an investment in our common stock to be risky, and you should invest in our common stock only if you can withstand a significant loss and wide fluctuations in the market value of your investment. Some factors that may cause the market price of our common stock to fluctuate, in addition to the other risks mentioned in this “Risk Factors” section and elsewhere in this prospectus, are:

- sales of our common stock by our stockholders, executives, and directors;
- volatility and limitations in trading volumes of our shares of common stock;
- our ability to obtain financing to conduct and complete research and development activities;
- our ability to attract new customers;
- changes in the development status of the drugs we acquire;
- failures to meet external expectations or management guidance;
- changes in our capital structure or dividend policy or future issuances of securities;
- our cash position;
- announcements and events surrounding financing efforts, including debt and equity securities;
- reputational issues;
- announcements of acquisitions, partnerships, collaborations, joint ventures, new products, capital commitments, or other events by us or our competitors;
- changes in general economic, political and market conditions in or any of the regions in which we conduct our business;
- changes in industry conditions or perceptions;
- changes in valuations of similar companies or groups of companies;
- analyst research reports, recommendation and changes in recommendations, price targets, and withdrawals of coverage;
- departures and additions of key personnel;
- disputes and litigations related to intellectual property rights, proprietary rights, and contractual obligations;
- changes in applicable laws, rules, regulations, or accounting practices and other dynamics; and
- other events or factors, many of which may be out of our control.

18

In addition, if the market for stocks in our industry or industries related to our industry, or the stock market in general, experiences a loss of investor confidence, the trading price of our common stock could decline for reasons unrelated to our business, financial condition and results of operations. If any of the foregoing occurs, it could cause our stock price to fall and may expose us to lawsuits that, even if unsuccessful, could be costly to defend and a distraction to management.

The Warrants may not have any value.

Each Warrant will have an assumed exercise price equal to \$ (% of the assumed \$6.375 offering price per Unit). The Warrants will be exercisable from the date of issuance until the fifth anniversary of the issue date. In the event our common stock price does not exceed the exercise price of the Warrants during the period when the Warrants are exercisable, the Warrants may not have any value.

Holders of Warrants have no rights as stockholders until such holders exercise their Warrants and acquire our shares of Common Stock.

Until holders of our Warrants acquire shares of common stock upon exercise thereof, such holders will have no rights with respect to the shares of common stock underlying the Warrants. Upon exercise of the Warrants, the holders will be entitled to exercise the rights of a stockholder only as to matters for which the record date occurs after the date they were entered in the register of members of the Company as a stockholder.

Future sales of shares by existing stockholders could cause our stock price to decline.

If our existing stockholders sell, or indicate an intent to sell, substantial amounts of our common stock in the public market after the twelve-month contractual lock-up and other legal restrictions on resale discussed in this prospectus lapse, the trading price of our common stock and Warrants could decline significantly and could decline below the initial public offering price. Based on shares outstanding as of the date of this prospectus, upon the completion of this offering, we will have outstanding shares of common stock. Of these shares, assuming no shares are purchased in this offering by our existing stockholders, shares of common stock, plus any shares sold pursuant to the underwriters’ option to purchase additional shares, will be immediately freely tradable, without restriction, in the public market.

After the twelve-month lock-up agreements pertaining to this offering expire, as the case may be, and based on shares outstanding as of the date of the prospectus, an additional shares will be eligible for sale in the public market. In addition, upon issuance, the shares reserved for future issuance under our 2022 Equity Incentive Plan]will become eligible for sale in the public market in the future, subject to certain legal and contractual limitations. If our existing stockholders sell substantial amounts of our common stock in the public market, or if the public perceives that such sales could occur, this could have an adverse impact on the market price of our common stock, even

if there is no relationship between such sales and the performance of our business.

After the completion of this offering, we may be at an increased risk of securities class action litigation.

Historically, securities class action litigation has often been brought against a company following a decline in the market price of its securities. If we were to be sued, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

We have never paid dividends on our capital stock and we do not anticipate paying any dividends in the foreseeable future. Consequently, any gains from an investment in our common stock will likely depend on whether the price of our common stock increases.

We have not paid dividends on any of our classes of capital stock to date and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. In addition, the terms of any future indebtedness we may incur could preclude us from paying dividends. As a result, capital appreciation, if any, of our common stock will be your sole source of gain from an investment in our common stock for the foreseeable future. Consequently, in the foreseeable future, you will likely only experience a gain from your investment in our common stock if the price of our common stock increases.

We are not subject to all Sarbanes-Oxley regulations and lack of financial controls and safeguards required of public companies.

We do not have the internal infrastructure necessary, and are not required, to complete an attestation about our financial controls that would be required under Section 404 of the Sarbanes-Oxley Act of 2002. There can be no assurance that there are no significant deficiencies or material weaknesses in the quality of our financial controls. We expect to incur additional expenses and diversion of management's time if and when it becomes necessary to perform the system and process evaluation, testing and remediation required in order to comply with the management certification and auditor attestation requirements.

If you invest in securities in this offering, you will incur immediate and substantial dilution in the book value of your common stock.

The offering price per share of our common stock that is part of a Unit will be substantially higher than the net tangible book value per share of our common stock immediately after this offering. Investors purchasing Units in this offering will pay a price per Unit that substantially exceeds the book value of our tangible assets after subtracting our liabilities. As a result, investors purchasing Units in this offering will incur immediate dilution of \$[*] per share of our common stock, based on the assumed offering price of \$6.375 per Unit.

19

If equity research analysts do not publish research or reports about our business or if they issue unfavorable commentary or downgrade our common stock, the price of our common stock could decline.

The trading market for our common stock may be affected by the research and reports that equity research analysts publish about us and our business. We do not control these analysts. The price of our common stock could decline if one or more equity analysts downgrade our common stock or if analysts issue other unfavorable commentary or cease publishing reports about us or our business.

We may not be able to satisfy listing requirements of Nasdaq to maintain a listing of our common stock or Warrants.

When our common stock and Warrants are listed on Nasdaq, we must meet certain financial and liquidity criteria to maintain such listing. If we violate the maintenance requirements for continued listing of our common stock and Warrants, our common stock or Warrants may be delisted. In addition, our board of directors may determine that the cost of maintaining our listing on a national securities exchange outweighs the benefits of such listing. A delisting of our common stock or Warrants from Nasdaq may materially impair our stockholders' ability to buy and sell our common stock or Warrants and could have an adverse effect on the market price of, and the efficiency of the trading market for, our common stock or Warrants. In addition, the delisting of our common stock or Warrants could significantly impair our ability to raise capital.

Provisions of our charter documents or Nevada law could delay or prevent an acquisition of our company, even if the acquisition would be beneficial to our stockholders, and could make it more difficult to change management.

Provisions of our certificate of incorporation and bylaws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders might otherwise consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. In addition, these provisions may frustrate or prevent any attempt by our stockholders to replace or remove our current management by making it more difficult to replace or remove our board of directors. These provisions include:

- limitations on our stockholders' ability to call special meetings of stockholders;
- an advance notice requirement for stockholder proposals and nominations for members of our Board;
- the authority of our Board to determine the number of director seats on our Board;
- the authority of our Board to fill vacancies occurring on the Board;
- the authority of our Board to issue preferred stock with such terms as our Board may determine.

Our certificate of incorporation grants our Board of Directors the power to designate and issue additional shares of common and/or preferred stock.

Our authorized capital consists of 100,000,000 shares of common stock and 10,000,000 shares of preferred stock. Our preferred stock may be designated into series pursuant to authority granted by our certificate of incorporation, and on approval from our Board of Directors. The Board of Directors, without any action by our stockholders, may designate and issue shares in such classes or series as the Board of Directors deems appropriate and establish the rights, preferences and privileges of such shares, including dividends, liquidation and voting rights. The rights of holders of other classes or series of stock that may be issued could be superior to the rights of holders of our common stock. The designation and issuance of shares of capital stock having preferential rights could adversely affect other rights appurtenant to shares of our common stock.

We will indemnify and hold harmless our officers and directors to the maximum extent permitted by Nevada law.

Our bylaws provide that we will indemnify and hold harmless our officers and directors against claims arising from our activities, to the fullest extent not prohibited by Nevada law. If we were called upon to perform under our indemnification agreement, then the portion of our assets expended for such purpose would reduce the amount otherwise available for our business.

20

We must implement additional and expensive procedures and controls in order to grow our business and organization and to satisfy new reporting requirements, which will increase our costs and require additional management resources.

Upon becoming a fully public reporting company, we will be required to comply with the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act") and the related rules and regulations of the SEC, including the requirements that we maintain disclosure controls and procedures and adequate internal control over financial reporting. In the future, if

our securities are listed on a national exchange, we may also be required to comply with marketplace rules and heightened corporate governance standards. Compliance with the Sarbanes-Oxley Act and other SEC and national exchange requirements will increase our costs and require additional management resources. We recently have begun upgrading our procedures and controls and will need to continue to implement additional procedures and controls as we grow our business and organization and to satisfy new reporting requirements. If we are unable to complete the required assessment as to the adequacy of our internal control over financial reporting, as required by Section 404 of the Sarbanes-Oxley Act or if we fail to maintain internal control over financial reporting, our ability to produce timely, accurate and reliable periodic financial statements could be impaired.

If we do not maintain adequate internal control over financial reporting, investors could lose confidence in the accuracy of our periodic reports filed under the Securities Exchange Act of 1934, as amended (the “Exchange Act”). Additionally, our ability to obtain additional financing could be impaired or a lack of investor confidence in the reliability and accuracy of our public reporting could cause our stock price to decline.

We are an “emerging growth company” under the JOBS Act of 2012 and we cannot be certain if the reduced disclosure requirements applicable to emerging growth companies will make our common stock less attractive to investors.

We are an “emerging growth company,” as defined in the Jumpstart Our Business Startups Act of 2012 (the “JOBS Act”), and we may take advantage of certain exemptions from various reporting requirements that are not applicable to other public companies that are not “emerging growth companies” including, but not limited to, not being required to comply with the auditor attestation requirements of section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and shareholder approval of any golden parachute payments not previously approved. We cannot predict if investors will find our common stock less attractive because we may rely on these exemptions. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile.

In addition, Section 107 of the JOBS Act also provides that an “emerging growth company” can take advantage of the extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933 (the “Securities Act”) for complying with new or revised accounting standards. In other words, an “emerging growth company” can delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. We are choosing to take advantage of the extended transition period for complying with new or revised accounting standards.

We will remain an “emerging growth company” until the last day of the fiscal year following the fifth anniversary of the date of the first sale of our common stock pursuant to an effective registration statement under the Securities Act, although we will lose that status sooner if our revenues exceed \$1.07 billion, if we issue more than \$1 billion in non-convertible debt in a three year period, or if the market value of our common stock that is held by non-affiliates exceeds \$700 million as of the last day of our most recently completed second fiscal quarter.

Investors may be unable to compare our business with other companies in our industry if they believe that our financial accounting is not as transparent as other companies in our industry. If we are unable to raise additional capital as and when we need it, our financial condition and results of operations may be materially and adversely affected.

Because Vininder Singh, our Chief Executive Officer and director, controls a significant number of shares of our voting capital stock, he has effective control over actions requiring stockholder approval.

Upon the completion of this offering, Mr. Vininder Singh, our Chief Executive Officer and a director will beneficially own approximately 48.77% of the Company’s common stock (approximately 47.11% if the over-allotment option is exercised). As a result, Mr. Singh may have the ability to control the outcome of matters submitted to our stockholders for approval, including the election of directors and any merger, consolidation or sale of all or substantially all of our assets. Accordingly, any investors who purchase shares will be minority shareholders and as such will have little to no say in the direction of us and the election of directors. Additionally, this concentration of ownership might harm the market price of our common stock by:

- delaying, deferring or preventing a change in corporate control;
- impeding a merger, consolidation, takeover or other business combination involving us; or
- discouraging a potential acquirer from making a tender offer or otherwise attempting to obtain control of us.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements that involve substantial risks and uncertainties. The forward-looking statements are contained principally in the sections entitled “Prospectus Summary,” “Risk Factors,” “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and “Business,” but are also contained in this prospectus. In some cases, you can identify forward-looking statements by the words “may,” “might,” “will,” “could,” “would,” “should,” “expect,” “intend,” “plan,” “aim,” “objective,” “anticipate,” “believe,” “estimate,” “predict,” “project,” “potential,” “continue,” “ongoing,” “target,” “seek” or the negative of these terms, or other comparable terminology intended to identify statements about the future. Forward-looking statements contained in this prospectus include, but are not limited to, statements about:

- our future financial performance, including our revenue, costs of revenue, operating expenses and profitability;
- the sufficiency of our cash and cash equivalents to meet our liquidity needs;
- our predictions about the property development, digital transformation technology and biohealth businesses and their respective market trends;
- our ability to attract and retain customers in all our business segments to purchase our products and services;
- the availability of financing for smaller publicly traded companies like us;
- our ability to successfully expand in our three principal business markets and into new markets and industry verticals; and
- our ability to effectively manage our growth and future expenses.

We caution you that the foregoing list may not contain all of the forward-looking statements made in this prospectus.

These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements. Although we believe that we have a reasonable basis for each forward-looking statement contained in this prospectus, we caution you that these statements are based on a combination of facts and factors currently known by us and our expectations of the future, about which we cannot be certain.

You should refer to the “Risk Factors” section of this prospectus for a discussion of important factors that may cause our actual results to differ materially from those expressed

or implied by our forward-looking statements. As a result, of these factors, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all. We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by federal securities law.

You should read this prospectus and the documents that we reference in this prospectus and have filed as exhibits to the registration statement, of which this prospectus is a part, completely and with the understanding that our actual future results may be materially different from what we expect. We qualify all of our forward-looking statements by these cautionary statements.

USE OF PROCEEDS

We expect the net proceeds from this offering to be approximately \$7,384,000, or approximately \$8,530,600 if the underwriters exercise their option to purchase additional shares in full, assuming an initial public offering price of \$6.375 per Unit and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$6.375 per Unit of common stock would increase (decrease) the net proceeds to us by approximately \$1,150,000, assuming that the number of Units offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions. We may also increase or decrease the number of Units we are offering. Each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us would increase (decrease) the net proceeds to us by approximately \$5,801,250, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions.

We intend to use the net proceeds received from this offering for general and working capital purposes, including but not limited to investing in research and development, including in our technology, the repayment of debt and for working capital and general corporate purposes

RESEARCH AND DEVELOPMENT. Approximately 25% to initiate development activities on the newly licensed drug programs.

DEBT REDUCTION. Approximately 10% for repayment of debt.

WORKING CAPITAL. The remainder for working capital and other general corporate purposes.

The actual allocation of proceeds realized from this offering will depend upon our operating revenues and cash position and our working capital requirements and may change. The estimated use of proceeds is preliminary and subject to change. We cannot specify with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering.

We will pay all of our own expenses and certain expenses of the underwriters related to this offering. See “Underwriting” on page 53.

DIVIDEND POLICY

Holders of common stock are entitled to receive ratably such dividends, if any, as may be declared by the Board of Directors out of funds legally available. We have not paid any dividends since our inception, and we presently anticipate that all earnings, if any, will be retained for development of our business. Any future disposition of dividends will be at the discretion of our Board of Directors and will depend upon, among other things, our future earnings, operating and financial condition, capital requirements, and other factors.

CAPITALIZATION

The following table sets forth our cash and cash equivalents as of June 30, 2022:

- on an actual basis, reflecting the 1-7 reverse share split;
- on a pro forma basis to give effect to (i) the automatic conversion of the outstanding Convertible Bridge Notes and SAFE Notes and (ii) the conversion of other convertibles notes outstanding, pursuant to an optional conversion, effective immediately prior to the effectiveness of the registration statement of which this prospectus forms a part;
- on a pro forma as adjusted basis to give further effect to the sale of 1,317,647 Units in this offering at an assumed initial offering price of \$6.375 per Unit, after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us.

The pro forma and pro forma as adjusted information below is illustrative only and our capitalization following the completion of this offering is subject to adjustment based on the initial public offering price of the Units and other terms of this offering determined at pricing. You should read the following table in conjunction with the “Use of Proceeds” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations” sections of this prospectus and our consolidated financial statements and related notes appearing elsewhere in this prospectus.

	As of June 30, 2022(Unaudited)		
	Actual	Pro forma ⁽¹⁾	Pro forma as adjusted ⁽²⁾
Cash	\$ 238,453	\$ 238,453	\$ 7,622,453
Debt	\$ 2,154,315	\$ 911,942	\$ 911,942
Stockholders’ equity:			
Preferred stock, par value \$0.00001 per share, 10,000,000 shares authorized, 0 outstanding	\$ -	\$ -	\$ -
Common stock, par value \$0.00001 per share, 100,000,000 shares authorized, 4,021,935 shares outstanding	40	43	56
Additional paid-in capital	\$ 1,046,523	\$ 2,288,894	9,672,881
Accumulated deficits	\$ (2,938,844)	\$ (2,938,844)	\$ (2,938,844)
Total stockholder’s equity (deficit)	\$ (1,892,281)	\$ (649,908)	\$ 6,734,093
Total capitalization	\$ (1,892,281)	\$ (649,908)	\$ 6,734,093

- (1) The number of shares of common stock shown above to be outstanding before and after this offering gives effect to our planned reverse stock split at a ratio of 1-for-7. Includes 283,896 shares of common stock that are issuable upon automatic conversion of Convertible Bridge and SAFE Notes and the voluntary conversion of other convertible notes outstanding upon the completion of the IPO.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$6.375 per share of common stock would increase (decrease) the net proceeds to us by approximately \$1,150,000, assuming that the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us would increase (decrease) the net proceeds to us by approximately \$5,801,250, assuming that the assumed initial public offering price remains the same, and after deducting the estimated underwriting discounts and commissions.

If the underwriters exercise their option to purchase additional shares in full, pro forma cash, additional paid-in capital, total stockholders' (deficit) equity and total capitalization and shares of common stock outstanding as of June 30, 2022 would be \$8,769,053, \$10,819,479, \$7,880,693 and 5,821,125 shares, respectively.

The total number of shares of our common stock reflected in our actual and pro forma information set forth in the table above excludes:

- Warrants to purchase 425,761 shares of common stock at an exercise price of \$2.76 per share, with terms expiring April 1, 2026 through May 3, 2032
- Options to purchase 69,217 shares of common stock at a weighted average exercise price of \$3.06 per share; and
- Warrants to purchase 274,284 shares of common stock at an exercise price of \$0.0007 per share, with terms expiring February 7, 2030; and
- Warrants to purchase 340,185 shares of common stock at an exercise price of \$2.50 per share, with terms expiring August 9, 2031 through August 19, 2031

DILUTION

If you invest in our securities in this offering, your ownership interest will be diluted to the extent of the difference between the initial public offering price per share of our common stock that is a part of the Unit and the pro forma net tangible book value per share of our common stock immediately after this offering. The net tangible book value of our common stock as of June 30, 2022 was \$(1,892,281), or \$(0.47) per share. Net tangible book value per share represents our total tangible assets (which excludes deferred offering costs, which were \$0 at June 30, 2022 less our total liabilities, divided by the number of shares of outstanding common stock after adjusting for the stock split of the shares of existing stockholders).

24

Our pro forma net tangible book value (deficit) as of June 30, 2022 was \$(649,908), or \$(0.15) per share. Pro forma net tangible book value (deficit) represents the amount of our total assets less our total liabilities, after giving effect to the automatic conversion of Convertible Bridge and SAFE Notes and the voluntary conversion of other convertible notes outstanding upon the completion of the IPO.

After giving further effect to the receipt of the net proceeds from our sale of 1,317,647 shares of common stock in this offering, at an assumed initial public offering price of \$6.375 per Unit after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us, our pro forma as adjusted net tangible book value as of June 30, 2022 would have been approximately \$6,734,093 or \$ 1.20 per share. This amount represents an immediate increase in pro forma as adjusted net tangible book value of \$1.35 per share to our existing stockholders and an immediate dilution of \$5.18 per share to new investors purchasing Units in this offering.

We determine dilution per share to investors participating in this offering by subtracting pro forma as adjusted net tangible book value per share after this offering from the assumed initial public offering price per share paid by investors participating in this offering. The following table illustrates this dilution on a per share basis to new investors:

Assumed initial public offering price per Unit	\$	6.375
Net tangible book value per share as of June 30, 2022	\$	(0.47)
Increase in price per share attributable to the conversion of outstanding convertible notes	\$	0.32
Pro forma net tangible book value (deficit) per share as of June 30, 2022	\$	(0.15)
Increase in pro forma as adjusted net tangible book value per share attributable to new investors purchasing shares	\$	1.35
Pro forma as adjusted net tangible book value per share after this offering	\$	1.20
Dilution in net tangible book value per share to new investors in this offering	\$	5.18

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$6.375 per Unit would increase (decrease) the pro forma net tangible book value by \$0.21 per share and increase (decrease) the dilution per share to new investors by \$(0.21) per share, assuming the number of Units offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions.

Similarly, each increase (decrease) of 1,000,000 shares in the number of common stock we are offering would increase (decrease) our pro forma net tangible book value by approximately \$5,800,000, or \$0.70 per share and decrease (increase) the dilution per share to new investors participating in this offering by \$0.70 per share, assuming that the assumed initial public offering price of \$6.375 remains the same, and after deducting the estimated underwriting discounts and commissions.

The pro forma information discussed above is illustrative only and will change based on the actual initial public offering price, number of shares and other terms of this offering determined at pricing.

If the underwriters exercise their option to purchase additional shares in this offering in full at the assumed initial public offering price of \$6.375 Unit and assuming the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting estimated underwriting discounts and commissions and estimated offering expenses, the pro forma net tangible book value would be approximately \$1.40 per share, and the dilution in pro forma net tangible book value per share to investors in this offering would be approximately \$4.97 per share.

The table below summarizes as of June 30, 2022, adjusted pro forma basis described above, the number of shares of our common stock, the total consideration and the average price per share (i) paid to us by existing stockholders and (ii) to be paid by new investors purchasing our common stock in this offering at an assumed initial public offering price of \$6.375 per share, before deducting underwriting discounts and commissions and estimated offering expenses.

	Shares Purchased		Total Consideration		Average Price Per Share
	Number	Percent	Amount	Percent	
Existing stockholders	4,305,831	76.6%	\$ 2,288,937	23.7%	\$ 0.53
New investors	1,317,647	23.4%	\$ 7,384,000	76.3%	\$ 5.60
Total	5,623,478	100.0%	\$ 9,672,937	100.0%	\$ 1.72

In addition, if the underwriters exercise their option to purchase additional shares in full, the number of shares held by existing stockholders will be reduced to 74% of the total

number of shares of common stock to be outstanding upon the closing of this offering, and the number of shares of common stock held by new investors participating in this offering will be further increased by 197,647, or 2.6% of the total number of shares of common stock to be outstanding upon the closing of this offering.

Each \$1.00 increase (decrease) in the assumed initial public offering price of \$6.375 per share of common stock would increase (decrease) total consideration paid by new investors by \$1,199,059, assuming that the number of shares of common stock offered by us, as set forth on the cover page of this prospectus, remains the same, and after deducting the estimated underwriting discounts and commissions. We may also increase or decrease the number of shares we are offering. Each increase (decrease) of 1,000,000 shares in the number of shares of common stock offered by us would increase (decrease) total consideration paid by new investors by \$5,801,250, assuming that the assumed initial price to the public remains the same, and after deducting the estimated underwriting discounts and commissions.

The total number of shares of our common stock reflected in our actual and pro forma information set forth in the table above excludes:

- Warrants to purchase 425,761 shares of common stock at an exercise price of \$2.76 per share, with terms expiring April 1, 2026 through May 2, 2032
- Options to purchase 69,217 shares of common stock at a weighted average exercise price of \$3.06 per share; and
- Warrants to purchase 274,284 shares of common stock at an exercise price of \$0.0007 per share, with terms expiring February 7, 2030; and
- Warrants to purchase 340,185 shares of common stock at an exercise price of \$2.50 per share, with terms expiring August 9, 2031 through August 19, 2031

DESCRIPTION OF CAPITAL STOCK

General

Our authorized capital stock consists of 100,000,000 shares of common stock, par value \$0.00001 per share, and 10,000,000 shares of preferred stock, par value \$0.00001 per share, including 5,500,000 shares of Series A Preferred Stock.

Common Stock

Common stock outstanding

As of October 5, 2022, there were 4,021,935 shares of our common stock outstanding.

Voting rights

Each share of common stock entitles the holder to one vote, either in person or by proxy, at meetings of stockholders. The holders are not permitted to vote their shares cumulatively.

Dividend rights

Holders of common stock are entitled to receive ratably such dividends, if any, as may be declared by the Board of Directors out of funds legally available.

Rights upon liquidation

Upon our liquidation, dissolution or winding up, the holders of our common stock will be entitled to share ratably in the net assets legally available for distribution to stockholders after the payment of all of our debts and other liabilities

Other rights

Holders of our common stock do not have any pre-emptive rights or other subscription rights, conversion rights, redemption or sinking fund provisions.

Preferred Stock

Preferred stock outstanding

As of October 5, 2022, there are 734,493 shares of Series A Preferred Stock issued and outstanding.

Conversion rights

Each holder of Series A Preferred Stock may, from time to time, convert any or all of such holder's shares of Series A Preferred Stock into fully paid and nonassessable shares of Common Stock in an amount equal to ten shares of common stock for each one share of Series A Preferred Stock surrendered.

A holder of shares of Series A Preferred Stock is not entitled to convert shares of Series A Preferred Stock if upon such conversion the number of shares of common stock to be received, together with the number of shares of common stock beneficially owned by the holder and its affiliates on the conversion date, would result in beneficial ownership by the holder and its affiliates of more than 4.99% of the outstanding shares of common stock of the Company on such conversion date

Voting rights

Each holder of Series A Preferred Stock has no voting rights.

Rights upon liquidation

Upon our liquidation, dissolution or winding up, the holders of our Series A Preferred Stock shall not be entitled to any liquidation preference and are to receive any liquidation as if they were converted to common stock.

Warrants

Warrants to Be Issued in the Offering

Overview. The following summary of certain terms and provisions of the Warrants included in the Units offered hereby is not complete and is subject to, and qualified in its entirety by, the provisions of the Warrant Agent Agreement between us and VStock Transfer, LLC, as Warrant Agent, and the form of Warrant, all of which are filed as exhibits to the registration statement of which this prospectus is a part. Prospective investors should carefully review the terms and provisions set forth in the Warrant Agent Agreement, including the annexes thereto, and forms of Warrant.

Exercisability. The Warrants are exercisable at any time after their original issuance and at any time up to the date that is five years after their original issuance. The Warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice and, at any time a registration statement registering the issuance of the shares of common stock underlying the Warrants under the Securities Act is effective and available for the issuance of such shares, or an exemption from registration under the Securities Act is available for the issuance of such shares, by payment in full in immediately available funds for the number of shares of common stock purchased upon such exercise. If a registration statement registering the issuance of the shares of common stock underlying the Warrants under the Securities Act is not effective or available and an exemption from registration under the Securities Act is not available for the issuance of such shares, the holder of a Warrant may, in its sole discretion, elect to exercise the Warrant through a cashless exercise, in which case the holder would receive upon such exercise the net number of shares of common stock determined according to the formula set forth in the Warrant.

Exercise Limitation. A holder of a Warrant will not have the right to exercise any portion of the Warrant if the holder (together with its affiliates and any other person or entity acting as a group) would beneficially own more than 4.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Warrants. However, upon notice from the holder to us, the holder may waive such limitation up to a percentage, not in excess of 9.99%, provided that any increase in such percentage shall not be effective until 61 days following delivery of such notice from the holder to us.

Exercise Price. The exercise price per whole share of common stock purchasable upon exercise of the Warrants is \$[*] per share, which is [*]% of the assumed offering price of the Units. The exercise price of the Warrants and the is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our common stock and also upon any distributions of assets, including cash, stock or other property to our stockholders.

Fractional Shares. No fractional shares of common stock will be issued upon exercise of the Warrants. If, upon exercise of a Warrant, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, round up to the next whole share.

Transferability. Subject to applicable laws, the Warrants may be offered for sale, sold, transferred or assigned without our consent.

Exchange Listing. We have applied for listing of our common stock and the Warrants on The Nasdaq Capital Market under the symbols “BFAI” and “BFAIW,” respectively. No assurance can be given that our listing application will be approved.

Warrant Agent; Global Certificates. The Warrants will be issued in registered form under a Warrant Agent Agreement between the Warrant Agent and us. The Warrants shall initially be represented only by one or more global warrants deposited with the Warrant Agent, as custodian on behalf of The Depository Trust Company (“DTC”) and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC..

Fundamental Transactions. In the event of a fundamental transaction, as described in the Warrants and generally including any reorganization, recapitalization or reclassification of our common stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, or the acquisition of more than 50% of our outstanding common stock, the holders of the Warrants will be entitled to receive upon exercise of the Warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the Warrants immediately prior to such fundamental transaction.

Rights as a Stockholder. Except as otherwise provided in the Warrants or by virtue of such holder’s ownership of shares of our common stock, the holder of a Warrant does not have the rights or privileges of a holder of our Common Stock, including any voting rights, until the holder exercises the Warrant.

Cashless Exercise. If at the time of exercise there is no effective registration statement registering the issuance of the shares of common stock underlying the Warrants (the “Warrant Shares”), then the holder of a Warrant may, in its sole discretion, exercise in whole or in part, and in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the aggregate exercise price, elect instead to exercise the Warrant on a cashless basis. Notwithstanding anything herein to the contrary, the Company shall not be required to make any cash payments or net cash settlement to the Warrant holder in lieu of delivery of the Warrant Shares. Upon a “cashless exercise,” the Warrant holder shall be entitled to receive the number of Warrant Shares equal to the quotient obtained by dividing (A-B) (X) by (A), where:

(A) = the last VWAP immediately preceding the date of exercise giving rise to the applicable “cashless exercise,” as set forth in the applicable Election to Purchase (as defined in the Warrant Agent Agreement) (to clarify, the “last VWAP” will be the last VWAP as calculated over an entire trading day such that, in the event that the Warrant is exercised at a time that the trading market is open, the prior trading day’s VWAP shall be used in this calculation);

(B) = the Exercise Price then in effect for the applicable Warrant Shares at the time of the exercise of the Warrant, as adjusted as set forth herein; and

(X) = the number of Warrant Shares that would be issuable upon exercise of the Warrant in accordance with the terms of the Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

Governing Law; and Exclusive Forum. The Warrants and the Warrant Agent Agreement are governed by New York law. The warrant certificates governing the Warrants provide that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by the warrant certificate (whether brought against a party to the warrant certificate or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York, Borough of Manhattan. The warrant certificates further provide that we and the Warrant holders irrevocably submit to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan, for the adjudication of any dispute under the warrant certificate or in connection with it or with any transaction contemplated by it or discussed in it. Furthermore, we and the Warrant holders irrevocably waive, and agree not to assert in any suit, action or proceeding, any claim that we or they are not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. With respect to any complaint asserting a cause of action arising under the Securities Act or the rules and regulations promulgated thereunder, we note, however, that there is uncertainty as to whether a court would enforce this provision and that investors cannot waive compliance with the federal securities laws and the rules and regulations thereunder. Section 22 of the Securities Act creates concurrent jurisdiction for state and federal courts over all suits brought to enforce any duty or liability created by the Securities Act or the rules and regulations thereunder. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder. As a result, the exclusive forum provision in the Warrant certificates expressly does not apply to suits brought to enforce any duty or liability created by the Exchange Act. We irrevocably waive any right we may have to, and agree not to request, a jury trial for the adjudication of any dispute under, in connection with, or arising out of the Warrant or any transaction contemplated by the Warrant.

Representative’s Warrants

We have agreed to issue to the Representative (or its designed affiliates) share purchase warrants (the “Representative’s Warrants”) to purchase up to a total of 6% of the shares of common stock sold in this offering at an exercise price that is equal to 110% of the public offering price of the shares. The Representative’s Warrants will be non-exercisable for six (6) months after the effective date of the registration statement of which this prospectus forms a part and will expire five (5) years from the closing of this offering. The Representative’s Warrants shall not be redeemable. The Company will register the shares of common stock underlying the Representative’s Warrants under the Securities Act and will file all necessary undertakings in connection therewith. The Representative’s Warrants also provide for customary antidilution protect of the number and price of such warrants and shares of common stock underlying such warrants.

As of October 5, 2022, the Company had 1,044,515 warrants issued and outstanding, each exercisable for one share of common stock at an average exercise price of \$1.93 per

Convertible Bridge Notes and Warrants

In December 2021, the Company initiated a placement of Convertible Bridge Notes seeking \$1.5M in operating capital to ensure the Company had operating capital while it finished the audit of its financial statements and prepared the S-1 registration statement related to the IPO. In December, the Company sold a convertible promissory note to an unrelated party for \$25,000. On April 11, 2022, the Company entered into an exclusive engagement agreement with WallachBeth Capital LLC in connection with a proposed private and/or public offering by the Company. As discussed in the notes to our consolidated financial statements, a significant component of the Company's plan to secure capital is the intention of the Company to seek to be listed on a national exchange through an initial public offering ("IPO") of its common stock. WallachBeth was engaged in this regard and on April 28, 2022, the Company received net proceeds of approximately \$775,000 from the sale of Convertible Bridge Notes and warrants to several institutional investors, as well as certain individual accredited investors. In addition to the money received on April 28th, the Company also received \$100,000 from the sale of a Convertible Bridge Note and warrants to a related party in early April on the same terms. The Company received additional proceeds of \$25,000 from the sale of a Convertible Bridge Note and warrants to an unrelated party in early September on the same terms.

As of October 5, 2022, the Company had approximately \$1.13M in face value of Convertible Bridge Notes outstanding. The notes were sold with a 10% original Issue discount and convert at the IPO at the lesser of a 20% discount to the IPO price or a \$27 million pre-money valuation. The purchasers also received a warrant for each share of common stock to be issued upon conversion. The warrant exercise price will be 110% of the per share IPO price.

Anti-Takeover Provisions of Nevada Law, or Certificate of Incorporation and our Bylaws

Our certificate of incorporation and bylaws contain certain provisions that may have the effect of delaying, deferring or preventing a party from acquiring control of us and encouraging persons considering unsolicited tender offers or other unilateral takeover proposals to negotiate with our Board of Directors rather than pursue non-negotiated takeover attempts. According to our bylaws and certificate of incorporation, neither the holders of our common stock nor the holders of our preferred stock have cumulative voting rights in the election of our directors. The combination of the present ownership by a few stockholders of a significant portion of our issued and outstanding common stock and lack of cumulative voting makes it more difficult for other stockholders to replace our Board of Directors or for a third party to obtain control of our Company by replacing our Board of Directors.

The following provisions of the Nevada Revised Statutes ("NRS") could, if applicable, have the effect of discouraging takeovers of our company.

Transactions with Interested Stockholders. The NRS prohibits a publicly-traded Nevada company from engaging in any business combination with an interested stockholder for a period of three years following the date that the stockholder became an interested stockholder unless, prior to that date, the Board of Directors of the corporation approved either the business combination itself or the transaction that resulted in the stockholder becoming an interested stockholder.

An "interested stockholder" is defined as any entity or person beneficially owning, directly or indirectly, 10% or more of the outstanding voting stock of the corporation and any entity or person affiliated with, controlling, or controlled by any of these entities or persons. The definition of "business combination" is sufficiently broad to cover virtually any type of transaction that would allow a potential acquirer to use the corporation's assets to finance the acquisition or otherwise benefit its own interests rather than the interests of the corporation and its stockholders.

In addition, business combinations that are not approved and therefore take place after the three year waiting period may also be prohibited unless approved by the board of directors and stockholders or the price to be paid by the interested stockholder is equal to the highest of (i) the highest price per share paid by the interested stockholder within the 3 years immediately preceding the date of the announcement of the business combination or in the transaction in which he or she became an interested stockholder, whichever is higher; (ii) the market value per common share on the date of announcement of the business combination or the date the interested stockholder acquired the shares, whichever is higher; or (iii) if higher for the holders of preferred stock, the highest liquidation value of the preferred stock.

Acquisition of a Controlling Interest. The NRS contains provisions governing the acquisition of a "controlling interest" and provides generally that any person that acquires 20% or more of the outstanding voting shares of an "issuing corporation," defined as Nevada corporation that has 200 or more stockholders at least 100 of whom are Nevada residents (as set forth in the corporation's stock ledger); and does business in Nevada directly or through an affiliated corporation, may be denied voting rights with respect to the acquired shares, unless a majority of the disinterested stockholder of the corporation elects to restore such voting rights in whole or in part.

The statute focuses on the acquisition of a "controlling interest" defined as the ownership of outstanding shares sufficient, but for the control share law, to enable the acquiring person, directly or indirectly and individually or in association with others, to exercise (i) one-fifth or more, but less than one-third; (ii) one-third or more, but less than a majority; or (iii) a majority or more of the voting power of the corporation in the election of directors.

The question of whether or not to confer voting rights may only be considered once by the stockholders and once a decision is made, it cannot be revisited. In addition, unless a corporation's articles of incorporation or bylaws provide otherwise (i) acquired voting securities are redeemable in whole or in part by the issuing corporation at the average price paid for the securities within 30 days if the acquiring person has not given a timely information statement to the issuing corporation or if the stockholders vote not to grant voting rights to the acquiring person's securities; and (ii) if voting rights are granted to the acquiring person, then any stockholder who voted against the grant of voting rights may demand purchase from the issuing corporation, at fair value, of all or any portion of their securities.

The provisions of this section do not apply to acquisitions made pursuant to the laws of descent and distribution, the enforcement of a judgment, or the satisfaction of a security interest, or acquisitions made in connection with certain mergers or reorganizations.

Listing

We intend to apply to list our common stock and Warrants on the Nasdaq Capital Market under the symbol "BFAI" and "BFAIW," respectively. No assurance can be given that our application will be approved. The consummation of this offering is conditioned on obtaining Nasdaq approval.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is VStock Transfer, LLC.

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATION

The following discussion and analysis of our financial condition and results of operations should be read in conjunction with the section titled "Selected Consolidated Financial and Other Data" and the consolidated financial statements and related notes thereto included elsewhere in this prospectus. This discussion contains forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those discussed in the section titled "Risk Factors" included elsewhere in this prospectus.

OVERVIEW

Bullfrog AI Holdings, Inc. was incorporated in the State of Nevada on February 6, 2020. Bullfrog AI Holdings, Inc. is the parent company of Bullfrog AI, Inc. and Bullfrog AI Management, LLC. which were incorporated in Delaware and Maryland, in 2017 and 2021, respectively. Operations are currently conducted through BullFrog AI Holdings,

Inc., which began operations on February 6, 2020. We are a company focused specifically on advanced Artificial Intelligence / Machine Learning (AI/ML) analysis of complex data in the advancement of medicine. Our AI/ML platform (trade name: bfLEAP™) was created from technology originally developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL).

In February of 2018, BullFrog AI Holdings secured the original exclusive, world-wide, royalty-bearing license from JHU-APL for the technology. The license covers three (3) issued patents, one (1) new provisional patent application, non-patent rights to proprietary libraries of algorithms and other trade secrets including modifications and improvements. On July 8, 2022, a new license was secured that supersedes this license. Our objective is to utilize our for a precision medicine approach toward drug development with biopharmaceutical collaborators, as well as our own internal clinical development programs. We believe the bfLEAP™ platform is ideally suited for evaluating pre-clinical and clinical trial data generated in translational research and clinical trial settings that lead to faster, less expensive drug approvals.

Our aim is to improve the odds of success in each stage of developing medicine, ranging from early pre-clinical through late-stage clinical development. Our ultimate objective is to utilize bfLEAP™ to enable the success of ongoing clinical trials or rescue late-stage failed drugs (i.e., Phase 2 or Phase 3 clinical trial failures) for development and divestiture; although, we will also consider collaborations for earlier stage drugs. We hope to accomplish this through strategic acquisitions of current clinical stage and failed drugs for in-house development, or through strategic partnerships with biopharmaceutical industry companies.

On July 8, 2022, the company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the additional technology. The new license provides additional intellectual property rights including patents, copyrights and knowhow to be utilized under the Company's bfLEAP™ analytical AI/ML platform. In consideration of the new license, the Company issued to JHU-APL 39,879 shares of common stock. In September 2020 and October of 2021, the Company executed Amendments to the original license which represents improvements and new advanced analytics capabilities. This license supersedes the original license. In consideration of the rights granted to the Company under the original License Agreement, the Company granted JHU 178,571 warrants exercisable to purchase shares of common stock at \$2.10 per share. Under the terms of the new License Agreement, JHU will be entitled to eight (8%) percent of net sales for the services provided by the Company to other parties and 3% for internally development drug projects in which the JHU license was utilized. The new license also contains tiered sub licensing fees that start at 50% and reduce to 25% based on revenues. In addition, the Company is required to pay JHU an annual maintenance fee of \$1,500. Minimum annual payments are set to be \$30,000 for 2022, \$80,000 for 2023, and \$300,000 for 2024 and beyond, all of which are creditable by royalties.

We will continue to evolve and improve bfLEAP™, and some of the proceeds from this offering may be used toward that effort either in-house or with development partners like The Johns Hopkins University Applied Physics Lab. We plan to leverage our proprietary AI/ML platform developed over several years at one of the top innovation institutions in the world which has already been successfully applied in multiple sectors.

We are preparing to ramp our business using funds from this offering and through our partnerships and relationships. We currently have a strategic relationship with a leading rare disease non-profit organization for AI/ML analysis of late-stage clinical data. We have also acquired the rights to a series of preclinical and early clinical drug assets from universities, as well as a strategic collaboration with a world-renowned research institution to create a HSV1 viral therapeutic platform to engineer immunotherapies for a variety of diseases. We have signed exclusive worldwide License Agreements with Johns Hopkins University for a cancer drug that targets glioblastoma (brain cancer), pancreatic cancer, and others. We have also signed an exclusive worldwide license from George Washington University for another cancer drug that targets hepatocellular carcinoma (liver cancer), and other liver diseases. Additionally, we intend to gain access to later-stage clinical assets through partnerships or the acquisition of rights to failed therapeutic candidate for drug rescue. In certain circumstances, we intend to conduct late-stage clinical trials in an effort to rescue therapeutic assets that previously failed. In these cases there will be a requirement for a drug supply and regulatory services to conduct clinical trials. The success of our clinical development programs will require finding partners to support the clinical development, adequate availability of raw materials and/or drug product for our R&D and clinical trials, and, in some cases, may also require establishment of third-party arrangements to obtain finished drug product that is manufactured appropriately under (GMP) industry-standard guidelines, and packaged for clinical use or sale. Since we are a company focused on using our AI technology to advance medicines, our clinical development programs will also require, in some cases, establishment of third-party relationships for execution and completion of clinical trials. Over the next 15-18 months, the Company expects to spend approximately \$2.1 million on preclinical IND enabling activities and on R&D to enable future clinical trials evaluating our drug assets for new disease indications.

Our Strategy

The Company has a unique strategy designed to reduce risk and increase the frequency of cash flow. The first part of the strategy is to generate revenues through strategic relationships with biopharma companies. These relationships will be structured as a combination of fees and intellectual property based on the specific scope of the engagement. The objective of these engagements will be to uncover valuable insights to reduce the risk and/or increase the speed of the drug development process which can be achieved through manual or automated integration into the client's work flow or analysis of discrete data sets.

The second part of our strategy involves acquiring the rights to drugs, using our bfLEAP technology to design a precision medicine trial, conduct the trial, and sell the asset. This approach may also apply to earlier phases in the drug development process such as discovery and preclinical. In any case, the objective is to create near term value and exit and monetize as quickly as possible, preferably within approximately 30 months

Results of Operations

For the years ended December 31, 2021 and 2020

Through the end of 2021, the Company has not recorded any revenues and has an accumulated deficit of approximately \$1,600,000. Net loss from operations in 2021 was approximately \$600,000 versus \$340,000 in 2020. The 2021 increase reflects the costs of engaging advisors and consultants and other costs associated with readying the Company for the IPO including the costs related to auditing the Company's past and current financial statements. Cash used in operations in 2021 was approximately \$382,000 versus approximately \$212,000 in 2020 and cash inflows from financing activities in 2021 was approximately \$387,000 versus approximately \$210,000 in 2020.

For the periods ended June 30, 2022 and 2021

Through June 30, 2022, the Company has not recorded any revenues and has an accumulated deficit of approximately \$2,900,000. Net loss from operations for the six months ended June 30, 2022 was approximately \$1,342,000 versus \$240,000 in the 2021 period. The 2022 increase reflects the costs of engaging advisors and consultants and other costs associated with readying the Company for the IPO including the acquisition of two drug development programs, the costs related to auditing the Company's past and current financial statements. Cash used in operations in the six months ended June 30, 2022 was approximately \$612,000 versus approximately \$31,000 in the same period in 2021.

For the period end June 30, 2022 our Consolidated Statement of Operations reflects operating expenses of \$1,232,000 versus \$242,000 for the period ended June 30, 2021. The increase reflects the expansion of our management team, the acquisition of two drug development programs as well as an increase in professional services related to the intended IPO. Also included in this increase in the period ended June 30, 2022 is stock based compensation of \$239,000 versus \$73,000 in the 2021 period. The increase reflects the increase in the value of the shares of the Company's common stock to \$4.76 per share versus \$0.306 per share in 2021. The increased value reflects the license of two drug development candidates from universities in early 2022 and other developments.

Liquidity and Capital Resources

In 2020, the Company received proceeds of approximately \$210,000 from the sale of a convertible note for \$200,000 and approximately \$10,000 under the SBA PPP loan program. In 2021, we received net proceeds of approximately \$387,000, primarily from the sale of a SAFE note (\$150,000) and a convertible promissory note (\$99,900) and three unsecured promissory notes (\$49,000) to a related party. In addition, in July and December 2021, the Company sold convertible bridge notes to two unrelated parties and received net proceeds of approximately \$88,000. Through June 30, 2022 the Company received net proceeds from the sale of Convertible Bridge Notes of approximately \$898,000 and repaid the unsecured promissory notes sold in 2021 in the amount of \$49,000.

In anticipation of the initial public offering, a management team with extensive deep industry experience has been identified and engaged as employees and consultants to assist the Company in preparing for the initial public offering and subsequently, to operate and function as a public company. Through 2021, the Company primarily operated with only one full time employee and a series of consultants. During this period the primary activities included: technology evaluation, acquisition and validation, capital acquisition and business development activities which in general, have readied the Company for contract services while exploring strategic partnering and asset acquisition. The Company expended approximately \$88,000 and \$206,000 on these activities in 2019 and 2020, respectively. The majority of this was paid to employees and consultants as compensation. In 2021, the Company used approximately \$382,000 on operating activities including approximately \$203,000 in salaries and approximately \$150,000 on professional services and fees directly related to preparation for the intended IPO. The Company also made payments totaling \$25,000 under two evaluation/option agreements for the two drug development programs licensed in 2022. In 2022, three consultants engaged by the Company became part time employees and the Company now has four employees. For the six months ended June 30, 2022, the Company used approximately \$612,000 on operating activities versus approximately \$31,000 for the same period in 2021. The 2022 cash use included approximately \$244,000 in salaries, approximately \$291,000 in consulting and professional fees including legal, accounting and auditing fees as well as consulting fees for operational activities and approximately \$282,000 in technology license fees.

Through the period ended June 30, 2022, the Company has an accumulated deficit of approximately \$2,900,000 and funded its operations through the sale of common stock and debt. We anticipate that our expenses will increase in the future to support our service offerings, clinical and pre-clinical research and development activities associated with strategic partnering and collaborations as we well as acquired product candidates and the increased costs of operating as a public company. These increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, lawyers and accountants, among other expenses. Additionally, we anticipate increased costs associated with being a public company including expenses related to services associated with maintaining compliance with exchange listing and Securities and Exchange Commission requirements, insurance, and investor relations costs.

We will need substantial additional funds while we develop our services business and to significantly advance development of our licensed programs. The Company's existence is dependent upon management's ability to develop profitable operations and to obtain additional funding sources, including the proceeds from this offering.

These factors raise substantial doubt about our ability to continue as a going concern.

The Company's current operations include BullFrog AI, Inc. and BullFrog Management, LLC. which are wholly owned subsidiaries of BullFrog AI Holdings, Inc., which is a holding company that depends upon the sale of its securities and cash generated through its subsidiaries to fund consolidated operations.

In April 2022, the Company received net proceeds of approximately \$898,000 from the sale of convertible promissory notes and warrants. The Company continues to seek additional capital to expand and fund operations into the planned IPO which is targeted for this summer.

Critical Accounting Policies

In Footnote 3 of our Audited Financial Statements for the year ended December 31, 2021 found elsewhere in this filing, we included a discussion of the most critical accounting policies used in the preparation of our financial statements. There has been no material change in the policies and estimates used in the preparation of our financial statements since the completion of the 2021 audit.

Off-Balance Sheet Arrangements

We do not have any off-balance sheet arrangements, as such term is defined in Item 303(a)(4) of Regulation S-K.

Financial operations overview

Revenue

We did not produce any revenues through June 2022, we do anticipate generating our first revenues in late 2022 from our services related to the strategic relationship with a leading NGO and from a pharmaceutical customer. We currently have multiple discussions underway and anticipate, although there can be no assurance, entering into additional service agreements and business relationships in 2022.

Operating Expenses

We plan to classify our operating expenses into two categories: research and development and general and administrative. To date, our financial statements have not reflected research and development expenses as the first of our two acquired drug development programs was not licensed until early 2022 and we have not yet initiated development activities. Prior to 2022, most of our activities were related to: technology evaluation, acquisition and validation, capital acquisition and business development activities which in general, which we believe have readied the Company for contract services while exploring strategic partnering and asset acquisition. These activities and related expenditures have been recorded and reported as General and Administrative in our Financial Statements. We expect this will change in 2022 as we initiate development activities directed towards initiating preclinical IND enabling studies.

Research and Development Costs and Expenses

Research and development costs and expenses consist primarily of fees paid to external service providers. We anticipate our research and development costs could become significant as we execute on our business plan and begin conducting preclinical research and development activities directed at filing Investigational New Drug (IND) applications for our licensed drug development programs describes in this filing, as well as under strategic partnerships and for other drug development programs we may acquire. Research and development expenses are recorded in operating expenses in the period in which they are incurred. Estimates will be used in determining the expense liability of certain costs where services have been performed but not yet invoiced. We will monitor levels of performance under each significant contract for external service providers, including the extent of patient enrollment and other activities through communications with the service providers to reflect the actual amount expended.

General and Administrative Expenses

In anticipation of the initial public offering, a management team with deep industry experience has been identified and engaged as employees and consultants to assist the Company in preparing for the initial public offering and subsequently, to operate and function as a public company. Through 2021, the Company primarily operated with only one full time employee and a series of consultants. In 2022, three of the consultants became part time employees of the Company. During this period, the primary activities included: technology evaluation, acquisition and validation, capital acquisition and business development activities which in general, have readied the Company for contract services while exploring strategic partnering and asset acquisition as noted above. The Company's financial statements reflect an accumulated deficit of approximately \$2,900,000 as a result of these activities including the licensing costs for bLEAP™. Our 2021 Statement of Operation reflect approximately \$555,000 in operating expenses in 2021 versus approximately \$260,000 in 2020. For the period ended June 30, 2022 the Statement of Operation reflects approximately \$1,232,000 in operating expenses versus

\$242,000 in the 2021 period. The increase reflects the Company's preparation for its IPO including legal and accounting costs related to the audit of the Company's 2019 – 2021 financial statements. The Company also engaged the management team noted above which resulted in increased consulting and stock-based compensation expenses in 2021 and 2022. The 2022 Consolidated Statement of Operations reflects Salaries of approximately, \$244,000, Consulting and other professional fees of approximately \$291,000, Stock based compensation of \$239,000 and \$282,000 to license two drug development programs from universities. For the 2021 six-month period these amounts were approximately \$94,000, \$36,000, \$73,000 and \$0. We anticipate that our general and administrative expenses will increase in the future to support our service offerings, clinical and pre-clinical research and development activities associated with strategic partnering and collaborations as well as any newly acquired product candidates and the increased costs of operating as a public company. These increases will likely include increased costs related to the hiring of additional personnel and fees to outside consultants, lawyers and accountants, among other expenses. Additionally, we anticipate increased costs associated with being a public company including expenses related to services associated with maintaining compliance with exchange listing and Securities and Exchange Commission requirements, insurance, and investor relations costs.

BUSINESS

Our Corporate History and Background

BullFrog Holdings AI, Holdings, Inc. was incorporated in the State of Nevada on February 6, 2020. Our principal business address is 325 Ellington Blvd, Unit 317, Gaithersburg, MD 20878. All of our operations are currently conducted through BullFrog AI Holdings, Inc. BullFrog AI, Inc., is a wholly owned subsidiary has the sole purpose of housing and protecting all of the organization's intellectual property, was acquired through a share exchange. BullFrog AI Management, LLC is a wholly owned subsidiary that handles all HR and payroll activities.

Acquisition of BullFrog AI

In March of 2020, BullFrog AI, Inc. received an investment from TEDCO - the Technology Development Corporation of Maryland, a State of Maryland Investment Fund – pursuant to the issuance of a \$200,000 convertible note with an 18-month term, 6% annual interest rate, and a 20% discount. In June of 2020, BullFrog AI Holdings, Inc. acquired BullFrog AI, Inc. via a 1:1 share exchange. Immediately prior to the share exchange, each authorized common share of BullFrog AI, Inc. was split into 25 shares of common stock. Share amounts in our financial statements for 2021 and 2020 have been adjusted to reflect this forward share split and shares exchange. All of our operations are currently conducted through BullFrog AI Holdings, Inc. BullFrog AI, Inc., is a wholly owned subsidiary, has the sole purpose of housing and protecting all of the organization's intellectual property. BullFrog AI Management, LLC is a wholly owned subsidiary that handles all HR and payroll activities Pursuant to the agreement, 24,223,975 shares of the Company's common stock were issued to the shareholders of BullFrog AI, Inc. in exchange for 100% of the ownership interests of BullFrog AI, Inc. Upon completion of the Exchange, BullFrog AI, Inc. became the Company's wholly-owned subsidiary and the shareholders of BullFrog AI, Inc. own a 100% controlling interest in the Company. As a result, BullFrog AI, Inc. became BullFrog AI Holdings, Inc's wholly owned subsidiary and assumed a total of \$330,442 in net liabilities. All of the entities were controlled both before and after the transactions by the same controlling shareholder. This transaction is being accounted for as a common control transaction and all entities are being presented as if the transactions took place at the beginning of the earliest period presented. Share amounts in our financial statements for 2021 and 2020 have been adjusted to reflect this forward share split and shares exchange. BullFrog AI, Inc was incorporated in 2017 as discussed in the previous notes. All of our operations are currently conducted through BullFrog AI Holdings, Inc.

31

BullFrog AI Corporate History

BullFrog AI, Inc. was incorporated in the State of Delaware on August 25, 2017. Vininder Singh is the founder, CEO and chairman of BullFrog AI

Our Strategy

We plan to achieve our business objectives by enabling the successful development of drugs and biologics using a precision medicine approach via our proprietary artificial intelligence platform bfLEAP. We will execute our plan by doing all or any of the following: partnering with biopharmaceutical companies in a fee for service model to assist and enable them with their drug development programs, acquiring rights to and rescuing drugs that have failed FDA review following pivotal Phase 2 or Phase 3 clinical trials (we refer to this rescue process as "drug rescue"), and acquiring rights to drugs that are in early stage clinical trials and have not failed, and discovering new drugs and biologics.

The process for enhancing developing and late-stage failed drugs is to:

- acquire the rights to the failed drug from a biopharmaceutical industry company or university,
- use the proprietary bfLEAP™ AI/ML platform to determine a multi-factorial profile for a patient that would best respond to the drug,
- Rapidly conduct a clinical trial likely with a partner to validate the drug's use for the defined "high-responder" population; and
- Divest/sell the rescued drug asset with new information back to the pharma industry, following positive results of the clinical trial.

We also plan to deploy this strategy for all discovery and early stage clinical candidates. The common objective is to monetize our assets as quickly as possible with no current plan to commercialize any asset. As part of our strategy, we will continue evolving our intellectual property, analytical platform and technologies, build a large portfolio of drug candidates, and implement a model that reduces risk and increases the frequency of cash flow from rescued drugs. This strategy will include strategic partnerships, collaborations, and relationships along the entire business value chain.

We did not produce any revenues through 2021, we do anticipate generating our first revenues in late 2022 from our services related to the strategic relationship with a leading NGO and a pharmaceutical company.

To date, we have not conducted clinical trials on any pharmaceutical drugs and our platform has not been used to identify a drug candidate that has received regulatory approval for commercialization. However, we currently have a strategic relationship with a leading rare disease non-profit organization for AI/ML analysis of late stage clinical data. We have also positioned the Company to acquire the rights to a series of preclinical and early clinical drug assets from universities, as well as a strategic collaboration with a world renowned research institution to create a HSV1 viral therapeutic platform to engineer immunotherapies for colorectal cancer. In addition, we have signed exclusive world-wide license agreements with Johns Hopkins University for a cancer drug that targets glioblastoma (brain cancer), pancreatic cancer, and other cancers. We have also signed an exclusive worldwide license with George Washington University for another cancer drug that targets hepatocellular carcinoma (liver cancer), and other liver diseases.

Our platform was originally developed by the JHU-APL. JHU-APL uses the same technology for applications related to national defense. Over several years, the software and algorithms have been used to identify relationship, patterns, and anomalies, and make predictions that otherwise may not be found. These discoveries and insights provide an advantage when predicting a target of interest, regardless of industry or sector. We have applied the technology to various clinical data sets and have identified novel relationships that may provide new intellectual property, new drug targets, and other valuable information that may help with patient stratification for a clinical trial thereby improving the odds for success. The platform has not yet aided in the development of a drug that has reached commercialization. However, we own one drug candidate that has completed a phase 1 trial and a second candidate that is in the preclinical stages. Our aim is to use our technology on current and future available data to help us better determine the optimal path for development

Contract Services

Our fee for service partnership offering is designed for biopharmaceutical companies, as well as other organizations, of all sizes that have challenges analyzing data throughout the drug development process. We provide the customer with an analysis of large complex data sets using our proprietary Artificial Intelligence / Machine Learning platform called bfLEAP™. This platform is designed to predict targets of interest, patterns, relationships, and anomalies. Our service model involves a cash fee plus the potential for rights to new intellectual property generated from the analysis, which can be performed at the discovery, preclinical, or clinical stages of drug development.

Collaborative Arrangements

We will enter into collaborative arrangements with pharmaceutical companies who have drugs that have failed late Phase 2 or Phase 3 trials. Our revenue will be based on achieving certain milestones as determined by each specific arrangement.

Acquisition of Rights to Certain Drugs

In certain circumstances, we may also acquire rights to drugs that are in early stage clinical trials, use our technology to produce a successful later stage precision medicine trial, and divest the asset. The same process may apply to the discovery of new drugs.

Our Products

<u>Product/Platform</u>	<u>Description</u>	<u>Current Market</u>
bLEAP™ – AI/ML platform for analysis of preclinical and/or clinical data	AI/ML analytics platform derived from technology developed at Johns Hopkins University Applied Physics Laboratory and licensed by the Company.	Biotechnology and pharmaceutical companies and other organizations.
siRNA	siRNA targeting Beta2-spectrin in the treatment of human diseases developed at George Washington University licensed by the Company	Hepatocellular carcinoma (HCC), treatment of obesity, non-alcoholic fatty liver disease, and non-alcoholic steatohepatitis. Has not yet initiated clinical testing.
Mebendazole	Improved formulation of Mebendazole developed at Johns Hopkins University and licensed by the Company	Glioblastoma. Has begun the process of clinical testing but has not received regulatory approval for commercialization.

On January 14, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from George Washington University (GWU) for rights to use siRNA targeting Beta2-spectrin in the treatment of human diseases, including hepatocellular carcinoma (HCC). The license covers methods claimed in three US and worldwide patent applications, and also includes use of this approach for treatment of obesity, non-alcoholic fatty liver disease, and non-alcoholic steatohepatitis. This program is currently in the preclinical stage of development.

Non-alcoholic fatty liver disease (NAFLD) is a condition in which excess lipids, or fat, build up in the liver. This condition, which is more common in people who have obesity and related metabolic diseases including type 2 diabetes, affects as many as 24% of adults in the US and is associated with risk of progression to more serious conditions, including non-alcoholic steatohepatitis (NASH), with associated liver inflammation and fibrosis, and hepatocellular carcinoma (HCC). Evidence in animal models of obesity suggest that a protein called β 2-spectrin may play a key role in lipid accumulation, tissue fibrosis, and liver damage, and targeting expression or activity of this protein may be a useful approach in treating NASH and liver cancer (Rao et al., 2021).

On February 22, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from Johns Hopkins University (JHU) for the use of an improved formulation of Mebendazole for the treatment of any human cancer or neoplastic disease. This formulation shows potent activity in animal models of different types of cancer, and has been evaluated in a Phase I clinical trial in patients with high-grade glioma (NCT01729260). The trial, an open-label dose-escalation study, assessed the safety and efficacy (as measured by progression free survival and overall survival) of the improved formulation with adjuvant temozolomide in 24 patients with newly diagnosed gliomas. Investigators observed no dose-limiting toxicity in patients receiving all but the highest tested dose (200mg/kg/day). Four of the 15 patients receiving the maximum tested dose of 200mg/kg/day experienced dose-limiting toxicity, all of which were reversed by decreasing or eliminating the dose given. There were no serious adverse events attributed to mebendazole at any dose during the trial. The Company is currently formulating a strategy to find a partner to conduct additional clinical trials with this asset to enable evaluation of safety and efficacy in humans.

We are able to leverage our drug rescue business by leveraging a powerful and proven AI/ML platform (trade name: bLEAP™) initially derived from technology developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL). The bLEAP™ analytics platform is a potentially disruptive tool for analysis of pre-clinical and/or clinical data sets, such as the robust pre-clinical and clinical trial data sets being generated in translational R&D and clinical trial settings. The input data for bLEAP™ can include raw data (preclinical and/or clinical readouts), categorical data, sociodemographic data of patients, and various other inputs. Thus, the bLEAP™ platform is capable of capturing the “human experience” of patients in an unbiased manner, and contextualizing it against other disparate data sources from patients (e.g. molecular data, physiological data, etc.) for less biased and more meaningful conclusions (i.e. more ethical AI/ML). It is also uniquely scalable – the bLEAP™ platform is able to perform analysis on large, high-volume data sets (i.e. ‘big data’) and also able to analyze highly disparate “short and wide” data as well. In terms of visualization, bLEAP™ is able to integrate with most commonly used visualization tools for graph analytics.

The combination of a) scalable analytics (i.e., large data or short/wide data), b) state-of-the-art algorithms, c) unsupervised machine learning, and d) streamlined data ingestion/visualization makes bLEAP™ one of the most flexible and powerful new platforms available on the market.

Our Platform Technology

We will continue to evolve and improve bLEAP™, and some of the proceeds from this offering may be used toward that effort either in-house or with development partners like The Johns Hopkins University Applied Physics Lab. The bLEAP™ platform is based on an exclusive, world-wide license granted by Johns Hopkins University.

We plan to leverage our proprietary AI/ML platform developed over several years at one of the top innovation institutions in the world which has already been successfully applied in multiple sectors. In terms of underlying intellectual property, we have secured a worldwide exclusive license from JHU-APL for the technology – this license covers 3 issued patents, as well as 1 new provisional patent application, non-patent rights to proprietary libraries of algorithms and other trade secrets, and also includes modifications and improvements. In addition, we have a unique business model designed to reduce risk and increase the frequency of cash flow.

The Company has recently licensed new technology from Johns Hopkins University Applied Physics Lab to evolve the bLEAP platform to bLEAP 2.0. This new and improved platform will enable more robust analysis of data with faster and higher precision prediction of the most important variables for identifying patient response to a drug.

Going forward, the Company will continue to evolve the platform and either develop or acquire new capabilities and technologies. These development efforts may be in house or in collaboration with an existing or new technology partners. The Company plans on hiring talent in data science and software development to bolster its in house capabilities.

Summary for CATIE Schizophrenia Case Study

BullFrog AI worked with the Lieber Institute for Brain Development to analyze data from the landmark CATIE Trials. The CATIE trials were the largest trials ever conducted

for anti-psychotic medications. BullFrog analyzed CATIE data from ~200 schizophrenia patients, with a library of almost 1 million genetic data points for each patient, more than 200 non-genetic attributes per patient, and 4 different medications used in the trial. For each of the four medications used, bLEAP™ analysis revealed new, previously unknown relationships between individual genetic variants and negative patient symptoms. The genetic loci identified represent potential druggable targets, as well as potential stratifying criteria for future clinical trials in schizophrenia.

We performed another analysis on the data using our new advanced clustering algorithms bLEAP 2.0 but focused on one particular drug named Olanzapine. Our bLEAP™ 2.0 analytical results identified previously unknown, multi-dimensional associations among newly identified genetic variants, drug clearance, clinical trial sites, and clinical outcome variables in schizophrenia patients.

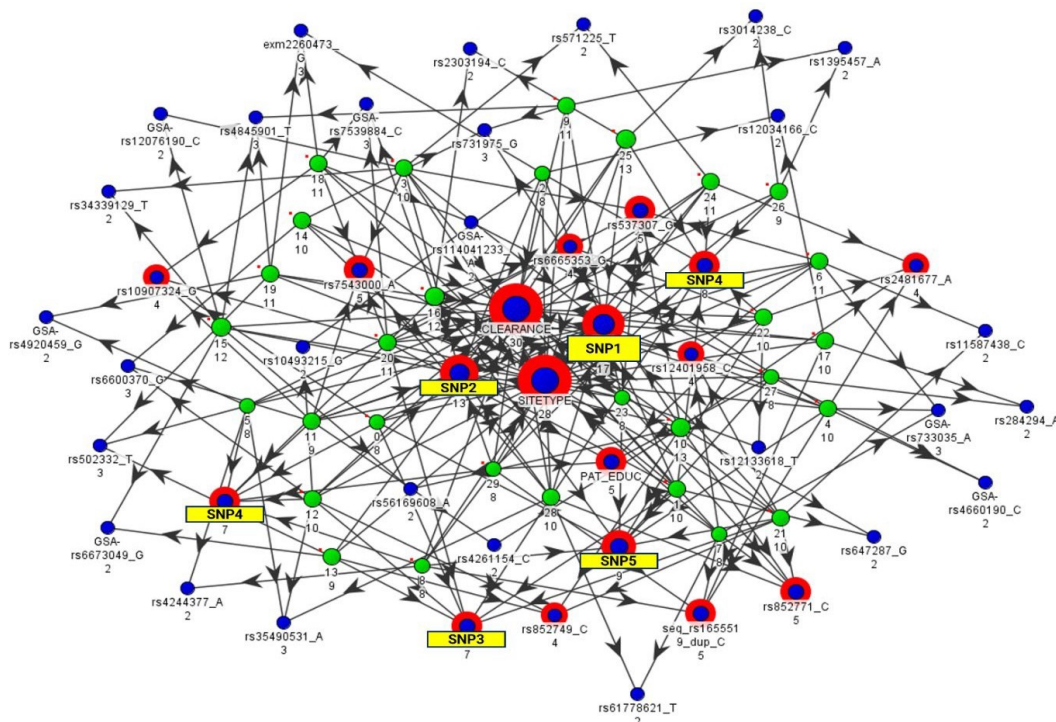
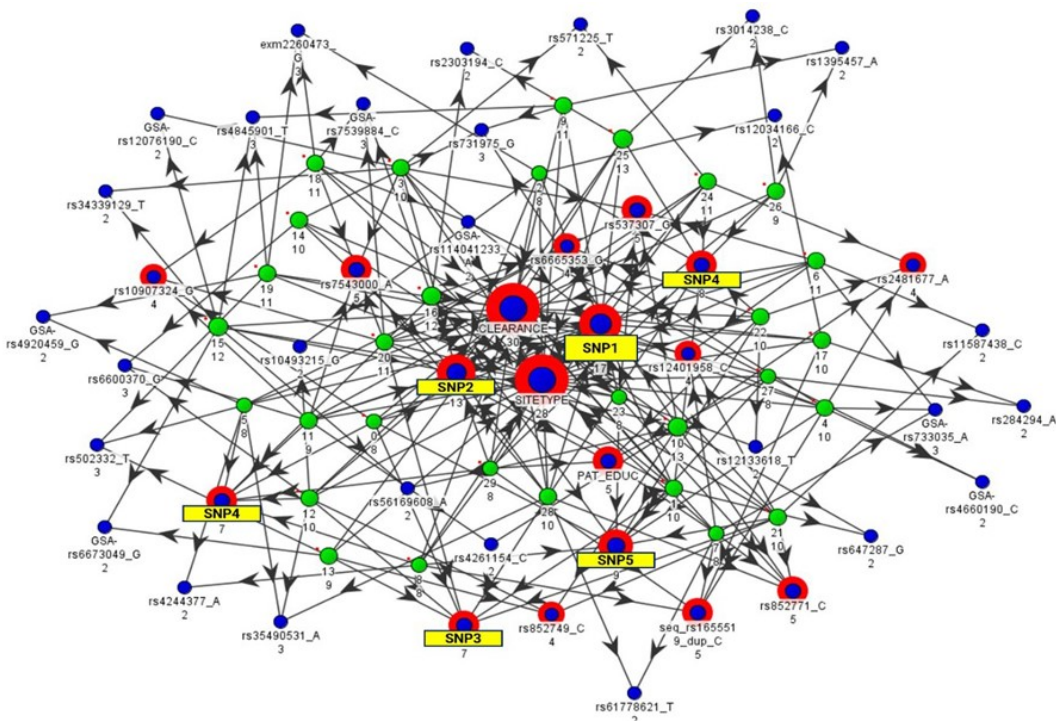
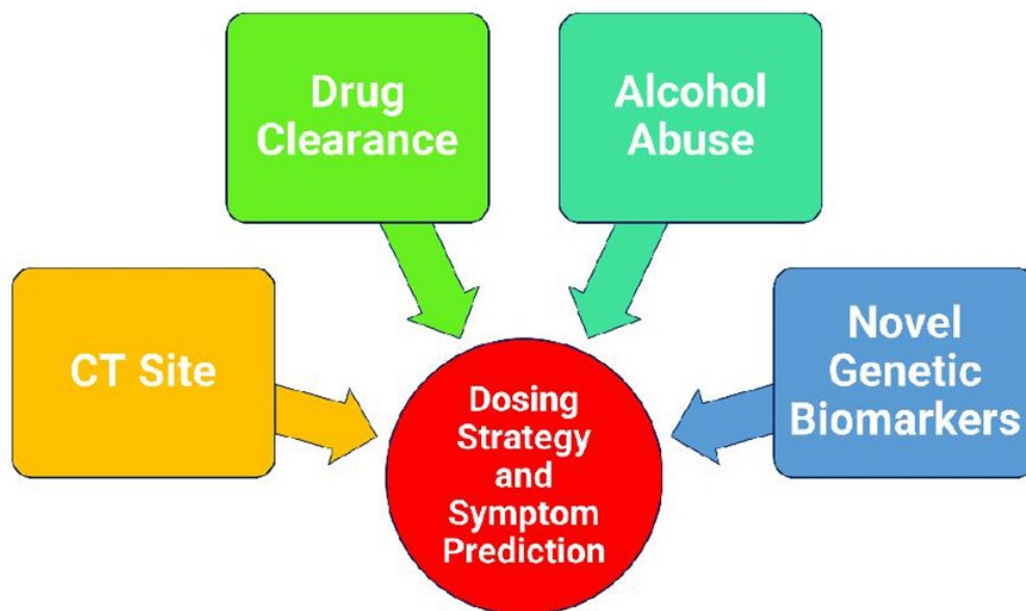


FIGURE 1 – bLEAP™ Analytical Map

Each green node represents a different sampling of the data, and arrows point to attributes (blue nodes) which were found to be key indicators according to that sampling. Attribute importance is determined by how many samplings identify that attribute as an indicator (i.e., number of incoming arrows to each blue node).





Identification of clustered multi-variate associations (e.g., novel genetic variants, drug clearance, substance abuse) could help us 1) identify novel drug targets, 2) predict which patients are most likely to respond, and 3) identify modifiable factors that could contribute to better outcomes.

Summary for Cardiovascular Case Study

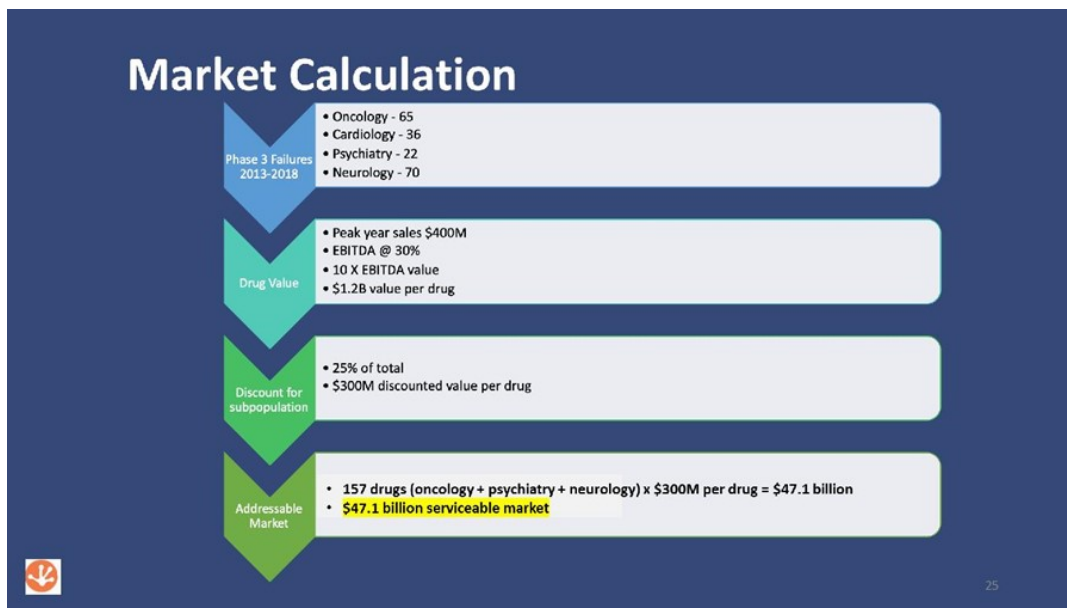
BullFrog AI worked with an international client in cardiovascular devices, to analyze data from an ongoing clinical trial for a new device. BullFrog analyzed data from ~55 patients, with a library of almost 15,000 unique attributes of data for each patient. The data also included adverse events, and key demographic information. For this client, bfLEAP™ analysis was able to provide ground truth for the company - confirming multiple correlations and non-correlations within the data. In terms of actionable output, the analytical results confirmed at least two demographic co-variables for the ongoing trial, and also provided a starting point for deeper physiological and molecular studies.

Our Supply Chain and Customer Base

We are preparing to launch our businesses using funds from this offering and through our partnerships and relationships. We have a strategic relationship with FSHD Society, a leading non-governmental organization, for AI/ML analysis of clinical trial data for patients with a rare neuromuscular disorder. We also have several other developing strategic relationships in the project design phase. The Company has executed a joint development deal for a biologics discovery phase opportunity that is directed toward targeted cancer therapeutics. The Company has also obtained exclusive world wide exclusive rights to a phase 2 ready glioblastoma drug and a preclinical hepatocellular carcinoma drug from universities. Since we intend to conduct late-stage clinical trials with rescued therapeutic assets, there will be a requirement of drug product or other significant services to plan and execute our clinical development programs. The success of our clinical development programs will require adequate availability of raw materials and/or drug product for our R&D and clinical trials, and, in some cases, may also require establishment of third-party arrangements to obtain finished drug product that is manufactured appropriately under industry-standard guidelines, and packaged for clinical use or sale. Since we are a digital biopharmaceutical company, our clinical development programs will also require, in some cases, establishment of third-party relationships for execution and completion of clinical trials.

Our Market Opportunity

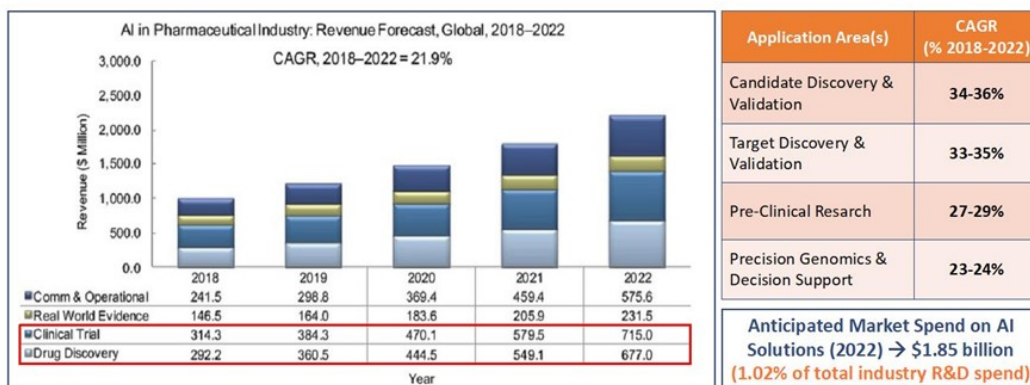
One aim of our business is to “rescue” drugs that have failed in phase 3 clinical trials by using our technology to analyze all available data with the goal of designing a precision medicine clinical trial that will have a better chance of being successful. The graphic below illustrates the estimated market opportunity for these failed drugs. The top arrow shows the number of failed phase 3 trials for several disease categories over a 5 year period. The arrows below provide our assumptions for narrowing or discounting certain parameters associated with the market size calculation. The final arrow shows the math behind the \$47.1B. To date, we have not penetrated the failed drug market, however; we are actively searching for failed drug opportunities.



The following graphic illustrates the global revenue forecast for applying AI in the pharmaceutical industry, as well as the increase in anticipated market spend and annual growth rate for AI solutions per certain application areas.

Market – AI in the Pharmaceutical Industry

BullFrog is poised to impact multiple **high-growth application areas**



Source: Frost & Sullivan – "Growth Insight – Role of AI in the Pharmaceutical Industry" (Sept. 2019)

Intellectual Property

Patents

We have exclusive worldwide rights to the following patents related to our intellectual property:

Johns Hopkins University Licensed Intellectual Property:

Title	Serial Number	File Date	Application Type	Country	Status	Patent Number	Expiration Date	Assignee
An Improved Formulation of Mebendazole and Drug Combination to Improve Anti-cancer Activity	62/112,706	06 Feb 2015	Provisional	US	Expired			The Johns Hopkins University
An Improved Formulation of Mebendazole and Drug Combination to Improve Anti-cancer Activity	PCT/US2016/016968	08 Feb 2016	PCT	PCT - Parent	Expired		11 Aug 2016	The Johns Hopkins University

MEBENDAZOLE POLYMORPH FOR TREATMENT AND PREVENTION OF TUMORS	15/548,959	04 Aug 2017	PCT	US	GRANTED	11,110,079	08 Feb 2036	The Johns Hopkins University
Mebendazole Polymorph For Treatment And Prevention Of Tumors	16747414.7	08 Feb 2016	PCT	EPO	GRANTED	Pending	08 Feb 2036	The Johns Hopkins University
MEBENDAZOLE POLYMORPH FOR TREATMENT AND PREVENTION OF TUMORS	253854	08 Feb 2016	PCT	Israel	GRANTED	253854	08 Feb 2036	The Johns Hopkins University
An Improved Formulation of Mebendazole and Drug Combination to Improve Anti- cancer Activity	2016800144274	08 Feb 2016	PCT	China	GRANTED	1ZL20168- 0014427.4	08 Feb 2036	The Johns Hopkins University
An Improved Formulation of Mebendazole and Drug Combination to Improve Anti- cancer Activity	201717028684	08 Feb 2016	PCT	India	GRANTED	352734	08 Feb 2036	The Johns Hopkins University
Mebendazole Polymorph For Treatment And Prevention Of Tumors	2017-541687	08 Feb 2016	PCT	Japan	GRANTED	6796586	08 Feb 2036	The Johns Hopkins University
CONTINUATION: Mebendazole Polymorph For Treatment And Prevention Of Tumors	17/402,131	13 Aug 2021	CON	United States	PENDING			The Johns Hopkins University

37

George Washington University Licensed Intellectual Property:

<u>Title</u>	<u>Serial Number</u>	<u>File Date</u>	<u>Application Type</u>	<u>Country</u>	<u>Status</u>	<u>Assignee</u>
Inhibition of SPTBN1 to treat Obesity/NASH and Obesity/NASH-driven cancer	63/113,745	11/13/2020	Provisional	US	Converted to PCT	George Washington University
Inhibition of SPTBN1 to treat Obesity/NASH and Obesity/NASH-driven cancer	63/147,141	2/8/2021	Provisional	US	Converted to PCT	George Washington University
Inhibition of SPTBN1 to treat Obesity/NASH and Obesity/NASH-driven cancer	PCT/US2021/059245	11/12/2021	PCT	WO	Filed	George Washington University

<u>Title</u>	<u>Country</u>	<u>Status</u>	<u>Patent #</u>	<u>Expiration Date</u>
B-Spectrin (SPTBN1) deficiency protects mice from high fat diet-induced liver disease and cancer development	US	Converted to PCT	63/113,745	11/13/21
B-Spectrin (SPTBN1) deficiency protects mice from high fat diet-induced liver disease and cancer development	US	Converted to PCT	63/147,141	11/13/21 PCT Filed
B-Spectrin (SPTBN1) deficiency protects mice from high fat diet-induced liver disease and cancer development	US	Pending	PCT/US2021/059245	Pending

38

John Hopkins University Applied Physics Lab Licensed Intellectual Property:

Title	Serial Number	File Date	Country	Status	Expiration Date	Assignee
Apparatus and Method for Distributed Graph Processing	U.S. Patent 10,146,801	7/13/2015	US	Granted	3/2/2037	The Johns Hopkins University
Method and Apparatus for Analysis and Classification of High Dimensional Data Sets	U.S. Patent 10,936,965	10/5/2017	US	Granted	9/25/2038	The Johns Hopkins University
Generalized Low Entropy Mixture Model	U.S. Patent 10,839,256	4/2/2018	US	Granted	12/15/2038	The Johns Hopkins University

Licenses

We hold the following licenses related to our intellectual property:

Licensor	Licensee	Description of Rights Granted
Johns Hopkins University Applied Physics Lab	BullFrog AI, Inc.	Worldwide, exclusive rights for therapeutics development and analytical services
George Washington University Johns Hopkins University	BullFrog AI Holdings BullFrog AI Holdings	Worldwide, exclusive rights for therapeutics development Worldwide, exclusive rights for therapeutics development

On February 7, 2018, we entered into a License Agreement (the "License Agreement") with The Johns Hopkins University Applied Physics Laboratory LLC, a Maryland limited liability company ("JHU"). Pursuant to the License Agreement, JHUAPL granted the Company exclusive rights to intellectual property of JHU related to analytical services for applications in biological and chemical derived pharmaceutical therapeutics. The License Agreement provides for the grant of an exclusive, world-wide, royalty-bearing license by JHU to the Company, with the right to sublicense, in order to conduct research using the patent rights and know-how and to develop and commercialize products in the field using the patent rights and know-how. In consideration of the rights granted to the Company under the License Agreement, the Company granted JHU a five (5%) percent equity stake in the Company, which was diluted following subsequent priced financings. Under the terms of the License Agreement, the Company is required to use commercially reasonable efforts to meet certain development milestones and minimum net sales milestones, and JHU will be entitled to eight (8%) percent of net sales for the services provided by the Company in which the JHU license was utilized, as well as fifty (50%) percent of all sublicense revenues received by the Company. In addition, the Company is required to pay JHU an annual maintenance fee of \$1,500. The Company is also obligated to make minimum annual payments. These minimum annual payments to JHU were amended in September 3, 2020 to \$20,000 in calendar year 2022, \$80,000 in calendar year 2023, \$300,000 in calendar year 2024, and \$300,000 in calendar year 2025 and each year thereafter, which may be offset against royalties paid by the Company for the year in which the minimum annual royalty becomes due.

The License Agreement will, unless sooner terminated, continue in each country until the date of expiration of the last to expire patent included within the patent rights in that country, or if no patents issue, then for 10 years. The License Agreement may be terminated by the Company upon 60 days' written notice in its discretion. The License Agreement may also be terminated by JHU if the Company is in material breach of the License Agreement and fails to cure such breach within a 60-day cure period commencing upon notice. A material breach by the Company may include a delinquency with respect to payment or the failure by the Company to timely achieve a specified milestone.

We also have exclusive, worldwide licenses to other intellectual property from JHU that is being held as trade secret related to our algorithm libraries, pattern recognition, shallow-and-wide data sets, and time series correlation. We anticipate that new intellectual property (patents, copyrights, trademarks, trade secrets, etc.) will be generated through the course of executing our strategic development projects, and also through the course of improving, modifying, and scaling our bLEAP™ platform. In October 2021, we amended the agreement with JHU-APL to include additional advanced AI technology. Currently, the latest patent grant date was in March 2021.

George Washington University - Beta2-spectrin siRNA License

On January 14, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from George Washington University (GWU) for rights to use siRNA targeting Beta2-spectrin in the treatment of human diseases, including hepatocellular carcinoma (HCC). The license covers methods claimed in three US and worldwide patent applications, and also includes use of this approach for treatment of obesity, non-alcoholic fatty liver disease, and non-alcoholic steatohepatitis. This program is currently in the preclinical stage of development. The term of the agreement began on January 14, 2022 and ends on the expiration date of the last patent to expire or 10 years after the first sale of a licensed product if no patents have issued. The license can be terminated by the licensee upon 60 days' written notice, or by the licensor if the Company is more than 30 days late in paying amounts owed to the licensor and does not make payment upon demand, or in the event of any material breach of the license that is not cured within 45 days.

Non-alcoholic fatty liver disease (NAFLD) is a condition in which excess lipids, or fat, build up in the liver. This condition, which is more common in people who have obesity and related metabolic diseases including type 2 diabetes, affects as many as 24% of adults in the US and is associated with risk of progression to more serious conditions, including non-alcoholic steatohepatitis (NASH), with associated liver inflammation and fibrosis, and hepatocellular carcinoma (HCC). Evidence in animal models of obesity suggest that a protein called β 2-spectrin may play a key role in lipid accumulation, tissue fibrosis, and liver damage, and targeting expression or activity of this protein may be a useful approach in treating NASH and liver cancer (Rao et al., 2021).

In consideration of the rights granted to the Company under the License Agreement, GWU received a \$20,000 License Initiation Fee. Under the terms of the License Agreement, GWU will be entitled to a three percent (3%) royalty on net sales subject to quarterly minimums once the first sale has occurred subsequent to regulatory approval, as well sublicense or assignment fees in the event the Company sublicenses or assigns their rights to use the technology. The Company will also reimburse GWU for previously incurred and ongoing patent costs. The Sublicense and Assignment fee amounts decline as the Company advances the clinical development of the licensed technology. The license agreement also contains milestone payments for clinical development through the approval of an NDA and commercialization.

Aggregate payments made to GWU to date include the \$20,000 License Initiation Fee and an additional \$6,550 to reimburse the licensor for past patent costs. Aggregate future milestone costs could reach \$860,000 if the drug successfully completes clinical trials and is the subject of a New Drug Application (NDA) to the US FDA. Future milestones on sales revenue are limited to \$1M on the first \$20M in net sales.

Johns Hopkins University – Mebendazole License

On February 22, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from Johns Hopkins University (JHU) for the use of an improved formulation of Mebendazole for the treatment of any human cancer or neoplastic disease. This formulation shows potent activity in animal models of different types of cancer, and has been evaluated in a Phase I clinical trial in patients with high-grade glioma (NCT01729260). The trial, an open-label dose-escalation study, assessed the safety and efficacy (as measured by progression free survival and overall survival) of the improved formulation with adjuvant temozolomide in 24 patients with newly diagnosed gliomas. Investigators observed no dose-limiting toxicity in patients receiving all but the highest tested dose (200mg/kg/day). Four of the 15 patients receiving the maximum tested dose of 200mg/kg/day experienced dose-limiting toxicity, all of which were reversed by decreasing or eliminating the dose given. There were no serious adverse events attributed to mebendazole at any dose during the trial. The Company is currently formulating a strategy to conduct additional clinical trials with this asset to enable evaluation of safety and efficacy in humans.

The license covers six (6) issued patents and one (1) pending application, with the term of the agreement beginning on February 22, 2022 and ending on the date of expiration of the last to expire patent. The license can be terminated by the licensee upon 90 days' written notice, or by the licensor in the event of any material breach of the license that is not cured within 30 days. In consideration of the rights granted to the Company under the License Agreement, JHU will receive a staggered Upfront License Fee of \$250,000, with the first \$50,000 payment due within 30 days of the effective date. The Company will also reimburse JHU for previously incurred and ongoing patent costs. Under the terms of the License Agreement, JHU will be entitled to three- and one-half percent (3.5%) royalty on net sales by the Company. In addition, the Company is required to pay JHU minimum annual royalty payments of \$5,000 for 2023, \$10,000 for 2024, \$20,000 for 2025, \$30,000 for 2026 and \$50,000 for 2027 and each year after until the first commercial sale after which the annual minimum royalty shall be \$250,000. The license agreement also contains milestone payments for clinical development steps through the approval of an NDA and commercialization. Aggregate payments made to date include the initial \$50,000 upfront fee and an additional \$79,232.53 to reimburse the licensor for past patent costs. Aggregate future milestone costs could reach \$1,500,000 if the drug successfully completes Phase II and III clinical trials and is approved for sale and marketing by the US FDA. Future milestones on sales revenue are \$1M on the first \$20M in sales revenue, \$2M in the first year cumulative sales revenue exceeds \$100M, \$10M in the first year cumulative sales revenue exceeds \$500M, and \$20M in the first year cumulative sales revenue exceeds \$1B.

Competition

The pharmaceutical and biotechnology industries are characterized by rapidly advancing technologies, intense competition, and a strong emphasis on proprietary products. The immuno-oncology, neuroscience, and rare disease segments of the industry in particular are highly competitive. While we believe that our technology, development experience and scientific knowledge provide competitive advantages, we face potential competition from many different sources, including major pharmaceutical, specialty pharmaceutical, and biotechnology companies, academic institutions and governmental agencies, and public and private research institutions.

Many of our competitors may have significantly greater financial resources, and expertise in research and development, manufacturing, preclinical studies, conducting clinical trials, obtaining regulatory approvals, and marketing approved medicines than we do. Mergers and acquisitions in the pharmaceutical, biotechnology, and diagnostic industries may result in even more resources being concentrated among a smaller number of our competitors. These competitors also compete with us in recruiting and retaining qualified scientific and management personnel and in establishing clinical trial sites and patient registration for clinical trials, as well as in acquiring technologies complementary to or necessary for our programs. Smaller or early-stage companies may also prove to be significant competitors, particularly through collaborative arrangements with large and established companies.

The key competitive factors affecting the success of all of our product candidates, if approved, are likely to be their efficacy, safety, convenience, price, the effectiveness of companion diagnostics in guiding the use of related therapeutics, if any, the level of generic competition and the availability of reimbursement from government and other third-party payors.

Our commercial opportunity could be reduced or eliminated if our competitors develop and commercialize medicines that are safer, are more effective, have fewer or less severe side effects, are more convenient or are less expensive than any medicines we may develop. Our competitors also may obtain FDA or other regulatory approval for their medicines more rapidly than we may obtain approval for ours, which could result in our competitors establishing a strong market position before we are able to enter the market. In addition, our ability to compete may be affected in many cases by insurers or other third-party payors seeking to encourage the use of generic medicines. There are many generic medicines currently on the market for certain of the indications that we are pursuing, and additional generics are expected to become available over the coming years. If our therapeutic product candidates are approved, we expect that they will be priced at a significant premium over competitive generic medicines.

Any product candidates that we successfully develop and commercialize will compete with existing therapies and new therapies that may become available in the future. If the product candidates of our priority programs are approved for the indications for which we are currently planning clinical trials, they will compete with the drugs discussed below and will likely compete with other drugs currently in development.

bfLEAP

The analytics industry and application of AI in healthcare is growing rapidly. Competition exists along the entire continuum of the drug development process from discovery to commercialization and beyond. We believe the weakness of the industry is the quality of the data and we believe bfLEAP provides several competitive advantages, that will position the Company for success. First, bfLEAP is highly scalable and can process data from small to extremely large complex data sets without the need for additional code being developed. Second, it is adept at processing and analyzing incomplete data and making predictions that we do not believe other technologies are capable of doing. Since data quality is a problem that exists in the healthcare industry, we see this as a major differentiator. The ability to make predictions, find relationships and patterns and anomalies in extremely large complex data sets has been demonstrated by the Applied Physics Lab in other applications and sectors. Finally, the algorithms used by bfLEAP are proprietary and protected, having been developed at Johns Hopkins University Applied Physics Lab. Most of the competitors rely on open source algorithms and we believe that we have already demonstrated our superiority via the August 2021 publication in DeepAI.org.

Government Regulation

The FDA does not currently require approval of AI technologies used to aid in therapeutics, but that could change in the future. The FDA will regulate any clinical trials conducted by the Company.

Our clinical development programs will, in some cases, require regulatory review of preclinical and/or clinical data by the FDA or other governing agencies, and subsequent compliance with applicable federal, state, local, and foreign statutes and regulations. The results of the clinical trials that we conduct will be evaluated by the FDA and other regulatory bodies. The comments and approvals that are obtained are expected to lead to milestone payments under the collaborative agreement. Accordingly, our ability to navigate the regulatory process is extremely important to the success of the Company. We believe that we have a competitive advantage in this process due to primarily focusing on drug candidates that already have some level of success in clinical trials. Previous success of a particular candidate in trials combined with our precision medicine approach to clinical trial design using our bfLEAP platform, will de-risk the development process and improve the chances for success.

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and in other countries and jurisdictions extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, packaging, storage, recordkeeping, labeling, advertising, promotion, distribution, marketing, post-approval monitoring and reporting, and import and export of pharmaceutical products. The processes for obtaining regulatory approvals in the United States and in foreign countries and jurisdictions, along with subsequent compliance with applicable statutes and regulations and other regulatory authorities, require the expenditure of substantial time and financial resources.

FDA Approval Process

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act (FD&C Act) and other federal and state statutes and regulations govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling and import and export of pharmaceutical products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending new drug applications (NDAs), warning or untitled letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties and criminal prosecution.

Pharmaceutical product development for a new product or certain changes to an approved product in the U.S. typically involves preclinical laboratory and animal tests, the submission to FDA of an investigational new drug application (IND) which must become effective before clinical testing may commence, and adequate and well-controlled

clinical trials to establish the safety and effectiveness of the drug for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity and novelty of the product or disease.

Preclinical tests include laboratory evaluation of product chemistry, formulation and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements, including good laboratory practices. The results of preclinical testing are submitted to FDA as part of an IND along with other information, including information about product chemistry, manufacturing and controls, and a proposed clinical trial protocol. Long-term preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted. A 30-day waiting period after the submission of each IND is required prior to the commencement of clinical testing in humans. If FDA has neither commented on nor questioned the IND within this 30-day period, the clinical trial proposed in the IND may begin. Clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted: (i) in compliance with federal regulations; (ii) in compliance with good clinical practice, or GCP, an international standard meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators and monitors; as well as (iii) under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to FDA as part of the IND.

Clinical trials to support NDAs for marketing approval are typically conducted in three sequential phases, but the phases may overlap. In Phase 1, the initial introduction of the drug into healthy human subjects or patients, the drug is tested to assess metabolism, pharmacokinetics, pharmacological actions, side effects associated with increasing doses, and, if possible, early evidence of effectiveness. Phase 2 usually involves trials in a limited patient population to determine the effectiveness of the drug for a particular indication, dosage tolerance and optimum dosage, and to identify common adverse effects and safety risks. If a drug demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2 evaluations, Phase 3 trials are undertaken to obtain the additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites, to permit FDA to evaluate the overall benefit-risk relationship of the drug and to provide adequate information for the labeling of the drug. In most cases, FDA requires two adequate and well-controlled Phase 3 clinical trials to demonstrate the efficacy of the drug. A single Phase 3 trial with other confirmatory evidence may be sufficient in rare instances, such as where the study is a large multicenter trial demonstrating internal consistency and a statistically very persuasive finding of a clinically meaningful effect on mortality, irreversible morbidity or prevention of a disease with a potentially serious outcome and confirmation of the result in a second trial would be practically or ethically impossible.

After completion of the required clinical testing, an NDA is prepared and submitted to FDA. FDA approval of the NDA is required before marketing of the product may begin in the U.S. The NDA must include the results of all preclinical, clinical and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture and controls. The cost of preparing and submitting an NDA is substantial. The submission of most NDAs is additionally subject to a substantial application user fee, and the applicant under an approved NDA is also subject to an annual program fee for each prescription product. These fees are typically increased annually. Sponsors of applications for drugs granted Orphan Drug Designation are exempt from these user fees.

FDA may also refer applications for novel drug products, or drug products that present difficult questions of safety or efficacy, to an outside advisory committee – typically a panel that includes clinicians and other experts – for review, evaluation and a recommendation as to whether the application should be approved. FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations.

Before approving an NDA, FDA will typically inspect one or more clinical sites to assure compliance with GCP. Additionally, FDA will inspect the facility or the facilities at which the drug is manufactured. FDA will not approve the product unless compliance with current good manufacturing practices (cGMPs) is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied.

Fast Track Designation

FDA is required to facilitate the development, and expedite the review, of drugs that are intended for the treatment of a serious or life-threatening disease or condition for which there is no effective treatment and which demonstrate the potential to address unmet medical needs for the condition. Under the Fast Track program, the sponsor of a new drug candidate may request that FDA designate the drug candidate for a specific indication as a Fast Track drug concurrent with, or after, the filing of the IND for the drug candidate. FDA must determine if the drug candidate qualifies for Fast Track Designation within 60 days of receipt of the sponsor's request.

If a submission is granted Fast Track Designation, the sponsor may engage in more frequent interactions with FDA, and FDA may review sections of the NDA before the application is complete. This rolling review is available if the applicant provides, and FDA approves, a schedule for the submission of the remaining information and the applicant pays applicable user fees. However, FDA's time period goal for reviewing an application does not begin until the last section of the NDA is submitted. While we may seek Fast Track Designation, there is no guarantee that we will be successful in obtaining any such designation. Even if we do obtain such designation, we may not experience a faster development process, review or approval compared to conventional FDA procedures. A Fast Track Designation does not ensure that the product candidate will receive marketing approval or that approval will be granted within any particular timeframe. Additionally, Fast Track Designation may be withdrawn by FDA if FDA believes that the designation is no longer supported by data emerging in the clinical trial process.

Post-Approval Requirements

Once an NDA is approved, a product will be subject to certain post-approval requirements. For instance, FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet. Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling.

Adverse event reporting and submission of periodic reports are required following FDA approval of an NDA. FDA also may require post-marketing testing, known as Phase 4 testing, REMS and surveillance to monitor the effects of an approved product, or FDA may place conditions on an approval that could restrict the distribution or use of the product. In addition, quality control, drug manufacture, packaging and labeling procedures must continue to conform to cGMPs after approval. Drug manufacturers and certain of their subcontractors are required to register their establishments with FDA and certain state agencies. Registration with FDA subjects entities to periodic unannounced inspections by FDA, during which the Agency inspects manufacturing facilities to assess compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money and effort in the areas of production and quality-control to maintain compliance with cGMPs. Regulatory authorities may withdraw product approvals or request product recalls if a company fails to comply with regulatory standards, if it encounters problems following initial marketing, or if previously unrecognized problems are subsequently discovered.

Generic Competition

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent whose claims cover the applicant's product. Upon approval of a drug, each of the patents listed in the application for the drug is then published in the FDA's Approved Drug Products with Therapeutic Equivalence Evaluations, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential generic competitors in support of approval of an abbreviated new drug application (ANDA). An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the listed drug and has been shown through bioequivalence testing to be therapeutically equivalent to the listed drug. Other than the requirement for bioequivalence testing, ANDA applicants are not required to conduct, or submit results of, preclinical or clinical tests to prove the safety or effectiveness of their drug product. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug and can often be substituted by pharmacists under prescriptions written for the original listed drug.

The ANDA applicant is required to certify to the FDA concerning any patents listed for the approved product in the FDA's Orange Book. Specifically, the applicant must certify that (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product (a Paragraph IV certification). The ANDA applicant may also elect to submit a section viii statement certifying that its proposed ANDA label does not contain (or carve out) any language regarding the patented method-of-use rather than certify to a listed method-of-use patent. If the applicant does not challenge the listed patents or certifies that the listed patents will not be infringed by the new product, the ANDA application will not be approved until all the listed patents claiming the referenced product have expired. If the ANDA applicant has provided a Paragraph IV certification, the NDA and patent holders may then initiate a patent infringement lawsuit in response. The filing of a patent infringement lawsuit within 45 days of the receipt of a such certification automatically prevents the FDA from approving the ANDA until the earlier of 30 months, expiration of the patent, settlement of the lawsuit, or a decision in the infringement case that is favorable to the ANDA applicant.

Exclusivity

Upon NDA approval of a new chemical entity (NCE) that drug receives five years of marketing exclusivity during which FDA cannot receive any ANDA seeking approval of a generic version of that drug. An ANDA may be submitted one year before NCE exclusivity expires if a Paragraph IV certification is filed. If there is no listed patent in the Orange Book, there may not be a Paragraph IV certification, and, thus, no ANDA may be filed before the expiration of the exclusivity period. Certain changes to a drug, such as the addition of a new indication to the package insert, can be the subject of a three-year period of exclusivity if the application contains reports of new clinical investigations (other than bioavailability studies) conducted or sponsored by the sponsor that were essential to approval of the application. FDA cannot approve an ANDA for a generic drug that includes the change during the period of exclusivity.

Patent Term Extension

After NDA approval, owners of relevant drug patents may apply for up to a five-year patent extension. The allowable patent term extension is calculated as half of the drug's testing phase (the time between IND application and NDA submission) and all of the review phase (the time between NDA submission and approval up to a maximum of five years). The time can be shortened if FDA determines that the applicant did not pursue approval with due diligence. The total patent term after the extension may not exceed 14 years, and only one patent can be extended. For patents that might expire during the application phase, the patent owner may request an interim patent extension. An interim patent extension increases the patent term by one year and may be renewed up to four times. For each interim patent extension granted, the post-approval patent extension is reduced by one year. The director of the United States Patent and Trademark Office must determine that approval of the drug covered by the patent for which a patent extension is being sought is likely. Interim patent extensions are not available for a drug for which an NDA has not been submitted.

Other Healthcare Laws

In the United States, biotechnology company activities are subject to regulation by various federal, state and local authorities in addition to the FDA, including but not limited to, the Centers for Medicare & Medicaid Services (CMS), other divisions of the U.S. Department of Health and Human Services (e.g., the Office of Inspector General and the Office for Civil Rights), the U.S. Department of Justice (DOJ), the U.S. Attorney offices within the DOJ, and state and local governments. For example, research, sales, marketing and scientific/educational grant programs have to comply with the anti-fraud and abuse provisions of the Social Security Act, the federal false claims laws, the privacy and security provisions of the Health Insurance Portability and Accountability Act (HIPAA) and similar state laws, each as amended, as applicable.

Also, many states have similar fraud and abuse statutes or regulations that apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

Data privacy and security regulations by both the federal government and the states in which business is conducted may also be applicable. HIPAA, as amended by the Health Information Technology for Economic and Clinical Health Act, or HITECH, and its implementing regulations, imposes requirements relating to the privacy, security and transmission of individually identifiable health information. HIPAA requires covered entities to limit the use and disclosure of protected health information to specifically authorized situations and requires covered entities to implement security measures to protect health information that they maintain in electronic form. Among other things, HITECH made HIPAA's security standards directly applicable to business associates, independent contractors or agents of covered entities that receive or obtain protected health information in connection with providing a service on behalf of a covered entity. HITECH also created four new tiers of civil monetary penalties, amended HIPAA to make civil and criminal penalties directly applicable to business associates, and gave state attorneys general new authority to file civil actions for damages or injunctions in federal courts to enforce the federal HIPAA laws and seek attorneys' fees and costs associated with pursuing federal civil actions. In addition, state laws govern the privacy and security of health information in specified circumstances, many of which differ from each other in significant ways and may not have the same effect, thus complicating compliance efforts.

Insurance Coverage and Reimbursement

Significant uncertainty exists as to the insurance coverage and reimbursement status of any products for which we may obtain regulatory approval. In the United States, sales of any product candidates for which regulatory approval for commercial sale is obtained will depend in part on the availability of coverage and adequate reimbursement from third-party payors. Third-party payors include government authorities and health programs in the United States such as Medicare and Medicaid, managed care providers, private health insurers and other organizations. These third-party payors are increasingly reducing reimbursements for medical products and services. The process for determining whether a payor will provide coverage for a drug product may be separate from the process for setting the reimbursement rate that the payor will pay for the drug product. Third-party payors may limit coverage to specific drug products on an approved list, or formulary, which might not include all of FDA-approved drugs for a particular indication. A payor's decision to provide coverage for a drug product does not imply that an adequate reimbursement rate will be approved. Further, coverage and reimbursement for drug products can differ significantly from payor to payor. As a result, the coverage determination process is often a time-consuming and costly process that will require us to provide scientific and clinical support for the use of our products to each payor separately, with no assurance that coverage and adequate reimbursement will be applied consistently or obtained in the first instance.

Employees

As of October 5, 2022 the Company has 2 full-time employee and consultants and 2 part-time employees, advisors, and consultants, including its Chief Executive Officer Vininder Singh and its Chief Financial Officer, Dane Saglio. None of these employees are covered by a collective bargaining agreement, and we believe our relationship with our employees is good. We also engage consultants on an as-needed basis to supplement existing staff.

Properties

Currently, the Company does not own any real property. All of the Company's employees work virtually.

Legal Proceedings

The Company is not a party to any legal proceedings.

Corporate Information

BullFrog Holdings AI, Inc. was incorporated in the State of Nevada on February 26, 2020. Our principal business address is 325 Ellington Blvd, Unit 317, Gaithersburg, MD 20878. Our website address is www.bullfrogai.com. The references to our website in this prospectus are inactive textual references only. The information on our website is neither incorporated by reference into this prospectus nor intended to be used in connection with this offering. All of our operations are currently conducted through BullFrog AI Holdings, Inc.

Available Information

Reports we file with the Securities and Exchange Commission (SEC) pursuant to the Exchange Act, including annual and quarterly reports, and other reports we file, can be inspected and copied at the public reference facilities maintained by the SEC at 100 F Street NE, Washington, D.C. 20549.

45

MANAGEMENT AND BOARD OF DIRECTORS

Executive Officers and Directors

The following table sets forth the name, age and position of each of our executive officers, key employees and directors.

Name	Age	Position(s)
Executive Officers:		
Vin Singh	53	Chief Executive Officer and Director
Dane Saglio	65	Chief Financial Officer
Non-Executive Directors:		
Don Elsey*	[*]	Director, Chair Audit Committee
William Enright*	[*]	Director and Chair of Compensation Committee
Jason Hanson*	[*]	Director and Chair of Nominating and Corporate Governance Committee

*Director Nominee

Vininder (Vin) Singh is the Founder, Chairman, and CEO of BullFrog AI Holdings, Inc. since its inception in August 2017. Over the past five years, he has built the Company from scratch and during that time he led strategy, built a highly experienced team of leaders, spear headed the acquisition and development of BullFrog's core AI technology and drug assets, secured the first revenue, and raised approximately \$2M in financing. In February of 2020, he formed BullFrog AI Holdings, Inc. and BullFrog AI Inc. became a wholly owned subsidiary designated as the holder of core intellectual property. Vin is a serial entrepreneur and experienced executive with 25 years of experience in the life sciences and biotechnology industries. He has extensive start-up experience having founded and built several pioneering investor backed companies including BullFrog AI, which uses machine learning/AI to enable drug development, Next Healthcare Inc., a personalized diagnostics and adult cell banking service, and MaxCyte Inc. (MXCT), a cell therapy company. He was also an executive at GlobalStem Inc. and ThermoFisher Scientific, leading their global cell therapy services business. Vin has a BS in Electrical Engineering from Rutgers University, an MS in Biomedical Engineering from Rensselaer Polytechnic Institute, and an MBA from Johns Hopkins University. We believe that Mr. Singh is qualified to serve as a member of our board of directors due to the perspective and experience that he brings as our Founder and Chief Executive Officer, his extensive experience in the science and biotechnology industries and in the management of startup companies.

Dane Saglio joined BullFrog Holdings AI, Inc. as Chief Financial Officer in September 2021. Mr. Saglio brings more than 40 years of financial management experience in both public and private companies across a number of business sectors. Previously, Mr. Saglio has served as CFO at Seneca Biopharma, RegeneRx Biopharmaceuticals since 2011, New Generation Biofuels 2010 until 2011, and EntreMed from 2000 until 2008, all public companies in the biotechnology arena. Prior to joining the Company, Mr. Saglio was the CFO of Seneca Biopharma, initially as a consultant in August 2019 and then as an employee in April 2020 until the Company merged with Leading Bio Sciences, forming Palisades Bio, Inc. in April 2021. He previously served as CFO at Celios Corporation from October 2017 until July 2019 and Helomics Corporation, a personalized medicine company in cancer from October 2014 through July 2017. He began his career at Informatics Corp, now Computer Associates International and then at Bressler & Reiner, a DC-based real estate developer and homebuilder. Dane has a BS from the University of Maryland and is a licensed CPA in Maryland (inactive).

R. Don Elsey will be a director and chair of the Audit Committee of our board. Currently, Mr. Elsey serves as an advisor to the CEO of Lyra Therapeutics, a private company pioneering a new therapeutic approach to treat debilitating ear, nose and throat diseases. Mr. Elsey was the CFO of Lyra until his retirement in December 2020. Previously, from February 2015 to February 2019, Mr. Elsey served as Chief Financial Officer at Senseonics, Inc., a medical device company. From May 2014 until February 2015, Mr. Elsey served as Chief Financial Officer of Regado Biosciences, Inc., a biopharmaceutical company. From December 2012 to February 2014, Mr. Elsey served as Chief Financial Officer of LifeCell Corporation, a privately held regenerative medicine company. Mr. Elsey holds a B.A. in economics and an M.B.A. in finance from Michigan State University. We believe that Mr. Elsey is qualified to serve as a member of our board of directors because of his extensive professional experience in science and biotechnology companies.

William "Bill" Enright is a seasoned biotech executive with more than thirty years of experience in building and financing both privately held and publicly held companies and joined the board in []. He is currently the CEO and a Director of Vaccitech plc (NASDAQ: VACC), which he helped to take public in April 2021. Prior to Vaccitech, Bill spent more than ten years at Altimmune (NASDAQ: ALT) as a Director, President & CEO, moving multiple programs into clinical testing, completing several acquisitions, and eventually taking the company public. Prior to joining Altimmune, Bill spent six years with GenVec, Inc. (acquired by Intrexon) with increasing responsibilities, culminating as Head of Business Development.

Bill brings a breadth of experiences in a variety of positions within the life science/biotech industry, including time as a consultant, a bench scientist and 12 years with Life Technologies, Inc. (acquired by Thermo-Fisher), working in various senior level licensing, business management, manufacturing and research roles.

46

In addition to Vaccitech, Bill sits on the Board of Gravitas Therapeutics, Inc. and on a Business Advisory Board for Creatv MicroTech, Inc., both privately held companies.

Bill received a Master of Arts in Molecular Biology from SUNY at Buffalo and a Master of Science in Business Management from Johns Hopkins University.

We believe that Mr. Enright is qualified to serve as a member of our board of directors because of his extensive professional experience in life science/biotech companies and in the management of public companies

Jason Hanson serves as President, Chief Executive Officer, and Director at enGene, Inc. ("enGene"), a position he has held since 2018. In this role, he has built "from the ground up" a new scientific, technical and strategic vision for enGene, a Montreal based gene therapy company with a ten plus year history, re-launched the company with new science, personnel and strategy within six months of joining the company. In addition, at enGene, Mr. Hanson continues to build on the new strategy by conceptualized a groundbreaking gene therapy product from ideation stage into a multi-billion dollar clinical stage asset, has assembled senior team experienced in R&D, oncology and gene therapy, and has successfully led efforts at FDA to expand BLA, clinical activities to first line NMIBC (Non-Muscle Invasive Bladder Cancer) effectively doubling addressable

market from \$3B to \$6B Previously, Mr. Hanson served as President and Chief Executive Officer of Ohana Biosciences, a biotechnology company based in Cambridge, MA. Mr. Hanson previously served as Executive Vice President and Chief Strategy Officer for NuVasive, Inc. and as Corporate Vice President of General Electric Company and member of the senior executive team of GE Healthcare, a \$20-plus billion dollar global pharmaceutical, medical device and healthcare services business. At GE Healthcare he had global business responsibilities for a range of portfolio management, corporate development, legal, compliance, and government relations activities. Prior to joining GE Healthcare, Mr. Hanson served as company Group Chairman and Executive Vice President at Valeant Pharmaceuticals with responsibility for the company's Consumer, Ophthalmology, Latin American and Dental businesses, as well as the manufacturing and supply chain, R&D, regulatory and medical affairs teams. Previously, he served as Executive Vice President and Chief Operating Officer at Medicis Pharmaceutical Corporation, where he led R&D and other critical functions and helped build the pre-eminent pipeline of prescription dermatology and aesthetic medicine products prior to its acquisition by Valeant for \$2.6 billion. Mr. Hanson received a bachelor's degree from Cornell University and a law degree from Duke University School of Law. We believe that Mr. Hanson is qualified to serve as a member of our board of directors because of his extensive professional experience in life science/biotech companies.

Corporate Governance

Director Independence

No members of our Board of Directors are independent using the definition of independence under Nasdaq Listing Rule 5605(a)(2) and the standards established by the SEC. Prior to closing the offering we plan to increase the size the Board of Directors to satisfy Nasdaq's requirement that the majority of the Board of Directors be independent.

Committees of our Board

Audit Committee. We did not during 2020, and do not currently, have an audit committee. If and when we satisfy the other initial listing standards for listing our common stock on Nasdaq or another national exchange, we intend to establish an audit committee of the Board of Directors. Don Elsey will Chair the Audit Committee.

Compensation Committee. We did not during 2020, and do not currently, have a compensation committee. If and when we satisfy the other initial listing standards for listing our common stock on Nasdaq or another national exchange, we intend to establish a compensation committee of the Board of Directors.

Nominating Committee. We did not during 2020, and do not currently, have a nominating committee. If and when we satisfy the other initial listing standards for listing our common stock on Nasdaq or another national exchange, we intend to establish a nominating committee of the Board of Directors.

Term of office

All directors hold office until the next annual meeting of the stockholders of the company and until their successors have been duly elected and qualified. Officers are elected by and serve at the discretion of our Board.

47

Code of Business Conduct and Ethics

We have not adopted a Code of Business Conduct and Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, or persons performing similar functions. We have at this time very limited personnel resources and only one officer. Nevertheless, we intend to work with legal counsel in order to prepare a Code of Business Conduct and Ethics appropriate to the nature of our business and the functions performed by the executive management of the Company. Upon adoption of the Code of Business Conduct and Ethics, we will file it with the SEC and post a copy on our website.

Family Relationships

There are no family relationships among and between the issuer's directors, officers, persons nominated or chosen by the issuer to become directors or officers, or beneficial owners of more than ten percent of any class of the issuer's equity securities.

Involvement in Certain Legal Proceedings

From time to time, we may become involved in litigation relating to claims arising out of its operations in the normal course of business. Currently there are no legal proceedings, government actions, administrative actions, investigations or claims are currently pending against us or that involve the Company or any of its affiliates which, in the opinion of the management

EXECUTIVE AND DIRECTOR COMPENSATION

No compensation was paid to our principal executive officer and our two other most highly compensated executive officers during the past two fiscal years.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Stock Awards (\$)	Option Awards (\$)	All Other Compensation (\$)	Total Compensation (\$)
Vininder Singh Chief Executive Officer and Director	2021	\$ 116,000-	\$ -	\$ -	\$ -	\$ -	\$ 116,000
	2020	\$ 118,000-	-	-	-	-	118,000
Dane Saglio Chief Financial Officer	2021	\$ -	\$ -	\$ 17,600-	\$ -	\$ -	\$ 17,600
	2020	-	-	-	-	-	-

Employment Agreements

On May 16, 2022, we entered into an employment agreement with Vininder Singh, pursuant to which he will receive received an annual base salary of \$400,000, which is subject to bi-annual review by the Company. Mr. Singh will also be eligible for an annual bonus based on the achievement of certain goals and performance criteria established by the Board. Mr. Singh's target annual bonus for the fiscal years ended 2022 through 2025 will be a minimum of twenty (20%) percent of the current base salary, with a maximum payout of up to one-hundred (100%) percent based on target achievement. For 2022, the criteria to determine Mr. Singh's bonus will include the following: (i) the Company achieves \$500,000 in sales; (ii) the filing of an Investigational New Drug (IND) Application with the FDA for mebandazole; (iii) the Company enters into two (2) strategic partnerships; and (iv) the Company commences partner negotiations with a third party for HSV-1, bf-114 or bf-222. Mr. Singh will also be eligible to participate in the Company's stock incentive plan, subject to Board approval. The agreement with Mr. Singh shall continue until either his resignation, termination for cause by the Company, or death or disability of Mr. Singh.

48

Consulting Agreements

We have also entered into a consulting agreement (the “Newman Agreement”) with Gerald Newman pursuant to which Mr. Newman will assist the Company with general business consulting, strategic relationships and the recruiting of certain key personnel. The Newman Agreement will terminate on June 23, 2023 and may be renewed upon mutual written agreement by both parties. Pursuant to the Newman Agreement, Newman will receive: (i) a monthly fee of \$7,500 per month payable for eight months commencing on the date of this Offering, payable on the last day of each month; and (ii) 500,000 shares of the Company’s common stock which will be conducted prior to this Offering.

Further, we have entered into an advisory agreement (the “Greentree Agreement”) with Greentree Financial Group, Inc. (“Greentree”) to render certain professional services to the Company including but not limited to responding to comments from the NASDAQ Listing Qualifications Staff as necessary, assist the Company in preparing a Code of Conduct applicable to directors, officers and employees, and advising on all documents and accounting systems relating to its finances and transactions, with the purpose of bringing such documents and systems into compliance with Generally Accepted Accounting Principles or disclosures required by the SEC. Pursuant to the Greentree Agreement, Greentree will receive 350,000 shares of the Company’s common stock.

Director Compensation

Mr. Singh has been and is currently our sole director. No compensation has been paid out to the director nominees and any compensation will be subject to closing of this Offering.

Outstanding Equity Awards at Fiscal Year-End

There are no outstanding equity awards held by the Company’s named executive officers or directors as of December 31, 2021.

2022 Equity Incentive Plan

Prior to the completion of this offering, we expect our Board of Directors to adopt the 2022 Equity Incentive Plan, or 2022 Plan. We expect our 2022 Plan will become effective on the date of the underwriting agreement related to this offering. Our 2022 Plan will come into existence upon its adoption by our board of directors, but no grants will be made under our 2022 Plan prior to its effectiveness. Once our 2022 Plan becomes effective, no further grants will be made under the Company’s existing Incentive Plan.

CERTAIN RELATIONSHIPS AND RELATED PARTY TRANSACTIONS

Certain Relationships and Related Party Transactions

On July 8, 2021, the Company entered into a Simple Agreement for Future Equity (SAFE), with a related party, Tivoli Trust, our second largest shareholder (the “Investor”), with an amount of \$150,000, with 0% interest. Under the SAFE agreement, if there is an Equity Financing before the termination of this SAFE, on the initial closing of such Equity Financing, this SAFE will automatically convert into the number of shares of SAFE Preferred Stock equal to the Purchase Amount divided by the Conversion Price, which means either: (1) the Safe Price (the price per share equal to the Post-Money Valuation Cap divided by the Company Capitalization) or (2) the Discount Price (the price per share of the Standard Preferred Stock sold in the Equity Financing multiplied by the Discount Rate), whichever calculation results in a greater number of shares of Safe Preferred Stock

If there is a Liquidity Event before the termination of this SAFE, this SAFE will automatically be entitled (subject to the liquidation priority set forth in Section 1(d) below) to receive a portion of Proceeds, due and payable to the Investor immediately prior to, or concurrent with, the consummation of such Liquidity Event, equal to the greater of (i) the Purchase Amount (the “Cash-Out Amount”) or (ii) the amount payable on the number of shares of Common Stock equal to the Purchase Amount divided by the Liquidity Price (the “Conversion Amount”). If any of the Company’s securityholders are given a choice as to the form and amount of Proceeds to be received in a Liquidity Event, the Investor will be given the same choice, provided that the Investor may not choose to receive a form of consideration that the Investor would be ineligible to receive as a result of the Investor’s failure to satisfy any requirement or limitation generally applicable to the Company’s securityholders, or under any applicable laws.

This SAFE will automatically terminate (without relieving the Company of any obligations arising from a prior breach of or non-compliance with this SAFE) immediately following the earliest to occur of: (i) the issuance of Capital Stock to the Investor pursuant to the automatic conversion of this SAFE under agreement; or (ii) the payment, or setting aside for payment, of amounts due the Investor pursuant to the agreement.

As of December 31, 2021, the \$150,000 received from SAFE was recorded at 6% imputed interest. The maturity date of the loan is defined by the SAFE agreement as discussed above.

On August 19, 2021, the company entered into a convertible loan agreement with a related party, with a principal balance of \$99,900 at 9% interest. The noteholder has the right to convert the principal and interest into common shares of the Company. This loan included an original issuance discount of 5% and included 99,900 Warrants at an exercise price of \$1, exercisable for 5 years from the issue date on the face of the Warrant. The maturity date of the loan was February 19, 2022. In May 2022, the Company and the note holder agreed to cancel and void previous warrants and entered into a new agreement for 115,185 warrants with an exercise price of \$2.50. As of June 30, 2022, the \$99,900 principal and the \$4,950 overpayment of the note remained outstanding and had accrued interest of \$7,867. The warrants discussed above were initially discounted against the notes, subsequent to year end December 31, 2021, they were deemed voided and new warrants in accordance with the new terms were issued. We assessed the differences in fair value and determined that they were de minimis and expensed the full value of the new warrants.

On June 15, 2021, the company entered into an unsecured short term loan agreement with the Investor for an aggregate principal balance of \$34,000, with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest.

On November 19, 2021, the company entered into an unsecured short term loan agreement with the Investor for an aggregate principal balance of \$5,000, with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest.

On December 13, 2021, the company entered into an unsecured short term loan agreement with the Investor for an aggregate principal balance of \$10,000, with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest.

On October 5, 2022, the Company entered into an exchange agreement with the Investor whereby all of his common stock, 734,493 shares, were exchanged into shares of Series A Convertible Preferred Stock. The Series A Preferred Stock is the economic equivalent of the common stock but has no voting rights and is subject to a blocker which prohibits the conversion into common stock if it would result in the Investor owning more than 4.99% of the Company’s outstanding common stock at such time. For a description of the rights and preferences of the Series A Preferred Stock, see “Description of Securities- Series A Convertible Preferred Stock”.

Related Person Transaction Policy

Prior to this offering, we have not had a formal policy regarding approval of transactions with related parties. We expect to adopt a related person transaction policy that sets forth our procedures for the identification, review, consideration and approval or ratification of related person transactions. For purposes of our policy only, a related person transaction is a transaction, arrangement or relationship, or any series of similar transactions, arrangements or relationships, in which we and any related person are, were or will be participants in which the amount involved exceeds the lesser of \$120,000 or 1% of the average of our total assets at year-end. Transactions involving compensation for services provided to us as an employee or director are not covered by this policy. A related person is any executive officer, director or beneficial owner of more than 5% of any class of our voting securities, including any of their immediate family members and any entity owned or controlled by such persons.

Under the policy, if a transaction has been identified as a related person transaction, including any transaction that was not a related person transaction when originally consummated or any transaction that was not initially identified as a related person transaction prior to consummation, our management must present information regarding the related person transaction to our audit committee, or, if audit committee approval would be inappropriate, to another independent body of our Board of Directors, for review, consideration and approval or ratification. The presentation must include a description of, among other things, the material facts, the interests, direct and indirect, of the related persons, the benefits to us of the transaction and whether the transaction is on terms that are comparable to the terms available to or from, as the case may be, an unrelated third party or to or from employees generally. Under the policy, we will collect information that we deem reasonably necessary from each director, executive officer and, to the extent feasible, significant stockholder to enable us to identify any existing or potential related-person transactions and to effectuate the terms of the policy. In addition, under our code of business conduct and ethics, our employees and directors will have an affirmative responsibility to disclose any transaction or relationship that reasonably could be expected to give rise to a conflict of interest. In considering related person transactions, our audit committee, or other independent body of our Board of Directors, will take into account the relevant available facts and circumstances including, but not limited to:

- the risks, costs and benefits to us;
- the impact on a director's independence in the event that the related person is a director, immediate family member of a director or an entity with which a director is affiliated;
- the availability of other sources for comparable services or products; and
- the terms available to or from, as the case may be, unrelated third parties or to or from employees generally.

The policy requires that, in determining whether to approve, ratify or reject a related person transaction, our audit committee, or other independent body of our Board of Directors, must consider, in light of known circumstances, whether the transaction is in, or is not inconsistent with, our best interests and those of our stockholders, as our audit committee, or other independent body of our Board of Directors, determines in the good faith exercise of its discretion.

50

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth certain information regarding the beneficial ownership of our common stock as of October 5, 2022 by:

- each of our named executive officers;
- each of our directors;
- all of our current directors and executive officers as a group; and
- each stockholder known by us to own beneficially more than five percent of our common stock.

Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. Shares of common stock that may be acquired by an individual or group within 60 days of October 5, 2022, pursuant to the exercise of options or warrants and convertible debt are deemed to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table. Percentage of ownership is based on 4,021,935 shares of common stock outstanding on October 5, 2022.

Except as indicated in footnotes to this table, we believe that the stockholders named in this table have sole voting and investment power with respect to all shares of common stock shown to be beneficially owned by them, based on information provided to us by such stockholders. Unless otherwise indicated, the address of all listed stockholders is c/o Bullfrog AI Holdings, Inc., 325 Ellington Blvd., Unit 317, Gaithersburg, MD 20878 .

<u>Name of Beneficial Owner</u>	<u>Common Stock Beneficially Owned</u>	<u>Percentage of Common Stock Before Offering</u>	<u>Percentage of Common Stock After Offering⁽¹⁾</u>
Directors and Officers:			
Vininder Singh Chief Executive Officer and Director	2,742,446	68.19%	48.77%
Dane Saglio Chief Financial Officer	57,142	1.42%	1.02%
All officers and directors 2 persons)	2,799,588	69.61%	49.79%
Beneficial owners of more than 5%			
Tivoli Trust (2)	905,317	21.59%	15.62%
Gerald Newman	500,000	12.43%	8.89%
Green Tree Financial	604,093	14.13%	10.28%
TEDCO	205,984	5.12%	3.66%
Johns Hopkins University Applied Physics Laboratory, LLC	218,450	5.43%	3.77%

(1) Assumes i) no exercise by the underwriter of its option to purchase additional shares of common stock to cover over-allotments, if any; ii) no exercise of the underwriter's warrants; and (iii) 1,317,647 shares of common stock sold in this offering.

(2) Comprised of 734,492 shares of non-voting Series A Preferred Stock, 115,185 warrants exercisable at \$2.50 per shares and 55,640 shares related to two convertible debt instruments that convert at a discount to the IPO price Assumes the conversion of all Series A Preferred Stock into common stock.

51

Prior to this offering, there has been no market for our common stock. Future sales of substantial amounts of our common stock in the public market or the perception that such sales might occur could adversely affect market prices prevailing from time to time. Furthermore, because only a limited number of shares will be available for sale shortly after this offering due to existing contractual and legal restrictions on resale as described below, there may be sales of substantial amounts of our common stock in the public market after the restrictions lapse. This may adversely affect the prevailing market price of our common stock and our ability to raise equity capital in the future.

After completion of this offering, we will have shares of common stock outstanding (or shares if the underwriters' option to purchase additional shares is exercised in full).

All of the shares of common stock sold in this offering will be freely tradable without restrictions or further registration under the Securities Act, unless the shares are purchased by our "affiliates" as that term is defined in Rule 144 and except certain shares that will be subject to the lock-up period described below after completion of this offering. Any shares owned by our affiliates may not be resold except in compliance with Rule 144 volume limitations, manner of sale and notice requirements, pursuant to another applicable exemption from registration or pursuant to an effective registration statement.

Any of the shares held by our directors, officers and holders of at least 5% of the Company's outstanding securities will be subject to a 12-month lock-up restriction described under "Underwriting" on page 53. Accordingly, there will be a corresponding increase in the number of shares that become eligible for sale after the lock-up period expires. As a result of these agreements, subject to the provisions of Rule 144 or Rule 701, shares will be available for sale in the public market as follows:

- beginning on the date of this prospectus, all of the shares sold in this offering will be immediately available for sale in the public market (except as described above);
- beginning six (6) months after this offering is completed, at the expiration of the lock-up period for our officers, directors and holders of at least 5% of the Company's outstanding securities, additional shares will become eligible for sale in the public market, all of which shares will be held by affiliates and subject to the volume and other restrictions of Rule 144 and Rule 701 as described below.

Rule 144

In general, under Rule 144 as currently in effect, once we have been subject to public company reporting requirements for at least 90 days, a person who is not deemed to have been one of our affiliates for purposes of the Securities Act at any time during the 90 days preceding a sale and who has beneficially owned the shares proposed to be sold for at least six months, including the holding period of any prior owner other than our affiliates, is entitled to sell those shares without complying with the manner of sale, volume limitation or notice provisions of Rule 144, subject to compliance with the public information requirements of Rule 144. If such a person has beneficially owned the shares proposed to be sold for at least one year, including the holding period of any prior owner other than our affiliates, then that person would be entitled to sell those shares without complying with any of the requirements of Rule 144.

In general, under Rule 144, as currently in effect, our affiliates or persons selling shares on behalf of our affiliates are entitled to sell upon expiration of the lock-up agreements described above, within any three-month period, a number of shares that does not exceed the greater of:

- 1% of the number of shares of our common stock then outstanding, which will equal approximately shares immediately after this offering; or
- the average weekly trading volume of our common stock during the four calendar weeks preceding the filing of a notice on Form 144 with respect to that sale.

Sales under Rule 144 by our affiliates or persons selling shares on behalf of our affiliates are also subject to certain manner of sale provisions and notice requirements and to the availability of current public information about us.

Rule 701

Rule 701 generally allows a stockholder who purchased shares of our common stock pursuant to a written compensatory plan or contract and who is not deemed to have been an affiliate of our company during the immediately preceding 90 days to sell these shares in reliance upon Rule 144, but without being required to comply with the public information, holding period, volume limitation or notice provisions of Rule 144. Rule 701 also permits affiliates of our company to sell their Rule 701 shares under Rule 144 without complying with the holding period requirements of Rule 144. All holders of Rule 701 shares, however, are required by that rule to wait until 90 days after the date of this prospectus before selling those shares pursuant to Rule 701 and are subject to the lock-up agreements described above.

UNDERWRITING

WallachBeth Capital LLC (is acting as the sole book-running manager and the representative of the underwriters of this offering (the "Representative"). Subject to the terms and conditions of the underwriting agreement between us and the Representative, we have agreed to sell to the underwriters and the underwriters have agreed to purchase from us, at the public offering price per share less the underwriting discounts set forth on the cover page of this prospectus, the number of Units listed next to its name in the following table:

Underwriter	Number of Units
WallachBeth Capital LLC	
Total	

The underwriters are committed to purchase all the Units offered by us other than those covered by the option to purchase additional shares described below, if they purchase any shares. The obligations of the underwriters may be terminated upon the occurrence of certain events specified in the underwriting agreement. Furthermore, pursuant to the underwriting agreement, the underwriters' obligations are subject to customary conditions, representations and warranties contained in the underwriting agreement, such as receipt by the underwriters of officers' certificates and legal opinions.

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect thereof.

The underwriters are offering the Units, subject to prior sale, when, as and if issued to and accepted by them, subject to approval of legal matters by their counsel and other conditions specified in the underwriting agreement. The underwriters reserve the right to withdraw, cancel or modify offers to the public and to reject orders in whole or in part.

Over-allotment Option

We have granted the underwriters an option, exercisable on or more times in whole or in part within 45-days after the closing of this offering to purchase up to an additional

197,647 shares of our common stock at a price of \$6.365 per share and/or Warrants to purchase up to an additional 197,647 shares of common stock at a price of \$0.01 per Warrant to purchase one share of common stock, in each case, less the underwriting discount, solely for the purpose of cover over-allotments. If this option is exercised in full, the total offering price to the public will be \$9,660,000 and the total net proceeds, before expenses, to us will be \$8,790,600.

Discount and Commissions; Expenses

The following table shows the public offering price, underwriting discount and proceeds, before expenses, to us. The information assumes either no exercise or full exercise by the underwriters of their over-allotment option.

	Per Unit	Total Without Over- Allotment Option	Total With Over- Allotment Option
Public offering price	\$	\$	\$
Underwriting discount (8.0%)	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

The underwriters propose to offer the Units offered by us to the public at the public offering price per Units set forth on the cover of this prospectus. In addition, the underwriters may offer some of the shares to other securities dealers at such price less a concession of \$ per Unit. If all of the Units offered by us are not sold at the public offering price per Unit, the underwriters may change the offering price per share and other selling terms by means of a supplement to this prospectus.

We have also agreed to reimburse the underwriters for reasonable out-of-pocket expenses not to exceed \$140,000 in the aggregate whether or not there is a closing of this offering. We estimate that total expenses payable by us in connection with this offering, other than the underwriting discount will be approximately \$260,000. In addition, we have also agreed to pay to the underwriters a non-accountable expense allowance in the amount of 1% of the gross offering amount (including shares purchased upon exercise of the over-allotment option).

The underwriting agreement, however, provides that in the event the offering is terminated, any advance expense deposits paid to the underwriters will be returned to the extent that offering expenses are not actually incurred in accordance with FINRA Rule 5110(f)(2)(C).

Representative's Warrants

We have agreed to issue to the Representative (or its designed affiliates) share purchase warrants (the "Representative's Warrants") to purchase up to a total of 6% of the shares of common stock sold in this offering at an exercise price that is equal to 110% of the public offering price of the shares. The Representative's Warrants will be non-exercisable for six (6) months after the effective date of the registration statement of which this prospectus forms a part and will expire five (5) years from the closing of this offering. The Representative's Warrants shall not be redeemable. The Company will register the shares of common stock underlying the Representative's Warrants under the Securities Act and will file all necessary undertakings in connection therewith. The Representative's Warrants also provide for customary antidilution protect of the number and price of such warrants and shares of common stock underlying such warrants.

54

Discretionary Accounts

The underwriters do not intend to confirm sales of the securities offered hereby to any accounts over which they have discretionary authority.

Indemnification

We have agreed to indemnify the underwriters against specified liabilities, including liabilities under the Securities Act, and to contribute to payments the underwriters may be required to make in respect thereof.

Right of First Refusal

For a period of eighteen (18) months from the closing of the offering, the Representative is granted the right of first refusal to act as lead underwriter or book running manager or placement agent for any and all of our future public and private equity, equity-linked, convertible or debt (excluding commercial bank debt) offerings during such eighteen (18) month period of the Company, or any successor to or any subsidiary of the Company.

Pricing of this Offering

Prior to this offering, there has not been an active market for our common stock. The public offering price for our common stock will be determined through negotiations between us and the underwriters. Among the factors to be considered in these negotiations will be prevailing market conditions, our financial information, market valuations of other companies that we and the underwriters believe to be comparable to us, estimates of our business potential, the present state of our development and other factors deemed relevant.

We offer no assurances that the public offering price of our common stock will correspond to the price at which our common stock will trade in the public market subsequent to this offering or that an active trading market for our common stock and warrants will develop and continue after this offering.

Lock-Up Agreements

We and each of our officers, directors, and 5% of greater stockholders have agreed, subject to certain exceptions, not to offer, issue, sell, contract to sell, encumber, grant any option for the sale of or otherwise dispose of any shares of our common stock or other securities convertible into or exercisable or exchangeable for shares of our common stock for a period of six months after this offering is completed without the prior written consent of the Representative.

The Representative may in its sole discretion and at any time without notice release some or all of the shares subject to lock-up agreements prior to the expiration of the lock-up period. When determining whether or not to release shares from the lock-up agreements, the representative will consider, among other factors, the security holder's reasons for requesting the release, the number of shares for which the release is being requested and market conditions at the time.

Trading; Nasdaq Capital Market Listing

We intend to apply to list our common stock and Warrants offered in the offering on the Nasdaq Capital Market under the symbol "BFAI" and "BFAIW," respectively. No assurance can be given that our listing application will be approved by the Nasdaq Capital Market. The consummation of this offering is conditioned on obtaining Nasdaq approval.

55

Price Stabilization, Short Positions and Penalty Bids

In connection with this offering the underwriters may engage in stabilizing transactions, over-allotment transactions, syndicate covering transactions and penalty bids in accordance with Regulation M under the Exchange Act:

- Stabilizing transactions permit bids to purchase securities so long as the stabilizing bids do not exceed a specified maximum.
- Over-allotment involves sales by the underwriters of securities in excess of the number of securities the underwriters are obligated to purchase, which creates a syndicate short position. The short position may be either a covered short position or a naked short position. In a covered short position, the number of securities over-allotted by the underwriters is not greater than the number of securities that they may purchase in the over-allotment option. In a naked short position, the number of securities involved is greater than the number of securities in the over-allotment option. The underwriters may close out any covered short position by either exercising its over-allotment option and/or purchasing securities in the open market.
- Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover syndicate short positions. In determining the source of securities to close out the short position, the underwriters will consider, among other things, the price of securities available for purchase in the open market as compared to the price at which they may purchase securities through the over-allotment option. A naked short position occurs if the underwriters sell more securities than could be covered by the over-allotment option. This position can only be closed out by buying securities in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in this offering.
- Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when securities originally sold by the syndicate member is purchased in a stabilizing or syndicate covering transaction to cover syndicate short positions.

These stabilizing transactions, syndicate covering transactions and penalty bids may have the effect of raising or maintaining the market price of our securities or preventing or retarding a decline in the market price of the securities. As a result, the price of our shares of common stock and warrants may be higher than the price that might otherwise exist in the open market. These transactions may be discontinued at any time.

Neither we nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our shares of common stock and warrants. In addition, neither we nor the underwriters make any representation that the underwriters will engage in these transactions or that any transaction, if commenced, will not be discontinued without notice.

Electronic Offer, Sale and Distribution of Shares

A prospectus in electronic format may be made available on a website maintained by the Representative and may also be made available on a website maintained by other underwriters. The underwriters may agree to allocate a number of shares to underwriters for sale to their online brokerage account holders. Internet distributions will be allocated by the Representative to underwriters that may make Internet distributions on the same basis as other allocations. In connection with the offering, the underwriters or syndicate members may distribute prospectuses electronically. No forms of electronic prospectus other than prospectuses that are printable as Adobe® PDF will be used in connection with this offering.

The underwriters have informed us that they do not expect to confirm sales of shares offered by this prospectus to accounts over which they exercise discretionary authority.

Other than the prospectus in electronic format, the information on any underwriter's website and any information contained in any other website maintained by an underwriter is not part of the prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or any underwriter in its capacity as underwriter and should not be relied upon by investors.

Other

From time to time, the underwriters and/or their affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services it has received and, may in the future receive, customary fees. Except for the services provided in connection with this offering and other than as described below, the underwriters have not provided any investment banking or other financial services during the 180-day period preceding the date of this prospectus.

Offers Outside the United States

Other than in the United States, no action has been taken by us or the underwriters that would permit a public offering of the securities offered by this prospectus in any jurisdiction where action for that purpose is required. The securities offered by this prospectus may not be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sale of any such securities be distributed or published in any jurisdiction, except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons into whose possession this prospectus comes are advised to inform themselves about and to observe any restrictions relating to the offering and the distribution of this prospectus. This prospectus does not constitute an offer to sell or a solicitation of an offer to buy any securities offered by this prospectus in any jurisdiction in which such an offer or a solicitation is unlawful.

DETERMINATION OF OFFERING PRICE

Prior to this offering, there has been no public market for our common stock or Warrants. The initial public offering price will be negotiated between the underwriters and us. In determining the initial public offering price of our Units, the underwriters will consider, among other things:

- the prospects for our company and the industry in which we operate;
- our financial information;
- financial and operating information and market valuations of publicly traded companies engaged in activities similar to ours;
- the prevailing conditions of U.S. securities markets at the time of this offering;
- the recent market prices of, and the demand for, publicly traded shares of generally comparable companies;
- our past and present financial and operating performance; and
- other factors deemed relevant by us and the underwriters.

Neither we nor the underwriters can assure investors that an active trading market will develop for our common shares or Warrants, or that the shares or Warrants will trade in the public market at or above the initial public offering price.

EXPERTS

The financial statements of Bullfrog AI Holdings, Inc. from February 26, 2020 (Inception) through period ending December 31, 2021 have been audited by M&K CPAs, an independent registered public accounting firm as set forth in its report and are included in reliance upon such report given on the authority of such firm as experts in accounting.

LEGAL MATTERS

Sichenzia Ross Ference LLP, New York, New York, will pass upon the validity of the shares of our common stock to be sold in this offering. Carmel, Milazzo & Feil LLP, New York, NY, will pass upon certain legal matters for the underwriters.

57

WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act with respect to the securities we are offering to sell. This prospectus, which constitutes part of the registration statement, does not include all of the information contained in the registration statement and the exhibits, schedules and amendments to the registration statement. For further information with respect to us and our securities, we refer you to the registration statement and to the exhibits and schedules to the registration statement. Statements contained in this prospectus about the contents of any contract, agreement or other document are not necessarily complete, and, in each instance, we refer you to the copy of the contract, agreement or other document filed as an exhibit to the registration statement. Each of these statements is qualified in all respects by this reference.

The SEC maintains a website, which is located at www.sec.gov, that contains reports, proxy and information statements and other information regarding issuers that file electronically with the SEC. You may access the registration statement of which this prospectus is a part at the SEC's website.

Upon completion of this offering, we will be subject to the information reporting requirements of the Securities Exchange Act of 1934, and we will file reports, proxy statements and other information with the SEC. All documents filed with the SEC are available for inspection and copying at the public reference room and website of the SEC referred to above. We maintain a website at www.precisionopinion.com. You may access our reports, proxy statements and other information free of charge at this website as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The information on such website is not incorporated by reference and is not a part of this prospectus.

58

BULLFROG AI HOLDINGS, INC. INDEX TO FINANCIAL STATEMENTS

Audited Financial Statements for the Years Ended December 31, 2020 and 2021:

Report of Independent Registered Public Accounting Firm	F-2
Consolidated Balance Sheets	F-3
Consolidated Statements of Operations	F-4
Consolidated Statements of Shareholders' Deficit	F-5
Consolidated Statements of Cash Flows	F-6
Notes to Consolidated Financial Statements	F-7

Unaudited Interim Consolidated Financial Statements for the Three and Six Months Ended June 30, 2021 and 2022:

Consolidated Balance Sheets	F-24
Consolidated Statements of Operations	F-25
Consolidated Statements of Shareholders' Deficit	F-26
Consolidated Statements of Cash Flows	F-27
Notes to Consolidated Financial Statements	F-28

BULLFROG AI HOLDINGS, INC. AUDITED FINANCIAL STATEMENTS 2021 and 2020

F-1

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of Bullfrog AI Holdings, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Bullfrog AI Holdings, Inc. (the Company) as of December 31, 2021 and 2020, and the related consolidated statements of operations and comprehensive loss, changes in stockholders' deficit, and cash flows for the years ended December 31, 2021 and 2020, and the related notes (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2021 and 2020 and the results of its operations and its cash flows for flows for the two-year period ended December 31, 2021, in conformity with accounting principles generally accepted in the United States of America.

Going Concern

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 2 to the financial statements, the Company has continued to incur net losses from operations and negative cash flows in operations, which raises substantial doubt about its ability to continue as a going concern. Management's plans regarding those matters are also described in Note 2. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements

based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that were communicated or required to be communicated to the audit committee and that: (1) relate to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective, or complex judgments. The communication of a critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing separate opinions on the critical audit matter or on the accounts or disclosures to which they relate.

As discussed in Note 2, the Company had a going concern disclosure due to continued net losses from operations and negative cash flows in operations. Auditing management's evaluation of a going concern can be a significant judgment given the fact that the Company uses management estimates on future revenues and expenses, which are difficult to substantiate.

We evaluated the appropriateness of the going concern, we examined and evaluated the financial information along with management's plans to mitigate the going concern and management's disclosure on going concern.

/s/ M&K CPAS, PLLC

We have served as the Company's auditor since 2021.
Houston, Texas
June 10, 2022

F-2

Bullfrog AI Holdings, Inc.
Consolidated Balance Sheets

	December 31 2021	December 31 2020
ASSETS		
CURRENT ASSETS:		
Cash	\$ 10,014	\$ 5,019
Total Current Assets	<u>\$ 10,014</u>	<u>\$ 5,019</u>
TOTAL ASSETS	<u>\$ 10,014</u>	<u>\$ 5,019</u>
LIABILITIES AND STOCKHOLDERS' DEFICIT		
CURRENT LIABILITIES:		
Accounts payable	\$ 68,594	\$ 94,447
Accrued expenses	68,557	41,173
Accrued expenses-related party	285,666	200,000
Deferred revenue	10,000	-
Notes payable	-	9,917
Notes payable-related party	49,000	-
Convertible notes, net of \$12,962 and \$0 debt discount, respectively	284,038	200,000
Convertible notes-related party, not of \$1,584 and \$0 debt discount, respectively	253,266	-
Total Current Liabilities	<u>\$ 1,019,121</u>	<u>\$ 545,537</u>
TOTAL LIABILITIES	<u>\$ 1,019,121</u>	<u>\$ 545,537</u>
STOCKHOLDERS' DEFICIT:		
Preferred stock, \$0.00001 par value, 10,000,000 shares authorized; no shares are issued and outstanding,	-	-
Common stock, \$0.00001 par value, 100,000,000 shares authorized; 27,259,547 25,223,975 shares are issued and outstanding as of December 31, 2021 and 2020, respectively	272	252
Subscription receivable	-	(100)
Additional paid-in capital	587,189	470,058
Accumulated deficit	(1,596,568)	(1,010,728)
Total BullFrog stockholders' deficit	<u>\$ (1,009,107)</u>	<u>\$ (540,518)</u>
TOTAL STOCKHOLDERS' DEFICIT	<u>(1,009,107)</u>	<u>(540,518)</u>
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	<u>\$ 10,014</u>	<u>\$ 5,019</u>

The accompanying notes are an integral part of these financial statements

F-3

Bullfrog AI Holdings, Inc.
Consolidated Statements of Operations

	<u>December 31 2021</u>	<u>December 31 2020</u>
NET REVENUES:		
Revenues, net	\$ -	\$ -
TOTAL NET REVENUES	<u>-</u>	<u>-</u>
COST OF GOODS SOLD:		
Cost of goods sold	-	-
TOTAL COST OF GOODS SOLD	<u>-</u>	<u>-</u>
GROSS PROFIT	-	-
OPERATING EXPENSES:		
General and administrative expenses	253,378	70,617
Payroll and salary-related party	203,033	189,450
Stock based compensation	98,951	87,126
TOTAL OPERATING EXPENSES	<u>555,362</u>	<u>260,067</u>
(LOSS) FROM OPERATIONS	<u>(555,362)</u>	<u>(260,067)</u>
OTHER INCOME (EXPENSE):		
Interest expense, net	(40,395)	(11,767)
Gain on debt forgiveness	9,917	17,270
TOTAL OTHER INCOME (EXPENSE)	<u>(30,478)</u>	<u>(81,623)</u>
NET (LOSS)	(585,840)	(341,690)
NET (LOSS) PER COMMON SHARE:		
Basic and diluted	<u>\$ (0.02)</u>	<u>\$ (0.01)</u>
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING:		
Basic and diluted	<u>26,145,603</u>	<u>24,803,210</u>

The accompanying notes are an integral part of these financial statements

F-4

Bullfrog AI Holdings, Inc.
Consolidated Statements of Stockholders' Deficit

	<u>Common Stock</u>		<u>Additional Paid in Capital</u>	<u>Subscription Receivables</u>	<u>Accumulated Deficit</u>	<u>Total</u>
	<u>Shares</u>	<u>Amount</u>				
Balances, December 31, 2018	24,026,050	\$ 240	\$ 238,545	\$ -	\$ (475,238)	\$ (236,453)
Issuance of shares for cash	197,925	2	94,998	-	-	95,000
Equity compensation	-	-	11,544	-	-	11,544
Net Income/(Loss)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(193,800)</u>	<u>(193,800)</u>
Balances, December 31, 2019	24,223,975	\$ 242	\$ 345,087	\$ -	\$ (669,038)	\$ (323,709)
Issuance of Shares for cash to be received	1,000,000	10	90	(100)	-	-
Warrant issued for common stocks payable settlement	-	-	37,730	-	-	37,730
Equity compensation	-	-	87,126	-	-	87,126
Capital Contribution	-	-	25	-	-	25
Net Income/(Loss)	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>(341,690)</u>	<u>(341,690)</u>
Balances, December 31, 2020	25,223,975	\$ 252	\$ 470,058	\$ (100)	\$ (1,010,728)	\$ (540,518)
Cash from subscription receivables				100		100
Warrant issued with convertible notes			13,661			13,661

Imputed Interest			4,539			4,539
Equity compensation	-	-	9,385	-	-	9,385
Shares issued for services	2,035,572	20	89,546	-	-	89,566
Net Income/(Loss)	-	-	-	-	(585,840)	(585,840)
Balances, December 31, 2021	27,259,547	\$ 272	\$ 587,189	\$ -	\$ (1,596,568)	\$ (1,009,107)

The accompanying notes are an integral part of these financial statements

F-5

Bullfrog AI Holdings, Inc.
Consolidated Statements of Cash Flows

	<u>December 31</u>	
	<u>2021</u>	<u>2020</u>
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net (loss)	\$ (585,840)	\$ (341,690)
Adjustment to reconcile change in net (loss) to net cash and cash equivalents used in operating activities:		
Gain on debt forgiveness	(9,917)	(17,270)
Stock-based compensation	98,951	87,126
Amortization of debt discount	12,665	-
Imputed Interest	4,539	-
Changes in operating assets and liabilities:		
Accounts payable	(25,853)	60,126
Accrued expenses	27,384	-
Accrued expenses-related party	85,666	-
Deferred revenue	10,000	-
NET CASH USED IN OPERATING ACTIVITIES	(382,405)	(211,708)
CASH FLOWS FROM FINANCING ACTIVITIES:		
Borrowings - Related Party	298,900	200,000
Borrowings on debt	88,400	9,917
Capital contribution	-	25
Proceeds from subscription receivable	100	-
NET CASH FROM FINANCING ACTIVITIES	387,400	209,942
Net increase/(decrease) in cash and cash equivalents	4,995	(1,766)
Cash, beginning of year	5,019	6,785
Cash, end of period	\$ 10,014	\$ 5,019
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid for interest	\$ -	\$ -
Cash paid for taxes	\$ -	\$ -
SUPPLEMENTAL DISCLOSURE of NON-CASH ACTIVITY:		
Warrant issued with convertible notes	\$ 13,661	\$ -
Shares issued to settle Accrued Severance	\$ -	\$ 37,730
Common stocks issued for services	\$ 20	\$ -

The accompanying notes are an integral part of these financial statements

F-6

BULLFROG AI HOLDINGS, INC.
NOTES TO FINANCIAL STATEMENTS
DECEMBER 31, 2021 and 2020

NOTE 1 – ORGANIZATION AND NATURE OF BUSINESS

Bullfrog AI Holdings, Inc. was incorporated in the State of Nevada on February 6, 2020. Bullfrog AI Holdings, Inc. is the parent company of Bullfrog AI, Inc. and Bullfrog AI Management, LLC. which were incorporated in Delaware and Maryland, in 2017 and 2021, respectively. All of our operations are currently conducted through BullFrog AI Holdings, Inc., which began operations on February 6, 2020. We are a digital biopharmaceutical company focused specifically on advanced AI/ML-driven analysis of complex data sets in medicine and healthcare. Our objective is to utilize our platform for precision medicine approach to drug asset enablement through external partnerships and selective internal development.

In June of 2020, BullFrog AI Holdings, Inc. acquired BullFrog AI, Inc. via a 1:1 share exchange. Immediately prior to the share exchange, each authorized common share of BullFrog AI, Inc. was split into 25 shares of common stock. Share amounts in our financial statements for 2021 and 2020 have been adjusted to reflect this forward share split

and shares exchange. All of our operations are currently conducted through BullFrog AI Holdings, Inc. BullFrog AI, Inc., is a wholly owned subsidiary, has the sole purpose of housing and protecting all of the organization's intellectual property. BullFrog AI Management, LLC is a wholly owned subsidiary that handles all HR and payroll activities Pursuant to the agreement, 24,223,975 shares of the Company's common stock were issued to the shareholders of BullFrog AI, Inc. in exchange for 100% of the ownership interests of BullFrog AI, Inc. Upon completion of the Exchange, BullFrog AI, Inc. became the Company's wholly-owned subsidiary and the shareholders of BullFrog AI, Inc. own a 100% controlling interest in the Company. As a result, BullFrog AI, Inc. became BullFrog AI Holdings, Inc's wholly owned subsidiary and assumed a total of \$330,442 in net liabilities. All of the entities were controlled both before and after the transactions by the same controlling shareholder. This transaction is being accounted for as a common control transaction and all entities are being presented as if the transactions took place at the beginning of the earliest period presented. Share amounts in our financial statements for 2021 and 2020 have been adjusted to reflect this forward share split and shares exchange. BullFrog AI, Inc was incorporated in 2017 as discussed in the previous notes. All of our operations are currently conducted through BullFrog AI Holdings, Inc.

Most new therapeutics will fail at some point in preclinical or clinical development. This is the primary driver of the high cost of developing new therapeutics. A major part of the difficulty in developing new therapeutics is efficient integration of complex and highly dimensional data generated at each stage of development to de-risk subsequent stages of the development process. Artificial Intelligence and Machine Learning (AI/ML) has emerged as a digital solution to help address this problem.

We are an artificial intelligence-driven biotech company committed to improving the probability of success and the time and cost involved developing therapeutics. Most current AI/ML platforms still fall short in their ability to synthesize disparate, high-dimensional data for actionable insight. Our platform technology, named bfLEAP™ is an analytical AI/ML platform developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL) which is able to surmount the challenges of scalability and flexibility currently hindering researchers and clinicians by providing a more precise, multi-dimensional understanding of their data. We are deploying bfLEAP™ for use at several critical stages of development for internal programs and through strategic partnerships and collaborations with the intention of streamlining data analytics in therapeutics development, decreasing the overall development costs by decreasing failure rates for new therapeutics, and impacting the lives of countless patients that may otherwise not receive the therapies they need.

The bfLEAP™ platform utilizes both supervised and unsupervised machine learning – as such, it is able to reveal real/meaningful connections in the data without the need for an a priori hypothesis. Algorithms used in the bfLEAP™ platform are designed to handle highly imbalanced data sets to successfully identify combinations of factors that are associated with outcomes of interest.

Our primary goal is to improve the odds of success at any stage of pre-clinical and clinical therapeutics development, for in house programs, and our strategic partners and collaborators. Our primary business model is enabling the success of ongoing clinical trials or rescue of late stage failed drugs (i.e., Phase 2 or Phase 3 clinical trial failures) for development and divestiture; although, we will also consider collaborations for earlier stage drugs. We hope to accomplish this through strategic acquisitions of current clinical stage and failed drugs for in-house development, or through strategic partnerships with biopharmaceutical industry companies. We are able to pursue our drug asset enhancement business by leveraging a powerful and proven AI/ML platform (trade name: bfLEAP™) initially developed at JHU-APL. We believe the bfLEAP™ analytics platform is a potentially disruptive tool for analysis of pre-clinical and/or clinical data sets, such as the robust pre-clinical and clinical trial data sets being generated in translational R&D and clinical trial settings.

NOTE 2 – GOING CONCERN AND MANAGEMENT'S LIQUIDITY PLANS

The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. As shown in the accompanying financial statements, for the year-ended December 31, 2021, the Company incurred net losses from operations of \$585,840 and used cash in operations of \$382,405. These factors among others raise substantial doubt that the Company will be able to continue as a going concern for a reasonable period of time.

F-7

The Company's primary source of operating funds for the years ended December 31, 2020 and 2021 has been from investors and related parties. The Company has experienced net losses from operations since inception but expects these conditions to improve in 2022 and beyond, as it continues to develop its direct sales and marketing programs; however, no assurance can be provided that the Company will not continue to experience losses in the future. The Company has stockholders' deficiencies at December 31, 2020 and December 31, 2021 and requires additional financing to fund future operations.

A significant component of the Company's plan to secure capital to both establish its operating base and also to execute on its business plan is the intention of the Company to seek to be listed on a national exchange through an initial public offering ("IPO") of its common stock. In this regard, the Company has entered into a number of advisory and consulting agreements with entities and individuals providing services and advice to the Company. The Company has compensated these advisors and consultants using equity instruments issued by Bull Frog AI Holdings, Inc. as will be more thoroughly explained below.

The Company's existence is dependent upon management's ability to develop profitable operations and to obtain additional funding sources, including an IPO. There can be no assurance that the Company's financing efforts will result in profitable operations or the resolution of the Company's liquidity problems. There can be no assurance that the Company will be successful in developing profitable operations or that it will be able to obtain financing on favorable terms, if at all. The accompanying statements do not include any adjustments that might result should the Company be unable to continue as a going concern.

NOTE 3 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Use of Estimates in the Preparation of Financial Statements

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Estimates include, but are not limited to, revenue recognition, allowances for doubtful accounts, recoverability of deferred tax assets and certain other of our accrued liabilities. Actual results could differ from those estimates.

Financial Instruments

The carrying value of short-term instruments, including cash and cash equivalents, accounts payable and accrued expenses approximate fair value due to the relatively short period to maturity for these instruments.

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value maximize the use of observable inputs and minimize the use of unobservable inputs. The Company utilizes a three-level valuation hierarchy for disclosures of fair value measurements, defined as follows:

Level 1 - inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 - inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the assets or liability, either directly or indirectly, for substantially the full term of the financial instruments.

Level 3 - inputs to the valuation methodology are unobservable and significant to the fair value.

The Company does not have any assets or liabilities that are required to be measured and recorded at fair value on a recurring basis.

Revenue Recognition

For annual reporting periods after December 15, 2017, the Financial Accounting Standards Board (“FASB”) made effective ASU 2014-09 “Revenue from Contracts with Customers,” to supersede previous revenue recognition guidance under current U.S. GAAP. Revenue is now recognized in accordance with FASB ASC Topic 606, Revenue Recognition. The objective of the guidance is to establish the principles that an entity shall apply to report useful information to users of financial statements about the nature, amount, timing, and uncertainty of revenue and cash flows arising from a contract with a customer. The core principle is to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. Two options were made available for implementation of the standard: the full retrospective approach or modified retrospective approach. The guidance became effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period, with early adoption permitted. We have adopted FASB ASC Topic 606 for our reporting period as of the year-ended December 31, 2019. As of December 31, 2021 and December 31, 2020, we have had no revenue. For the year-ended December 31, 2021 and December 31, 2020, there were no incomplete contracts although we did receive a customer down payment in late 2021 which is reflected on the balance sheet as of December 31, 2021 as unearned revenue in the amount of \$10,000. As is more fully discussed below, we are of the opinion that none of our contracts for products contain significant financing components that require revenue adjustment under FASB ASC Topic 606. Under ASC 606, the Company recognizes revenue from the commercial sales of products, licensing agreements and contracts to perform pilot studies by applying the following steps: (1) identifying the contract with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to each performance obligation in the contract; and (5) recognize revenue when each performance obligation is satisfied.

The five step model provides:

- **Identification of the contract with a customer**

Contracts included in our application of FASB ASC Topic 606, consist completely of sales/service contracts between us and our customers that create enforceable rights and obligations. Contracts are initiated by entering into Master Services Agreements, which establishes the contractual elements of the relationship between the Company and its customers. Services to be provided under each MSA will be contracted under a Statement of Work which describes the services to be performed, the time frame in which services will be performed, and establishes the customer payment obligations.

- **Identification of the performance obligations in the contract**

In analyzing our sales contracts, our policy is to identify the distinct performance obligations in a services contract arrangement. SOWs constitute the company’s performance obligation(s) and Terms and conditions of services, which are explicitly outlined. Current contract(s) contain a single performance obligation; the analysis of data received from our customer and delivery of the analysis report.

- **Determination of the transaction price**

The service fee in our SOW is the amount of consideration we expect to be entitled to for providing the promised services. Transaction price is determined by current market conditions and costs of delivering our obligations.

- **Allocation of the transaction price to the performance obligations in the contract**

Our SOWs require the fulfillment of a single performance obligation. As such, we allocate the full transaction price to the single performance obligation.

- **Recognition of revenue when, or as, the Company satisfies a performance obligation**

In accordance with ASC 606, we recognize revenue once final analysis reports are completed and delivered to customers. Upon delivery of analysis reports, control of the good is deemed transferred and the company’s performance obligation is determined satisfied.

Contract Services

The Company anticipates that the majority of revenues to be recognized in the near future will result from our fee for service partnership offering, designed for biopharmaceutical companies, as well as other organizations, of all sizes that have challenges analyzing data throughout the drug development process. The Company provides the customer with an analysis of large complex data sets using the Company’s proprietary Artificial Intelligence / Machine Learning platform called bfLEAP™. This platform is designed to predict targets of interest, patterns, relationships, and anomalies. The Company believes that there will be additional on-going work requested from partners therefore the service model utilizes a master services agreement with work or task orders issued for discrete analysis performed at the discovery, preclinical, or clinical stages of drug development. The Company receives a cash fee and in some instances the potential for rights to new intellectual property generated from the analysis.

Collaborative Arrangements

The Company also intends to enter collaborative arrangements with pharmaceutical companies who have drugs that have failed late Phase 2 or Phase 3 trials. These arrangements could take several forms including true partnerships where BullFrog contributes data analysis using the bfLEAP™ platform with the partner contributing the drug candidate and other resources needed to continue development towards commercialization with BullFrog receiving an equity or royalty right in the commercialized product. In other arrangements the Company may earn cash payments based on achieving certain milestones as determined under each specific arrangement.

Acquisition of Rights to Certain Drugs

In certain circumstances, we may also acquire rights to drugs that are in early-stage clinical trials, use our technology to sponsor and support a successful later stage precision medicine trial, and divest the asset. The same process may apply to the discovery of new drugs. In these instances, divestiture may be in the form of an outright sale of all rights or possibly a license to develop and commercialize enhanced development candidates. License agreements could include developmental and commercial milestones in addition to royalties.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include the fair value of the Company’s stock, stock-based compensation, fair values relating to derivative liabilities, debt discounts and the valuation allowance related to deferred tax assets. Actual results may differ from these estimates.

Cash

The Company considers cash to consist of cash on hand and temporary investments having an original maturity of 90 days or less that are readily convertible into cash. As of December 31, 2021 and December 31, 2020, cash balances were \$10,014 and \$5,019, respectively.

Concentrations of Credit Risk

The Company's financial instruments that are exposed to a concentration of credit risk are cash and accounts receivable. Occasionally, the Company's cash in interest-bearing accounts may exceed FDIC insurance limits. The financial stability of these institutions is periodically reviewed by senior management.

Accounts Receivable

Trade receivables are carried at their estimated collectible amounts. Trade credit is generally extended on a short-term basis. Thus, trade receivables do not bear interest. Trade accounts receivable are periodically evaluated for collectability based on past credit history with customers and their current financial condition.

Allowance for Doubtful Accounts

Any charges to the allowance for doubtful accounts on accounts receivable are charged to operations in amounts sufficient to maintain the allowance for uncollectible accounts at a level management believes is adequate to cover any probable losses. Management determines the adequacy of the allowance based on historical write-off percentages and the current status of accounts receivable. Accounts receivables are charged off against the allowance when collectability is determined to be permanently impaired. As of December 31, 2021 and 2020, allowance for doubtful accounts was \$0.

F-10

Inventories

The Company does not have inventory and does not plan to have inventory in the near future.

Cost of Sales

Cost of sales is comprised of cost of outsourced services provided to the Company related to customer service contracts.

Property and Equipment

Property and equipment are stated at cost. When retired or otherwise disposed, the related carrying value and accumulated depreciation are removed from the respective accounts and the net difference less any amount realized from disposition, is reflected in earnings. For financial statement purposes, property and equipment are recorded at cost and depreciated using the straight-line method over their estimated useful lives.

Advertising

The Company follows the policy of charging the costs of advertising to expense as incurred.

Income Taxes

Deferred income tax assets and liabilities are determined based on the estimated future tax effects of net operating loss and credit carry forwards and temporary differences between the tax basis of assets and liabilities and their respective financial reporting amounts measured at the current enacted tax rates. The Company records an estimated valuation allowance on its deferred income tax assets if it is not more likely than not that these deferred income tax assets will be realized.

The Company recognizes a tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the condensed consolidated financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. As of December 31, 2021 and 2020, the Company has not recorded any unrecognized tax benefits.

Stock-Based Compensation

Employee and non-employee share-based compensation is measured at the grant date, based on the fair value of the award, and is recognized as an expense over the requisite service period.

Net Loss per Share

We report both basic and diluted loss per share. Loss earnings per share is calculated based on the weighted average number of shares of common stock outstanding and excludes the dilutive effect of warrants, stock options or any other type of convertible securities. Diluted loss per share is calculated based on the weighted average number of shares of common stock outstanding and the dilutive effect of stock options, warrants and other types of convertible securities are included in the calculation. Dilutive securities are excluded from the diluted earnings per share calculation because their effect is anti-dilutive. As of December 31, 2021 and 2020, the Company's potentially dilutive shares and options, which were not included in the calculation of net loss per share, included options and warrants for 9,354,328 and 4,983,206 common shares, respectively.

Recent Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). This ASU requires lessees to recognize a lease liability, on a discounted basis, and a right-of-use asset for substantially all leases, as well as additional disclosures regarding leasing arrangements. In July 2018, the FASB issued ASU 2018-11, Leases (Topic 842), which provides an optional transition method of applying the new lease standard. Topic 842 can be applied using either a modified retrospective approach at the beginning of the earliest period presented, or as permitted by ASU 2018-11, at the beginning of the period in which it is adopted.

F-11

We adopted this standard using a modified retrospective approach since inception of the company. The modified retrospective approach includes a number of optional practical expedients relating to the identification and classification of leases that commenced as of the inception of the company; initial direct costs for leases that commenced as of inception of the company; and, the ability to use hindsight in evaluating lessee options to extend or terminate a lease or to purchase the underlying asset.

The Company elected the package of practical expedients permitted under ASC 842 allowing it to account for its prior operating lease that commenced before the adoption date as an operating lease under the new guidance without reassessing (i) whether the contract contains a lease; (ii) the classification of the lease; or (iii) the accounting for indirect costs as defined in ASC 842.

All staff are working remotely; therefore, the Company does not currently have a lease or rent office space.

Consistent with ASC 842-20-50-4, for the Company's quarterly financial statements for the years ended December 31, 2020 and 2021, the Company does not have a monthly rent obligation. The Company had no cash flows arising from a lease, no finance lease cost, short term lease cost, or variable lease costs. The Company does not produce any sublease income or any net gain or loss recognized from sale and leaseback transactions. As a result, the Company did not need to segregate amounts between finance and operating leases for cash paid for amounts included in the measurement of lease liabilities, segregated between operating and financing cash flows; supplemental non-cash information on lease liabilities arising from obtaining right-of-use assets; weighted-average calculations for the remaining lease term; or the weighted-average discount rate.

The adoption of this guidance resulted in no significant impact to the Company's results of operations or cash flows.

In December 2019, the FASB issued ASU No. 2019-12 - Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes ("ASU 2019-12"). ASU 2019-12 is part of the FASB's overall simplification initiative and seeks to simplify the accounting for income taxes by updating certain guidance and removing certain exceptions. The updated guidance is effective for fiscal years beginning after December 15, 2020 and interim periods within those fiscal years. Early adoption is permitted. The adoption of this update did not have a material effect on the Company's financial statements.

In August 2020, the FASB issued ASU 2020-06, Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity ("ASU 2020-06"), which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity. This ASU (1) simplifies the accounting for convertible debt instruments and convertible preferred stock by removing the existing guidance in ASC 470-20, Debt: Debt with Conversion and Other Options, that requires entities to account for beneficial conversion features and cash conversion features in equity, separately from the host convertible debt or preferred stock; (2) revises the scope exception from derivative accounting in ASC 815-40 for freestanding financial instruments and embedded features that are both indexed to the issuer's own stock and classified in stockholders' equity, by removing certain criteria required for equity classification; and (3) revises the guidance in ASC 260, Earnings Per Share, to require entities to calculate diluted earnings per share (EPS) for convertible instruments by using the if-converted method. In addition, entities must presume share settlement for purposes of calculating diluted EPS when an instrument may be settled in cash or shares. For SEC filers, excluding smaller reporting companies, ASU 2020-06 is effective for fiscal years beginning after December 15, 2021 including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020. For all other entities, ASU 2020-06 is effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Entities should adopt the guidance as of the beginning of the fiscal year of adoption and cannot adopt the guidance in an interim reporting period. The Company elected early adoption, effective January 1, 2021. Considering that the Common shares of the Company were not publicly traded as of December 31, 2021, the convertible options are not considered to be readily convertible to cash. In addition, the beneficial conversion feature was eliminated under ASU 2020-06. Therefore, no derivative liabilities will be triggered from these convertible notes.

F-12

In October 2020, the FASB issued ASU 2020-10, Codification Improvements, which updates various codification topics by clarifying or improving disclosure requirements to align with the SEC's regulations. The Company adopted ASU 2020-10 as of the reporting period beginning January 1, 2021. The adoption of this update did not have a material effect on the Company's financial statements.

The Company does not believe that any other recently issued effective pronouncements, or pronouncements issued but not yet effective, if adopted, would have a material effect on the accompanying financial statements.

COVID-19 – Going Concern

In March 2020, the World Health Organization declared the global emergence of the COVID-19 pandemic. The impact of COVID-19 on the Company's business is currently unknown. The Company will continue to monitor guidance and orders issued by federal, state, and local authorities with respect to COVID-19. As a result, the Company may take actions that alter its business operations as may be required by such guidance and orders or take other steps that the Company determines are in the best interest of its employees, customers, partners, suppliers and stockholders.

Any such alterations or modifications could cause substantial interruption to the Company's business and could have a material adverse effect on the Company's business, operating results, financial condition, and the trading price of the Company's common stock, and could include temporary closures of one or more of the Company's facilities; temporary or long-term labor shortages; temporary or long-term adverse impacts on the Company's supply chain and distribution channels; and the potential of increased network vulnerability and risk of data loss resulting from increased use of remote access and removal of data from the Company's facilities. In addition, COVID-19 could negatively impact capital expenditures and overall economic activity in the impacted regions or depending on the severity, globally, which could impact the demand for the Company's products and services.

It is unknown whether and how the Company may be impacted if the COVID-19 pandemic persists for an extended period of time or if there are increases in its breadth or in its severity, including as a result of the waiver of regulatory requirements or the implementation of emergency regulations to which the Company is subject. The COVID-19 pandemic poses a risk that the Company or its employees, contractors, suppliers, and other partners may be prevented from conducting business activities for an indefinite period.

The Company may incur expenses or delays relating to such events outside of its control, which could have a material adverse impact on its business, operating results, financial condition and the trading price of its common stock.

NOTE 4 – ACCOUNTS PAYABLE AND ACCRUED EXPENSES

As of December 31, 2021 and December 31, 2020, the Company had accounts payable and accrued expenses totaling \$432,817 and \$335,620, respectively.

NOTE 5 – NOTES PAYABLE

On May 5, 2020 the Company received an SBA PPP loan in the amount of \$9,917, at 1% interest. The loan was forgiven on May 1, 2021.

On December 20, 2021, the company entered into a loan agreement with an unrelated party, with a principal balance of \$25,000 at 6% interest. The maturity date of the loan is December 19, 2022. As of December 31, 2021, the loan remained outstanding had accrued interest of \$42. The holder will also be issued warrants equal to 50% of the shares issued upon conversion. The warrant exercise price will be the IPO price.

NOTE 6 – NOTES PAYABLE RELATED PARTY

On June 15, 2021, the company entered into a unsecured short term loan agreement with a related party for an aggregate principal balance of \$34,000, with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest.

F-13

On November 19, 2021, the company entered into an unsecured short term loan agreement with a related party for an aggregate principal balance of \$5,000, with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest.

On December 13, 2021, the company entered into an unsecured short term loan agreement with a related party for an aggregate principal balance of \$10,000, with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest.

As of December 31, 2021, the loan remained outstanding and had accrued interest of \$994 and imputed interest expense of \$4,539, respectively.

NOTE 7 – CONVERTIBLE NOTES PAYABLE

On March 27, 2020, the company entered into a convertible loan agreement with the Maryland Technology Development Corporation with a principal balance of \$200,000 at 6% interest. The maturity date of the loan was September 27, 2021. As of December 31, 2021, the loan remained outstanding had accrued interest of \$21,173. The Company understands that the holder intends to convert the loan into equity prior to the Company becoming a public reporting company.

On December 20, 2021, the company entered into a loan agreement with an unrelated party, with a principal balance of \$25,000 at 6% interest. The maturity date of the loan is December 19, 2022. As of December 31, 2021, the loan remained outstanding had accrued interest of \$42. Should the Company complete an IPO prior to the maturity date, the note will automatically convert into the Company's common stock, at a 20% discount to the IPO price. The holder will also be issued warrants equal to 50% of the shares issued upon conversion. The warrant exercise price will be the IPO price.

On August 9, 2021, the company entered into a convertible loan agreement an unrelated party to loan up to \$195,000 at 9% interest, with a principal balance of \$72,000, as of December 31, 2021. This loan included an original issuance discount of 5% and included 195,000 Warrants at an exercise price of \$1, exercisable for 5 years from the issue date on the face of the Warrant. The noteholder has the right to convert the principal and interest into common shares of the Company. The maturity date of the loan was February 9, 2022. As of December 31, 2021, the loan remained outstanding and had accrued interest of \$2,232.

In August 2020, the FASB issued ASU 2020-06, Debt - Debt with Conversion and Other Options (Subtopic 470- 20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity ("ASU 2020-06"), which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity. The Company specified that an entity should adopt the guidance as of the beginning of its annual fiscal year. After adoption of ASU 2020-06, if the equity securities underlying the conversion option are not readily convertible to cash, and the conversion option requires gross physical settlement of the underlying shares, the embedded conversion option may not meet the net settlement criterion, and therefore would not meet the definition of a derivative. Considering that the Common shares of the Company were not publicly traded as of December 31, 2021, the convertible options are not considered to be readily convertible to cash. In addition, the beneficial conversion feature was eliminated under ASU 2020-06. Therefore, no derivative liabilities will be triggered from these convertible notes.

NOTE 8 – CONVERTIBLE NOTES PAYABLE RELATED PARTY

On July 8, 2021, the company entered into a Simple Agreement for Future Equity (SAFE), with a related party, with an amount of \$150,000, with 0% interest. Under the SAFE agreement, if there is an Equity Financing before the termination of this SAFE, on the initial closing of such Equity Financing, this SAFE will automatically convert into the number of shares of SAFE Preferred Stock equal to the Purchase Amount divided by the Conversion Price, which means either: (1) the Safe Price (the price per share equal to the Post-Money Valuation Cap divided by the Company Capitalization) or (2) the Discount Price (the price per share of the Standard Preferred Stock sold in the Equity Financing multiplied by the Discount Rate), whichever calculation results in a greater number of shares of Safe Preferred Stock

F-14

If there is a Liquidity Event before the termination of this SAFE, this SAFE will automatically be entitled (subject to the liquidation priority set forth in Section 1(d) below) to receive a portion of Proceeds, due and payable to the Investor immediately prior to, or concurrent with, the consummation of such Liquidity Event, equal to the greater of (i) the Purchase Amount (the "Cash-Out Amount") or (ii) the amount payable on the number of shares of Common Stock equal to the Purchase Amount divided by the Liquidity Price (the "Conversion Amount"). If any of the Company's securityholders are given a choice as to the form and amount of Proceeds to be received in a Liquidity Event, the Investor will be given the same choice, provided that the Investor may not choose to receive a form of consideration that the Investor would be ineligible to receive as a result of the Investor's failure to satisfy any requirement or limitation generally applicable to the Company's securityholders, or under any applicable laws.

This SAFE will automatically terminate (without relieving the Company of any obligations arising from a prior breach of or non-compliance with this SAFE) immediately following the earliest to occur of: (i) the issuance of Capital Stock to the Investor pursuant to the automatic conversion of this SAFE under agreement; or (ii) the payment, or setting aside for payment, of amounts due the Investor pursuant to the agreement.

As of December 31, 2021, the \$150,000 received from SAFE was recorded at 6% imputed interest. The maturity date of the loan is defined by the SAFE agreement as discussed above.

On August 19, 2021, the company entered into a convertible loan agreement with a related party, with a principal balance of \$99,900 at 9% interest. The noteholder has the right to convert the principal and interest into common shares of the Company. This loan included an original issuance discount of 5% and included 99,900 Warrants at an exercise price of \$1, exercisable for 5 years from the issue date on the face of the Warrant. The maturity date of the loan was February 19, 2022. As of December 31, 2021, the \$99,900 principal and the \$4,950 overpayment of the note remained outstanding and had accrued interest of \$3,347.

The Company specified that an entity should adopt ASU 2020-06 as of the beginning of its annual fiscal year. After adoption of ASU 2020-06, no derivative liabilities will be triggered from these convertible notes. See Note 7 for details.

NOTE 9 – RELATED PARTY

During the year-ended December 31, 2020, there were 1,000,000 common shares issued to CEO Vin Singh, for a subscription payable.

During the year-ended December 31, 2021, there were 400,000 common shares issued to CFO Dane Saglio, for services rendered.

As of December 31, 2021 and 2020, the accrued salary for related parties were \$276,666 and \$200,000, respectively.

During the year ended December 31, 2021, the Company entered into loans with related parties, with total principal balance of \$303,850 and accrued and imputed interest of \$7,687. There were also 99,900 warrants attached to the loans. See Note 6 and Note 8 for details.

During the year ended December 31, 2021, the Company issued totaling 205,000 shares of options to related party for services rendered. The options have an original life of ten years and vest at different rates over as much as 24 months. During the years ended December 31, 2021, the Company recognized \$157 of stock-based compensation related to outstanding stock options, respectively.

NOTE 10 – SHAREHOLDER'S EQUITY

Preferred Stock

The Company has 10,000,000 shares of preferred stock authorized at a par value of \$0.00001. As of December 31, 2020 and 2021, there were no preferred shares issued.

F-15

Common Stock

In June of 2020, BullFrog AI Holdings, Inc. acquired BullFrog AI, Inc. via a 1:1 share exchange. Immediately prior to the share exchange, each authorized common share of BullFrog AI, Inc. was split into 25 shares of common stock. Share amounts in our financial statements for 2021 and 2020 have been adjusted to reflect this forward share split and shares exchange. All of our operations are currently conducted through BullFrog AI Holdings, Inc. BullFrog AI, Inc., is a wholly owned subsidiary, has the sole purpose of housing and protecting all of the organization's intellectual property. BullFrog AI Management, LLC is a wholly owned subsidiary that handles all HR and payroll activities. Immediately prior to the share exchange, each authorized common share of BullFrog AI, Inc. was split into 25 shares of common stock. Share amounts in our financial statements for 2021 and 2020 have been adjusted to reflect this forward share split and shares exchange. All of our operations are currently conducted through BullFrog AI Holdings, Inc. BullFrog AI, Inc., is a wholly owned subsidiary, has the sole purpose of housing and protecting all of the organization's intellectual property. BullFrog AI Management, LLC is a wholly owned subsidiary that handles all HR and payroll activities Pursuant to the agreement, 24,223,975 shares of the Company's common stock were issued to the shareholders of BullFrog AI, Inc. in exchange for 100% of the ownership interests of BullFrog AI, Inc. Upon completion of the Exchange, BullFrog AI, Inc. became the Company's wholly-owned subsidiary and the shareholders of BullFrog AI, Inc. own a 100% controlling interest in the Company. As a result, BullFrog AI, Inc. became BullFrog AI Holdings, Inc's wholly owned subsidiary and assumed a total of \$330,442 in net liabilities. All of the entities were controlled both before and after the transactions by the same controlling shareholder. This transaction is being accounted for as a common control transaction and all entities are being presented as if the transactions took place at the beginning of the earliest period presented. Share amounts in our financial statements for 2021 and 2020 have been adjusted to reflect this forward share split and shares exchange. BullFrog AI, Inc was incorporated in 2017 as discussed in the previous notes. All of our operations are currently conducted through BullFrog AI Holdings, Inc.

The Company has 100,000,000 shares of common stock authorized at a par value of \$0.00001. As of December 31, 2020 and 2021, there are 25,223,975 and 27,259,547 shares outstanding, respectively.

During the year-ended December 31, 2020, there were 1,000,000 common shares issued to CEO Vin Singh.

During the year-ended December 31, 2021, there were 400,000 shares issued to CFO Dane Saglio for services rendered to the Company.

In June of 2021 the Company entered into two advisory agreements with entities engaged specifically to assist the Company in becoming a publicly listed NASDAQ company. Under the fee provisions of these agreements the Company issued a total of 1,635,572 shares of common stock to the advisors as well as warrants to purchase additional common shares. In addition, the Company entered into a convertible note with one of the advisors. The proceeds from the note are to be and have been used to cover a percentage of agreed upon pre IPO expenses. In November 2021 the Company issued 400,000 shares of common stock to a consultant who has been engaged to provide financial and accounting services to the Company. Three Percent (3%) of the fully diluted equity of the company as measured by the capital equity table immediately prior to listing on NASDAQ or any other Exchange, with a 'true-up' amount to be delivered within thirty days prior to its expected listing day.

Stock Options

During the year ended December 31, 2021, the Company granted a total of 205,000 shares of options to employee of the Company for services rendered. The options have an original life of ten years and vest at different rates over as much as 48 months. During the years ended December 31, 2021, the Company vested 9,167 of these options and recognized \$157 of stock-based compensation related to outstanding stock options.

During the year ended December 31, 2020, no options are granted and vested.

The following tables summarizes the stock options activity for the years ended December 31, 2021 and 2020:

	Options
Granted and outstanding, December 31, 2019	6,193,750
Granted	-
Exercised	-
Forfeited	-
Expired	-
Granted and outstanding, December 31, 2020	6,193,750
Granted during 2021	205,000
Exercised	-
Forfeited	-
Expired during 2021	(3,118,750)
Vested and outstanding, December 31, 2021	3,280,000

F-16

	Options	Intrinsic Value of Vested Options	Weight Averaged exercise Price
Vested and outstanding, December 31, 2019	733,567	12,706	0.48
Granted	-	-	-
Exercised	-	-	-
Forfeited	-	-	-
Expired	-	-	-
Vested and outstanding, December 31, 2020	733,567	12,706	0.48
Granted	9,167	157	0.38
Exercised	-	-	-
Forfeited	-	-	-
Expired	(465,669)	(7,922)	(0.48)
Vested and outstanding, December 31, 2021	277,065	4,941	0.48

As of December 31, 2021 and 2020, 9,167 and 0 options are vested, 465,669 options are expired and the outstanding stock options have a weighted average remaining life 7.38 years and 3.33 years, respectively.

As of December 31, 2021 and 2020, the aggregate intrinsic value of options vested and outstanding was \$157 and \$0. The aggregate fair value of the options measured during the years ended December 31, 2021 was calculated using the Black-Scholes option pricing model based on the following assumption:

December 31, 2021

Fair Value of Common Stock on measurement date	\$	0.044
Risk free interest rate		From 1.26% to 1.33%
Volatility		93%
Dividend Yield		0%
Expected Term		10

- (1) The risk-free interest rate was determined by management using the market yield on U.S. Treasury securities with comparable terms as of the measurement date.
- (2) The trading volatility was determined by calculating the volatility of the Company's peer group.
- (3) The Company does not expect to pay a dividend in the foreseeable future.

Warrants

During the year ended December 31, 2021, the Company granted a total of 3,021,614 warrants. Of this amount 1,400,000 warrants, with an intrinsic value of \$12,462, were granted to advisors related to the Company's IPO objective. The warrants have an original life of five years and vest 30 days before the intended IPO. During the year ended December 31, 2021, 0 shares of these warrants are vested.

F-17

972,500 warrants, with an intrinsic value of \$28,683, are issued for services rendered. The warrants have an original life of ten years and vest at different rates over as much as 36 months. During the year ended December 31, 2021, 220,000 shares of these warrants are vested, with an intrinsic value of \$6,567.

In addition, the Company granted and vested 649,114 warrants, with an intrinsic value of \$12,908, in connection with convertible bridge debt agreements with multiple parties including a related party and the advisors engaged to assist with the IPO. The warrants have an original life of five years and vest at different rates immediately.

During the year ended December 31, 2020, the Company granted a total of 3,170,000 shares of warrants. Of this amount 1,250,000 warrants are granted and vested to settle the \$55,000 common stock payable. The warrants have an original life of ten years and vested immediately. The aggregate intrinsic value of the 1,250,000 warrants was \$37,730. And therefore, the Company recorded a \$17,270 gain on liability settlement as of December 31, 2020.

1,920,000 warrants are issued to consultants of the Company for services rendered. The warrants have an original life of ten years and vest immediately. The Company recognized \$84,344 warrant expense during December 31, 2020 year ended.

During the years ended December 31, 2019 and 2018, the Company granted a total of 300,000 warrants for services rendered. The warrants have an original life of ten years and vest at 36 months. During the years ended December 31, 2021 and 2020, 93,750 shares of warrants with an intrinsic value of \$2,661, and 97,916 shares of warrants with an intrinsic value of \$2,782 are vested and were recognized, respectively.

The following tables summarize the warrants activity for the years ended December 31, 2021 and December 31, 2020:

	Warrants
Granted and outstanding, December 31, 2019	300,000
Granted	3,170,000
Exercised	-
Forfeited	-
Expired	-
Granted and outstanding, December 31, 2020	3,470,000
Granted during 2021	3,021,614
Exercised	-
Forfeited	-
Expired during 2021	-
Granted and outstanding, December 31, 2021	6,491,614

F-18

	Warrants	Intrinsic Value of Vested Warrants	Weight Averaged exercise Price
Vested and outstanding, December 31, 2019	91,667	2,624	0.48
Granted	3,267,916	124,856	0.13
Exercised	-	-	-
Forfeited	-	-	-
Expired	-	-	-
Vested and outstanding, December 31, 2020	3,359,583	127,480	0.14
Granted and Vested	962,864	22,208	0.45
Exercised	-	-	-
Forfeited	-	-	-
Expired	-	-	-
Vested and outstanding, December 31, 2021	4,322,447	149,687	0.21

As of December 31, 2021, 6,491,614 warrants are outstanding, and 4,322,447 warrants are vested, and the vested stock warrants have a weighted average remaining life of 7.73 years.

As of December 31, 2021, the aggregate intrinsic value of warrants vested was \$149,687. The aggregate fair value of the warrants measured during the year-ended December 31, 2021 was calculated using the Black-Scholes option pricing model.

As of December 31, 2020, 3,267,917 warrants are vested, and the outstanding stock warrants have a weighted average remaining life of 9.19 years.

As of December 31, 2020, the aggregate intrinsic value of warrants vested was \$127,480. The aggregate fair value of the warrants measured during the year-ended December 31, 2020 was calculated using the Black-Scholes option pricing model based on the assumptions below:

	December 31, 2021	December 31, 2020
Fair Value of Common Stock on measurement date	\$ 0.044	\$ 0.044
Risk free interest rate	From 0.78% to 1.63%	From 0.68% to 1.59%

Volatility	93%	93%
Dividend Yield	0%	0%
Expected Term	5-10 years	10 years

- (1) The risk-free interest rate was determined by management using the market yield on U.S. Treasury securities with comparable terms as of the measurement date.
- (2) The trading volatility was determined by calculating the volatility of the Company's peer group.
- (3) The Company does not expect to pay a dividend in the foreseeable future.

F-19

NOTE 11 – INCOME TAXES

As of December 31, 2021, the Company has available for federal income tax purposes a net operating loss carry forward of approximately \$1,614,386, that do not expire, that may be used to offset future taxable income, but could be limited under Section 382. The Company has provided a valuation reserve against the full amount of the net operating loss benefit, since in the opinion of management based upon the earnings history of the Company; it is more likely than not that the benefits will not be realized. Due to possible significant changes in the Company's ownership, the future use of its existing net operating losses may be limited. All or portion of the remaining valuation allowance may be reduced in future years based on an assessment of earnings sufficient to fully utilize these potential tax benefits.

We have adopted the provisions of ASC 740-10-25, which provides recognition criteria and a related measurement model for uncertain tax positions taken or expected to be taken in income tax returns. ASC 740-10-25 requires that a position taken or expected to be taken in a tax return be recognized in the financial statements when it is more likely than not that the position would be sustained upon examination by tax authorities.

Tax position that meets the more likely than not threshold is then measured using a probability weighted approach recognizing the largest amount of tax benefit that is greater than 50% likely of being realized upon ultimate settlement. The Company had no tax positions relating to open income tax returns that were considered to be uncertain. We file income tax returns in the U.S. and in the state of California and Utah with varying statutes of limitations.

The Company's deferred taxes as of December 31, 2020 and 2021 consist of the following:

	2021	2020
Non-Current deferred tax asset:		
Net operating loss carryforwards	\$ 339,000	\$ 212,000
Valuation allowance	(339,000)	(212,000)
Net non-current deferred tax asset	<u>\$ —</u>	<u>\$ —</u>

NOTE 12 – MATERIAL AGREEMENTS

JHU-APL Technology License

On February 7, 2018, the Company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the technology. The license covers three (3) issued patents, 1 new provisional patent application, non-patent rights to proprietary libraries of algorithms and other trade secrets, the license also includes modifications and improvements. In October of 2021, the Company executed an Amendment to the original license which represents improvements and new advanced analytics capabilities. In consideration of the rights granted to the Company under the License Agreement JHU received a warrant equal to five (5%) percent of the then fully diluted equity base of the Company, which shall be diluted following the closing of this offering. Under the terms of the License Agreement, JHU will be entitled to eight (8%) percent royalty on net sales for the services provided by the Company in which the JHU licensed technology was utilized, as well as fifty (50%) percent of all sublicense revenues received by the Company. In addition, the Company is required to pay JHU an annual maintenance fee of \$1,500. Minimum annual royalty payments are \$20,000 for 2022, \$80,000 for 2023, and \$300,000 for 2024 and beyond, if cumulative annual royalty payments do not reach these levels, the amount due to JHU to reach the annual minimum is due by January 31st of the following year. Failure to make annual royalty payments is considered a material breach under the agreement and upon notice from JHU of a material breach, the Company shall have 60 days to cure the material breach.

See Note 10 for details on warrants issued related to this agreement.

F-20

NOTE 13 – COMMITMENTS AND CONTINGENCIES

The Company follows ASC 450, Contingencies, which requires the Company to assess the likelihood that a loss will be incurred from the occurrence or non-occurrence of one or more future events. Such assessment inherently involves an exercise of judgment. In assessing possible loss contingencies from legal proceedings or unasserted claims, the Company evaluates the perceived merits of such proceedings or claims, and of the relief sought or expected to be sought.

If the assessment of a contingency indicates that it is probable that a material loss will be incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Company's financial statements. If the assessment indicates that a potentially material loss contingency is not probable but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, and an estimate of the range of possible losses, if determinable and material, would be disclosed. Loss contingencies considered remote are generally not disclosed unless they involve guarantees, in which case the guarantees would be disclosed.

While not assured, management does not believe, based upon information available at this time, that a loss contingency will have material adverse effect on the Company's financial position, results of operations or cash flows.

NOTE 14 – SUBSEQUENT EVENTS

In furthering its business objectives, the Company has entered into two license agreements with world renowned universities for the right to license mid and early-stage drug development programs.

GWU - Beta2-spectrin siRNA License

On January 14, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from George Washington University (GWU) for rights to use siRNA targeting Beta2-spectrin in the treatment of human diseases, including hepatocellular carcinoma (HCC). The license covers methods claimed in three US and worldwide patent applications, and also includes use of this approach for treatment of obesity, non-alcoholic fatty liver disease, and non-alcoholic steatohepatitis. This program is currently in the preclinical stage of development.

In consideration of the rights granted to the Company under the License Agreement GWU received a \$20,000 License Initiation Fee. Under the terms of the License Agreement, GWU will be entitled to a three percent (3%) royalty on net sales subject to quarterly minimums once the first sale has occurred subsequent to regulatory approval, as well sublicense or assignment fees in the event the Company sublicenses or assigns their rights to use the technology. The Company will also reimburse GWU for previously

incurred and ongoing patent costs. The Sublicense and Assignment fee amounts decline as the Company advances the clinical development of the licensed technology. The license agreement also contains milestone payments for clinical development steps totaling \$860,000 through the approval of an NDA and a commercial milestone of \$1M once sales reach \$20M in the US. In addition, the Company is required to pay GWU an annual license maintenance fee of \$10,000 beginning in year 3, increasing to \$20,000 in year 4 and remaining at this level for the term of the license. Failure to make payments under the license agreement is considered a material breach under the agreement and upon notice from GWU of a material breach, the Company shall have 45 days to cure it.

JHU – Mebendazole License

On February 22, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from Johns Hopkins University (JHU) for the use of an improved formulation of Mebendazole for the treatment of any human cancer or neoplastic disease. This formulation shows potent activity in animal models of different types of cancer, and has been evaluated in a Phase I clinical trial in patients with high-grade glioma (NCT01729260). The trial, an open-label dose-escalation study, enrolled 24 patients and demonstrated acceptable toxicity of the drug with adjuvant temozolomide in this population.

F-21

The license covers six (6) issued patents and one (1) pending application. In consideration of the rights granted to the Company under the License Agreement JHU will receive an Upfront License Fee of \$250,000. The first \$50,000 of this upfront fee was due within 30 days of the effective date with the remaining amount of \$200,000 due upon the earlier of: (i) completion of an IPO, (ii) the Company raising \$10 million in financing, or (iii) within 9 months of the effective date of the license. The Company will also reimburse JHU for previously incurred and ongoing patent costs. Under the terms of the License Agreement, JHU will be entitled to three- and one-half percent (3.5%) royalty on net sales by the Company. In addition, the Company is required to pay JHU minimum annual royalty payments of \$5,000 for 2023, \$10,000 for 2024, \$20,000 for 2025, \$30,000 for 2026 and \$50,000 for 2027 and each year after until the first commercial sale after which the annual minimum royalty shall be \$250,000. The license agreement also contains milestone payments for clinical development steps totaling up to \$1.5M through the approval of an NDA, and commercial milestones of \$1M once annual sales reach \$20M in the US, \$2M once sales exceed \$100M, \$10M once sales exceed \$500M, and \$20M once sales exceed \$1B. Failure to make payments under the license agreement is considered a material breach under the agreement and upon notice from JHU of a material breach, the Company shall have 30 days to cure it. In addition, JHU shall have the right to participate up to 1% in any private equity financing conducted by the Company.

On April 11, 2022, the Company entered into an Exclusive placement agent and/or underwriter agreement with WallachBeth Capital LLC in connection with a proposed private and/or public offerings by the Company. As discussed in Footnote 2, a significant component of the Company's plan to secure capital is the intention of the Company to seek to be listed on a national exchange through an initial public offering ("IPO") of its common stock. WallachBeth was engaged in this regard and on April 28, 2022, the Company received net proceeds or approximately \$775,000 from the sale of Convertible Bridge Notes and Warrants to several institutional investors as well as several individual accredited investors. In connection with the April 28th note sale, the Company paid approximately \$92,000 in fees and expenses. In addition to the money received on April 28th, the Company also received \$100,000 from the sale of a Convertible Bridge Note and Warrants to a related party earlier in April. The bridge notes were issued with a 10% original issue discount and are convertible at the IPO at a 20% discount to the IPO price and the purchasers will also have a warrant for each share of common stock issued upon conversion. The warrant exercise price will be 110% of the per share IPO price. The Company plans to file an S-1 Registration Statement in the second quarter and seek to conduct an IPO this summer.

In May 2022, the Company and the two entities engaged in June 2021 to assist the Company in becoming a publicly listed NASDAQ company (see footnote 10) amended the advisory agreements, specifically the fee provisions. Under the amended agreements, the advisors are to receive a total of 850,000 shares of common stock that will not be subject to a reverse split of the common shares in the event this is required to achieve the NASDAQ listing. Also, under the amended agreements, the warrant agreements issued under the original advisory agreements have been cancelled.

Also in May of 2022, the Company, and the holders of two convertible promissory notes sold in August 2021, amended the note term to extend the maturity date. As consideration to the note holders, the Company issued additional warrants to each holder and amended the terms of the previous warrants to reflect that all warrants now have an exercise price of \$2.50 and the number of warrant shares will not be subject to a reverse split of the common shares in the event this is required to achieve the NASDAQ listing. One of the note holders is a related party (see footnote 8) and the holder of the second note is one of the advisors mentioned above. (see footnote 10).

Through May of 2022, the Company issued warrants to consultants and advisors who performed services for the Company. The warrants for a total of 495,412 shares, have exercise prices ranging from \$0.38 to \$1 and vest over periods of zero through 24 months. 301,000 were issued to individuals who have been engaged as Company management and advisors, the remaining 194,412 were issued to unrelated individuals or entities.

F-22

BULLFROG AI HOLDINGS, INC.
FINANCIAL STATEMENTS
JUNE 30, 2022
(unaudited)

F-23

Bullfrog AI Holdings, Inc.
Consolidated Balance Sheets

	June 30 2022	December 31 2021
	(Unaudited)	(Audited)
ASSETS		
CURRENT ASSETS:		
Cash	\$ 238,453	\$ 10,014
Prepaid expense	15,000	-
Total Current Assets	<u>\$ 253,453</u>	<u>\$ 10,014</u>
NON-CURRENT ASSETS:		
Property and Equipment, net	8,581	-
Total Non-Current Assets	<u>\$ 8,581</u>	<u>-</u>
TOTAL ASSETS	<u>\$ 262,034</u>	<u>\$ 10,014</u>
LIABILITIES AND STOCKHOLDERS' DEFICIT		

CURRENT LIABILITIES:			
Accounts payable	\$	101,271	\$ 68,594
Accrued expenses		336,011	68,557
Accrued expenses-related party		362,666	285,666
Deferred revenue		32,000	10,000
Notes payable-related party		-	49,000
Convertible notes, net of \$130,595 and \$12,962 debt discount, respectively		1,067,517	284,038
Convertible notes-related party, net of \$0 and \$1,584 debt discount, respectively		254,850	253,266
Total Current Liabilities	\$	2,154,315	\$ 1,019,121
TOTAL LIABILITIES	\$	<u>2,154,315</u>	\$ <u>1,019,121</u>
STOCKHOLDERS' DEFICIT:			
Preferred stock, \$0.00001 par value, 10,000,000 shares authorized; no shares are issued and outstanding,		-	-
Common stock, \$0.00001 par value, 100,000,000 shares authorized; 27,915,863 and 27,259,547 shares are issued and outstanding as of June 30, 2022 and December 31, 2021, respectively		279	272
Subscription receivable		-	-
Additional paid-in capital		1,046,284	587,189
Accumulated deficit		(2,938,844)	(1,596,568)
Total BullFrog stockholders' deficit	\$	(1,892,281)	\$ (1,009,107)
TOTAL STOCKHOLDERS' DEFICIT		<u>(1,892,281)</u>	<u>(1,009,107)</u>
TOTAL LIABILITIES AND STOCKHOLDERS' DEFICIT	\$	<u>262,034</u>	\$ <u>10,014</u>

The accompanying notes are an integral part of these financial statements

F-24

Bullfrog AI Holdings, Inc.
Consolidated Statements of Operations

	<u>For The Three Months Ended June 30</u>		<u>For The Six Months Ended June 30</u>	
	<u>2022</u>	<u>2021</u>	<u>2022</u>	<u>2021</u>
NET REVENUES:				
Revenues, net	\$ -	\$ -	\$ -	\$ -
TOTAL NET REVENUES	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
COST OF GOODS SOLD:				
Cost of goods sold	-	-	-	-
TOTAL COST OF GOODS SOLD	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
GROSS PROFIT	-	-	-	-
OPERATING EXPENSES:				
General and administrative expenses	328,405	65,384	747,896	75,385
Payroll and salary-related party	144,227	47,733	244,970	93,635
Stock based compensation	209,323	72,662	239,340	73,358
TOTAL OPERATING EXPENSES	<u>681,955</u>	<u>185,779</u>	<u>1,232,206</u>	<u>242,378</u>
(LOSS) FROM OPERATIONS	<u>(681,955)</u>	<u>(185,779)</u>	<u>(1,232,206)</u>	<u>(242,378)</u>
OTHER INCOME (EXPENSE):				
Interest expense	(94,020)	(4,070)	(110,509)	(7,969)
Other income	58	118	439	10,035
TOTAL OTHER INCOME (EXPENSE)	<u>(93,962)</u>	<u>(3,952)</u>	<u>(110,070)</u>	<u>2,066</u>
NET (LOSS)	<u>(775,917)</u>	<u>(189,731)</u>	<u>(1,342,276)</u>	<u>(240,312)</u>
NET (LOSS) PER COMMON SHARE:				
Basic and diluted	<u>\$ (0.03)</u>	<u>\$ (0.01)</u>	<u>\$ (0.05)</u>	<u>\$ (0.01)</u>
WEIGHTED AVERAGE NUMBER OF COMMON SHARES OUTSTANDING:				
Basic and diluted	<u>27,294,666</u>	<u>25,349,788</u>	<u>27,277,203</u>	<u>25,287,229</u>

The accompanying notes are an integral part of these financial statements

F-25

Bullfrog AI Holdings, Inc.
Consolidated Statements of Stockholders' Deficit

<u>Common Stock</u>	<u>Additional Paid in</u>	<u>Subscription</u>	<u>Accumulated</u>
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	<u>Shares</u>	<u>Amount</u>	<u>Capital</u>	<u>Receivables</u>	<u>Deficit</u>	<u>Total</u>
Balances, December 31, 2020	25,223,975	\$ 252	\$ 470,058	\$ (100)	\$ (1,010,728)	\$ (540,518)
Equity compensation	1,635,572	16	73,342	-	-	73,358
Imputed Interest	-	-	14	-	-	14
Net Income/(Loss)	-	-	-	-	(240,312)	(240,312)
Balances, June 30, 2021	<u>26,859,547</u>	<u>\$ 268</u>	<u>\$ 543,414</u>	<u>(100)</u>	<u>\$ (1,251,040)</u>	<u>\$ (707,458)</u>
Balances, December 31, 2021	27,259,547	\$ 272	\$ 587,189	-	\$ (1,596,568)	\$ (1,009,107)
Imputed Interest	-	-	4,721	-	-	4,721
Equity compensation	-	-	239,340	-	-	239,340
Conversion of convertible notes	1,441,888	15	226,123	-	-	226,138
Reclassification of warrant	-	-	(11,097)	-	-	(11,097)
Shares cancellation	(785,572)	(8)	8	-	-	-
Net Income/(Loss)	-	-	-	-	(1,342,276)	(1,342,276)
Balances, June 30, 2022	<u>27,915,863</u>	<u>\$ 279</u>	<u>\$ 1,046,284</u>	<u>\$ -</u>	<u>\$ (2,938,844)</u>	<u>\$ (1,892,281)</u>

The accompanying notes are an integral part of these financial statements

F-26

Bullfrog AI Holdings, Inc.
Consolidated Statements of Cash Flows

	<u>For The Six Months Ended June 30</u>	
	<u>2022</u>	<u>2021</u>
CASH FLOWS FROM OPERATING ACTIVITIES:		
Net (loss)	\$ (1,342,276)	\$ (240,312)
Adjustment to reconcile change in net (loss) to net cash and cash equivalents used in operating activities:		
Gain on debt forgiveness	-	(9,917)
Depreciation expense	163	-
Stock-based compensation	239,340	73,358
Amorization of debt discount	76,155	-
Imputed Interest	4,721	14
Changes in operating assets and liabilities:		
Prepaid Expense	(15,000)	-
Accounts payable	32,677	17,359
Accrued expenses	293,213	11,781
Accrued expenses-related party	77,000	117,169
Deferred revenue	22,000	-
NET CASH USED IN OPERATING ACTIVITIES	<u>(612,007)</u>	<u>(30,548)</u>
CASH FLOWS FROM INVESTING ACTIVITIES:		
Purchase of Property and Equipment	(8,744)	-
NET CASH USED IN INVESTING ACTIVITIES	<u>(8,744)</u>	<u>-</u>
CASH FLOWS FROM FINANCING ACTIVITIES:		
Proceeds from convertible notes payables	898,190	-
Repayment of note payable and interest-related party	(49,000)	-
Proceeds from notes payables - related party	-	34,000
NET CASH FROM FINANCING ACTIVITIES	<u>849,190</u>	<u>34,000</u>
Net increase/(decrease) in cash and cash equivalents	228,439	3,452
Cash, beginning of year	<u>10,014</u>	<u>5,019</u>
Cash, end of period	<u>\$ 238,453</u>	<u>\$ 8,471</u>
SUPPLEMENTAL CASH FLOW INFORMATION:		
Cash paid for interest	\$ 4,399	\$ 940
Cash paid for taxes	\$ -	\$ -
SUPPLEMENTAL DISCLOSURE of NON-CASH ACTIVITY:		

Reclassification of warrant	\$ 11,097	\$ -
Conversion of Convertible Note payable	\$ 226,138	\$ -
Cancellation of common stocks	\$ 8	\$ -

The accompanying notes are an integral part of these financial statements

F-27

BULLFROG AI HOLDINGS, INC.
NOTES TO FINANCIAL STATEMENTS
June 30, 2022
(unaudited)

NOTE 1 – ORGANIZATION AND NATURE OF BUSINESS

Bullfrog AI Holdings, Inc. was incorporated in the State of Nevada on February 6, 2020. Bullfrog AI Holdings, Inc. is the parent company of Bullfrog AI, Inc. and Bullfrog AI Management, LLC, which were incorporated in Delaware and Maryland, in 2017 and 2021, respectively. All of our operations are currently conducted through Bullfrog AI Holdings, Inc., which began operations on February 6, 2020. We are a company focused specifically on advanced AI/ML-driven analysis of complex data sets in medicine and healthcare. Our objective is to utilize our platform for precision medicine approach to drug asset enablement through external partnerships and selective internal development.

Most new therapeutics will fail at some point in preclinical or clinical development. This is the primary driver of the high cost of developing new therapeutics. A major part of the difficulty in developing new therapeutics is efficient integration of complex and highly dimensional data generated at each stage of development to de-risk subsequent stages of the development process. Artificial Intelligence and Machine Learning (AI/ML) has emerged as a digital solution to help address this problem.

We use artificial intelligence and machine learning to advance medicines for both internal and external projects. Most current AI/ML platforms still fall short in their ability to synthesize disparate, high-dimensional data for actionable insight. Our platform technology, named, bfLEAP™ is an analytical AI/ML platform developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL) which is able to surmount the challenges of scalability and flexibility currently hindering researchers and clinicians by providing a more precise, multi-dimensional understanding of their data. We are deploying bfLEAP™ for use at several critical stages of development for internal programs and through strategic partnerships and collaborations with the intention of streamlining data analytics in therapeutics development, decreasing the overall development costs by decreasing failure rates for new therapeutics, and impacting the lives of countless patients that may otherwise not receive the therapies they need.

The bfLEAP™ platform utilizes both supervised and unsupervised machine learning – as such, it is able to reveal real/meaningful connections in the data without the need for an a priori hypothesis. Algorithms used in the bfLEAP™ platform are designed to handle highly imbalanced data sets to successfully identify combinations of factors that are associated with outcomes of interest.

Our primary goal is to improve the odds of success at any stage of pre-clinical and clinical therapeutics development, for in-house programs, and our strategic partners and collaborators. Our primary business model is enabling the success of ongoing clinical trials or rescue of late stage failed drugs (i.e., Phase 2 or Phase 3 clinical trial failures) for development and divestiture; although, we will also consider collaborations for earlier stage drugs. We hope to accomplish this through strategic acquisitions of current clinical stage and failed drugs for in-house development, or through strategic partnerships with biopharmaceutical industry companies. We are able to pursue our drug asset enhancement business by leveraging a powerful and proven AI/ML platform (trade name: bfLEAP™) initially developed at JHU-APL. We believe the bfLEAP™ analytics platform is a potentially disruptive tool for analysis of pre-clinical and/or clinical data sets, such as the robust pre-clinical and clinical trial data sets being generated in translational R&D and clinical trial settings.

NOTE 2 – GOING CONCERN AND MANAGEMENT’S LIQUIDITY PLANS

The accompanying financial statements have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities in the normal course of business. As shown in the accompanying financial statements, for the six months ended June 30, 2022 the Company incurred net losses from operations of \$1,342,276 and used cash in operations of \$612,007. These factors among others raise substantial doubt that the Company will be able to continue as a going concern for a reasonable period of time.

The Company’s primary source of operating funds for the six months ended June 30, 2022 and for the year ended December 31, 2021 has been from investors and related parties. The Company has experienced net losses from operations since inception, but expects these conditions to improve in 2022 and beyond, as it continues to develop its direct sales and marketing programs; however, no assurance can be provided that the Company will not continue to experience losses in the future. The Company has stockholders’ deficiencies at June 30, 2022 and December 31, 2021 and requires additional financing to fund future operations.

F-28

A significant component of the Company’s plan to secure capital to both establish its operating base and also to execute on its business plan is the intention of the Company to seek to be listed on a national exchange through an initial public offering (“IPO”) of its common stock. In this regard, the Company has entered into a number of advisory and consulting agreements with entities and individuals providing services and advice to the Company. The Company has compensated these advisors and consultants using equity instruments issued by Bull Frog AI Holdings, Inc. as will be more thoroughly explained below.

The Company’s existence is dependent upon management’s ability to develop profitable operations and to obtain additional funding sources, including an IPO. There can be no assurance that the Company’s financing efforts will result in profitable operations or the resolution of the Company’s liquidity problems. There can be no assurance that the Company will be successful in developing profitable operations or that it will be able to obtain financing on favorable terms, if at all. The accompanying statements do not include any adjustments that might result should the Company be unable to continue as a going concern.

NOTE 3 –SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Use of Estimates in the Preparation of Financial Statements

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires us to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Estimates include, but are not limited to, revenue recognition, allowances for doubtful accounts, recoverability of deferred tax assets and certain other of our accrued liabilities. Actual results could differ from those estimates.

Financial Instruments

The carrying value of short-term instruments, including cash and cash equivalents, accounts payable and accrued expenses approximate fair value due to the relatively short period to maturity for these instruments.

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Valuation techniques used to measure fair value maximize the use of observable

inputs and minimize the use of unobservable inputs. The Company utilizes a three-level valuation hierarchy for disclosures of fair value measurements, defined as follows:

Level 1 - inputs to the valuation methodology are quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 - inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets, and inputs that are observable for the assets or liability, either directly or indirectly, for substantially the full term of the financial instruments.

Level 3 - inputs to the valuation methodology are unobservable and significant to the fair value.

The Company does not have any assets or liabilities that are required to be measured and recorded at fair value on a recurring basis.

Revenue Recognition

For annual reporting periods after December 15, 2017, the Financial Accounting Standards Board (“FASB”) made effective ASU 2014-09 “Revenue from Contracts with Customers,” to supersede previous revenue recognition guidance under current U.S. GAAP. Revenue is now recognized in accordance with FASB ASC Topic 606, Revenue Recognition. The objective of the guidance is to establish the principles that an entity shall apply to report useful information to users of financial statements about the nature, amount, timing, and uncertainty of revenue and cash flows arising from a contract with a customer. The core principle is to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the Company expects to be entitled in exchange for those goods or services. Two options were made available for implementation of the standard: the full retrospective approach or modified retrospective approach. The guidance became effective for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period, with early adoption permitted. We have adopted FASB ASC Topic 606 for our reporting period as of the year-ended December 31, 2019. As of June 30, 2022 and December 31, 2021, we have had no revenue. For the six months ended June 30, 2022 and year-ended December 31, 2021, there were no completed contracts therefore the customer down payment received in late 2021 and early 2022 is reflected on the balance sheet as of June 30, 2022 and December 31, 2021 as unearned revenue in the amount of \$32,000 and \$10,000, respectively. As is more fully discussed below, we are of the opinion that none of our contracts for products contain significant financing components that require revenue adjustment under FASB ASC Topic 606.

F-29

Revenue is recognized based on the following five step model:

- **Identification of the contract with a customer**
This step outlines the criteria that must be met when establishing a contract with a customer to supply goods or services
- **Identification of the performance obligations in the contract**
This step describes how distinct performance obligations in the contract must be handled
- **Determination of the transaction price**
This step outlines what must be considered when establishing the transaction price, which is the amount the business expects to receive for transferring the goods and services to the customer
- **Allocation of the transaction price to the performance obligations in the contract**
This step outlines guidelines for allocating the transaction price across the contract’s separate performance obligations, and is what the customer agrees to pay for the goods and services
- **Recognition of revenue when, or as, the Company satisfies a performance obligation**
Revenue can be recognized as the business meets each performance obligation. This step specifies how that should happen

Contract Services

The Company anticipates that the majority of revenues to be recognized in the near future will result from our fee for service partnership offering, designed for biopharmaceutical companies, as well as other organizations, of all sizes that have challenges analyzing data throughout the drug development process. The Company provides the customer with an analysis of large complex data sets using the Company’s proprietary Artificial Intelligence / Machine Learning platform called bfLEAP™. This platform is designed to predict targets of interest, patterns, relationships, and anomalies. The Company believes that there will be additional on-going work requested from partners therefore the service model utilizes a master services agreement with work or task orders issued for discrete analysis performed at the discovery, preclinical, or clinical stages of drug development. The Company receives a cash fee and in some instances the potential for rights to new intellectual property generated from the analysis.

Collaborative Arrangements

The Company also intends to enter collaborative arrangements with pharmaceutical companies who have drugs that have failed late Phase 2 or Phase 3 trials. These arrangements could take several forms including true partnerships where BullFrog contributes data analysis using the bfLEAP™ platform with the partner contributing the drug candidate and other resources needed to continue development towards commercialization with BullFrog receiving an equity or royalty right in the commercialized product. In other arrangements the Company may earn cash payments based on achieving certain milestones as determined under each specific arrangement.

Acquisition of Rights to Certain Drugs

In certain circumstances, we may also acquire rights to drugs that are in early-stage clinical trials, use our technology to sponsor and support a successful later stage precision medicine trial, and divest the asset. The same process may apply to the discovery of new drugs. In these instances, divestiture may be in the form of an outright sale of all rights or possibly a license to develop and commercialize enhanced development candidates. License agreements could include developmental and commercial milestones in addition to royalties.

Use of Estimates

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Significant estimates include the fair value of the Company’s stock, stock-based compensation, fair values relating to derivative liabilities, debt discounts and the valuation allowance related to deferred tax assets. Actual results may differ from these estimates.

Cash

The Company considers cash to consist of cash on hand and temporary investments having an original maturity of 90 days or less that are readily convertible into cash. As of June 30, 2022 and December 31, 2021, cash balances were \$238,453 and \$10,014, respectively.

F-30

Concentrations of Credit Risk

The Company’s financial instruments that are exposed to a concentration of credit risk are cash and accounts receivable. Occasionally, the Company’s cash in interest-bearing accounts may exceed FDIC insurance limits. The financial stability of these institutions is periodically reviewed by senior management.

Accounts Receivable

Trade receivables are carried at their estimated collectible amounts. Trade credit is generally extended on a short-term basis. Thus, trade receivables do not bear interest. Trade accounts receivable are periodically evaluated for collectability based on past credit history with customers and their current financial condition.

Allowance for Doubtful Accounts

Any charges to the allowance for doubtful accounts on accounts receivable are charged to operations in amounts sufficient to maintain the allowance for uncollectible accounts at a level management believes is adequate to cover any probable losses. Management determines the adequacy of the allowance based on historical write-off percentages and the current status of accounts receivable. Accounts receivables are charged off against the allowance when collectability is determined to be permanently impaired. As of June 30, 2022 and December 31, 2021, allowance for doubtful accounts was \$0.

Inventories

The Company does not have inventory and does not plan to have inventory in the near future.

Cost of Sales

Cost of sales is comprised of royalties and the cost of outsourced services provided to the Company related to customer service contracts.

Property and Equipment

Property and equipment are stated at cost. When retired or otherwise disposed, the related carrying value and accumulated depreciation are removed from the respective accounts and the net difference less any amount realized from disposition, is reflected in earnings. For financial statement purposes, property and equipment are recorded at cost and depreciated using the straight-line method over their estimated useful lives.

Advertising

The Company follows the policy of charging the costs of advertising to expense as incurred.

Income Taxes

Deferred income tax assets and liabilities are determined based on the estimated future tax effects of net operating loss and credit carry forwards and temporary differences between the tax basis of assets and liabilities and their respective financial reporting amounts measured at the current enacted tax rates. The Company records an estimated valuation allowance on its deferred income tax assets if it is not more likely than not that these deferred income tax assets will be realized.

The Company recognizes a tax benefit from an uncertain tax position only if it is more likely than not that the tax position will be sustained on examination by taxing authorities, based on the technical merits of the position. The tax benefits recognized in the condensed consolidated financial statements from such a position are measured based on the largest benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. As of June 30, 2022 and December 31, 2021, the Company has not recorded any unrecognized tax benefits.

F-31

Stock-Based Compensation

Employee and non-employee share-based compensation is measured at the grant date, based on the fair value of the award, and is recognized as an expense over the requisite service period.

Net Loss per Share

We compute net loss per share in accordance with ASC 260, Earnings per Share. We report both basic and diluted loss per share. Loss earnings per share is calculated based on the weighted average number of shares of common stock outstanding and excludes the dilutive effect of warrants, stock options or any other type of convertible securities. Considering that the Common shares of the Company were not publicly traded as of June 30, 2022, the contingently convertible notes and related dilutive shares are not included in the dilutive shares calculation upon the Initial Public Offering (IPO). Diluted loss per share is calculated based on the weighted average number of shares of common stock outstanding and the dilutive effect of stock options, warrants and other types of convertible securities are included in the calculation. Dilutive securities are excluded from the diluted earnings per share calculation because their effect is anti-dilutive. The Company's potentially dilutive shares and equity instruments, which were not included in the calculation of net loss per share, included 6,491,614 and 5,240,617 warrants as of December 31, 2021 and June 30, 2022, respectively. Also included are options for 3,280,000 and 484,525 common shares, respectively.

Recent Accounting Pronouncements

In February 2016, the FASB issued ASU 2016-02, Leases (Topic 842). This ASU requires lessees to recognize a lease liability, on a discounted basis, and a right-of-use asset for substantially all leases, as well as additional disclosures regarding leasing arrangements. In July 2018, the FASB issued ASU 2018-11, Leases (Topic 842), which provides an optional transition method of applying the new lease standard. Topic 842 can be applied using either a modified retrospective approach at the beginning of the earliest period presented, or as permitted by ASU 2018-11, at the beginning of the period in which it is adopted.

We adopted this standard using a modified retrospective approach since inception of the company. The modified retrospective approach includes a number of optional practical expedients relating to the identification and classification of leases that commenced as of the inception of the company; initial direct costs for leases that commenced as of inception of the company; and the ability to use hindsight in evaluating lessee options to extend or terminate a lease or to purchase the underlying asset.

The Company elected the package of practical expedients permitted under ASC 842 allowing it to account for its prior operating lease that commenced before the adoption date as an operating lease under the new guidance without reassessing (i) whether the contract contains a lease; (ii) the classification of the lease; or (iii) the accounting for indirect costs as defined in ASC 842.

All staff are working remotely; therefore, the Company does not currently have a lease or rent office space.

Consistent with ASC 842-20-50-4, for the Company's quarterly financial statements for the six month period ended June 30, 2022 and the year ended December 31, 2021, the Company does not have a monthly rent obligation. The Company had no cash flows arising from a lease, no finance lease cost, short term lease cost, or variable lease costs. The Company does not produce any sublease income or any net gain or loss recognized from sale and leaseback transactions. As a result, the Company did not need to segregate amounts between finance and operating leases for cash paid for amounts included in the measurement of lease liabilities, segregated between operating and financing cash flows; supplemental non-cash information on lease liabilities arising from obtaining right-of-use assets; weighted-average calculations for the remaining lease term; or the weighted-average discount rate.

F-32

The adoption of this guidance resulted in no significant impact to the Company's results of operations or cash flows.

In December 2019, the FASB issued ASU No. 2019-12 - Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes ("ASU 2019-12"). ASU 2019-12 is part of the FASB's overall simplification initiative and seeks to simplify the accounting for income taxes by updating certain guidance and removing certain exceptions. The updated guidance is effective for fiscal years beginning after December 15, 2020 and interim periods within those fiscal years. Early adoption is permitted. The adoption of this update did not have a material effect on the Company's financial statements.

In August 2020, the FASB issued ASU 2020-06, Debt - Debt with Conversion and Other Options (Subtopic 470- 20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity ("ASU 2020-06"), which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity. This ASU (1) simplifies the accounting for convertible debt instruments and convertible preferred stock by removing the existing guidance in ASC 470-20, Debt: Debt with Conversion and Other Options, that requires entities to account for beneficial conversion features and cash conversion features in equity, separately from the host convertible debt or preferred stock; (2) revises the scope exception from derivative accounting in ASC 815-40 for freestanding financial instruments and embedded features that are both indexed to the issuer's own stock and classified in stockholders' equity, by removing certain criteria required for equity classification; and (3) revises the guidance in ASC 260, Earnings Per Share, to require entities to calculate diluted earnings per share (EPS) for convertible instruments by using the if-converted method. In addition, entities must presume share settlement for purposes of calculating diluted EPS when an instrument may be settled in cash or shares. For SEC filers, excluding smaller reporting companies, ASU 2020-06 is effective for fiscal years beginning after December 15, 2021 including interim periods within those fiscal years. Early adoption is permitted, but no earlier than fiscal years beginning after December 15, 2020. For all other entities, ASU 2020-06 is effective for fiscal years beginning after December 15, 2023, including interim periods within those fiscal years. Entities should adopt the guidance as of the beginning of the fiscal year of adoption and cannot adopt the guidance in an interim reporting period. The Company elected early adoption, effective January 1, 2021. Considering that the Common shares of the Company were not publicly traded as of June 30, 2022, the convertible options are not considered to be readily convertible to cash. In addition, the beneficial conversion feature was eliminated under ASU 2020-06. Therefore, no derivative liabilities will be triggered from these convertible notes.

In October 2020, the FASB issued ASU 2020-10, Codification Improvements, which updates various codification topics by clarifying or improving disclosure requirements to align with the SEC's regulations. The Company adopted ASU 2020-10 as of the reporting period beginning January 1, 2021. The adoption of this update did not have a material effect on the Company's financial statements.

The Company does not believe that any other recently issued effective pronouncements, or pronouncements issued but not yet effective, if adopted, would have a material effect on the accompanying financial statements.

COVID-19 – Going Concern

In March 2020, the World Health Organization declared the global emergence of the COVID-19 pandemic. The impact of COVID-19 on the Company's business is currently unknown. The Company will continue to monitor guidance and orders issued by federal, state, and local authorities with respect to COVID-19. As a result, the Company may take actions that alter its business operations as may be required by such guidance and orders or take other steps that the Company determines are in the best interest of its employees, customers, partners, suppliers and stockholders.

Any such alterations or modifications could cause substantial interruption to the Company's business and could have a material adverse effect on the Company's business, operating results, financial condition, and the trading price of the Company's common stock, and could include temporary closures of one or more of the Company's facilities; temporary or long-term labor shortages; temporary or long-term adverse impacts on the Company's supply chain and distribution channels; and the potential of increased network vulnerability and risk of data loss resulting from increased use of remote access and removal of data from the Company's facilities. In addition, COVID-19 could negatively impact capital expenditures and overall economic activity in the impacted regions or depending on the severity, globally, which could impact the demand for the Company's products and services.

It is unknown whether and how the Company may be impacted if the COVID-19 pandemic persists for an extended period of time or if there are increases in its breadth or in its severity, including as a result of the waiver of regulatory requirements or the implementation of emergency regulations to which the Company is subject. The COVID-19 pandemic poses a risk that the Company or its employees, contractors, suppliers, and other partners may be prevented from conducting business activities for an indefinite period.

The Company may incur expenses or delays relating to such events outside of its control, which could have a material adverse impact on its business, operating results, financial condition and the trading price of its common stock.

NOTE 4 – PROPERTY AND EQUIPMENT

Property and equipment consisted of the following:

During the six months ended June 30, 2022, the Company acquired \$8,744 of equipment and has accumulated depreciation of \$163, for a net of \$8,581.

Depreciation expense totaled \$163, and \$0 in the six months ended June 30, 2022 and June 30, 2021, respectively.

NOTE 5 – ACCOUNTS PAYABLE AND ACCRUED EXPENSES

As of June 30, 2022 and December 31, 2021, the Company had accounts payable and accrued expenses totaling \$799,948 and \$422,817, respectively.

NOTE 6 –NOTES PAYABLE

On May 5, 2020 the Company received an SBA PPP loan in the amount of \$9,917, at 1% interest. The loan was forgiven on March 15, 2021.

NOTE 7 –NOTES PAYABLE RELATED PARTY

On June 15, 2021, the company entered into an unsecured short term loan agreement with a related party for an aggregate principal balance of \$34,000, with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest. During the six months ended June 30, 2022, the full amount of the loan and interest was repaid.

On November 19, 2021, 2021, the company entered into an unsecured short term loan agreement with a related party for an aggregate principal balance of \$5,000, with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest. During the six months ended June 30, 2022, the full amount of the loan and interest was repaid.

On December 13, 2021, the company entered into an unsecured short term loan agreement with a related party for an aggregate principal balance of \$10,000, with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest. During the six months ended June 30, 2022, the full amount of the loan and interest was repaid.

NOTE 8 – CONVERTIBLE NOTES PAYABLE

On March 27, 2020, the company entered into a convertible loan agreement with the Maryland Technology Development Corporation with a principal balance of \$200,000 at 6% interest. The maturity date of the loan was September 27, 2021. During the six months ended June 30, 2022, the full amount of the loan and interest totaling \$226,138 was converted into 1,441,888 shares of common stock of the Company, in accordance with the conversion notice submitted by the noteholder. Pursuant to the note agreement, the number of shares that the note converted into was based on the note balance plus accrued interest divided by \$5,000,000 times the fully diluted equity of the company, excluding convertible securities issued for capital raising purposes. There was no gain or loss due to conversion.

On August 9, 2021, the company entered into a convertible loan agreement with an unrelated party to loan up to \$195,000 at 9% interest, with a principal balance of \$72,000, as of December 31, 2021. This loan included an original issuance discount of 5%, and included 195,000 Warrants at an exercise price of \$1, exercisable for 5 years from the issue date on the face of the Warrant. The noteholder has the right to convert the principal and interest into common shares of the Company. The maturity date of the loan was February 9, 2022. During the three months ended March 31, 2022, another \$25,000 principal with an additional \$1,250 original issuance discount, was loaned to the Company. In May 2022, the Company and the note holder agreed to cancel and void previous warrants and entered into a new agreement for 225,000 warrants with an exercise price of \$2.50. As of June 30, 2022, the loan was outstanding with a principal balance of \$97,000, accrued interest of \$6,584, amortization of debt discount of \$3,500, and unamortized debt discount of \$41. The warrants discussed above were initially discounted against the notes, subsequent to year end December 31, 2021, they were deemed voided and new warrants in accordance with the new terms were issued. We assessed the differences in fair value and determined that they were de minimis and expensed the full value of the new warrants. During the six months ended June 30, 2022 the Company recorded an expense of \$64,978.

F-34

On December 20, 2021, the company entered into a loan agreement with an unrelated party, with a principal balance of \$25,000 at 6% interest. The maturity date of the loan is December 19, 2022. During the six months ended June 30, 2022, the note principal was increased by \$2,778 representing a 10% original issue discount pursuant to the enhanced terms mentioned below. As of June 30, 2022, the loan remained outstanding had accrued interest of \$796. Should the Company complete an IPO prior to the maturity date, the note will automatically convert into the Company's common stock, at a 20% discount to the IPO price. Initially, the loan was estimated to be issued with 355,114 warrants. Subsequent to the entry into the December 20, 2021 the loan agreement, the Company enhanced the terms of the Bridge Note Offering under which the loan was closed and in April 2022 closed on the sale of approximately \$1M in face value of convertible bridge notes, as described in footnote 13. Pursuant to the enhanced terms, the warrants will not be issued until the note converts.

On April 11, 2022, the Company entered into an Exclusive placement agent and/or underwriter agreement with WallachBeth Capital LLC in connection with a proposed private and/or public offerings by the Company. As discussed in Footnote 2, a significant component of the Company's plan to secure capital is the intention of the Company to seek to be listed on a national exchange through an initial public offering ("IPO") of its common stock. WallachBeth was engaged in this regard and on April 28, 2022, the Company received net proceeds or approximately \$775,000 from the sale of Convertible Bridge Notes and Warrants to several institutional investors as well as several individual accredited investors. In connection with the April 28th note sale, the Company paid approximately \$91,560 in fees and expenses. In addition to the money received on April 28th, the Company also received \$100,000 from the sale of a Convertible Bridge Note and Warrants to a related party earlier in April. The bridge notes were issued with a 10% original issue discount and are convertible at the IPO at a 20% discount to the IPO price and the purchasers will also have a warrant for each share of common stock issued upon conversion. The warrant exercise price will be 110% of the per share IPO price. The Company plans to file an S-1 Registration Statement later this year and seek to conduct an IPO in the fourth quarter of 2022.

As of June 30, 2022, the table below reflects the balances of the Convertible Bridge Notes and Warrants issued pursuant April 11, 2022 agreement with Wallach Beth. All notes are mandatorily converted at the IPO at a 20% discount to the IPO price and the purchasers will also have a warrant for each share of common stock issued upon conversion. The warrant exercise price will be 110% of the per share IPO price. Due to the IPO price not yet being probable, no current accounting for these warrants has been journalized.

Note Date	Purchase Price	Principal Balance	Original Issue Discount	Accrued Interest
4/28/2022	\$ 250,000	\$ 277,778	\$ 27,778	\$ 2,917
4/28/2022	\$ 250,000	\$ 277,778	\$ 27,778	\$ 2,917
4/28/2022	\$ 250,000	\$ 277,778	\$ 27,778	\$ 2,917
4/28/2022	\$ 25,000	\$ 27,778	\$ 2,778	\$ 292
4/28/2022	\$ 28,000	\$ 31,111	\$ 3,111	\$ 327
4/28/2022	\$ 28,000	\$ 31,111	\$ 3,111	\$ 327
4/28/2022	\$ 35,000	\$ 38,889	\$ 3,889	\$ 408
12/21/2021 *	\$ 25,000	\$ 27,778	\$ 2,778	\$ 884
4/13/2022 *	\$ 100,000	\$ 111,111	\$ 11,111	\$ 1,444
Total	\$ 991,000	\$ 1,101,111	\$ 110,111	\$ 12,432
* Notes sold by Company prior to the April 28, 2022 closing				

In August 2020, the FASB issued ASU 2020-06, Debt - Debt with Conversion and Other Options (Subtopic 470- 20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40): Accounting for Convertible Instruments and Contracts in an Entity's Own Equity ("ASU 2020-06"), which simplifies the accounting for certain financial instruments with characteristics of liabilities and equity. The Company specified that an entity should adopt the guidance as of the beginning of its annual fiscal year. After adoption of ASU 2020-06, if the equity securities underlying the conversion option are not readily convertible to cash, and the conversion option requires gross physical settlement of the underlying shares, the embedded conversion option may not meet the net settlement criterion, and therefore would not meet the definition of a derivative. Considering that the Common shares of the Company were not publicly traded as of June 30, 2022, the convertible options are not considered to be readily convertible to cash. In addition, the beneficial conversion feature was eliminated under ASU 2020-06. Therefore, no derivative liabilities will be triggered from these convertible notes. All conversions are contingent upon an effective IPO, which not yet considered probable.

F-35

NOTE 9 – CONVERTIBLE NOTES PAYABLE RELATED PARTY

On July 8, 2021, the company entered into a Simple Agreement for Future Equity (SAFE), with a related party, with an amount of \$150,000, with 0% interest. Under the SAFE agreement, if there is an Equity Financing before the termination of this SAFE, on the initial closing of such Equity Financing, this SAFE will automatically convert into the number of shares of SAFE Preferred Stock equal to the Purchase Amount divided by the Conversion Price, which means either: (1) the Safe Price (the price per share equal to the Post-Money Valuation Cap divided by the Company

Capitalization) or (2) the Discount Price (the price per share of the Standard Preferred Stock sold in the Equity Financing multiplied by the Discount Rate), whichever

calculation results in a greater number of shares of Safe Preferred Stock

If there is a Liquidity Event before the termination of this SAFE, this SAFE will automatically be entitled (subject to the liquidation priority set forth in Section 1(d) below) to receive a portion of Proceeds, due and payable to the Investor immediately prior to, or concurrent with, the consummation of such Liquidity Event, equal to the greater of (i) the Purchase Amount (the "Cash-Out Amount") or (ii) the amount payable on the number of shares of Common Stock equal to the Purchase Amount divided by the Liquidity Price (the "Conversion Amount"). If any of the Company's securityholders are given a choice as to the form and amount of Proceeds to be received in a Liquidity Event, the Investor will be given the same choice, provided that the Investor may not choose to receive a form of consideration that the Investor would be ineligible to receive as a result of the Investor's failure to satisfy any requirement or limitation generally applicable to the Company's securityholders, or under any applicable laws.

This SAFE will automatically terminate (without relieving the Company of any obligations arising from a prior breach of or non-compliance with this SAFE) immediately following the earliest to occur of: (i) the issuance of Capital Stock to the Investor pursuant to the automatic conversion of this SAFE under agreement; or (ii) the payment, or setting aside for payment, of amounts due the Investor pursuant to the agreement.

As of December 31, 2021, the \$150,000 received from SAFE was recorded at 6% imputed interest. The maturity date of the loan is defined by the SAFE agreement as discussed above.

On August 19, 2021, the company entered into a convertible loan agreement with a related party, with a principal balance of \$99,900 at 9% interest. The noteholder has the right to convert the principal and interest into common shares of the Company. This loan included an original issuance discount of 5% and included 99,900 Warrants at an exercise price of \$1, exercisable for 5 years from the issue date on the face of the Warrant. The maturity date of the loan was February 19, 2022. In May 2022, the Company and the note holder agreed to cancel and void previous warrants and entered into a new agreement for 115,185 warrants with an exercise price of \$2.50. As of June 30, 2022, the \$99,900 principal and the \$4,950 overpayment of the note remained outstanding and had accrued interest of \$7,867. The warrants discussed above were initially discounted against the notes, subsequent to year end December 31, 2021, they were deemed voided and new warrants in accordance with the new terms were issued. We assessed the differences in fair value and determined that they were de minimis and expensed the full value of the new warrants.

The Company specified that an entity should adopt ASU 2020-06 as of the beginning of its annual fiscal year. After adoption of ASU 2020-06, no derivative liabilities will be triggered from these convertible notes. See Note 8 for details.

NOTE 10 –RELATED PARTY

During the year-ended December 31, 2021, there were 400,000 common shares issued to CFO Dane Saglio, for services rendered.

As of June 30, 2022 and December 31, 2021, the accrued salary for related parties was \$362,666 and \$285,666, respectively. The increase reflects salaries accrued for employees but not paid in the period ending June 30, 2022.

As of June 30, 2022, the Company accrued consulting fees to related parties of \$73,000 for services provided to the Company.

During the year ended December 31, 2021, the Company issued options totaling 205,000 shares to related party for services rendered. The options have an original life of ten years and vest at different rates over as much as 24 months. During the six months ended June 30, 2022, the Company did not issue any options and recognized \$1,108 of stock-based compensation related to outstanding stock options.

F-36

NOTE 11– SHAREHOLDER'S EQUITY

Preferred Stock

The Company has 10,000,000 shares of preferred stock authorized at a par value of \$0.00001. As of June 30, 2022 and December 31, 2021, there were no preferred shares issued.

Common Stock

In June of 2020, BullFrog AI Holdings, Inc. acquired BullFrog AI, Inc. via a 1:1 share exchange. Immediately prior to the share exchange, each authorized common share of BullFrog AI, Inc. was split into 25 shares of common stock. Share amounts in our financial statements for 2021 and June 30, 2022 have been adjusted to reflect this forward share split and shares exchange. All of our operations are currently conducted through BullFrog AI Holdings, Inc. BullFrog AI, Inc., is a wholly owned subsidiary, has the sole purpose of housing and protecting all of the organization's intellectual property. BullFrog AI Management, LLC is a wholly owned subsidiary that handles all HR and payroll activities.

The Company has 100,000,000 shares of common stock authorized at a par value of \$0.00001. During the six months ended June 30, 2022, 1,441,888 common shares were issued for conversion of principal and interest by a noteholder and 785,572 common shares were canceled as the change in number of shares issued as part of the cancellation of the prior agreements and new agreements with advisors. As of June 30, 2022 and December 31, 2021, there are 27,915,863 and 27,259,547, shares outstanding, respectively.

After the Company signed two licenses for two drug programs from universities in the first half of 2022 it engaged an independent valuation firm to perform an Enterprise-Equity valuation. The results of this engagement resulted in an increase in the value per share of common stock used in the Black Scholes option pricing model employed to value the Company's equity grants and warrant issuances.

Stock Options

During the first quarter of 2022, 2,795,475 shares of options were forfeited due to the termination of employment.

During the year ended December 31, 2021, the Company granted a total of 205,000 shares of options to employee of the Company for services rendered. The options have an original life of ten years and vest at different rates over as much as 48 months. During the years ended December 31, 2021, the Company vested 9,167 of these options and recognized \$157 of stock-based compensation related to outstanding stock options. During the six months ended June 30, 2022, 64,127 shares of these options was vested and \$1,108 stock-based compensation was recognized.

The following tables summarizes the stock options activity for the six months ended June 30, 2022 and for the year ended December 31, 2021:

	Options
Granted and outstanding, December 31, 2020	6,193,750
Granted during 2021	205,000
Exercised	-
Forfeited	-
Expired during 2021	(3,118,750)

Granted and outstanding, December 31, 2021	3,280,000
Granted during Q1 2022	-
Exercised	-
Forfeited	(2,795,475)
Expired during Q1 2022	-
Granted and outstanding, March 31, 2022	484,525
Granted during Q2 2022	-
Exercised	-
Forfeited	-
Expired during Q2 2022	-
Granted and outstanding, June 30, 2022	484,525

F-37

	Options	Fair Value of Vested Options	Weight Averaged exercise Price
Vested and outstanding, December 31, 2020	733,567	\$ 12,706	\$ 0.48
Granted and vested during 2021	9,167	157	0.38
Exercised	-	-	-
Forfeited	-	-	-
Expired	(465,669)	(7,922)	(0.48)
Vested and outstanding, December 31, 2021	277,065	4,941	0.48
Granted and vested during Q1 2022	37,877	658	0.41
Exercised	-	-	-
Forfeited	-	-	-
Expired	-	-	-
Vested and outstanding, March 31, 2022	314,942	5,599	0.47
Granted and vested during Q2 2022	26,250	450	0.46
Exercised	-	-	-
Forfeited	-	-	-
Expired	-	-	-
Vested and outstanding, June 30, 2022	341,192	\$ 6,049	\$ 0.46

As of June 30, 2022 and December 31, 2021, 64,127 and 9,167 options vested, respectively, 0 and 465,669 options expired and the outstanding stock options have a weighted average remaining life 7.28 and 7.38 years, respectively.

As of December 31, 2021 and 2020, the fair value of options vested and outstanding was \$4,941 and \$12,706, respectively. The aggregate fair value of the options measured during the six months ended June 30, 2022 and the year ended December 31, 2021 was calculated using the Black-Scholes option pricing model based on the following assumption:

	June 30, 2022	December 31, 2021
Fair Value of Common Stock on measurement date	\$ 0.68	\$ 0.044
Risk free interest rate	From 1.86% to 3.01%	From 1.26% to 1.33%
Volatility	89%	93%
Dividend Yield	0%	0%
Expected Term	4-10	10

- (1) The risk-free interest rate was determined by management using the market yield on U.S. Treasury securities with comparable terms as of the measurement date.
- (2) The trading volatility was determined by calculating the volatility of the Company's peer group.
- (3) The Company does not expect to pay a dividend in the foreseeable future.

Warrants

During the six months ended June 30, 2022, the Company granted a total of 835,617 warrants. The warrants have an original life of four to ten years and vest immediately and over 12 months. During the six months ended June 30, 2022, 941,876 shares of warrants were vested and amended with a fair value of \$238,232.

During the year ended December 31, 2021, the Company granted a total of 3,021,614 warrants. Of this amount 1,400,000 warrants, with a fair value of \$12,462, were granted to advisors related to the Company's IPO objective. The warrants have an original life of five years and vest 30 days before the intended IPO. During the year ended December 31, 2021, 0 shares of these warrants were vested. As of June 30, 2022, the warrants for 1,400,000 shares were cancelled and voided per agreement of the warrant holder and the Company. There was no gain or loss due to cancellation. In 2021, 972,500 warrants, with a fair value of \$28,683, were issued for services rendered. The warrants have an original life of ten years and vest at different rates over as much as 36 months. During the year ended December 31, 2021, 220,000 shares of these warrants are vested, with a fair value of \$6,567. As of June 30, 2022, 284,792 shares of these warrants were vested with a fair value of \$8,286 and 37,500 warrants were forfeited.

F-38

During the year ended December 31, 2021, the Company issued 650,014 warrants with a fair value of \$12,980, in connection with convertible bridge debt agreements with multiple parties including a related party. The warrants had an original life of five years. During the period ending June 30, 2022, the Company determined that 355,144 warrants, with a fair value of \$11,097, should not have been issued as further described in footnote 8. The fair value was reclassified to Additional Paid in Capital. As discussed in Note 8 in May 2022, the Company and the note holders agreed to cancel and void the previous 99,000 warrants and entered into a new agreement for 115,185 and the exercise price increased to \$2.50 from \$1, with a fair value of \$15,412. As discussed in Note 8 in May 2022, the Company and the note holders agreed to cancel and void the previous 195,000 warrants and entered into a new agreement for 225,000 warrants with an exercise price of \$2.50, with a fair value of \$64,978.

The 650,014 warrants discussed above were initially discounted against the notes, subsequent to year end December 31, 2021, they were deemed voided and these individuals were or will be issued new warrants in accordance with the new terms as stated above. We assessed the differences in fair values and determined the values were de minimis and expensed the full value of the new warrants.

The following tables summarize the warrant activity for the six months ended June 30, 2022 and for the year ended December 31, 2021,

Warrants

Granted and outstanding, December 31, 2020	3,470,000
Granted during 2021	3,021,614
Exercised	-
Forfeited	-
Expired during 2021	-
Granted and outstanding, December 31, 2021	6,491,614
Granted during Q1 2022	286,000
Exercised	-
Forfeited	-
Reclassification	(391,714)
Expired during Q1 2022	-
Granted and outstanding, March 31, 2022	6,385,900
Granted during Q2 2022	549,617
Exercised	-
Forfeited	-
Reclassification	(1,694,900)
Expired during Q2 2022	-
Granted and outstanding, June 30, 2022	5,240,617

F-39

	Warrants	Fair Value of Warrants	Weight Averaged exercise Price
Vested and outstanding, December 31, 2020	3,359,583	\$ 127,480	\$ 0.14
Granted and Vested	962,864	22,208	0.45
Exercised	-	-	-
Forfeited	-	-	-
Expired	-	-	-
Vested and outstanding, December 31, 2021	4,322,447	149,688	0.40
Granted and Vested during Q1 2022	199,625	29,29,359	0.38
Exercised	-	-	-
Forfeited	-	-	-
Reclassification	(363,589)	(11,097)	0.04
Expired	-	-	-
Vested and outstanding, March 31, 2022	4,158,483	167,950	0.43
Granted and Vested during Q2 2022	742,251	208,238	0.68
Amend	-	-	-
Exercised	-	-	-
Forfeited	(294,900)	(1,883)	-
Reclassification	-	-	-
Expired	-	-	-
Vested and outstanding, June 30, 2022	4,605,834	\$ 374,940	\$ 0.58

As of June 30, 2022, 5,241,517 warrants are outstanding, and 4,605,834 warrants vested, and the vested stock warrants have a weighted average remaining life of 7.55 years.

For the six months ended June 30, 2022, the aggregate fair value of warrants vested was \$208,238. The aggregate fair value of the warrants measured during the six months ended June 30, 2022 was calculated using the Black-Scholes option pricing model and recorded as stock-based compensation.

As of December 31, 2021, 6,492,614 warrants are outstanding, 4,322,447 warrants are vested, and the vested stock warrants have a weighted average remaining life of 7.73 years.

As of December 31, 2021, the aggregate fair value of warrants vested was \$149,688. The aggregate fair value of the warrants measured during the year-ended December 31, 2021 was calculated using the Black-Scholes option pricing model.

The number of warrants related to the Convertible Bridge Notes discussed Note 8 is not yet determinable, given some of the terms discussed in Note 8 have not been completed. Therefore, the warrants to be issued are not accounted for in our warrants outstanding. Due to the IPO price not yet being probable, no current accounting for these warrants has been journalized.

	June 30, 2022	December 31, 2021
Fair Value of Common Stock on measurement date	\$ 0.68	\$ 0.044
Risk free interest rate	From 1.86% to 1.97%	From 0.78% to 1.63%
Volatility	89%	93%
Dividend Yield	0%	0%
Expected Term	10 years	5-10 years

- (1) The risk-free interest rate was determined by management using the market yield on U.S. Treasury securities with comparable terms as of the measurement date.
- (2) The trading volatility was determined by calculating the volatility of the Company's peer group.
- (3) The Company does not expect to pay a dividend in the foreseeable future.
- (4) After the Company signed two licenses for two drug programs from universities in the first half of 2022 it engaged an independent valuation firm to perform an Enterprise-Equity valuation. The results of this engagement resulted in an increase in the value per share of common stock used in the Black Scholes option pricing model employed to value the Company's equity grants and warrant issuances for all 2022 grant date stock prices.

F-40

NOTE 12 – MATERIAL AGREEMENTS

JHU-APL Technology License

On February 7, 2018, the Company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the technology. The license covers three (3) issued patents, 1 new provisional patent application, non-patent rights to proprietary libraries of algorithms and other trade secrets, the license also includes modifications and improvements. In October of 2021, the Company executed an Amendment to the original license which represents improvements and new advanced analytics capabilities. In consideration of the rights granted to the Company under the License Agreement JHU received a warrant equal to five (5%) percent of the then fully diluted equity base of the Company, which shall be diluted following the closing of this offering. Under the terms of the License Agreement, JHU will be entitled to eight (8%) percent royalty on net sales for the services provided by the Company in which the JHU licensed technology was utilized, as well as fifty (50%) percent of all sublicense revenues received by the Company. In addition, the Company is required to pay JHU an annual maintenance fee of \$1,500. Minimum annual royalty payments are \$20,000 for 2022, \$80,000 for 2023, and \$300,000 for 2024 and beyond, if cumulative annual royalty payments do not reach these levels, the amount due to JHU to reach the annual minimum is due by January 31st of the following year. Failure to make annual royalty payments is considered a material breach under the agreement and upon notice from JHU of a material breach, the Company shall have 60 days to cure the material breach. As of June 30, 2022, we have accrued, \$10,000 of the 2022 minimum annual royalty payments.

See Note 10 for details on warrants issued related to this agreement.

George Washington University - Beta2-spectrin siRNA License

On January 14, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from George Washington University (GWU) for rights to use siRNA targeting Beta2-spectrin in the treatment of human diseases, including hepatocellular carcinoma (HCC). The license covers methods claimed in three US and worldwide patent applications, and also includes use of this approach for treatment of obesity, non-alcoholic fatty liver disease, and non-alcoholic steatohepatitis.

In consideration of the rights granted to the Company under the License Agreement GWU received a \$20,000 License Initiation Fee. Under the terms of the License Agreement, GWU will be entitled to a three percent (3%) royalty on net sales subject to quarterly minimums once the first sale has occurred subsequent to regulatory approval, as well sublicense or assignment fees in the event the Company sublicenses or assigns their rights to use the technology. The Company will also reimburse GWU for previously incurred and ongoing patent costs. The Sublicense and Assignment fee amounts decline as the Company advances the clinical development of the licensed technology. The license agreement also contains milestone payments for clinical development through the approval of an NDA and commercialization. As of June 30, 2022, there has been no accrual for royalties, since we have not begun revenue. The Company assessed whether the license should be capitalized and determined that the licensed program is early stage and therefore the Company expensed the license fee and will expense development costs until commercial viability is likely.

Johns Hopkins University – Mebendazole License

On February 22, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from Johns Hopkins University (JHU) for the use of an improved formulation of Mebendazole for the treatment of any human cancer or neoplastic disease. This formulation shows potent activity in animal models of different types of cancer, and has been evaluated in a Phase I clinical trial in patients with high-grade glioma (NCT01729260). The trial, an open-label dose-escalation study, assessed the safety and efficacy of the improved formulation with adjuvant temozolomide in 24 patients with newly diagnosed gliomas. Investigators observed no dose-limiting toxicity in patients receiving all but the highest tested dose (200mg/kg/day). Four of the 15 patients receiving the maximum tested dose of 200mg/kg/day experienced dose-limiting toxicity, all of which were reversed by decreasing or eliminating the dose given. There were no serious adverse events attributed to mebendazole at any dose during the trial. 41.7% of patients who received mebendazole were alive at two years after enrollment, and 25% were alive at four years (Gallia et al., 2021).

The license covers six (6) issued patents and one (1) pending application. In consideration of the rights granted to the Company under the License Agreement JHU will receive a staggered Upfront License Fee of \$250,000. The Company will also reimburse JHU for previously incurred and ongoing patent costs. Under the terms of the License Agreement, JHU will be entitled to three- and one-half percent (3.5%) royalty on net sales by the Company. In addition, the Company is required to pay JHU minimum annual royalty payments of \$5,000 for 2023, \$10,000 for 2024, \$20,000 for 2025, \$30,000 for 2026 and \$50,000 for 2027 and each year after until the first commercial sale after which the annual minimum royalty shall be \$250,000. The license agreement also contains milestone payments for clinical development steps through the approval of an NDA and commercialization. The license covers six (6) issued patents and one (1) pending application. In consideration of the rights granted to the Company under the License Agreement JHU will receive a staggered Upfront License Fee of \$250,000. The initial payment for \$50,000 was paid and the remaining balance is deferred until the earlier of; we complete the IPO, raise \$10 million in financing or until 9 months from the effective date of the license. As of June 30, 2022, we have accrued, \$200,000 of the 2022 staggered Upfront License Fee and \$37,671 for reimbursement of past patent costs. The Company assessed whether the license should be capitalized and determined that the licensed program is early stage and therefore the Company expensed the license fee and will expense development costs until commercial viability is likely.

F-41

NOTE 13 – COMMITMENTS AND CONTINGENCIES

The Company follows ASC 450, Contingencies, which requires the Company to assess the likelihood that a loss will be incurred from the occurrence or non-occurrence of one or more future events. Such assessment inherently involves an exercise of judgment. In assessing possible loss contingencies from legal proceedings or unasserted claims, the Company evaluates the perceived merits of such proceedings or claims, and of the relief sought or expected to be sought.

If the assessment of a contingency indicates that it is probable that a material loss will be incurred and the amount of the liability can be estimated, then the estimated liability would be accrued in the Company's financial statements. If the assessment indicates that a potentially material loss contingency is not probable but is reasonably possible, or is probable but cannot be estimated, then the nature of the contingent liability, and an estimate of the range of possible losses, if determinable and material, would be disclosed. Loss contingencies considered remote are generally not disclosed unless they involve guarantees, in which case the guarantees would be disclosed.

While not assured, management does not believe, based upon information available at this time, that a loss contingency will have material adverse effect on the Company's financial position, results of operations or cash flows.

NOTE 14 – SUBSEQUENT EVENTS

In July 2022, the Company issued 30,000 warrants to an advisor who performed services for the Company. The warrants exercise price is \$1 and vest over a period of 3 months.

On July 8, 2022, the company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the additional technology. The new license provides additional Patent rights, copywrites and knowhow to be utilized under the Company's bLEAP™ analytical AI/ML platform. In consideration of the new license, the Company issued to JHU-APL 279,159 shares of common stock.

In September 2022, the company entered into a loan agreement with an unrelated party, with a principal balance of \$27,778 at 6% interest. The maturity date of the loan is October 31, 2022. The note includes Warrants to purchase shares equal to 100% of the Shares issuable upon conversion of the Note at a price equal to 110% of the IPO price or, if the Company fails to complete the IPO before October 22, 2022, 90% of the IPO price.

On October 5, 2022, the Company entered into an exchange agreement with the Investor whereby all of his common stock, 5,141,450 shares, were exchanged into shares of Series A Convertible Preferred Stock. The Series A Preferred Stock is the economic equivalent of the common stock but has no voting rights and is subject to a blocker which prohibits the conversion into common stock if it would result in the Investor owning more than 4.99% of the Company's outstanding common stock at such time. For a description of the rights and preferences of the Series A Preferred Stock.

F-42

PROSPECTUS

WALLACHBETH CAPITAL LLC

VIEWTRADE SECURITIES, INC.

, 2022

Through and including _____, 2022 (the 25th day after the date of this prospectus), all dealers that effect transactions in these securities, whether or not participating in this offering, may be required to deliver a prospectus. This is in addition to a dealer's obligation to deliver a prospectus when acting as an underwriter and with respect to an unsold allotment or subscription.

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS

SUBJECT TO COMPLETION

DATED OCTOBER [*], 2022

**1,682,997 Shares of
Common Stock**

BULLFROG AI HOLDINGS, Inc.

This prospectus relates to 1,682,997 shares of common stock Bullfrog AI Holdings, Inc. (the "Company", "we", "us", "our"). that may be sold from time to time by the selling stockholders named in this prospectus, which includes:

- 1,001,485 shares of common stock held by selling stockholders;
- 228,256 shares of common stock upon the conversion of convertible notes (the "Convertible Bridge Notes") held by selling stockholders (the "Noteholders") at a conversion price that reflects a 20% discount from the initial public offering price; and
- 228,256 shares of common stock upon exercise of currently outstanding warrants held by the Noteholders at an exercise price of 90% of the initial public offering prices of our initial public offering (the "Noteholder Warrants") and 225,000 shares of common stock upon exercise of commons stock purchase warrants.

The selling stockholders must sell their shares at a fixed price per share of \$ _____, which is the per share price of the shares being offered in our initial public offering, until such time as our shares are listed on a national securities exchange. Thereafter, the shares offered by this prospectus may be sold by the selling stockholders from time to time in the open market, through privately negotiated transactions or a combination of these methods, at market prices prevailing at the time of sale or at negotiated prices. By separate prospectus (the "IPO Prospectus"), we have registered an aggregate of 1,317,647 Units which we are offering for sale to the public through our underwriters, excluding any shares issuable upon the underwriters' over-allotment option.

The 1,682,997 shares of common stock offered by the selling stockholders is defined herein as the "Resale Shares." For a more detailed description of the Convertible Bridge Notes and the Noteholder Warrants, see "*Description of Capital Stock—Convertible Notes and Warrants.*"

We intend to apply to list our shares of common stock for trading on the Nasdaq Capital Market, subject to official notice of issuance, under the symbol "BFAI." No assurance can be given that our application will be approved. The consummation of this offering is conditioned on obtaining Nasdaq approval.

We are an emerging growth company under the Jumpstart our Business Startups Act of 2012, or JOBS Act, and, as such, may elect to comply with certain reduced public company reporting requirements for future filings. Investing in our common stock involves a high degree of risk.

The distribution of securities offered hereby may be effected in one or more transactions that may take place on The Nasdaq Capital Market, including ordinary brokers' transactions, privately negotiated transactions or through sales to one or more dealers for resale of such securities as principals, at market prices prevailing at the time of sale, at prices related to such prevailing market prices or at negotiated prices. Usual and customary or specifically negotiated brokerage fees or commissions may be paid by the selling stockholders. No sales of the shares covered by this prospectus shall occur until the shares of common stock sold in our initial public offering begin trading on The Nasdaq Capital Market. Currently, there is no public market for our common stock.

Investing in our securities is highly speculative and involves a significant degree of risk. See "Risk Factors" beginning on page 8 of this prospectus for a discussion of information that should be considered before making a decision to purchase our securities.

Sales of the shares of our common stock registered in this prospectus and the IPO Prospectus will result in two offerings taking place concurrently which might affect price, demand, and liquidity of our common stock.

You should rely only on the information contained in this prospectus and any prospectus supplement or amendment. We have not authorized anyone to provide you with different information. This prospectus may only be used where it is legal to sell these securities. The information in this prospectus is only accurate on the date of this prospectus, regardless of the time of any sale of securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

[Alternate Page for Resale Prospectus]

THE OFFERING

EXPLANATORY NOTE

Concurrent with this offering, the Company is registering shares of common stock in connection with an initial public offering of 1,682,997 Units through the underwriters. Sales by stockholders that purchased shares in our common stock as a part of the Units from the initial public offering may reduce the price of our common stock, demand for our shares and, as a result, the liquidity of your investment.

Alt-1

[Alternate Page for Resale Prospectus]

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of the Resale Shares. However, upon any exercise of the Noteholder Warrants, we will receive cash proceeds per share equal to the exercise price of such warrants. The Noteholder Warrants have a per share exercise price equal to 90% of the initial public offering price per share. If all of the Noteholder Warrants are exercised, the aggregate gross proceeds from the warrant exercise prices would be approximately \$. We cannot predict the number of warrants that will be exercised by the Noteholders.

We have no specific plan for such proceeds except to generate funds for working capital and general corporate purposes. We will have broad discretion in the way that we use these proceeds.

The selling stockholders will pay any underwriting discounts and commissions and expenses incurred by them for brokerage, accounting, tax or legal services or any other expenses incurred by them in disposing of the shares. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, without limitation, all registration and filing fees and fees and expenses of our counsel and our accountants.

Alt-2

[Alternate Page for Resale Prospectus]

SELLING STOCKHOLDERS

This prospectus covers the possible resale by the selling stockholders identified in the table below of up to 1,682,997 shares of our common stock (the "Resale Shares"). The Resale Shares offered by the selling stockholders includes the following: (i) 1,001,485 shares of common stock held by selling stockholders; (ii) 228,256 shares of common stock upon the conversion of Convertible Bridge Notes held by Noteholders at a conversion price that reflects a 20% discount from the initial public offering price; and (iv) 228,256 shares of common stock upon exercise of currently outstanding Noteholder Warrants at an exercise price of 90% of the initial public offering prices of our initial public offering and 225,000 shares of common stock upon exercise of common stock purchase warrants at an exercise price of \$2.50 per share. The transactions by which the selling stockholders acquired their securities from us were exempt under the registration provisions of the Securities Act.

The selling stockholders may sell some, all, or none of the Resale Shares. We do not know whether any selling stockholder will exercise the Noteholder Warrants, and upon such exercise, how long such selling stockholders will hold the Resale Shares before selling them, and we currently have no agreements, arrangements, or understandings with the selling stockholders regarding the sale of any of the Resale Shares. Unless otherwise indicated in the footnotes to the table below, no selling stockholder has had any material relationship with us or any of our affiliates within the past three years other than as a security holder.

We have prepared the following table based on written representations and information furnished to us by or on behalf of the selling stockholders. Since the date on which the selling stockholders provided this information, the selling stockholders may have sold, transferred, or otherwise disposed of all or a portion of the Convertible Bridge Notes or the Noteholder Warrants in a transaction exempt from the registration requirements of the Securities Act. Unless otherwise indicated in the footnotes to the table below, we believe that (i) none of the selling stockholders are broker-dealers or affiliates of broker-dealers, and (ii) no selling stockholder has direct or indirect agreements or understandings with any person to distribute their Resale Shares. To the extent any selling stockholder identified below is, or is affiliated with, a broker-dealer, it could be deemed, individually, but not severally, to be an "underwriter" within the meaning of the Securities Act. Information about the selling stockholders may change over time.

The table below lists the selling stockholders and other information regarding the beneficial ownership of the shares of common stock by each of the selling stockholders. The second column lists the number of shares of common stock beneficially owned by each selling stockholder, based on its ownership of Resale Shares as of October 5, 2022, assuming the conversion of Convertible Bridge Notes and the exercise of the Noteholder Warrants held by the selling stockholders on that date, without regard to any limitations on conversions and exercises.

The third column lists the shares of common stock being offered by this prospectus by the selling stockholders.

This prospectus generally covers the resale of the sum of the maximum number of shares of common stock issuable upon the conversion of Convertible Bridge Notes and the exercise of all Noteholder Warrants held by the selling stockholders, each as of the trading day immediately preceding the date of this prospectus and all subject to adjustment, without regard to any limitations on the conversion or exercise of these securities. The fourth column assumes the sale of all of the shares offered by the selling stockholders pursuant to this prospectus.

Under the terms of the, Convertible Bridge Notes and the Noteholder Warrants, a selling stockholder may not convert the Convertible Bridge Notes or exercise the Noteholder Warrants to the extent such conversion or exercise would cause such selling stockholder, together with its affiliates, to beneficially own a number of shares of common stock which would exceed 4.99% of our then outstanding common stock following such conversion or exercise. This limitation may be waived (up to a maximum of 9.99%) by the selling stockholder and in its sole discretion, upon not less than sixty-one (61) days' prior notice to us. The number of shares in the table below do not reflect this limitation. The selling stockholders may sell all, some or none of their shares in this offering. See "Plan of Distribution."

<u>Selling Stockholder</u>	<u>Number of Shares Beneficially Owned Before Offering</u>	<u>Number of Shares Being Offered</u>	<u>Number of Shares Beneficially Owned After Offering</u>	<u>Percentage of Shares Beneficially Owned After Offering (%)⁽¹⁾</u>
Abhishake Chhibber	4,464	*		
Bigger Capital Fund, LP (2)	112,308	2.79%		

Brittani Phillips (3)	11,462	*
Cavalry Investment Fund LP (4)	112,308	2.79%
Christopher Virtue Trust (5)	12,578	*
Dawn Cicone	107,142	2.66%
Dr Barry Ginsberg(6)	15,722	*
Gerald Newman	500,000	12.43%
GreenTree Financial Group Inc. (7)	575,000	14.30%
Indira Virtue Trust (8)	12,579	*
Johns Hopkins University Applied Physics Laboratory, LLC (9)	39,879	*
Shary Moxley (10)	45,032	1.11 %
Steve Simon(11)	11,230	*
Walleye Opportunities Master Fund Ltd. (12)	112,308	2.79%
Charles Stevenson (13)	10,986	*

*Represents beneficial ownership of less than one percent.

- (1) Applicable percentage ownership after to this offering is based on 4,021,935 shares of common stock deemed to be outstanding as of October 5, 2022. As noted above, for purposes of computing percentage ownership after this offering, we have assumed that all Convertible Bridge Notes and the Noteholder Warrants held by the selling stockholders will be converted to common stock and sold in this offering.
- (2) Consists of (i) 56,154 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 56,154 shares of common stock upon exercise of Noteholder Warrants. Michael Bigger, principal of Bigger Capital Fund, LP, has the power to vote or dispose of the shares held of record by Bigger Capital Fund, LP and may be deemed to beneficially own those shares.
- (3) Consists of (i) 5,731 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 5,731 shares of common stock upon exercise of Noteholder Warrants.
- (4) Consists of (i) 56,154 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 56,154 shares of common stock upon exercise of Noteholder Warrants. Thomas Walsh, principal of the Cavalry Investment Fund LP, has the power to vote or dispose of the shares held of record by Cavalry Investment Fund LP and may be deemed to beneficially own those shares.
- (5) Consists of (i) 6,289 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 6,289 shares of common stock upon exercise of Noteholder Warrants. Christopher Virtue, principal of the Christopher Virtue Trust, has the power to vote or dispose of the shares held of record by Christopher Virtue Trust and may be deemed to beneficially own those shares.
- (6) Consists of (i) 7,861 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 7,861 shares of common stock upon exercise of Noteholder Warrants.
- (7) Consists of (i) 350,000 shares of common stock and (ii) shares of common stock upon exercise of common stock purchase warrants at an exercise price of \$2.50 per share. Chris Cottone, principal of the GreenTree Financial Group Inc., has the power to vote or dispose of the shares held of record by GreenTree Financial Group Inc. and may be deemed to beneficially own those shares.
- (8) Consists of (i) 6,289 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 6,289 shares of common stock upon exercise of Noteholder Warrants. Indira Virtue, principal of the Indira Virtue Trust, has the power to vote or dispose of the shares held of record by Indira Virtue Trust and may be deemed to beneficially own those shares.
- (9) [*], principal of the Johns Hopkins University Applied Physics Laboratory, LLC, has the power to vote or dispose of the shares held of record by Johns Hopkins University Applied Physics Laboratory, LLC and may be deemed to beneficially own those shares.
- (10) Consists of (i) 22,516 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 5,615 shares of common stock upon exercise of Noteholder Warrants.
- (11) Consists of (i) 5,615 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 5,615 shares of common stock upon exercise of Noteholder Warrants.
- (12) Consists of (i) 56,154 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 56,154 shares of common stock upon exercise of Noteholder Warrants Pura Vida Investments, LLC (“PVI”) serves as the sub-adviser to Walleye Opportunities Master Fund Ltd. (“WOF”). Efrem Kamen serves as the managing member of PVI. By virtue of these relationships, PVI and Efrem Kamen may be deemed to have shared voting and dispositive power principal of the shares held of record by Walleye Opportunities Master Fund Ltd and may be deemed to beneficially own those shares.
- (13) Consists of (i) 5,493 shares of common stock upon the conversion of Convertible Bridge Notes and (ii) 5,493 shares of common stock upon exercise of Noteholder Warrants.

Alt-3

[Alternate Page for Resale Prospectus]

PLAN OF DISTRIBUTION

We are registering the Resale Shares to permit the resale of the Resale Shares by the selling stockholders from time to time after the date of this prospectus. We will not receive any of the proceeds from the sale of the Resale Shares. However, upon any exercise of the Noteholder Warrants held by the selling stockholders, we will receive cash proceeds per share equal to the exercise price of such warrants. We will pay all expenses (other than discounts, commissions, and transfer taxes, if any) relating to the registration of the Resale Shares in the registration statement of which this prospectus forms a part.

The selling stockholders may sell all or a portion of the Resale Shares beneficially owned by them and offered hereby from time to time directly or through one or more underwriters, broker-dealers, or agents. If the Resale Shares are sold through underwriters or broker-dealers, the selling stockholders will be responsible for any underwriter discounts or commissions and any applicable transfer taxes. The Resale Shares may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of the sale, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions,

- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;

- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the securities as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;
- in transactions through broker-dealers that agree with the selling stockholders to sell a specified number of such securities at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- a combination of any such methods of sale; or
- any other method permitted pursuant to applicable law

The selling stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus. The selling stockholders may also sell securities under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of securities, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

In connection with the sale of the securities or interests therein, the selling stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short sales of the securities in the course of hedging the positions they assume. The selling stockholders may also sell securities short and deliver these securities to close out their short positions, or loan or pledge the securities to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of securities offered by this prospectus, which securities such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the securities may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the securities purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each selling stockholder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the securities.

Alt-4

[Alternate Page for Resale Prospectus]

LEGAL MATTERS

The validity of the common stock covered by this prospectus will be passed upon by Sichenzia Ross Ference LLP.

Alt-5

PART II — INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution

The following table sets forth an itemization of the various expenses, all of which we will pay, in connection with the issuance and distribution of the securities being registered. All of the amounts shown are estimated except the SEC Registration Fee and the FINRA filing fee.

SEC registration fee	\$	2,000
FINRA filing fee	\$	5,000
NASDAQ listing fee	\$	50,000
Legal fees and expenses	\$	160,000
Accounting fees and expenses	\$	34,000
Transfer agent and registrar fees	\$	5,000
Miscellaneous fees and expenses	\$	4,000
Total	\$	260,000

All amounts are estimated, except the U.S. Securities and Exchange Commission registration fee, the NASDAQ listing fee and the FINRA filing fee.

** To be completed by amendment.

Item 14. Indemnification of Directors and Officers

Nevada law provides that a Nevada corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, other than an action by or in the right of the corporation (i.e., a “non-derivative proceeding”), by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, against expenses, including attorneys’ fees, judgments, fines and amounts paid in settlement actually and reasonably incurred by him in connection with the action, suit or proceeding if he or she:

- Is not liable under Section 78.138 of the Nevada Revised Statutes for breach of his or her fiduciary duties to the corporation; or
- Acted in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful.

In addition, a Nevada corporation may indemnify any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor (i.e., a “derivative proceeding”), by reason of the fact that he or she is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against expenses, including amounts paid in settlement and attorneys’ fees actually and reasonably incurred by him or her in connection with the defense or settlement of the action or suit if he:

- Is not liable under Section 78.138 of the Nevada Revised Statute for breach of his or her fiduciary duties to the corporation; or
- Acted in good faith and in a manner which he or she reasonably believed to be in or not opposed to the best interests of the corporation.

II-1

Under Nevada law, indemnification may not be made for any claim, issue or matter as to which such a person has been adjudged by a court of competent jurisdiction, after exhaustion of all appeals therefrom, to be liable to the corporation or for amounts paid in settlement to the corporation, unless and only to the extent that the court in which the action or suit was brought or other court of competent jurisdiction determines upon application that in view of all the circumstances of the case, the person is fairly and reasonably entitled to indemnity for such expenses as the court deems proper.

NRS Section 78.747 provides that except as otherwise provided by specific statute, no director or officer of a corporation is individually liable for a debt or liability of the corporation, unless the director or officer acts as the alter ego of the corporation. The court as a matter of law must determine the question of whether a director or officer acts as the alter ego of a corporation.

To the extent that a director, officer, employee or agent of a corporation has been successful on the merits or otherwise in defense of any non-derivative proceeding or any derivative proceeding, or in defense of any claim, issue or matter therein, the corporation is obligated to indemnify him or her against expenses, including attorneys’ fees, actually and reasonably incurred in connection with the defense.

Further, Nevada law permits a Nevada corporation to purchase and maintain insurance or to make other financial arrangements on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise for any liability asserted against him or her and liability and expenses incurred by him or her in his or her capacity as a director, officer, employee or agent, or arising out of his or her status as such, whether or not the corporation has the authority to indemnify him or her against such liability and expenses.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is therefore unenforceable.

The Company plans to enter into an underwriting agreement in connection with this offering that provides that the underwriter is obligated, under some circumstances, to indemnify the Company’s directors, officers and controlling persons against specified liabilities, including liabilities under the Securities Act.

Item 15. Recent Issuances of Unregistered Securities

In the three years preceding the filing of this registration statement, we have issued the following securities that were not registered under the Securities Act. The information provided below does not give effect to the proposed reverse stock split described in the accompanying prospectus.

In 2019, Bullfrog AI, Inc. sold a total of 7,917 shares of common stock to Tivoli Trust, an affiliate, for \$12 per share and raised a total of \$95,000. The sales occurred monthly throughout the year.

In March of 2020, BullFrog AI, Inc. received an investment from TEDCO - the Technology Development Corporation of Maryland, a State of Maryland Investment Fund – pursuant to the issuance of a \$200,000 convertible note with an 18-month term, 6% annual interest rate, and a 20% discount.

In June 2020 BullFrog Holdings AI, Holdings, Inc. acquired BullFrog AI, Inc. via a 1:1 share exchange. Prior to completing the share exchange, BullFrog AI, Inc. shares of common stock were forward split at a 25:1 ratio. Approximately 23 million shares of BullFrog AI Holdings, Inc. common stock were issued in the 1:1 share exchange. In addition, 1,000,000 shares were purchased by Vin Singh, the CEO, for \$100 and 1,250,000 warrants exercisable for \$0.30 were issued to JHU-APL pursuant to the 2018 licensing agreement for the bfLEAP™ technology. (do we need to say anything about the 960,000 penny warrants issued each to Haber and Themis?)

II-2

On June 23, 2021, the Company signed two consulting/advisor agreements with entities engaged to facilitate the Company’s objective of seeking a public listing of its securities. Under these agreements, each advisor was to receive: (i) three (3%) percent of the fully diluted equity of the Company as measured by the equity table immediately prior to listing on NASDAQ or any other national securities exchange, with a true-up amount to be delivered within thirty (30) days prior to its expected listing day; and (ii) warrants with a term of five years to purchase 1,000,000 (in one case) and 400,000 shares of the Company’s Common Stock at \$1.00 per share, which warrants will vest thirty (30) days prior to an expected going public transaction. Pursuant to these agreements, 817,786 shares of common stock were issued to each consultant as well as the above-mentioned warrants. In May 2022, these agreements were each amended so that one consultant (Newman) received 500,000 shares and the other advisor received 350,000 shares of common stock. All warrants were cancelled.,

In July 2021, the Company entered into a SAFE note agreement \$150,000 with a related party. In August the Company entered into two bridge note agreements, one, in the amount of \$99,900 with the same related party as the SAFE and the second with an unrelated party for \$195,000. The notes were issued with a 5% original issuance discount and the purchasers received 115,185 and 225,000 warrant, respectively.

In November 2021, 400,000 shares of common stock were issued under a consulting agreement with Dane Saglio, for services consistent with the responsibilities of a Chief Financial Officer. In addition, a total of 972,500 warrants with exercises prices of \$0.30-\$0.38 were issued to consultants who have been engaged as Company management and advisors. These warrant agreements have vesting terms that range for 12 to 36 months. In addition, the Company issued 205,000 options to employees with an exercise price of \$0.38 with vesting terms that range from 12 -24 months.

In December 2021, the Company initiated a placement of Bridge Notes seeking \$1.5M in operating capital to ensure the Company had operating capital while it finished the audit of its financial statements and prepared the S-1 registration statement related to the IPO. In December, the Company sold a convertible promissory note to an unrelated party for \$25,000. On April 11, 2022, the Company entered into an Exclusive placement agent and/or underwriter agreement with WallachBeth Capital LLC in connection with

a proposed private and/or public offerings by the Company. As discussed in Footnote 2, a significant component of the Company's plan to secure capital is the intention of the Company to seek to be listed on a national exchange through an initial public offering ("IPO") of its common stock. WallachBeth was engaged in this regard and on April 28, 2022 the Company received net proceeds or approximately \$775,000 from the sale of Convertible Bridge Notes and Warrants to several institutional investors as well as several individual accredited investors. In addition to the money received on April 28th, the Company also received \$100,000 from the sale of a Convertible Bridge Note and Warrants to a related party in early April. The bridge notes are convertible at the IPO at a 20% discount to the IPO price and the purchasers will also a warrant for each share of common stock issued upon conversion. The warrant exercise price will be 90% of the per share IPO price.

Item 16. Exhibits and Financial Statement Schedules

The following exhibits to this registration statement included in the Index to Exhibits are incorporated by reference.

<u>Exhibit No.</u>	<u>Description</u>
1.1	Form of Underwriting Agreement
3.1	Amended and Restated Articles of Incorporation of Bullfrog AI Holdings, Inc
3.2	Bylaws of Bullfrog AI Holdings Inc.
4.1	Form of Registrant's Common Stock certificate
4.2	Form of Underwriter's Warrant**
4.3	Form of Common Stock Purchase Warrant to be issued to Holders of the Registrant's Convertible Promissory Notes.
4.4	Form of Warrant Agent Agreement for the Warrants to be issued as part of the Units to be sold in the Offering.
4.5	Form of Common Stock Purchase Warrant to be issued as part of the Units to be sold in the Offering pursuant to the Warrant Agent Agreement (contained in form of underwriting agreement filed as Exhibit 4.4).
4.6	Form of Securities Purchase Agreement
4.7	Form of Convertible Promissory Note
5.1	Opinion of Sichenzia Ross Ference LLP
10.1	Acquisition Agreement with Bullfrog AI, Inc.
10.2	License Agreement
10.3	Advisor Agreement between the Company and Greentree Financial Group, Inc.
10.4	Consulting Agreement between the Company and Garrett Newman
10.5	Employment Agreement
14.1	Code of Ethics**
21.1	List of significant subsidiaries of Bullfrog AI Holdings, Inc.**
23.1	Consent of M&K CPAS PLLC, an independent registered public accounting firm*
23.2	Consent of Sichenzia Ross Ference LLP (contained in its form of opinion filed as Exhibit 5.1 hereto)
99.1	Charter of Audit Committee
99.2	Charter of Compensation Committee
99.3	Consent of Don Elsey**
99.4	Consent of William Enright**
99.5	Consent of Jason Hanson**
107	Registration Fee Table
	XRBL

** To be filed by amendment.

Item 17. Undertakings

- (a) The undersigned registrant hereby undertakes:
- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;
 - (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
 - (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
 - (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
 - (5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

- (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.
- (b) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

II-4

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement on Form S-1 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of New York, State of New York on the 19th day of October 2022.

BULLFROG AI HOLDINGS, INC.
(Registrant)

By: /S/Vininder Singh
Name: Vininder Singh
Title: Chief Executive Officer (Principal Executive Officer)

Pursuant to the requirements of the Securities Act of 1933, this registration statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

Name	Title	Date
<u>/S/ Vininder Singh</u>	Chief Executive Officer (Principal Executive Officer) and Director	October 19, 2022
<u>/s/ Dane Saglio</u>	Chief Financial Officer (Principal Financial Officer)	October 19, 2022

II-5

BULLFROG AI HOLDINGS, INC.
UNDERWRITING AGREEMENT
 [*] Units
 Consisting of
 [*] Shares of Common Stock,
 And
 Warrants to Purchase [*] Shares of Common Stock
 \

October __, 2022

WallachBeth Capital LLC
 Harborside Financial Center Plaza 5
 185 Hudson Street, Ste 1410
 Jersey City, NJ 07311

As Representative of the Several Underwriters Named on Schedule I hereto

Ladies and Gentlemen:

BULLFROG AI HOLDINGS, INC., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated herein, to issue and sell to the underwriters named in **Schedule I** hereto (the "Underwriters," or each, an "Underwriter"), for whom WallachBeth Capital, LLC is acting as Representative (the "Representative"), an aggregate of [*] Units (the "Firm Units"), each Firm Unit consisting of: (i) one share of the Company's common stock, \$0.0001 par value per share (the "Common Stock"); (ii) one warrant to purchase one share of Common Stock (the "Purchase Warrants"). The [*] shares of Common Stock referred to in this Section are hereinafter referred to as the "Firm Shares" and the Purchase Warrants to purchase [*] shares of Common Stock are hereinafter referred to as the "Firm Warrants," and together with the Firm Units and the Firm Shares, the "Firm Securities." The Firm Warrants shall be issued pursuant to and shall have the rights and privileges set forth in, a warrant agent agreement, dated on or before the Closing Date, between the Company and Vstock Transfer, LLC, as warrant agent (the "Warrant Agreement"). The Company also proposes to grant to the Underwriters, upon the terms and conditions set forth in Section 4 hereof, an option (the "Over-allotment Option") to purchase up to an additional [*] shares of Common Stock, representing up to fifteen percent (15%) of the Firm Shares sold in the offering (the "Option Shares"), and/or Warrants to purchase up to an additional [*] shares of common stock at a price of \$0.01 per Warrant to purchase one share of Common Stock, representing in the aggregate 15% of the Firm Warrants sold in the Offering (as defined below) (the "Option Warrants"), in each case for the purpose of covering over-allotments of such securities, if any. The Over-allotment Option is, at the Underwriters' sole discretion, for Option Shares and Option Warrants together, solely Option Shares, solely Option Warrants, or any combination thereof (each, an "Option Security" and collectively, the "Option Securities"). The Firm Securities and the Option Securities are collectively referred to as the "Securities." The Securities shall be issued directly by the Company and shall have the rights and privileges described in the Registration Statement, the Pricing Prospectus and the Prospectus (as defined below). The offering and sale of the Securities is herein referred to as the "Offering."

The Company and the several Underwriters hereby confirm their agreement as follows:

1. Registration Statement and Prospectus.

The Company has prepared and filed with the Securities and Exchange Commission (the "Commission") a registration statement covering the Securities and Representative's Securities (as defined in Section 4(f) hereof) on Form S-1 (File No. 333-[*]) under the Securities Act of 1933, as amended (the "Securities Act"), and the rules and regulations (the "Rules and Regulations") of the Commission thereunder, including a preliminary prospectus relating to the Securities and such amendments to such registration statement (including post effective amendments) as may have been required to the date of this Agreement. Such registration statement, as amended (including any post effective amendments), has been declared effective by the Commission. Such registration statement, including amendments thereto (including post effective amendments thereto) and all documents and information deemed to be a part of the Registration Statement through incorporation by reference or otherwise at the time of effectiveness thereof (the "Effective Time"), the exhibits and any schedules thereto at the Effective Time or thereafter during the period of effectiveness and the documents and information otherwise deemed to be a part thereof or included therein by the Securities Act or otherwise pursuant to the Rules and Regulations at the Effective Time or thereafter during the period of effectiveness, is herein called the "Registration Statement." If the Company has filed or files an abbreviated registration statement pursuant to Rule 462(b) under the Securities Act (the "Rule 462 Registration Statement"), then any reference herein to the term Registration Statement shall include such Rule 462 Registration Statement. Any preliminary prospectus included in the Registration Statement or filed with the Commission pursuant to Rule 424(a) under the Securities Act is hereinafter called a "Preliminary Prospectus." The Preliminary Prospectus relating to the Securities and Representative's Securities that was included in the Registration Statement immediately prior to the pricing of the offering contemplated hereby is hereinafter called the "Pricing Prospectus."

The Company is filing with the Commission pursuant to Rule 424 under the Securities Act a final prospectus covering the Securities, which includes the information permitted to be omitted therefrom at the Effective Time by Rule 430A under the Securities Act. Such final prospectus, as so filed, is hereinafter called the "Final Prospectus." The Final Prospectus, the Pricing Prospectus and any preliminary prospectus in the form in which they were included in the Registration Statement or filed with the Commission pursuant to Rule 424 under the Securities Act is hereinafter called a "Prospectus." Reference made herein to any Preliminary Prospectus, the Pricing Prospectus or to the Prospectus shall be deemed to refer to and include any documents incorporated by reference therein.

2. Representations and Warranties of the Company Regarding the Offering.

(a) The Company represents and warrants to, and agrees with, the several Underwriters, as of the date hereof and as of the Closing Date (as defined in Section 4(d) below) and as of each Option Closing Date (as defined in Section 4(b) below), as follows:

(i) **No Material Misstatements or Omissions.** At each time of effectiveness, at the date hereof, at the Closing Date, and at each Option Closing Date, if any, the Registration Statement and any post-effective amendment thereto complied or will comply in all material respects with the requirements of the Securities Act and the Rules and Regulations and did not, does not, and will not, as the case may be, contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Time of Sale Disclosure Package (as defined below) as of the date hereof and at the Closing Date and on each Option Closing Date, any roadshow or investor presentations delivered to and approved by the Underwriter for use in connection with the marketing of the offering of the Securities (the "Marketing Materials"), if any, and the Final Prospectus, as amended or supplemented, as of its date, at the time of filing pursuant to Rule 424(b) under the Securities Act, at the Closing Date, and at each Option Closing Date, if any, did not, does not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the two immediately preceding sentences shall not apply to statements in or omissions from the Registration Statement, the Time of Sale Disclosure Package or any Prospectus in reliance upon, and in conformity with, written information furnished to the Company by the Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f). The Registration Statement contains all exhibits and schedules required to be filed by the Securities Act or the Rules and Regulations. No order preventing or suspending the effectiveness or use of the Registration Statement or any Prospectus is in effect and no proceedings for such purpose have been instituted or are pending, or, to the knowledge of the Company, are contemplated or threatened by the Commission.

(ii) **Marketing Materials.** The Company has not distributed any prospectus or other offering material in connection with the offering and sale of the Securities other than the Time of Sale Disclosure Package and the roadshow or investor presentations delivered to and approved by the Representative for use in connection with the marketing of the offering of the Securities (the “Marketing Materials”).

(iii) **Accurate Disclosure.** (A) The Company has provided a copy to the Underwriters of each Issuer Free Writing Prospectus (as defined below) used in the sale of Securities. The Company has filed all Issuer Free Writing Prospectuses required to be so filed with the Commission, and no order preventing or suspending the effectiveness or use of any Issuer Free Writing Prospectus is in effect and no proceedings for such purpose have been instituted or are pending, or, to the knowledge of the Company, are contemplated or threatened by the Commission. When taken together with the rest of the Time of Sale Disclosure Package or the Final Prospectus, no Issuer Free Writing Prospectus, as of its issue date and at all subsequent times through the completion of the public offer and sale of the Securities, has, does or will include (1) any untrue statement of a material fact or omission to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, or (2) information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Final Prospectus. The representations and warranties set forth in the immediately preceding sentence shall not apply to statements in or omissions from the Time of Sale Disclosure Package, the Final Prospectus or any Issuer Free Writing Prospectus in reliance upon, and in conformity with, written information furnished to the Company by any Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f). As used in this paragraph and elsewhere in this Agreement:

(1) “Time of Sale Disclosure Package” means the Prospectus most recently filed with the Commission before the time of this Agreement, including any preliminary prospectus supplement deemed to be a part thereof, each Issuer Free Writing Prospectus, and the description of the transaction provided by the Underwriters included on **Schedule II**.

(2) “Issuer Free Writing Prospectus” means any “issuer free writing prospectus,” as defined in Rule 433 under the Securities Act, relating to the Securities that (A) is required to be filed with the Commission by the Company, or (B) is exempt from filing pursuant to Rule 433(d)(5)(i) or (d)(8) under the Securities Act, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company’s records pursuant to Rule 433(g) under the Securities Act.

(B) At the time of filing of the Registration Statement and at the date hereof, the Company is an “ineligible issuer,” as defined in Rule 405 under the Securities Act.

(C) Each Issuer Free Writing Prospectus listed on **Schedule III** satisfied, as of its issue date and at all subsequent times through the Prospectus Delivery Period (as defined in Section 5(a) hereof), all other conditions as may be applicable to its use as set forth in Rules 164 and 433 under the Securities Act, including any legend, record-keeping or other requirements.

(iv) **Financial Statements.** The financial statements of the Company, together with the related notes and schedules, included in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus comply in all material respects with the applicable requirements of the Securities Act and the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the rules and regulations of the Commission thereunder, and fairly present in all material respects the financial condition of the Company as of the dates indicated and the results of operations and changes in cash flows for the periods therein specified in conformity with U.S. generally accepted accounting principles (“GAAP”) consistently applied throughout the periods involved (provided that unaudited interim financial statements are subject to year-end audit adjustments that are not expected to be material in the aggregate and do not contain all footnotes required by GAAP). No other financial statements, pro forma financial information or schedules are required under the Securities Act, the Exchange Act, or the Rules and Regulations to be included in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus.

(v) **Pro Forma Financial Information.** The pro forma financial statements included in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus include assumptions that provide a reasonable basis for presenting the significant effects directly attributable to the transactions and events described therein, the related pro forma adjustments give appropriate effect to those assumptions, and the pro forma adjustments reflect the proper application of those adjustments to the historical financial statements amounts in the pro forma financial statements included in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus. The pro forma financial statements included in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus comply as to form in all material respects with the application requirements of Regulation S-X under the Exchange Act.

(vi) **Independent Accountants.** To the Company’s knowledge, M&K CPAS, PLLC, which has expressed its opinion with respect to the audited financial statements and schedules included as a part of the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, is an independent public accounting firm with respect to the Company within the meaning of the Securities Act and the Rules and Regulations.

(vii) **Accounting Controls.** The Company will maintain a system of “internal control over financial reporting” (as defined under Rules 13a-15 and 15d-15 under the Exchange Act) that complies with the requirements of the Exchange Act and has been designed by, or under the supervision of, its principal executive and principal financial officer, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, including, but not limited to, internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management’s general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management’s general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

(viii) **Forward-Looking Statements.** The Company had a reasonable basis for, and made in good faith, each “forward-looking statement” (within the meaning of Section 27A of the Securities Act or Section 21E of the Exchange Act) contained or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package, the Final Prospectus or the Marketing Materials.

(ix) **Statistical and Marketing-Related Data.** All statistical or market-related data included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, or included in the Marketing Materials, are based on or derived from sources that the Company reasonably believes to be reliable and accurate, and the Company has obtained the written consent to the use of such data from such sources, to the extent required.

(x) **Stock Exchange Listing.** The shares of Common Stock have been approved for listing on The Nasdaq Capital Market (“Nasdaq”), and the Company has taken no action designed to, or likely to have the effect of, delisting the shares of Common Stock from Nasdaq, nor has the Company received any written notification that Nasdaq is contemplating terminating such listing.

(xi) **Absence of Manipulation.** The Company has not taken, directly or indirectly, any action that is designed to or that has constituted or that would reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(xii) **Investment Company Act.** The Company is not and, after giving effect to the offering and sale of the Securities and the application of the net proceeds thereof, will not be an “investment company,” as such term is defined in the Investment Company Act of 1940, as amended.

(b) Any certificate signed by any officer of the Company and delivered to the Underwriters or to counsel for the Underwriters shall be deemed a representation and warranty by the Company to the Underwriters as to the matters covered thereby.

3. Representations and Warranties Regarding the Company.

(a) The Company represents and warrants to, and agrees with, the several Underwriters, as of the date hereof and as of the Closing Date and as of each Option Closing Date, if any, as follows:

(i) **Good Standing.** The Company has been duly organized and is validly existing as a corporation or other entity in good standing under the laws of its jurisdiction of incorporation or organization. The Company has the power and authority (corporate or otherwise) to own its properties and conduct its business as currently being carried on and as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign corporation or other entity in good standing in each jurisdiction in which it owns or leases real property or in which the conduct of its business makes such qualification necessary, except where the failure to so qualify would not have or be reasonably likely to result in a material adverse effect upon the business, prospects, properties, operations, condition (financial or otherwise) or results of operations of the Company, or in its ability to perform its obligations under this Agreement, the Warrant, the Warrant Agreement or the Representative’s Warrant (as defined in Section 4(f)) (“**Material Adverse Effect**”).

(ii) **Validity and Binding Effect of Agreements.** This Agreement, the Warrant, the Warrant Agreement and the Representative’s Warrant have been duly and validly authorized by the Company, and, when executed and delivered, will constitute, the valid and binding agreements of the Company, enforceable against the Company in accordance with their respective terms, except: (i) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors’ rights generally; (ii) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws; and (iii) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

(iii) **Contracts.** The execution, delivery and performance of this Agreement, the Warrant Agreement, the Warrant and the Representative’s Warrant and the consummation of the transactions herein and therein contemplated will not (A) result in a breach or violation of any of the terms and provisions of, or constitute a default under, any law, order, rule or regulation to which the Company is subject, or by which any property or asset of the Company is bound or affected, except to the extent that such conflict, breach or default is not reasonably likely to result in a Material Adverse Effect, (B) conflict with, result in any violation or breach of, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or give to others any right of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) (a “**Default Acceleration Event**”) of, any agreement, lease, credit facility, debt, note, bond, mortgage, indenture or other instrument (the “**Contracts**”) or obligation or other understanding to which the Company is a party or by which any property or asset of the Company is bound or affected, except to the extent that such conflict, default, or Default Acceleration Event is not reasonably likely to result in a Material Adverse Effect, or (C) result in a breach or violation of any of the terms and provisions of, or constitute a default under, the Company’s Amended and Restated Certificate of Incorporation, as amended (“**Certificate of Incorporation**”), or Amended and Restated Bylaws (“**Bylaws**”).

(iv) **No Violations of Governing Documents.** The Company is not in violation, breach or default under its Certificate of Incorporation, Bylaws or other equivalent organizational or governing documents.

(v) **Consents.** No consents, approvals, orders, authorizations or filings are required on the part of the Company in connection with the execution, delivery or performance of this Agreement, the Warrant Agreement, the Warrant and the Representative’s Warrant and the issue and sale of the Securities and the Representative’s Securities, except (A) the registration under the Securities Act of the Securities and Representative’s Securities, which has been effected, (B) the necessary filings and approvals from Nasdaq to list the Securities and the shares of Common Stock underlying the Warrants and the Representative’s Warrants, (C) such consents, approvals, authorizations, registrations or qualifications as may be required under state or foreign securities or Blue Sky laws and the rules of the Financial Industry Regulatory Authority, Inc. (“**FINRA**”) in connection with the purchase and distribution of the Securities by the several Underwriters, (D) such consents and approvals as have been obtained and are in full force and effect, and (E) such consents, approvals, orders, authorizations and filings the failure of which to make or obtain is not reasonably likely to result in a Material Adverse Effect.

(vi) **Capitalization.** The Company has an authorized capitalization as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus. All of the issued and outstanding shares of capital stock of the Company are duly authorized and validly issued, fully paid and non-assessable, and have been issued in compliance with all applicable securities laws, and conform to the description thereof in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus. Since the respective dates as of which information is provided in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, the Company has not entered into or granted any convertible or exchangeable securities, options, warrants, agreements, contracts or other rights in existence to purchase or acquire from the Company any shares of the capital stock of the Company. The Firm Securities, the Option Securities and the Representative’s Warrant have been duly authorized for issuance and sale and, when issued and paid for, will be validly issued, fully paid and non-assessable, free and clear of all liens imposed by the Company; the holders thereof are not and will not be subject to personal liability by reason of being such holders; the Securities and Representative’s Warrant are not and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company; and all corporate action required to be taken for the authorization, issuance and sale of the Securities and Representative’s Warrant has been duly and validly taken; the shares of Common Stock issuable upon exercise of the Warrants and the Representative’s Warrant have been duly authorized and reserved for issuance by all necessary corporate action on the part of the Company and when paid for and issued in accordance with the Warrant Agreement or Representative’s Warrant or exercised on a cashless basis as set forth in such Representative’s Warrant, as the case may be, such shares of Common Stock will be validly issued, fully paid and non-assessable; and the Securities, the Warrant Agreement and Representative’s Warrant conform in all material respects to all statements with respect thereto contained in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus.

(vii) **Taxes.** The Company has (a) filed all foreign, federal, state and local tax returns (as hereinafter defined) required to be filed with taxing authorities prior to the date hereof or has duly obtained extensions of time for the filing thereof (except where the failure to file would not, individually or in the aggregate, have a Material Adverse Effect) and (b) paid all taxes (as hereinafter defined) shown as due and payable on such returns that were filed and has paid all taxes imposed on or assessed against the Company (except where the failure to pay would not, individually or in the aggregate, have a Material Adverse Effect). The provisions for taxes payable, if any, shown on the financial statements included in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus are sufficient for all accrued and unpaid taxes, whether or not disputed, and for all periods to and including the dates of such consolidated financial statements. To the knowledge of the Company, no issues have been raised (and are currently pending) by any taxing authority in connection with any of the returns or taxes asserted as due from the Company, and no waivers of statutes of limitation with respect to the returns or collection of taxes have been given by or requested from the Company. The term “**taxes**” mean all federal, state, local, foreign, and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments, or charges of any kind whatever, together with any interest and any penalties, additions to tax, or additional amounts with respect thereto. The term “**returns**” means all returns, declarations, reports, statements, and other documents required to be filed in respect to taxes.

(viii) **Material Change.** Since the respective dates as of which information is given in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, and except as disclosed in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, (a) the Company has not incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions other than in the ordinary course of business, (b) the Company has not declared or paid any dividends or made any distribution of any kind with respect to its capital stock; (c) there has not been any change in the capital stock of the Company (other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise of outstanding options or warrants, upon the conversion of outstanding shares of preferred stock or other convertible securities, due to the vesting of outstanding stock grants or the issuance of restricted stock awards or restricted stock units under the Company's existing stock awards plan, or any new grants thereof in the ordinary course of business), (d) there has not been any material change in the Company's long-term or short-term debt, other than periodic accruals in the ordinary course pursuant to the terms of the Company's outstanding debt, and (e) there has not been the occurrence of any Material Adverse Effect.

(ix) **Absence of Proceedings.** There is no action, suit, proceeding, inquiry, arbitration, investigation, litigation or governmental proceeding pending or, to the Company's knowledge, threatened against, or involving the Company or, to the Company's knowledge, any executive officer or director which has not been disclosed in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus.

(x) **Regulatory.** Except as described in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus: (i) the Company has not received notice from any Governmental Entity (as defined below) alleging or asserting noncompliance with any Applicable Regulations (as defined below) or Authorizations (as defined below); (ii) the Company is and has been in material compliance with federal, state or foreign statutes, laws, ordinances, rules and regulations applicable to the Company (collectively, "Applicable Regulations"); (iii) the Company possesses all licenses, certificates, approvals, clearances, consents, authorizations, qualifications, registrations, permits, and supplements or amendments thereto required by any such Applicable Regulations and/or to carry on its businesses as now conducted ("Authorizations") and such Authorizations are valid and in full force and effect and the Company is not in violation of any term of any such Authorizations; (iv) the Company has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any Governmental Entity or third party alleging that any product, operation or activity is in violation of any Applicable Regulations or Authorizations or has any knowledge that any such Governmental Entity or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding, nor, has there been any material noncompliance with or violation of any Applicable Regulations by the Company that could reasonably be expected to require the issuance of any such communication or result in an investigation, corrective action, or enforcement action by any Governmental Entity; and (v) the Company has not received notice that any Governmental Entity has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations or has any knowledge that any such Governmental Entity has threatened or is considering such action. Neither the Company nor, to the Company's knowledge, any of its directors, officers, employees or agents has been convicted of any crime under any Applicable Regulations. "Governmental Entity" shall be defined as any arbitrator, court, governmental body, regulatory body, administrative agency or other authority, body or agency (whether foreign or domestic) having jurisdiction over the Company or any of its properties, assets or operations.

(xi) **Good Title.** The Company has good and marketable title to all property (whether real or personal) described in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus as being owned by it that are material to the business of the Company, in each case free and clear of all liens, claims, security interests, other encumbrances or defects, except those that are disclosed in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus and those that are not reasonably likely to result in a Material Adverse Effect. The property held under lease by the Company is held by it under valid, subsisting and enforceable leases with only such exceptions with respect to any particular lease as do not interfere in any material respect with the conduct of the business of the Company.

(xii) **Intellectual Property.** The Company owns or possesses or has valid rights to use all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses, inventions, trade secrets and similar rights ("Intellectual Property Rights") necessary for the conduct of the business of the Company as currently carried on and as described in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus. To the knowledge of the Company, no action or use by the Company necessary for the conduct of its business as currently carried on and as described in the Registration Statement and the Final Prospectus will involve or give rise to any infringement of, or license or similar fees for, any Intellectual Property Rights of others. The Company has not received any notice alleging any such infringement, fee or conflict with asserted Intellectual Property Rights of others. Except as would not reasonably be expected to result, individually or in the aggregate, in a Material Adverse Effect (A) to the knowledge of the Company, there is no infringement, misappropriation or violation by third parties of any of the Intellectual Property Rights owned by the Company; (B) there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others challenging the rights of the Company in or to any such Intellectual Property Rights, and the Company is unaware of any facts which would form a reasonable basis for any such claim, that would, individually or in the aggregate, together with any other claims in this Section 3(a)(xii), reasonably be expected to result in a Material Adverse Effect; (C) the Intellectual Property Rights owned by the Company and, to the knowledge of the Company, the Intellectual Property Rights licensed to the Company have not been adjudged by a court of competent jurisdiction invalid or unenforceable, in whole or in part, and there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property Rights, and the Company is unaware of any facts which would form a reasonable basis for any such claim that would, individually or in the aggregate, together with any other claims in this Section 3(a)(xii) reasonably be expected to result in a Material Adverse Effect; (D) there is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others that the Company infringes, misappropriates or otherwise violates any Intellectual Property Rights or other proprietary rights of others, the Company has not received any written notice of such claim and the Company is unaware of any other facts which would form a reasonable basis for any such claim that would, individually or in the aggregate, together with any other claims in this Section 3(a)(xii), reasonably be expected to result in a Material Adverse Effect; and (E) to the Company's knowledge, no employee of the Company is in or has ever been in violation in any material respect of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee's employment with the Company, or actions undertaken by the employee while employed with the Company and could reasonably be expected to result, individually or in the aggregate, in a Material Adverse Effect. To the Company's knowledge, all material technical information developed by and belonging to the Company which has not been patented has been kept confidential. The Company is not a party to or bound by any options, licenses or agreements with respect to the Intellectual Property Rights of any other person or entity that are required to be set forth in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus and are not described therein. The Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus contain in all material respects the same description of the matters set forth in the preceding sentence. None of the technology employed by the Company has been obtained or is being used by the Company in violation of any contractual obligation binding on the Company or, to the Company's knowledge, any of its officers, directors or employees, or otherwise in violation of the rights of any persons. To the Company's knowledge, there is no prior art or public or commercial activity that may render any patent included in the Intellectual Property Rights invalid or that would preclude the issuance of any patent on any patent application included in the Intellectual Property which has not been disclosed to the U.S. Patent and Trademark Office or the relevant foreign patent authority, as the case may be. The Company has not, and to the Company's knowledge, no third party has, committed any act or omitted to undertake any act the effect of such commission or omission would reasonably be expected to result in a legal determination that any item of Intellectual Property Rights thereby was rendered invalid or unenforceable in whole or in part. The manufacture, use and sale of the products or product candidates described in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus as under development by the Company fall within the scope of one or more claims of the patents or patent applications included in the Intellectual Property Rights. Other than information disclosed in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, no government funding, facilities or resources of a university, college, other educational institution or research center was used in the development of any Intellectual Property Rights that are owned or purported to be owned by the Company that would confer upon any governmental agency or body, university, college, other educational institution or research center any claim or right in or to any such Intellectual Property Rights.

(xiii) **Employment Matters.** There is (A) no unfair labor practice complaint pending against the Company, nor to the Company's knowledge, threatened against it, before the National Labor Relations Board, any state or local labor relation board or any foreign labor relations board, and no grievance or arbitration proceeding arising out of or under any collective bargaining agreement is so pending against the Company, or, to the Company's knowledge, threatened against it and (B) no labor disturbance by the employees of the Company exists or, to the Company's knowledge, is imminent, and the Company is not aware of any existing or imminent labor disturbance by the employees of any of its principal suppliers, manufacturers, customers or contractors, that could reasonably be expected, singularly or in the aggregate, to have a Material Adverse Effect. The Company is not aware that any key employee or significant group of employees of the Company plans to terminate employment with the Company.

(xiv) **ERISA Compliance.** No "prohibited transaction" (as defined in Section 406 of the Employee Retirement Income Security Act of 1974, as amended, including the regulations and published interpretations thereunder ("ERISA"), or Section 4975 of the Internal Revenue Code of 1986, as amended from time to time (the "Code")) or "accumulated funding deficiency" (as defined in Section 302 of ERISA) or any of the events set forth in Section 4043(b) of ERISA (other than events with respect to which the thirty (30)-day notice requirement under Section 4043 of ERISA has been waived) has occurred or could reasonably be expected to occur with respect to any employee benefit plan of the Company which would reasonably be expected to, singularly or in the aggregate, have a Material Adverse Effect. Each employee benefit plan of the Company is in compliance in all material respects with applicable law, including ERISA and the Code. The Company has not incurred and could not reasonably be expected to incur liability under Title IV of ERISA with respect to the termination of, or withdrawal from, any pension plan (as defined in ERISA). Each pension plan for which the Company would have any liability that is intended to be qualified under Section 401(a) of the Code is so qualified, and, to the Company's knowledge, nothing has occurred, whether by action or by failure to act, which could, singularly or in the aggregate, cause the loss of such qualification.

(xv) **Environmental Matters.** The Company is in compliance with all foreign, federal, state and local rules, laws and regulations relating to the use, treatment, storage and disposal of hazardous or toxic substances or waste and protection of health and safety or the environment which are applicable to their businesses ("Environmental Laws"), except where the failure to comply has not had and would not reasonably be expected to have, singularly or in the aggregate, a Material Adverse Effect. There has been no storage, generation, transportation, handling, treatment, disposal, discharge, emission, or other release of any kind of toxic or other wastes or other hazardous substances by, due to, or caused by the Company (or, to the Company's knowledge, any other entity for whose acts or omissions the Company is or may otherwise be liable) upon any of the property now or previously owned or leased by the Company, or upon any other property, in violation of any law, statute, ordinance, rule, regulation, order, judgment, decree or permit or which would, under any law, statute, ordinance, rule (including rule of common law), regulation, order, judgment, decree or permit, give rise to any liability, except for any violation or liability which has not had and would not reasonably be expected to have, singularly or in the aggregate, a Material Adverse Effect; and there has been no disposal, discharge, emission or other release of any kind onto such property or into the environment surrounding such property of any toxic or other wastes or other hazardous substances with respect to which the Company has knowledge.

(xvi) **SOX Compliance.** The Company has taken all actions it deems reasonably necessary or advisable to take on or prior to the date of this Agreement to assure that, upon and at all times after the Effective Date, it will be in compliance in all material respects with all applicable provisions of the Sarbanes-Oxley Act of 2002 and all rules and regulations promulgated thereunder or implementing the provisions thereof. (the "Sarbanes-Oxley Act") that are then in effect and will take all action it deems reasonably necessary or advisable to assure that it will be in compliance in all material respects with other applicable provisions of the Sarbanes-Oxley Act not currently in effect upon it and at all times after the effectiveness of such provisions.

(xvii) **Money Laundering Laws.** The operations of the Company are and have been conducted at all times in compliance with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Entity (collectively, the "Money Laundering Laws"); and no action, suit or proceeding by or before any Governmental Entity involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

(xviii) **Foreign Corrupt Practices Act.** Neither the Company nor, to the knowledge of the Company, any director, officer, employee, representative, agent, affiliate of the Company or any other person acting on behalf of the Company, is aware of or has taken any action, directly or indirectly, that would result in a violation by such persons of the Foreign Corrupt Practices Act of 1977, as amended, and the rules and regulations thereunder (the "FCPA"), including, without limitation, making use of the mails or any means or instrumentality of interstate commerce corruptly in furtherance of an offer, payment, promise to pay or authorization of the payment of any money, or other property, gift, promise to give, or authorization of the giving of anything of value to any "foreign official" (as such term is defined in the FCPA) or any foreign political party or official thereof or any candidate for foreign political office, in contravention of the FCPA and the Company and, to the knowledge of the Company, its affiliates have conducted their businesses in compliance with the FCPA and have instituted and maintain policies and procedures designed to ensure, and which are reasonably expected to continue to ensure, continued compliance therewith.

(xix) **OFAC.** Neither the Company nor, to the knowledge of the Company, any director, officer, employee, representative, agent or affiliate of the Company or any other person acting on behalf of the Company is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC"); and the Company will not directly or indirectly use the proceeds of the offering of the Securities contemplated hereby, or lend, contribute or otherwise make available such proceeds to any person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(xx) **Insurance.** Following the consummation of the offering contemplated hereby, the Company will carry insurance in such amounts and covering such risks as is adequate for the conduct of its business and the value of its properties and as is customary for companies engaged in similar businesses in similar industries.

(xxi) **Books and Records.** The minute books of the Company have been made available to the Underwriters and counsel for the Underwriters, and such books (i) contain a complete summary of all meetings and actions of the board of directors (including each board committee) and stockholders of the Company (or analogous governing bodies and interest holders, as applicable), since the time of its incorporation or organization through the date of the latest meeting and action, and (ii) accurately in all material respects reflect all transactions referred to in such minutes.

(xxii) **No Violation.** Neither the Company nor, to its knowledge, any other party is in violation, breach or default of any Contract that has resulted in or could reasonably be expected to result in a Material Adverse Effect.

(xxiii) **Continued Business.** No supplier, customer, distributor or sales agent of the Company has notified the Company that it intends to discontinue or decrease the rate of business done with the Company, except where such discontinuation or decrease has not resulted in and could not reasonably be expected to result in a Material Adverse Effect.

(xxiv) **No Finder's Fee.** There are no claims, payments, issuances, arrangements or understandings for services in the nature of a finder's, consulting or origination fee with respect to the introduction of the Company to any Underwriter or the sale of the Securities hereunder or any other arrangements, agreements, understandings, payments or issuances with respect to the Company that may affect the Underwriters' compensation, as determined by FINRA.

(xxv) **No Fees.** Except as disclosed to the Representative in writing, the Company has not made any direct or indirect payments (in cash, securities or

otherwise) to (i) any person, as a finder's fee, investing fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who provided capital to the Company, (ii) any FINRA member, or (iii) any person or entity that has any direct or indirect affiliation or association with any FINRA member within the twelve (12) month period prior to the date on which the Registration Statement was filed with the Commission ("Filing Date") or thereafter.

(xxvi) **Proceeds.** None of the net proceeds of the offering will be paid by the Company to any participating FINRA member or any affiliate or associate of any participating FINRA member, except as specifically authorized herein.

(xxvii) **No FINRA Affiliations.** To the Company's knowledge and except as disclosed to the Representative in writing, no (i) officer or director of the Company or (ii) owner of 5% or more of any class of the Company's securities or (iii) owner of any amount of the Company's unregistered securities acquired within the 180-day period prior to the Filing Date, has any direct or indirect affiliation or association with any FINRA member. The Company will advise the Representative and counsel to the Underwriter if it becomes aware that any officer, director of the Company or any owner of 5% or more of any class of the Company's securities is or becomes an affiliate or associated person of a FINRA member participating in the offering.

(xxviii) **No Financial Advisor.** Other than the Underwriters, no person has the right to act as an underwriter or as a financial advisor to the Company in connection with the transactions contemplated hereby.

(xxix) **Data Privacy and Security Laws.** The Company is, and at all prior times was, in material compliance with all applicable state and federal data privacy and security laws and regulations in the United States, including, without limitation, the Health Insurance Portability and Accountability Act of 1996 ("HIPAA") as amended by the Health Information Technology for Economic and Clinical Health Act, and all applicable provincial and federal data privacy and security laws and regulations in Canada, including without limitation the Personal Information Protection and Electronic Documents Act (S.C. 2000, c. 5) ("PIPEDA"); and the Company has taken commercially reasonable actions to prepare to comply with, and have been and currently are in compliance with, the European Union General Data Protection Regulation ("GDPR") (EU 2016/679) (collectively, the "Privacy Laws"). To ensure compliance with the Privacy Laws, the Company has in place, comply with, and take appropriate steps reasonably designed to ensure compliance in all material respects with their policies and procedures relating to data privacy and security and the collection, storage, use, disclosure, handling, and analysis of Personal Data (the "Policies"). "Personal Data" means (i) a natural person's name, street address, telephone number, e-mail address, photograph, social security number or tax identification number, driver's license number, passport number, credit card number, bank information, or customer or account number; (ii) any information which would qualify as "personally identifying information" under the Federal Trade Commission Act, as amended; (iii) Protected Health Information as defined by HIPAA; (iv) "personal information", "personal health information", and "business contact information" as defined by PIPEDA; (v) "personal data" as defined by GDPR; and (vi) any other piece of information that allows the identification of such natural person, or his or her family, or permits the collection or analysis of any data related to an identified person's health or sexual orientation. The Company has at all times made all disclosures to users or customers required by applicable laws and regulatory rules or requirements, and none of such disclosures made or contained in any Policy have, to the knowledge of the Company, been inaccurate or in violation of any applicable laws and regulatory rules or requirements in any material respect. The Company further certifies: (i) it has not received notice of any actual or potential liability under or relating to, or actual or potential violation of, any of the Privacy Laws, and has no knowledge of any event or condition that would reasonably be expected to result in any such notice; (ii) is currently conducting or paying for, in whole or in part, any investigation, remediation, or other corrective action pursuant to any Privacy Law; or (iii) is a party to any order, decree, or agreement that imposes any obligation or liability under any Privacy Law.

(xxx) **No Registration Rights.** Except as described in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, there are no contracts, agreements or understandings between the Company and any person granting such person the right (other than rights which have been waived in writing or otherwise satisfied) to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company owned or to be owned by such person or to require the Company to include such securities in the securities registered pursuant to the Registration Statement or in any securities being registered pursuant to any other registration statement filed by the Company under the Securities Act.

(xxxi) **Prior Sales of Securities.** Except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, the Company has not sold or issued any shares of Common Stock during the six-month period preceding the date hereof, including any sales pursuant to Rule 144A under, or Regulations D or S of, the Securities Act, other than shares issued pursuant to employee benefit plans, stock option plans or other employee compensation plans, pursuant to outstanding preferred stock, options, rights or warrants or other outstanding convertible securities or in connection with the vesting of any outstanding stock grants.

(xxxii) **Compliance with Laws.** The Company: (A) is and at all times has been in compliance with all statutes, rules, or regulations applicable to the Company, including, without limitation, all statutes, rules, or regulations relating to the ownership, testing, development, manufacture, packaging, processing, use, distribution, marketing, labeling, promotion, sale, offer for sale, storage, import, export or disposal of any product manufactured or distributed by the Company and, without limiting the foregoing, include (i) the Federal Food, Drug, and Cosmetic Act (the "FDCA"), (ii) the Occupational Safety and Health Act, the Environmental Protection Act, the Toxic Substances Control Act and Laws applicable to hazardous or regulated substances and radioactive or biologic materials, (iii) the federal Anti-Kickback Statute, (iv) the False Claims Act, (v) the Civil Monetary Penalties Law, (vi) the Physician Payments Sunshine Act, (vii) the criminal False Claims Law, (viii) the HIPAA as amended by the Health Information Technology for Economic and Clinical Health Act and (ix) licensing and certification laws covering any aspect of the business of the Company ("Applicable Laws"), except as could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect; (B) has not received any warning letter, untitled letter or other correspondence or notice from any other governmental authority alleging or asserting noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws and/or to carry on its business as now conducted ("Applicable Authorizations"); (C) possesses all material Application Authorizations and such Applicable Authorizations are valid and in full force and effect and are not in material violation of any term of any such Applicable Authorizations; (D) has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any Governmental Entity or third party alleging that any product operation or activity is in violation of any Applicable Laws or Applicable Authorizations and has no knowledge that any such Governmental Entity or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding nor, to the Company's knowledge, has there been any material noncompliance with or violation of any Applicable Laws by the Company that could reasonably be expected to require the issuance of any such communication or result in an investigation, corrective action, or enforcement action by any Governmental Entity; (E) has not received notice that any Governmental Entity has taken, is taking or intends to take action to limit, suspend, modify or revoke any Applicable Authorizations and has no knowledge that any such Governmental Entity has threatened or is considering such action; (F) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Applicable Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and correct on the date filed (or were corrected or supplemented by a subsequent submission); and (G) has not, either voluntarily or involuntarily, initiated, conducted, or issued or caused to be initiated, conducted or issued, any recall, market withdrawal or replacement, safety alert, post-sale warning, "dear doctor" letter, or other notice or action relating to the alleged lack of safety or efficacy of any product or any alleged product defect or violation and, to the Company's knowledge, no third party has initiated, conducted or intends to initiate any such notice or action.

(xxxiii) **Clinical and Preclinical Studies.** The studies, tests and preclinical and clinical trials conducted by or, to the Company's knowledge, on behalf of the Company were and, if still ongoing, are being conducted in all material respects in accordance with experimental protocols, procedures and controls pursuant to accepted professional scientific standards and all authorizations and applicable laws and the rules and regulations promulgated thereunder and any applicable rules, regulations and policies of the jurisdiction in which such trials and studies are being conducted; the descriptions of the results of such studies, tests and trials contained in

the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus are, to the Company's knowledge, accurate and complete in all material respects and fairly present the data derived from such studies, tests and trials; except to the extent disclosed in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, the Company is not aware of any studies, tests or trials, the results of which the Company believes reasonably call into question the study, test, or trial results described or referred to in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus when viewed in the context in which such results are described and the clinical state of development; and, except to the extent disclosed in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, the Company has not received any notices or correspondence from the FDA or any governmental entity requiring the termination or suspension of any studies, tests or preclinical or clinical trials conducted by or on behalf of the Company.

4. Purchase, Sale and Delivery of Shares.

(a) On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell the Firm Shares to the several Underwriters, and the several Underwriters agree, severally and not jointly, to purchase the Firm Units set forth opposite the names of the Underwriters in Schedule I hereto. The purchase price for each Firm Unit shall be \$1.242 per Firm Unit (92% of the public offering price for each Firm Unit) which purchase price will be allocated as \$[*] per Firm Share and \$[*] per Firm Warrant.

(b) The Company hereby grants to the Underwriters the option to purchase some or all of the Option Securities and, upon the basis of the warranties and representations and subject to the terms and conditions herein set forth, the Underwriter shall have the right, severally and not jointly, to purchase all or any portion of the Option Shares and/or the Option Warrants as may be necessary to cover over-allotments made in connection with the transactions contemplated hereby. The purchase price to be paid per Option Share shall be equal to \$[*] per Option Share. The purchase price to be paid per Option Warrant shall be equal to \$[*] per Option Warrant. The Underwriters shall not be under any obligation to purchase any of the Option Securities prior to the exercise of the Over-allotment Option. This Over-Allotment Option may be exercised by the Underwriters at any time and from time to time on or before the forty-fifth (45th) day following the date hereof, by written notice to the Company (the "Option Notice"). The Option Notice shall set forth the aggregate number of Option Shares and/or Option Warrants as to which the option is being exercised, and the date and time when the Option Shares and/or the Option Warrants are to be delivered (such date and time being herein referred to as the "Option Closing Date"); provided, however, that the Option Closing Date shall not be earlier than the Closing Date (as defined below) nor earlier than the first business day after the date on which the option shall have been exercised nor later than the fifth business day after the date on which the option shall have been exercised unless the Company and the Representative otherwise agree. Upon exercise of the Over-allotment Option with respect to all or any portion of the Option Securities subject to the terms and conditions set forth herein, (i) the Company shall become obligated to sell to the Underwriters the number of Option Securities specified in such notice; (ii) each of the Underwriters, acting severally and not jointly, shall purchase that portion of the total number of Option Securities then being purchased as set forth in Schedule I opposite the name of such Underwriter, subject to such adjustments as the Representative, in their sole discretion, shall determine and (iii) each of the Underwriters, acting severally and not jointly, shall purchase that portion of the total number of Option Warrants then being purchased that the number of Option Warrants as set forth in Schedule I opposite the name of such Underwriter bears to the total number of Option Warrants, subject, in each case, to such adjustments as the Representative, in their sole discretion, shall determine. The Representative may cancel the Over-Allotment Option at any time prior to the expiration of the Over-Allotment Option by written notice to the Company (except to the extent the Representative has exercised the Over-Allotment Option in accordance herewith).

(c) Payment of the purchase price for and delivery of the Option Shares and/or the Option Warrants shall be made on an Option Closing Date in the same manner and at the same office as the payment for the Firm Securities as set forth in subparagraph (d) below.

(d) The Firm Securities will be delivered by the Company to the Representative, for the respective accounts of the several Underwriters against payment of the purchase price therefor by wire transfer of same day funds payable to the order of the Company at the offices of WallachBeth Capital, LLC, Harborside Financial Center Plaza 5, 185 Hudson Street, Suite 1410, Jersey City, NJ 07311, or such other location as may be mutually acceptable, at 9:00 a.m. Eastern Time, on the second (or if the Firm Securities are priced, as contemplated by Rule 15c6-1(c) under the Exchange Act, after 4:30 p.m. Eastern time, the third) full business day following the date hereof, or at such other time and date as the Representative and the Company determine pursuant to Rule 15c6-1(a) under the Exchange Act, or, in the case of the Option Securities, at such date and time set forth in the Option Notice. The time and date of delivery of the Firm Shares is referred to herein as the "Closing Date." On the Closing Date, the Company shall deliver the Firm Securities which shall be registered in the name or names and shall be in such denominations as the Representative may request on behalf of the Underwriters at least one (1) business day before the Closing Date, to the respective accounts of the several Underwriters, which delivery shall with respect to the Firm Securities, be made through the facilities of the Depository Trust Company's Deposit or Withdrawal at Custodian ("DWAC") system.

(e) It is understood that WallachBeth Capital, LLC, has been authorized, for its own account and the accounts of the several Underwriters, to accept delivery of and receipt for, and make payment of the purchase price for, the Firm Securities and any Option Securities the Underwriters have agreed to purchase. WallachBeth Capital, LLC, individually and not as the Representative of the Underwriters, may (but shall not be obligated to) make payment for any Securities to be purchased by any Underwriter whose funds shall not have been received by the Representative by the Closing Date or any Option Closing Date, as the case may be, for the account of such Underwriter, but any such payment shall not relieve such Underwriter from any of its obligations under this Agreement.

(f) The Company hereby agrees to issue to the Underwriters (and/or its designees) on the Closing Date a five-year warrant (the "Representative's Warrant") for the purchase of an aggregate of [*] shares of Common Stock, representing up to 6% of the Firm Units. The Representative's Warrant, in the form attached hereto as Exhibit A, shall be exercisable, in whole or in part, commencing on a date which is six (6) months after the effective date (the "Effective Date") of the Registration Statement and expiring on the five-year anniversary of the Effective Date at an initial exercise price per share of Common Stock equal to \$[*] (110% of the per Unit offering price) (subject to adjustment as set forth therein). The Representative's Warrant and the shares of Common Stock issuable upon exercise thereof are hereinafter referred to together as the "Representative's Securities." The Representative understands and agrees that there are significant restrictions pursuant to FINRA Rule 5110 against transferring the Representative's Warrant and the underlying shares of Common Stock during the one hundred eighty (180) days after the Effective Date and by its acceptance thereof shall agree that it will not sell, transfer, assign, pledge or hypothecate the Representative's Warrant, or any portion thereof, or be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of such securities for a period of one hundred eighty (180) days following the Effective Date to anyone other than (i) an Underwriter or a selected dealer in connection with the offering of the Securities or (ii) a bona fide officer or partner of the Representative or of any such Underwriter or selected dealer; and only if any such transferee agrees to the foregoing lock-up restrictions. Delivery of the Representative's Warrant shall be made on the Closing Date and shall be issued in the name or names and in such authorized denominations as the Representative may request.

5. Covenants.

(a) The Company covenants and agrees with the Underwriters as follows:

(i) The Company shall prepare the Final Prospectus in a form approved by the Representative and file such Final Prospectus pursuant to Rule 424(b) under the Securities Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement, or, if applicable, such earlier time as may be required by the Rules and Regulations.

(ii) During the period beginning on the date hereof and ending on the later of the Closing Date or such date as determined by the Representative the Final Prospectus is no longer required by law to be delivered in connection with sales by an underwriter or dealer (the "Prospectus Delivery Period"), prior to amending or supplementing the Registration Statement, including any Rule 462 Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, the Company

shall furnish to the Representative for review and comment a copy of each such proposed amendment or supplement, and the Company shall not file any such proposed amendment or supplement to which the Representative reasonably objects.

(iii) From the date of this Agreement until the end of the Prospectus Delivery Period, the Company shall promptly advise the Representative in writing (A) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (B) of the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to the Time of Sale Disclosure Package, the Final Prospectus or any Issuer Free Writing Prospectus, (C) of the time and date that any post-effective amendment to the Registration Statement becomes effective and (D) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of any order preventing or suspending its use or the use of the Time of Sale Disclosure Package, the Final Prospectus or any Issuer Free Writing Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Common Stock from any securities exchange upon which it is listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time during the Prospectus Delivery Period, the Company will use its reasonable efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b), 430A, 430B or 430C as applicable, under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b) or Rule 433 were received in a timely manner by the Commission (without reliance on Rule 424(b)(8) or 164(b) of the Securities Act).

(iv) (A) During the Prospectus Delivery Period, the Company will comply with all requirements imposed upon it by the Securities Act, as now and hereafter amended, and by the Rules and Regulations, as from time to time in force, and by the Exchange Act, as now and hereafter amended, so far as necessary to permit the continuance of sales of or dealings in the Securities as contemplated by the provisions hereof, the Time of Sale Disclosure Package, the Registration Statement and the Final Prospectus. If during the Prospectus Delivery Period any event occurs the result of which would cause the Final Prospectus (or if the Final Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) to include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances then existing, not misleading, or if during such period it is necessary or appropriate in the opinion of the Company or its counsel or the Representative or counsel to the Underwriters to amend the Registration Statement or supplement the Final Prospectus (or if the Final Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) to comply with the Securities Act, the Company will promptly notify the Representative, allow the Representative the opportunity to provide reasonable comments on such amendment, prospectus supplement or document, and will amend the Registration Statement or supplement the Final Prospectus (or if the Final Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) or file such document (at the expense of the Company) so as to correct such statement or omission or effect such compliance.(B) If at any time during the Prospectus Delivery Period there occurred or occurs an event or development the result of which such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement or any Prospectus or included or would include, when taken together with the Time of Sale Disclosure Package, an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company will promptly notify the Representative and will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(v) The Company shall take or cause to be taken all necessary action to qualify the Securities and Representative's Securities for sale under the securities laws of such jurisdictions as the Representative reasonably designate and to continue such qualifications in effect so long as required, except that the Company shall not be required in connection therewith to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified, to execute a general consent to service of process in any state or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise subject.

(vi) The Company will furnish to the Underwriters and counsel to the Underwriters copies of the Registration Statement, each Prospectus, any Issuer Free Writing Prospectus, and all amendments and supplements to such documents, in each case as soon as available and in such quantities as the Underwriters may from time to time reasonably request.

(vii) The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement (which need not be audited) covering a 12-month period that shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 of the Rules and Regulations.

(viii) The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or cause to be paid all expenses relating to the Offering, including, without limitation, (a) all filing fees and communication expenses relating to the registration of the Securities with the Commission; (b) all filing fees associated with the review of the public offering of the Securities by FINRA; (c) all fees and expenses relating to the listing of such Offered Securities on Nasdaq; (d) fees relating to background checks by the Representative; (e) all fees, expenses and disbursements relating to the registration, qualification or exemption of such Securities under the securities laws of such foreign jurisdictions as the Representative may reasonably designate; (f) the costs of all mailing and printing of the underwriting documents (including, without limitation, the Underwriting Agreement, any Blue Sky Surveys and, if appropriate, any Agreement Among Underwriters, Selected Dealers' Agreement, Underwriters' Questionnaire and Power of Attorney), Registration Statements, Prospectuses and all amendments, supplements and exhibits thereto and as many preliminary and final Prospectuses as the Representative may reasonably deem necessary; (g) the costs and expenses of a public relations firm for the Company mutually agreed upon by the Representative and the Company; (h) the costs of preparing, printing and delivering certificates representing the Securities; (i) fees and expenses of the transfer agent for the Securities of the Company; (j) the fees and expenses of the Company's legal counsel and other agents and Representative; (k) fees and expenses of legal counsel for the Underwriters not to exceed \$140,000 and (l) all reasonable road show expenses for the Offering.

(ix) The Company intends to apply the net proceeds from the sale of the Securities to be sold by it hereunder for the purposes set forth in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus under the heading "Use of Proceeds".

(x) The Company has not taken and will not take, directly or indirectly, during the Prospectus Delivery Period, any action designed to, or which might reasonably be expected to cause or result in, or that has constituted, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(xi) The Company represents and agrees that, unless it obtains the prior written consent of the Representative, and each Underwriter, severally, and not jointly, represents and agrees that, unless it obtains the prior written consent of the Company, it has not made and will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus; provided that the prior written consent of the parties hereto shall be deemed to have been given in respect of the free writing prospectuses included in **Schedule III**. Any such free writing prospectus consented to by the Company and the Representative is hereinafter referred to as a "Permitted Free Writing Prospectus." The Company represents that it has treated or agrees that it will treat each Permitted Free Writing Prospectus as an "issuer free writing prospectus," as defined in Rule 433, and has complied or will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely Commission filing where required, legending and record-keeping.

(xii) The Company hereby agrees that, without the prior written consent of the Representative, it and any successors will not, during the period ending one hundred and eighty 180 days after the date hereof ("Lock-Up Period"), (a) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock or the Company, (b) file or caused to be filed any registration

statement with the Commission relating to the offering or resale of any shares of capital stock or any securities convertible into or exercisable or exchangeable for shares of capital stock or (c) enter into any swap or other arrangement that transfers to another in whole or in part, any of the economic consequences of ownership of capital stock of the Company, whether any such transaction described in clause (a), (b) or (c) above is to be settled by delivery of shares of capital stock of the Company or any successors or such other securities, in cash or otherwise, other than in the case of a Variable Rate Transaction (as defined below). The restrictions contained in the preceding sentence shall not apply to (i) the shares of Common Stock to be sold hereunder, (ii) the issuance by the Company of shares of Common Stock upon the exercise of a stock option or warrant or the conversion of a security outstanding on the date hereof, which is disclosed in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, the terms of which option, warrant or other outstanding convertible security are not thereafter amended, (iii) the issuance by the Company of shares of Common Stock upon the vesting of outstanding stock grants (iv) grants of stock options, stock awards, restricted stock, RSUs, or other equity awards and the issuance of Common Stock or securities convertible into or exercisable or exchangeable for Common Stock (whether upon the exercise of stock options or otherwise) to the Company's employees, officers, directors, advisors, or consultants pursuant to the terms of an equity compensation plan in effect as of the Closing Date and described in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus provided the grantee of any such equity award set forth in this Section enters into a Lock-Up Agreement (as defined below) in the form attached hereto as Exhibit B in connection with any such grant provided further that any such grant to advisors or consultants are issued as "restricted securities" (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith within 180 days following the date hereof; and (v) the filing by the Company of any registration statement on Form S-8 or a successor form thereto relating to an equity compensation plan described in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus.

(xiii) From the date hereof until one year after the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its subsidiaries of Common Stock or any securities of the Company or any subsidiary which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock (or a combination of units thereof) involving a Variable Rate Transaction. "Variable Rate Transaction" means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive, additional shares of Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon, and/or varies with, the trading prices of or quotations for the shares of Common Stock at any time after the initial issuance of such debt or equity securities or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit, whereby the Company may issue securities at a future determined price. Any Underwriter shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(xiv) To engage and maintain, at its expense, a registrar and transfer agent for the Common Stock (if other than the Company).

(xv) To use its reasonable best efforts to maintain the listing of the Common Stock on Nasdaq.

(xvi) To not take, directly or indirectly, any action designed to cause or result in, or that has constituted or might reasonably be expected to constitute, under the Exchange Act or otherwise, the stabilization or manipulation of the price of any securities of the Company to facilitate the sale or resale of the Securities.

(xvii) The Company further agrees that, in addition to the expenses payable pursuant to Section 5(a)(viii), on the Closing Date it shall pay to the Representative, by deduction from the net proceeds of the Offering contemplated herein, a non-accountable expense allowance equal to one percent (1%) of the gross proceeds received by the Company from the sale of the Shares; provided, however, that in the event that the Offering is terminated, the Company agrees to reimburse the Underwriters pursuant to Section 7 hereof. Notwithstanding the foregoing, any advance previously paid by the Company to WallachBeth Capital LLC against the Representative's non-accountable expense allowance actually anticipated to be incurred, shall be applied towards the accountable expenses set forth herein; provided that the Representative will reimburse the Company for any remaining portion of the Advance to the extent amount of the Advance was not used for accountable expenses actually incurred by the Representative in the offering.

(xviii) As of the Closing Date, the Company shall have retained an investor relations advisory firm reasonably acceptable to the Representative and the Company and shall retain such firm or another firm reasonably acceptable to the Representative for a period of not less than six (6) months after the Closing Date.

(xix) On or prior to the date of this Agreement, the Company will have appropriate Directors' & Officers' ("D&O") and Errors & Omissions ("E&O") insurance with appropriate liability levels as reasonably determined by the Company.

(xx) Right of First Participation. Provided that the Firm Shares are sold in accordance with the terms of this Agreement, for a period of one year from the closing of any Offering, the Company will grant to WallachBeth the right of first participation (the "Right of First Participation") to act as lead underwriter or book-running manager or placement agent for each and every future public and private equity and debt offerings of the Company, or any successor to or any subsidiary of the Company (each, a "Subject Transaction") in any US stock exchange during such one-year period, according to the mechanism to be agreed upon by the parties in the placement agency agreement

The Company shall notify the Representative of its intention to pursue a Subject Transaction, including the material terms thereof, by providing written notice thereof by registered mail or overnight courier service addressed to the Representative. If the Representative fails to exercise its Right of First Participation with respect to any Subject Transaction within ten (10) Business Days after the mailing of such written notice, then the Representative shall have no further claim or right with respect to the Subject Transaction. The Representative may elect, in its sole and absolute discretion, not to exercise its Right of First Participation with respect to any Subject Transaction; provided that any such election by the Representative shall not adversely affect the Representative's Right of First Participation with respect to any other Subject Transaction during the period agreed to above.

6. Conditions of the Underwriter's Obligations. The respective obligations of the several Underwriters hereunder to purchase the Shares are subject to the accuracy, as of the date hereof and at all times through the Closing Date, and on each Option Closing Date (as if made on the Closing Date or such Option Closing Date, as applicable), of and compliance with all representations, warranties and agreements of the Company contained herein, the performance by the Company of its obligations hereunder and the following additional conditions:

(a) If filing of the Final Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, is required under the Securities Act or the Rules and Regulations, the Company shall have filed the Final Prospectus (or such amendment or supplement) or such Issuer Free Writing Prospectus with the Commission in the manner and within the time period so required (without reliance on Rule 424(b)(8) or 164(b) under the Securities Act); the Registration Statement shall remain effective; no stop order suspending the effectiveness of the Registration Statement or any part thereof, any Rule 462 Registration Statement, or any amendment thereof, nor suspending or preventing the use of the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus or any Issuer Free Writing Prospectus shall have been issued; no proceedings for the issuance of such an order shall have been initiated or threatened by the Commission; any request of the Commission or the Representative for additional information (to be included in the Registration Statement, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus, any Issuer Free Writing Prospectus or otherwise) shall have been complied with to the satisfaction of the Representative.

(b) The Common Stock and Warrants shall be approved for listing on Nasdaq, and satisfactory evidence thereof shall have been provided to the Representative and its counsel.

(c) FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(d) The Representative shall not have reasonably determined, and advised the Company, that the Registration Statement, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus, or any amendment thereof or supplement thereto, or any Issuer Free Writing Prospectus, contains an untrue statement of fact which, in the reasonable opinion of the Representative, is material, or omits to state a fact which, in the reasonable opinion of the Representative, is material and is required to be stated therein or necessary to make the statements therein not misleading.

(e) Intentionally Omitted.

(f) On the Closing Date and on each Option Closing Date, there shall have been furnished to the Representative on behalf of the Underwriter the opinion and negative assurance letters of Carmel, Milazzo & Feil LLP, corporate counsel to the Company, dated the Closing Date or the Option Closing Date, as applicable, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representative.

(g) On the Closing Date and on each Option Closing Date, there shall have been furnished to the Representative on behalf of the Underwriters the opinion letter of [*], intellectual property counsel to the Company, dated the Closing Date or the Option Closing Date, as applicable, and addressed to the Underwriters, in form and substance reasonably satisfactory to the Representative.

(h) The Underwriters shall have received a letter of M&K CPAS, PLLC, on the date hereof and on the Closing Date and on each Option Closing Date, addressed to the Underwriters, confirming that they are independent public accountants within the meaning of the Securities Act and are in compliance with the applicable requirements relating to the qualifications of accountants under Rule 2-01 of Regulation S-X of the Commission, and confirming, as of the date of each such letter (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, as of a date not prior to the date hereof or more than five (5) days prior to the date of such letter), the conclusions and findings of said firm with respect to the financial information and other matters required by the Underwriters.

(i) Intentionally Omitted.

(j) On the Closing Date and on each Option Closing Date, there shall have been furnished to the Underwriters a certificate, dated the Closing Date and on each Option Closing Date and addressed to the Underwriters, signed by the chief executive officer and the chief financial officer of the Company, in their capacity as officers of the Company, to the effect that:

(i) The representations and warranties of the Company in this Agreement that are qualified by materiality or by reference to any Material Adverse Effect are true and correct in all respects, and all other representations and warranties of the Company in this Agreement are true and correct, in all material respects, as if made at and as of the Closing Date and on the Option Closing Date, and the Company has complied in all material respects with all the agreements and satisfied all the conditions on its part required to be performed or satisfied at or prior to the Closing Date or on the Option Closing Date, as applicable;

(ii) No stop order or other order (A) suspending the effectiveness of the Registration Statement or any part thereof or any amendment thereof, (B) suspending the qualification of the Securities for offering or sale, or (C) suspending or preventing the use of the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus or any Issuer Free Writing Prospectus, has been issued, and no proceeding for that purpose has been instituted or, to their knowledge, is contemplated by the Commission or any state or regulatory body; and

(iii) There has been no occurrence of any event resulting or reasonably likely to result in a Material Adverse Effect during the period from and after the date of this Agreement and prior to the Closing Date or on the Option Closing Date, as applicable.

(k) On or before the date hereof, the Representative shall have received duly executed lock-up agreement, substantially in the form of **Exhibit B** hereto (each a "Lock-Up Agreement"), by and between the Representative and each of the parties specified in **Schedule IV**.

(l) On the Closing Date, the Company shall have delivered to the Representative executed copies of the Warrant Agreement and the Representative's Warrant

(m) The Company shall have furnished to the Representative and its counsel such additional documents, certificates and evidence as the Representative and its counsel may have reasonably requested.

If any condition specified in this Section 6 shall not have been fulfilled when and as required to be fulfilled, this Agreement may be terminated by the Representative by notice to the Company at any time at or prior to the Closing Date or on the Option Closing Date, as applicable, and such termination shall be without liability of any party to any other party, except that Section 5(a)(viii), Section 7 and Section 8 shall survive any such termination and remain in full force and effect.

7. Indemnification and Contribution.

(a) The Company agrees to indemnify, defend and hold harmless each Underwriter, its affiliates, directors and officers and employees, and each person, if any, who controls such Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities to which such Underwriter or such person may become subject, under the Securities Act or otherwise (including in settlement of any litigation if such settlement is effected with the written consent of the Company), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon (i) an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, including the information deemed to be a part of the Registration Statement at the time of effectiveness and at any subsequent time pursuant to Rules 430A and 430B of the Rules and Regulations, or arise out of or are based upon the omission from the Registration Statement, or alleged omission to state therein, a material fact required to be stated therein or necessary to make the statements therein not misleading (ii) an untrue statement or alleged untrue statement of a material fact contained in the Time of Sale Disclosure Package, any oral or written communication with potential investors undertaken in reliance on Section 5(d) of the Securities Act (Written Testing-the-Waters Communications), any Prospectus, the Final Prospectus, or any amendment or supplement thereto, any Issuer Free Writing Prospectus, or the Marketing Materials or in any other materials used in connection with the offering of the Securities, or arise out of or are based upon the omission or alleged omission to state therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, (iii) in whole or in part, any inaccuracy in the representations and warranties of the Company contained herein, or (iv) in whole or in part, any failure of the Company to perform its obligations hereunder or under law, and will reimburse each Underwriter for any legal or other expenses reasonably incurred by it in connection with evaluating, investigating or defending against such loss, claim, damage, liability or action; *provided, however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, liability or action arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, the Time of Sale Disclosure Package, any Written Testing-the-Waters Communications, any

Prospectus, the Final Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by such Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f).

(b) Each Underwriter, severally and not jointly, will indemnify, defend and hold harmless the Company, its affiliates, directors, officers and employees, and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities to which the Company may become subject, under the Securities Act or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Underwriter), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus in reliance upon and in conformity with written information furnished to the Company by such Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f), and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with evaluating, investigating, and defending against any such loss, claim, damage, liability or action. The obligation of each Underwriter to indemnify the Company (including any controlling person, director or officer thereof) shall be limited to the amount of the underwriting discount applicable to the Shares to be purchased by such Underwriter hereunder actually received by such Underwriter.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof, but the failure to notify the indemnifying party shall not relieve the indemnifying party from any liability that it may have to any indemnified party except to the extent such indemnifying party has been materially prejudiced by such failure. In case any such action shall be brought against any indemnified party, and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate in, and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of the indemnifying party's election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof; *provided, however*, that if (i) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (ii) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party), or (iii) the indemnifying party has not in fact employed counsel reasonably satisfactory to the indemnified party to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, the indemnified party shall have the right to employ a single counsel to represent it in any claim in respect of which indemnity may be sought under subsection (a) or (b) of this Section 7, in which event the reasonable fees and expenses of such separate counsel shall be borne by the indemnifying party or parties and reimbursed to the indemnified party as incurred.

The indemnifying party under this Section 7 shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is a party or could be named and indemnity was or would be sought hereunder by such indemnified party, unless such settlement, compromise or consent (a) includes an unconditional release of such indemnified party from all liability for claims that are the subject matter of such action, suit or proceeding and (b) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 7 is unavailable or insufficient to hold harmless an indemnified party under subsection (a) or (b) above, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of the losses, claims, damages or liabilities referred to in subsection (a) or (b) above, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriters on the other from the offering and sale of the Shares or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and the Underwriters on the other in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriters on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discount received by the Underwriters, in each case as set forth in the table on the cover page of the Final Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriters and the parties' relevant intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriters agree that it would not be just and equitable if contributions pursuant to this subsection (d) were to be determined by pro rata allocation or by any other method of allocation that does not take account of the equitable considerations referred to in the first sentence of this subsection (d). The amount paid by an indemnified party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending against any action or claim that is the subject of this subsection (d). Notwithstanding the provisions of this subsection (d), no Underwriter shall be required to contribute any amount in excess of the amount of the underwriting discount applicable to the Shares to be purchased by such Underwriter hereunder actually received by such Underwriter. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation. The Underwriters' respective obligations to contribute as provided in this Section 7 are several in proportion to their respective underwriting commitments and not joint.

(e) The obligations of the Company under this Section 7 shall be in addition to any liability that the Company may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to each person, if any, who controls any Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act; and the obligations of each Underwriter under this Section 7 shall be in addition to any liability that each Underwriter may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to the Company and its officers, directors and each person who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act.

(f) For purposes of this Agreement, each Underwriter severally confirms, and the Company acknowledges, that there is no information concerning such Underwriter furnished in writing to the Company by such Underwriter specifically for preparation of or inclusion in the Registration Statement, the Time of Sale Disclosure Package, any Prospectus, the Final Prospectus or any Issuer Free Writing Prospectus, other than the statement set forth in the last paragraph on the cover page of the Prospectus, the marketing and legal names of each Underwriter, and the statements set forth in the "Underwriting" section of the Registration Statement, the Time of Sale Disclosure Package, and the Final Prospectus only insofar as such statements relate to the amount of selling concession and re-allowance, if any, or to over-allotment, stabilization and related activities that may be undertaken by such Underwriter.

8. Representations and Agreements to Survive Delivery. All representations, warranties, and agreements of the Company contained herein or in certificates delivered pursuant hereto, including, but not limited to, the agreements of the several Underwriters and the Company contained in Section 5(a)(viii) and Section 7 hereof, shall remain operative and in full force and effect regardless of any investigation made by or on behalf of the several Underwriters or any controlling person thereof, or the Company or any

of its officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Shares to and by the Underwriters hereunder.

9. Termination of this Agreement.

(a) The Representative shall have the right to terminate this Agreement by giving notice to the Company as hereinafter specified at any time at or prior to the Closing Date or any Option Closing Date (as to the Option Shares to be purchased on such Option Closing Date only), if in the discretion of the Representative, (i) there has occurred any material adverse change in the securities markets or any event, act or occurrence that has materially disrupted, or in the opinion of the Representative, will in the future materially disrupt, the securities markets or there shall be such a material adverse change in general financial, political or economic conditions or the effect of international conditions on the financial markets in the United States is such as to make it, in the judgment of the Representative, inadvisable or impracticable to market the Shares or enforce contracts for the sale of the Shares (ii) trading in the Company's Common Stock shall have been suspended by the Commission or Nasdaq or trading in securities generally on the Nasdaq Stock Market, the NYSE or the NYSE MKT shall have been suspended, (iii) minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required, on the Nasdaq Stock Market, the NYSE or NYSE American, by such exchange or by order of the Commission or any other governmental authority having jurisdiction, (iv) a banking moratorium shall have been declared by federal or state authorities, (v) there shall have occurred any attack on, outbreak or escalation of hostilities or act of terrorism involving the United States any declaration by the United States of a national emergency or war, any substantial change or development involving a prospective substantial change in United States or other international political, financial or economic conditions or any other calamity or crisis, or (vi) the Company suffers any loss by strike, fire, flood, earthquake, accident or other calamity, whether or not covered by insurance, or (vii) in the judgment of the Representative, there has been, since the time of execution of this Agreement or since the respective dates as of which information is given in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, any material adverse change in the assets, properties, condition, financial or otherwise, or in the results of operations, business affairs or business prospects of the Company, whether or not arising in the ordinary course of business. Any such termination shall be without liability of any party to any other party except that the provisions of Section 5(a)(viii) and Section 7 hereof shall at all times be effective and shall survive such termination.

(b) If the Representative elect to terminate this Agreement as provided in this Section 9, the Company and the other Underwriters shall be notified promptly by the Representative by telephone, confirmed by letter.

(c) If this Agreement is terminated pursuant to any of its provisions, the Company shall not be under any liability to any Underwriter, and no Underwriter shall be under any liability to the Company, except that (y) subject to a maximum reimbursement of \$140,000, the Company will reimburse the Representative only for all actual, accountable out-of-pocket expenses (including the reasonable fees and disbursements of its counsel) reasonably incurred by the Representative in connection with the proposed purchase and sale of the Shares or in contemplation of performing their obligations hereunder and (z) no Underwriter who shall have failed or refused to purchase the Shares agreed to be purchased by it under this Agreement, without some reason sufficient hereunder to justify cancellation or termination of its obligations under this Agreement, shall be relieved of liability to the Company, or to the other Underwriters for damages occasioned by its failure or refusal.

10. Substitution of Underwriters. If any Underwriter or Underwriters shall default in its or their obligations to purchase Shares hereunder on the Closing Date or any Option Closing Date and the aggregate number of Shares which such defaulting Underwriter or Underwriters agreed but failed to purchase does not exceed five percent (5%) of the total number of Shares to be purchased by all Underwriters on such Closing Date or Option Closing Date, the other Underwriters shall be obligated severally, in proportion to their respective commitments hereunder, to purchase the Shares which such defaulting Underwriter or Underwriters agreed but failed to purchase on such Closing Date or Option Closing Date. If any Underwriter or Underwriters shall so default and the aggregate number of Shares with respect to which such default or defaults occur is more than ten percent (10%) of the total number of Shares to be purchased by all Underwriters on such Closing Date or Option Closing Date and arrangements satisfactory to the remaining Underwriters and the Company for the purchase of such Shares by other persons are not made within forty-eight (48) hours after such default, this Agreement shall terminate.

If the remaining Underwriters or substituted Underwriters are required hereby or agree to take up all or part of the Shares of a defaulting Underwriter or Underwriters on such Closing Date or Option Closing Date as provided in this Section 10, (i) the Company shall have the right to postpone such Closing Date or Option Closing Date for a period of not more than five (5) full business days in order to permit the Company to effect whatever changes in the Registration Statement, the Final Prospectus, or in any other documents or arrangements, which may thereby be made necessary, and the Company agrees to promptly file any amendments to the Registration Statement or the Final Prospectus which may thereby be made necessary, and (ii) the respective numbers of Shares to be purchased by the remaining Underwriters or substituted Underwriters shall be taken as the basis of their underwriting obligation for all purposes of this Agreement. Nothing herein contained shall relieve any defaulting Underwriter of its liability to the Company or any other Underwriter for damages occasioned by its default hereunder. Any termination of this Agreement pursuant to this Section 10 shall be without liability on the part of any non-defaulting Underwriters or the Company, except that the obligations with respect to expenses to be paid or reimbursed pursuant to Section 5(a)(viii) and Section 7 and Sections 9 through 17, inclusive, shall not terminate and shall remain in full force and effect.

11. [Intentionally Omitted].

12. Notices. All notices and communications hereunder shall be in writing and mailed or delivered or by telephone, electronic mail or telegraph if subsequently confirmed in writing, (a) if to the Representative, WallachBeth Capital, LLC, Harborside Financial Center Plaza 5, 185 Hudson Street, Ste 1410, Jersey City, NJ 07311, with a copy to Sheppard, Mullin, Richter & Hampton LLP, 30 Rockefeller Plaza, 39th Floor, New York, NY 10112, Attention: Richard Friedman and Stephen Cohen, and (b) if to the Company, to the Company's agent for service as such agent's address appears on the cover page of the Registration Statement with a copy to Carmel, Milazzo & Feil LLP, 55 West 39th Street, 18th Floor New York, New York 10018, Attention: Jeffrey P. Wofford, Esq.

13. Persons Entitled to Benefit of Agreement. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns and the controlling persons, officers and directors referred to in Section 7. Nothing in this Agreement is intended or shall be construed to give to any other person, firm or corporation any legal or equitable remedy or claim under or in respect of this Agreement or any provision herein contained. The term "successors and assigns" as herein used shall not include any purchaser, as such purchaser, of any of the Shares from any Underwriters.

14. Absence of Fiduciary Relationship. The Company acknowledges and agrees that: (a) each Underwriter has been retained solely to act as underwriter in connection with the sale of the Shares and that no fiduciary, advisory or agency relationship between the Company and any Underwriter has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Underwriter has advised or is advising the Company on other matters; (b) the price and other terms of the Shares set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Underwriters and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement; (c) it has been advised that the Underwriters and their affiliates are engaged in a broad range of transactions that may involve interests that differ from those of the Company and that no Underwriter has any obligation to disclose such interest and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and (d) it has been advised that each Underwriter is acting, in respect of the transactions contemplated by this Agreement, solely for the benefit of such Underwriter, and not on behalf of the Company.

15. Amendments and Waivers. No supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the party to be bound thereby. The failure of a party to exercise any right or remedy shall not be deemed or constitute a waiver of such right or remedy in the future. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (regardless of whether similar), nor shall any such waiver be deemed or constitute a continuing waiver unless otherwise expressly provided.

16. **Partial Unenforceability.** The invalidity or unenforceability of any section, paragraph, clause or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph, clause or provision.

17. **Governing Law.** This Agreement shall be governed by and construed in accordance with the laws of the State of New York.

18. **Submission to Jurisdiction.** The Company hereby agrees that any action, proceeding or claim against it arising out of, or relating in any way to this Agreement shall be brought and enforced in the New York Supreme Court, County of New York, or in the United States District Court for the Southern District of New York, and irrevocably submits to such jurisdiction, which jurisdiction shall be exclusive. The Company hereby waives any objection to such exclusive jurisdiction and that such courts represent an inconvenient forum. EACH OF THE COMPANY (ON BEHALF OF ITSELF AND, TO THE FULLEST EXTENT PERMITTED BY LAW, ON BEHALF OF ITS RESPECTIVE EQUITY HOLDERS AND CREDITORS) AND THE UNDERWRITER HEREBY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY CLAIM BASED UPON, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT, THE REGISTRATION STATEMENT, THE TIME OF SALE DISCLOSURE PACKAGE, ANY PROSPECTUS AND THE FINAL PROSPECTUS.

19. **Counterparts.** This Agreement may be executed and delivered (including by facsimile transmission or electronic mail) in one or more counterparts and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original and all such counterparts shall together constitute one and the same instrument.

[Signature Page Follows]

Please sign and return to the Company the enclosed duplicates of this letter whereupon this letter will become a binding agreement between the Company and the several Underwriters in accordance with its terms.

Very truly yours,

BULLFROG AI HOLDINGS, INC.

By: _____
Name: _____
Title: _____

Confirmed as of the date first above-mentioned by the Representative of the several Underwriters.

WALLACHBETH CAPITAL, LLC

By: _____
Name: _____
Title: _____

[Signature page to Underwriting Agreement]

SCHEDULE I

<i>Underwriter</i>	<i>Number of Firm Securities to be Purchased</i>	<i>Total Number of Option Securities to be Purchased</i>	
	<i>Number of Firm Units</i>	<i>Number of Option Shares</i>	<i>Number of Option Warrants</i>
WallachBeth Capital, LLC			
Total			

SCHEDULE II

Pricing Information

Number of Firm Units

Number of Option Shares:

Number of Option Warrants:

Public Offering Price per Firm Unit: \$

Public Offering Price per Option Share: \$[*]

Public Offering Price per Option Warrant:

Underwriting Discount per Firm Unit: (8% per Firm Unit)

Underwriting non-accountable expense allowance per Firm Unit: (1% per Firm Unit)

SCHEDULE III
Free Writing Prospectus

SCHEDULE IV
Lock-Up Parties



BARBARA K. CEGAVSKE
 Secretary of State
 202 North Carson Street
 Carson City, Nevada 89701-4201
 (775) 684-5708
 Website: www.nvsos.gov
 www.nvsilverflume.gov

ABOVE SPACE IS FOR OFFICE USE ONLY

Formation - Profit Corporation

NRS 78 - Articles of Incorporation Domestic Corporation NRS 80 - Foreign Corporation NRS 89 - Articles of Incorporation Professional Corporation

78A Formation - Close Corporation

(Name of Close Corporation MUST appear in the below heading)

Articles of Formation of _____ a close corporation (NRS 78A)

TYPE OR PRINT - USE DARK INK ONLY - DO NOT HIGHLIGHT

1. Name of Entity:
 (If foreign, name in home jurisdiction)

2. Registered Agent for Service of Process: (Check only one box)

Bullfrog AI Holdings, Inc.

Commercial Registered Agent (name only below) Noncommercial Registered Agent (name and address below) Office or Position with Entity (title and address below)

Incorporating Services, Ltd.

Name of Registered Agent OR Title of Office or Position with Entity

321 W. Winnie Lane, Suite 104 Carson City Nevada 89703
 Street Address City State Zip Code

Mailing Address (if different from street address) City State Zip Code

2a. Certificate of Acceptance of Appointment of Registered Agent:

I hereby accept appointment as Registered Agent for the above named Entity. If the registered agent is unable to sign the Articles of Incorporation, submit a separate signed Registered Agent Acceptance form.

X _____ Date _____
 Authorized Signature of Registered Agent or On Behalf of Registered Agent Entity

3. Governing Board:
 (NRS 78A, close corporation only, check one box; if yes, complete article 4 below)

This corporation is a close corporation operating with a board of directors Yes No

4. Names and Addresses of the Board of Directors/ Trustees or Stockholders

(NRS 78: Board of Directors/ Trustees is required.
 NRS 78a: Required if the Close Corporation is governed by a board of directors.
 NRS 89: Required to have the Original stockholders and directors. A certificate from the regulatory board must be submitted showing that each individual is licensed at the time of filing. See instructions)

1) Vininder Singh USA
 Name Country

4 Black Kettle Court Boyds MD 20841
 Street Address City State Zip/Postal Code

2) _____
 Name Country

Street Address City State Zip/Postal Code

3) _____
 Name Country

Street Address City State Zip/Postal Code

5. Jurisdiction of Incorporation: (NRS 80 only)

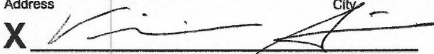
5a. Jurisdiction of incorporation: _____ 5b. I declare this entity is in good standing in the jurisdiction of its incorporation.

This form must be accompanied by appropriate fees.



BARBARA K. CEGAVSKE
 Secretary of State
 202 North Carson Street
 Carson City, Nevada 89701-4201
 (775) 684-5708
 Website: www.nvsos.gov
 www.nvsilverflume.gov

**Formation -
 Profit Corporation**
 Continued, Page 2

6. Benefit Corporation: <small>(For NRS 78, NRS 78A, and NRS 89, optional. See instructions.)</small>	By selecting "Yes" you are indicating that the corporation is organized as a benefit corporation pursuant to NRS Chapter 78B with a purpose of creating a general or specific public benefit. The purpose for which the benefit corporation is created must be disclosed in the below purpose field. <p align="right">Yes <input type="checkbox"/></p>												
7. Purpose/Profession to be practiced: <small>(Required for NRS 80, NRS 89 and any entity selecting Benefit Corporation. See instructions.)</small>													
8. Authorized Shares: <small>(Number of shares corporation is authorized to issue)</small>	<table border="1"> <tr> <td>Number of Authorized shares with Par value:</td> <td>110,000,000</td> <td>Par value: \$0.0000100000</td> </tr> <tr> <td>Number of Common shares with Par value:</td> <td>100,000,000</td> <td>Par value: \$0.0000100000</td> </tr> <tr> <td>Number of Preferred shares with Par value:</td> <td>10,000,000</td> <td>Par value: \$0.0000100000</td> </tr> <tr> <td>Number of shares with no par value:</td> <td colspan="2"></td> </tr> </table> <p><small>If more than one class or series of stock is authorized, please attach the information on an additional sheet of paper.</small></p>	Number of Authorized shares with Par value:	110,000,000	Par value: \$0.0000100000	Number of Common shares with Par value:	100,000,000	Par value: \$0.0000100000	Number of Preferred shares with Par value:	10,000,000	Par value: \$0.0000100000	Number of shares with no par value:		
Number of Authorized shares with Par value:	110,000,000	Par value: \$0.0000100000											
Number of Common shares with Par value:	100,000,000	Par value: \$0.0000100000											
Number of Preferred shares with Par value:	10,000,000	Par value: \$0.0000100000											
Number of shares with no par value:													
9. Name and Signature of Officer making the statement or Authorized Signer for NRS 80. Name, Address and Signature of the Incorporator for NRS 78, 78A, and 89. NRS 89 - Each Organizer/Incorporator must be a licensed professional.	<p>I declare, to the best of my knowledge under penalty of perjury, that the information contained herein is correct and acknowledge that pursuant to NRS 239.330, it is a category C felony to knowingly offer any false or forged instrument for filing in the Office of the Secretary of State.</p> <p>Vininder Singh <input type="text"/> USA <input type="text"/> <small>Name Country</small></p> <p>4 Black Kettle Court <input type="text"/> Boyds <input type="text"/> MD <input type="text"/> 20841 <input type="text"/> <small>Address City State Zip/Postal Code</small></p> <p>X  <small>(attach additional page if necessary)</small></p>												

AN INITIAL LIST OF OFFICERS MUST ACCOMPANY THIS FILING

Please include any required or optional information in space below:
 (attach additional page(s) if necessary)

Reference is hereby made to the additional information statement attached hereto and made a part hereof.



BARBARA K. CEGAVSKE
 Secretary of State
 202 North Carson Street
 Carson City, Nevada 89701-4201
 (775) 684-5708
 Website: www.nvsos.gov
www.nvsilverflume.gov

**Initial List and State
 Business License
 Application**

Initial List of Officers, Managers, Members, General Partners, Managing Partners, or Trustees:

BULLFROG AI HOLDINGS, INC.

NAME OF ENTITY

TYPE OR PRINT ONLY - USE DARK INK ONLY - DO NOT HIGHLIGHT

IMPORTANT: Read instructions before completing and returning this form.

Please indicate the entity type (check only one):

- Corporation
 - This corporation is publicly traded, the Central Index Key number is:
- Nonprofit Corporation (see nonprofit sections below)
- Limited-Liability Company
- Limited Partnership
- Limited-Liability Partnership
- Limited-Liability Limited Partnership (if formed at the same time as the Limited Partnership)
- Business Trust

Additional Officers, Managers, Members, General Partners, Managing Partners, Trustees or Subscribers, may be listed on a supplemental page.

<p>CHECK ONLY IF APPLICABLE. Pursuant to NRS Chapter 76, this entity is exempt from the business license fee.</p> <p><input type="checkbox"/> 001 - Governmental Entity</p> <p><input type="checkbox"/> 006 - NRS 680B.020 Insurance Co, provide license or certificate of authority number <input style="width: 100px;" type="text"/></p>
<p>For nonprofit entities formed under NRS Chapter 80: entities without 501(c) nonprofit designation are required to maintain a state business license, the fee is \$200.00. Those claiming an exemption under 501(c) designation must indicate by checking box below.</p> <p><input type="checkbox"/> Pursuant to NRS Chapter 76, this entity is a 501(c) nonprofit entity and is exempt from the business license fee. Exemption code 002</p>
<p>For nonprofit entities formed under NRS Chapter 81: entities which are Unit-owners' association or Religious, charitable, fraternal or other organization that qualifies as a tax-exempt organization pursuant to 26 U.S.C. § 501(c) are excluded from the requirement to obtain a state business license. Please indicate below if this entity falls under one of these categories by marking the appropriate box. If the entity does not fall under either of these categories please submit \$200.00 for the state business license.</p> <p><input type="checkbox"/> Unit-owners' Association <input type="checkbox"/> Religious, charitable, fraternal or other organization that qualifies as a tax-exempt organization pursuant to 26 U.S.C. § 501(c)</p>
<p>For nonprofit entities formed under NRS Chapter 82 and 80: Charitable Solicitation Information - check applicable box Does the Organization intend to solicit charitable or tax deductible contributions?</p> <p><input type="checkbox"/> No - no additional form is required</p> <p><input type="checkbox"/> Yes - the "Charitable Solicitation Registration Statement" is required.</p> <p><input type="checkbox"/> The Organization claims exemption pursuant to NRS 82A.210 - the "Exemption From Charitable Solicitation Registration Statement" is required</p>

**** Failure to include the required statement form will result in rejection of the filing and could result in late fees.****



BARBARA K. CEGAVSKE
 Secretary of State
 202 North Carson Street
 Carson City, Nevada 89701-4201
 (775) 684-5708
 Website: www.nvsos.gov
www.nvslverflume.gov

**Initial List and State
 Business License
 Application - Continued**

Officers, Managers, Members, General Partners, Managing Partners or Trustees:

CORPORATION, INDICATE THE <u>PRESIDENT</u> , OR EQUIVALENT OF:		Title: <input type="text" value="CEO"/>	
<input type="text" value="Vininder Singh"/>		<input type="text" value="USA"/>	
Name		Country	
<input type="text" value="4 Black Kettle Court"/>	<input type="text" value="Boysd"/>	<input type="text" value="MD"/>	<input type="text" value="20841"/>
Address	City	State	Zip/Postal Code
CORPORATION, INDICATE THE <u>SECRETARY</u> , OR EQUIVALENT OF:		Title: <input type="text"/>	
<input type="text"/>		<input type="text"/>	
Name		Country	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Address	City	State	Zip/Postal Code
CORPORATION, INDICATE THE <u>TREASURER</u> , OR EQUIVALENT OF:		Title: <input type="text"/>	
<input type="text"/>		<input type="text"/>	
Name		Country	
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Address	City	State	Zip/Postal Code
CORPORATION, INDICATE THE <u>DIRECTOR</u> :		Title: <input type="text"/>	
<input type="text" value="Vininder Singh"/>		<input type="text" value="USA"/>	
Name		Country	
<input type="text" value="4 Black Kettle Court"/>	<input type="text" value="Boysd"/>	<input type="text" value="MD"/>	<input type="text" value="20841"/>
Address	City	State	Zip/Postal Code

None of the officers or directors identified in the list of officers has been identified with the fraudulent intent of concealing the identity of any person or persons exercising the power or authority of an officer or director in furtherance of any unlawful conduct.

I declare, to the best of my knowledge under penalty of perjury, that the information contained herein is correct and acknowledge that pursuant to NRS 239.330, it is a category C felony to knowingly offer any false or forged instrument for filing in the Office of the Secretary of State.

X

Signature of Officer, Manager, Managing Member, General Partner, Managing Partner, Trustee, Member, Owner of Business, Partner or Authorized Signer FORM WILL BE RETURNED IF UNSIGNED.

Title Date

**BYLAWS
OF
BULLFROG AI HOLDINGS, INC.**

**ARTICLE I
Name and Principal Office**

Section 1. The name of this corporation is:

BULLFROG AI HOLDINGS, INC.

Section 2. The principal office of the corporation shall be located at such place as shall be designated by the Board of Directors, and it may maintain branch offices or agents elsewhere, within or without the State of Nevada, as the Board of Directors may from time to time determine.

Section 3. The corporation shall at all times maintain a registered office and registered agent within the State of Nevada, at such place within said state as shall be designated by the Board of Directors.

**ARTICLE II
Capital Stock**

Section 1. The authorized capital stock of the corporation shall consist of 110,000,000 shares of which 100,000,000 shares shall be designated to be common stock with \$.00001 par value and 10,000,000 shares to be designated as Preferred Stock with a \$.00001 par value. The Preferred Stock may be issued in one or more series, and the preferences, rights and powers of such Preferred Shares shall be determined in the discretion of the Board of Directors. Said capital stock shall be evidenced by certificates of stock, issued in the name of the corporation and signed by the President and Secretary of the corporation under the corporate seal.

Section 2. Said shares of stock shall be transferable only on the books of the corporation or its authorized registration and transfer agent. The stock transfer records shall be kept by the corporation or the appropriate designee of the corporation as may be determined by the Board of Directors.

Section 3. Shares of stock may be represented at all shareholder meetings by the shareholders of record or by written proxy directed to any other person or legal entity and filed with the Secretary of the corporation prior to the beginning of any shareholder meeting. No person, however, shall be entitled to vote any shares of stock in person or by proxy at any such meeting unless the same shall have been transferred to him/her on the books of the corporation at least 30 days prior to the said meeting.

Section 4. Before a new stock certificate shall be transferred or issued to replace a lost certificate, proof of loss together with proper indemnification procedures, including an indemnification bond, if requested by the Board of Directors, shall be furnished by the applicant for the new certificate. Any cost of reissuing and indemnifying the corporation for reissuing lost certificates shall be paid by the applicant.

Section 5. The owner as reflected on the books of the corporation, subject to the provisions of Section 3 of this Article II, shall be entitled to one vote for each share of stock owned by him/her. No cumulative voting shall be allowed.

Section 6. The corporation shall not be allowed to vote any Treasury stock held by it.

Section 7. The Board of Directors may fix a date or dates at which time or times the persons reflected on the books of the corporation as shareholders shall receive dividends or distributions of the corporate assets.

Section 8. The corporation shall be entitled to treat the holder of record of any share or shares of stock as the holder in fact thereof and, accordingly, shall not be bound to recognize any equitable or other claim to or interest in such share or shares on the part of any other person, whether or not it shall have express or other notice thereof, except as otherwise provided by the laws of Nevada.

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Section 9. Shares standing in the name of another corporation, domestic or foreign, may be voted by such officer, agent or proxy as the Bylaws of such corporation may prescribe or, in the absence of such provision, as the Board of Directors of such corporation may determine. Shares standing in the name of a deceased person may be voted by the executor or administrator of such deceased person, either in person or by proxy. Shares standing in the name of a guardian, conservator or trustee may be voted by such fiduciary, either in person or by proxy, but no such fiduciary shall be entitled to vote shares held in such fiduciary capacity without a transfer of such shares into the name of such fiduciary. Shares standing in the name of a receiver may be voted by such receiver. A shareholder whose shares are pledged shall be entitled to vote such shares, unless, in the transfer by the pledgor on the books of the corporation, he/she has expressly empowered the pledgee to vote thereon, in which case only the pledgee or his/her proxy may represent the stock and vote thereon.

Section 10. There shall be issued no fractional shares of the corporation. In the event a shareholder shall be entitled to a fractional share by virtue of the declaration of a stock dividend or stock split or otherwise, the corporation shall issue to said shareholder a certificate, called scrip, acknowledging the right of said shareholder to said fractional share. At any time that a shareholder shall become the holder of sufficient scrip to total one or more whole shares, then, at the request of said shareholder, the corporation shall issue said whole share or shares to said shareholder. No holder of any scrip shall be entitled to any vote on account thereof.

Section 11. All issued shares of the corporation shall be fully paid and nonassessable; there shall be issued no partially paid shares of the corporation.

Section 12. Shares of the corporation shall be issued for such consideration as shall be fixed from time to time by the Board of Directors; provided, however, that no such shares shall be issued for consideration less than the par value of such shares.

Section 13. Treasury shares may be disposed of by the corporation for such consideration as may be fixed from time to time by the Board of Directors.

ARTICLE III
Meetings of Shareholders

Section 1. An annual meeting of the shareholders shall be held annually, within five (5) months of the end of each fiscal year of the Corporation. The annual meeting shall be held at such time and place and on such date as the Directors shall determine from time to time and as shall be specified in the notice of the meeting; at which time the shareholders shall elect a Board of Directors and transact such other business as may be properly brought before the meeting. Notwithstanding the foregoing, the Board of Directors may cause the annual meeting of shareholders to be held on such other date in any year as they shall determine to be in the best interests of the corporation; and any business transacted at said meeting shall have the same validity as if transacted on the date designated herein.

Notice of the annual meeting, stating the time and place thereof, shall be mailed to each shareholder at his/her address as shown on the records of the corporation not less than ten (10) days and not more than sixty (60) days prior to such meeting.

Section 2. For the purpose of determining shareholders entitled to notice of or to vote at any meeting of shareholders or any adjournment thereof, or shareholders entitled to receive payment of dividends, the Board of Directors may fix in advance a date as the record date for any such determination of shareholders, such date in any case to be not less than ten (10) nor more than sixty (60) days prior to the date on which the particular action requiring such determination of shareholders is to be taken. If no record date is fixed for the determination of shareholders entitled to notice of or to vote at a meeting of shareholders, or shareholders entitled to receive payment of dividends, the date on which notice of the meeting is mailed, or the date on which the resolution of the Board of Directors declaring such dividend is adopted, as the case may be, shall be the record date. When a determination of shareholders entitled to vote at any meeting of shareholders has been made as provided in this Section, such determination shall apply to any adjournment thereof.

Section 3. A simple majority of the capital stock issued and outstanding, represented in person or by proxy, shall constitute a quorum for the transaction of business at any shareholders' meeting.

Section 4. A special meeting of the shareholders may be called at any time by the President or as directed by a majority vote of the Board of Directors. The same notice shall be given of special meetings as is herein provided for the annual meeting, except that, in the case of special meetings, the notice shall state the objective therefor, and no matters may be considered except those mentioned in said notice.

Section 5. A special meeting of the shareholders shall be called by the corporation upon the written request of the holders of not less than twenty-five (25%) percent of the outstanding shares of the corporation. Such written request shall be presented to the Secretary of the corporation. The Secretary shall then comply with the provisions of this Article regarding notice to shareholders of any special or annual meeting.

Section 6. Notice of meetings, both annual and special, may be waived by any shareholder, and his/her presence at such meetings will constitute such a waiver.

Section 7. At all meetings of shareholders, all questions shall be determined by a majority vote of the holders of each class of capital stock entitled to vote, present in person or by proxy, unless otherwise provided for by these Bylaws or by the laws of the State of Nevada.

Section 8. Whenever the vote of shareholders at a meeting thereof is required or permitted to be taken, for or in connection with any corporate action, by any provision of the laws of Nevada, the meeting and vote of shareholders may be dispensed with if the written consent of the holders of less than all of the stock who would have been entitled to vote upon the action if a meeting were held, then on the written consent of the shareholders having not less than such percentage of the number of votes as may be authorized in the Articles of Incorporation; provided that, in no case shall action be taken upon the written consent of the holders of stock having less than the minimum percentage of the vote required by statute for the proposed corporate action, and provided that prompt notice be given to all shareholders of the taking of corporate action without a meeting and by less than unanimous written consent.

Section 9. The Board of Directors may adopt whatever rules it deems necessary or desirable for the orderly transaction of business at any meeting of shareholders; provided that such rules shall be in writing and shall be distributed to the shareholders prior to or at the beginning of said meeting, and provided further that such rules shall not abrogate any right of the holders of capital stock as defined by statute or by these Bylaws.

ARTICLE IV **Board of Directors**

Section 1. The business and affairs of the corporation shall be managed by its Board of Directors, which may exercise all powers of the corporation as are not, by statute, by the Articles of Incorporation or by these Bylaws, directed or required to be exercised or done by the shareholders.

Section 2. The number of Directors which shall constitute the whole Board shall be not less than one (1) nor more than fifteen (15). Such number of Directors shall from time to time be fixed and determined by the shareholders and shall be set forth in the notice of any meeting of shareholders held for the purpose of electing Directors. The Directors shall be elected at the Annual Meeting of the Shareholders, except as provided in Section 3 of this Article IV, and each Director elected shall hold office until his/her successor shall be elected and shall qualify. Except as provided otherwise herein, Directors need not be residents of Nevada nor shareholders of the corporation.

Section 3. Any Director may resign at any time by written notice to the corporation. Any such resignation shall take effect at the date of receipt of such notice or any later time specified therein, and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective. If any vacancy occurs on the Board of Directors caused by death, resignation, retirement, disqualification or removal from office of any Director or otherwise, or if any new directorship is created by an increase in the authorized number of Directors, a majority of the Directors then in office, though less than a quorum, or a sole remaining Director may choose a successor or fill the newly created directorship; and a Director so chosen shall hold office until the next annual meeting and until his/her successor shall be duly elected and shall qualify, unless sooner displaced.

Section 4. A regular meeting of the Board of Directors shall be held each year, without other notice than this Bylaw, at the place of and immediately following the Annual Meeting of Shareholders, and other regular meetings of the Board of Directors shall be held each year, at such time and place as the Board of Directors may provide, by resolution, either within or without the State of Nevada, without other notice than such resolution.

Section 5. A special meeting of the Board of Directors may be called by the President and shall be called by the Secretary on the written request of any two Directors. The President so calling, or the Directors so requesting, any such meeting shall fix the time and place, either within or without the State of Nevada, as the place for holding such meeting.

Section 6. Written notice of special meetings of the Board of Directors shall be given to each Director at least twenty-four (24) hours prior to the time of any such meeting. Any Director may waive notice of any meeting. The attendance of a Director at any meeting shall constitute a waiver of notice of such meeting, except where a Director attends a meeting for the purpose of objecting to the transaction of any business because the meeting is not lawfully called or convened. Neither the business to be transacted at nor the purpose of any special meeting of the Board of Directors needs to be specified in the notice or waiver of notice of such meeting, except that notice shall be given of any proposed amendment to the Bylaws if it is to be adopted at any special meeting or with respect to any other matter where notice is required by statute.

Section 7. A simple majority of the Board of Directors shall constitute a quorum for the transaction of business at any meeting of the Board of Directors, and the act of a majority of the Directors present at any meeting at which there is a quorum shall be the act of the Board of Directors, except as may be otherwise specifically provided by statute, by the Articles of Incorporation or by these Bylaws. If a quorum shall not be present at any meeting of the Board of Directors, the Directors present thereat may adjourn the meeting from time to time, without notice other than announcement at the meeting, until a quorum shall be present.

Section 8. Unless otherwise restricted by the Articles of Incorporation or these Bylaws, any action required or permitted to be taken at any meeting of the Board of Directors or of any committee thereof, as provided in Article V of these Bylaws, may be taken without a meeting; provided that a written consent thereto is signed by all members of the Board or of such committee, as the case may be, and such written consent is filed with the minutes of proceedings of the Board or committee.

Section 9. Directors, as such, shall not be entitled to any stated salary for their services unless voted by the Board of Directors. By resolution of the Board, a fixed sum and expenses of attendance, if any, may be allowed for attendance at each regular or special meeting of the Board of Directors or any meeting of a committee of Directors. No provision of these Bylaws shall be construed to preclude any Director from serving the corporation in any other capacity and receiving compensation therefor.

Section 10. Members of the Board of Directors, or any committee designated by such Board, may participate in a meeting of such Board or committee by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other, and participation in a meeting pursuant to this Section shall constitute presence in person at such meeting.

ARTICLE V **Committees of Directors**

Section 1. The Board of Directors may, by resolution passed by a majority of the entire Board, designate one or more committees, including, if it shall so determine, an Executive Committee. Each such committee shall consist of two or more of the Directors of the corporation, which shall have and may exercise such of the powers of the Board of Directors in the management of the business and affairs of the corporation as may be provided in this Article and may authorize the seal of the corporation to be affixed to all papers which may require it. The Board of Directors may designate one or more Directors as alternate members of any committee, who may replace any absent or disqualified member at any meeting of such committee. Such committee or committees shall have such name or names and such authority as may be determined from time to time by resolution adopted by the Board of Directors.

Section 2. In the event the Board of Directors shall, pursuant to Section 1 of this Article, designate an Executive Committee to have and exercise the full powers of the Board of Directors, such power shall extend to the full limit of the powers of the entire Board of Directors, except that no committee of Directors shall have or exercise any of the following powers: amend the Articles of Incorporation of the corporation; undertake any actions toward merger or consolidation of the corporation; recommend the lease, sale or exchange of all or substantially all of the assets of the corporation; amend these Bylaws; declare any dividend; or authorize the issuance of any of the stock of the corporation.

Section 3. Each committee of Directors shall keep regular minutes of its proceedings and report same to the Board of Directors when required.

Section 4. Members of special or standing committees may be allowed compensation for attending committee meetings, if the Board shall so determine.

ARTICLE VI

Notice

Section 1. Whenever, under the provisions of the statutes, the Articles of Incorporation or these Bylaws, notice is required to be given to any Directors, member of any committee or shareholders, such notice shall be in writing and shall be delivered personally or mailed to such Director, member or shareholder or, in the case of a Director or a member of any committee, may be delivered in person or given orally by telephone. If mailed, notice to a Director, member of a committee or shareholder shall be deemed to be given when deposited in the United States mail in a sealed envelope, with postage thereon prepaid, addressed, in the case of a shareholder, to the shareholder at the shareholder's address as it appears on the records of the corporation or, in the case of a Director or a member of a committee, to such person at his/her business address. If sent by telegraph, notice to a Director or member of a committee shall be deemed to be given when the telegram, so addressed, is delivered to the telegraph company.

Section 2. Whenever any notice is required to be given under the provisions of the statutes, the Articles of Incorporation or these Bylaws, a waiver thereof in writing, signed by the person or persons entitled to said notice, whether before or after the time stated therein, shall be deemed equivalent thereto.

ARTICLE VII

Officers

Section 1. The officers of the corporation shall be a President, one or more Vice Presidents, any one or more of which may be designated Executive Vice President or Senior Vice President, a Secretary and a Treasurer. The Board of Directors may appoint such other officers and agents, including Assistant Vice Presidents, Assistant Secretaries and Assistant Treasurers, as it shall deem necessary, who shall hold their offices for such terms and shall exercise such powers and perform such duties as shall be determined by the Board. Any two or more offices may be held by the same person. The President shall be elected from among the Directors. With that exception, none of the other officers need be a Director, and none of the officers need be a shareholder of the corporation.

Section 2. The officers of the corporation shall be elected annually by the Board of Directors at its first regular meeting held after the Annual Meeting of Shareholders or as soon thereafter as conveniently possible. Each officer shall hold office until his/her successor shall have been chosen and shall have qualified, or until his/her death or the effective date of his/her resignation or removal, or until he/she shall cease to be a Director in the case of the President.

Section 3. Any officer or agent elected or appointed by the Board of Directors may be removed without cause by affirmative vote of a majority of the Board of Directors whenever, in its judgment, the best interests of the corporation shall be served thereby, but such removal shall be without prejudice to the contractual rights, if any, of the person so removed. Any officer may resign at any time by giving written notice to the corporation. Any such resignation shall take effect on the date of receipt of such notice or at any later time specified therein, and, unless otherwise specified therein, the acceptance of such resignation shall not be necessary to make it effective.

Section 4. Any vacancy occurring in any office of the corporation by death, resignation, removal or otherwise may be filled by the Board of Directors for the unexpired portion of the term.

Section 5. The salaries of all officers and agents of the corporation shall be fixed by the Board of Directors or pursuant to its direction, and no officer shall be prevented from receiving such salary by reason of his/her also being a Director.

Section 6. The President shall be the chief executive officer of the corporation and subject to the control of the Board of Directors, shall generally supervise and control the business and affairs of the corporation. The President shall preside at all meetings of the Board of Directors and the shareholders. He/She shall have the power to appoint and remove subordinate officers, agents and employees, except those elected or appointed by the Board of Directors. The President shall keep the Board of Directors and the Executive Committee fully informed and shall consult with them concerning the business of the corporation. The President may sign, with the Secretary or any other officer of the corporation thereunto authorized by the Board of Directors, certificates for shares of the corporation and any deeds, bonds, mortgages, contracts, checks, notes, drafts or other instruments which the Board of Directors has authorized to be executed, except in cases where the signing and execution thereof has been expressly delegated by these Bylaws or by the Board of Directors to some other officer or agent of the corporation, or shall be required by law to be otherwise executed. The President shall vote, or give a proxy to any other officer of the corporation to vote, all shares of stock of any other corporation standing in the name of the corporation and, in general, shall perform all other duties incident to the office of President and such other duties as may be prescribed by the Board of Directors or the Executive Committee from time to time.

Section 7. In the absence of the President, or in the event of his/her inability or refusal to act, the Executive Vice President (or, in the event there shall be no Vice President designated Executive Vice President, any Vice President designated by the Board) shall perform the duties and exercise the powers of the President. The Vice Presidents shall perform such other duties as from time to time may be assigned to them by the President, the Board of Directors or the Executive Committee.

Section 8. The Secretary shall: (a) keep the minutes of the meetings of the shareholders, the Board of Directors and the committees of Directors; (b) see that all notices are duly given in accordance with the provisions of these Bylaws or as required by law; (c) be custodian of the corporate records and of the seal of the corporation, and see that the seal is affixed to all certificates for shares or a facsimile thereof is affixed to all certificates for shares prior to the issuance thereof and to all documents, the execution of which on behalf of the corporation under its seal is duly authorized in accordance with the provisions of these Bylaws; (d) keep or cause to be kept a register of the post office address of each shareholder as furnished by each shareholder; (e) sign, with the President, certificates for shares of the corporation, the issuance of which shall have been authorized by resolution of the Board of Directors; (f) have general charge of the stock transfer books of the corporation; and (g) in general, perform all duties incident to the office of Secretary and such other duties as from time to time may be assigned by the President, the Board of Directors or the Executive Committee.

Section 9. If required by the Board of Directors, the Treasurer shall give a bond for the faithful discharge of his/her duties in such sum and with such surety or sureties as the Board of Directors shall determine. The Treasurer shall: (a) have charge and custody of and be responsible for all funds and securities of the corporation; (b) receive and give receipts for monies due and payable to the corporation from any source whatsoever and deposit all such monies in the name of the corporation in such banks, trust companies or other depositories as shall be selected in accordance with the provisions of these Bylaws; (c) prepare or cause to be prepared, for submission at each regular meeting of the Directors, at each annual meeting of the shareholders and at such other times as may be required by the Directors, the President or the Executive Committee, a statement of financial condition of the corporation in such detail as may be required; and (d) in general, perform all of the duties incident to the office of Treasurer and such other duties as from time to time may be assigned by the President, Board of Directors or Executive Committee.

Section 10. The Assistant Secretaries and Assistant Treasurers shall, in general, perform such duties as shall be assigned to them by the Secretary or the Treasurer, respectively, or by the President, Board of Directors or Executive Committee. The Assistant Secretaries and Assistant Treasurers shall, in the absence of the Secretary or Treasurer, respectively, perform all functions and duties which such absent officers may delegate, but such delegation shall not relieve the absent officer from the responsibilities and liabilities of his/her office. The Assistant Treasurers shall, if

required by the Board of Directors, give bonds for the faithful discharge of their duties in such sums and with such sureties as the Board of Directors shall determine.

ARTICLE VIII
Contracts, Checks and Deposits

Section 1. Subject to the provisions of these Bylaws, the Board of Directors may authorize any officer or officers and agent or agents to enter into any contract or execute and deliver any such instrument in the name of and on behalf of the corporation, and such authority may be general or confined to specific instances.

Section 2. All checks, demands, drafts or other orders for payment of money, notes or other evidences of indebtedness issued in the name of the corporation shall be signed by such officer or officers or such agent or agents of the corporation and in such manner as may be determined by the Board of Directors.

Section 3. All funds of the corporation not otherwise employed shall be deposited from time to time to the credit of the corporation in such banks, trust companies or other depositories as the Board of Directors may select.

ARTICLE IX
Dividends

Section 1. Dividends upon the capital stock of the corporation may be declared by the Board of Directors at any regular or special meeting pursuant to law. Dividends may be paid in cash, in property or in shares of capital stock.

Section 2. Before payment of any dividends, there may be set aside out of any funds the corporation available for dividends such sum or sums as the Directors may from time to time, in their absolute discretion, think proper as a reserve or reserves to meet contingencies, for equalizing dividends, for repairing or maintaining any property of the corporation or for such other purpose as the Directors deem conducive to the best interests of the corporation, and the Directors may modify or abolish any such reserve in the manner in which it was created.

ARTICLE X
Indemnification

Section 1. The Corporation shall indemnify each person who is or was a director, officer, employee or agent of the Corporation (including the heirs, executors, administrators or estate of such person) or is or was serving at the request of the Corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise to the full extent permitted under the Nevada Revised Statutes or any successor law or laws of the Code. The Corporation may, in advance of the final disposition of an action, suit or proceeding against an officer, director or employee pay any expenses incurred by such person, consistent with the Nevada Revised Statute. Any indemnification under this section shall be made in accordance with the provisions of the Nevada Revised Statutes.

Section 2. The Corporation may purchase and maintain insurance, at its expense, to protect itself and any of the above-referenced parties against any liability, cost, payment or expense, whether or not the Corporation would have the power to indemnify such person against such liability.

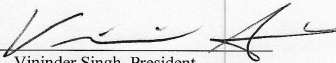
ARTICLE XI
Fiscal Year

The fiscal year of the corporation shall be set by resolution of the Board of Directors.

ARTICLE XII
Amendments to Bylaws

At any regular meeting of the Board of Directors or at any meeting of the Board of Directors specially called for said purpose, with each Director having been mailed, along with notice of said meeting, a copy of the proposed changes in the Bylaws, these Bylaws may be altered, amended or repealed, in whole or in part, and new Bylaws may be adopted in accordance with the copy of the proposed changes mailed to the Directors by vote of a majority of said Directors.

I HEREBY CERTIFY that the foregoing Bylaws were duly adopted by the Board of Directors of the corporation on April 16, 2020.

By: 
Vininder Singh, President

(CORPORATE SEAL)



NEITHER THIS SECURITY NOR THE SECURITIES FOR WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933 (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THIS SECURITY AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

COMMON STOCK PURCHASE WARRANT

Warrant Shares: <WARRANT SHARES>

Initial Exercise Date: April [*], 2022

THIS COMMON STOCK PURCHASE WARRANT (the "Warrant") certifies that, for value received, <HOLDER>, or its assigns (the "Holder") is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the "Initial Exercise Date") and on or prior to the close of business on the fifth year anniversary of the Initial Exercise Date (the "Termination Date") but not thereafter, to subscribe for and purchase from Bullfrog AI Holdings, Inc., a Nevada corporation (the "Company"), up to <WARRANT SHARES> shares of Common Stock (subject to adjustment hereunder, the "Warrant Shares"). The purchase price of one Warrant Share under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b). This Warrant issued pursuant to a Securities Purchase Agreement (the "Purchase Agreement") entered into as of the Initial Exercise Date between the Company and the initial Holder.

Section 1. Definitions. Capitalized terms used and not otherwise defined herein shall have the meanings set forth in that certain Securities Purchase Agreement (the "Purchase Agreement"), dated April [*], 2022 among the Company and the Purchasers.

Section 2. Exercise.

(a) Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company (or such other office or agency of the Company as it may designate by notice in writing to the registered Holder at the address of the Holder appearing on the books of the Company) of a duly executed copy of the Notice of Exercise Form annexed hereto. Within two Trading Days following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier's check drawn on a United States bank, unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. Notwithstanding anything herein to the contrary (although the Holder may surrender the Warrant to, and receive a replacement Warrant from, the Company), the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within two Trading Days of the date the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise Form within one Trading Day of delivery of such notice. The Holder by acceptance of this Warrant or any transferee, acknowledges and agrees that, by reason of the provisions of this Section 2(a), following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.

(b) Exercise Price. The initial exercise price per share of the Common Stock under this Warrant shall be equal to 110% of the IPO (as defined in the Purchase Agreement) price or, if the Company fails to complete the IPO before October 22, 2022, 90% of the IPO price, subject to adjustment under Section 3 (the "Exercise Price").

(c) Cashless Exercise. Other than as provided for in Section 2(f), if at any time after the six month anniversary of the Initial Exercise Date, there is no effective Registration Statement covering the resale of the Warrant Shares by the Holder (or the prospectus does not meet the requirements of Section 10 of the Securities Act), then this Warrant may also be exercised at the Holder's election, in whole or in part and in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise, at such time by means of a "cashless exercise" in which the Holder shall be entitled to receive a number of Warrant Shares equal to the number obtained by dividing [(A - B) times (C)] by (A), where:

- (A) = the greater of (i) the arithmetic average of the VWAPs for the five consecutive Trading Days ending on the date immediately preceding the date on which the Holder elects to exercise this Warrant by means of a "cashless exercise," as set forth in the applicable Notice of Exercise or (ii) the VWAP for the Trading Day immediately prior to the date on which the Holder makes such "cashless exercise" election;
- (B) = the Exercise Price of this Warrant, as adjusted hereunder, at the time of such exercise; and
- (C) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise;

"VWAP" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)) (or a similar organization or agency succeeding to its functions of reporting prices), (b) if no volume weighted average price of the Common Stock is reported for the Trading Market, the most recent reported bid price per share of the Common Stock, or (c) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the characteristics of the Warrants being exercised, and the holding period of the Warrants being exercised may be tacked on to the holding period of the Warrant Shares. The Company agrees not to take any position contrary to this Section 2(c).

Statement covering the resale of the Warrant Shares by the Holder, then this Warrant shall be automatically exercised via cashless exercise pursuant to this Section 2(c).

(d) Mechanics of Exercise.

(i) Delivery of Certificates Upon Exercise. Certificates for the shares of Common Stock purchased hereunder shall be transmitted to the Holder by the Transfer Agent by crediting the account of the Holder's prime broker with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by the Holder or (B) this Warrant is being exercised via cashless exercise and Rule 144 is available, or otherwise by physical delivery to the address specified by the Holder in the Notice of Exercise by the date that is two Trading Days after the latest of (A) the delivery to the Company of the Notice of Exercise and (B) payment of the aggregate Exercise Price as set forth above (unless by cashless exercise, if permitted) (such date, the "Warrant Share Delivery Date"). The Warrant Shares shall be deemed to have been issued, and Holder or any other person so designated to be named therein shall be deemed to have become a holder of record of such shares for all purposes, as of the date the Warrant has been exercised, with payment to the Company of the Exercise Price (or by cashless exercise, if permitted). The Company understands that a delay in the delivery of the Warrant Shares after the Warrant Share Delivery Date could result in economic loss to the Holder. As compensation to the Holder for such loss, the Company agrees to pay (as liquidated damages and not as a penalty) to the Holder for late issuance of Warrant Shares upon exercise of this Warrant the proportionate amount of \$10 per Trading Day (increasing to \$20 per Trading Day after the fifth Trading Day) after the Warrant Share Delivery Date for each \$1,000 of the value of the Warrant Shares for which this Warrant is exercised (based on the Exercise Price) which are not timely delivered. In no event shall liquidated damages for any one transaction exceed \$1,000 for the first 10 Trading Days. Furthermore, in addition to any other remedies which may be available to the Holder, in the event that the Company fails for any reason to effect delivery of the Warrant Shares by the Warrant Share Delivery Date, the Holder may revoke all or part of the relevant Warrant exercise by delivery of a notice to such effect to the Company, whereupon the Company and the Holder shall each be restored to their respective positions immediately prior to the exercise of the relevant portion of this Warrant, except that the liquidated damages described above shall be payable through the date notice of revocation or rescission is given to the Company or the date the Warrant Shares are delivered to the Holder, whichever date is earlier.

(ii) Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant, at the time of delivery of the certificate or certificates representing Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical to this Warrant. Unless the Warrant has been fully exercised, the Holders shall not be required to surrender this Warrant as a condition of exercise.

(iii) Rescission Rights. If the Company fails to deliver the Warrant Shares or cause the Transfer Agent to transmit to the Holder a certificate or the certificates representing the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right, at any time prior to issuance of such Warrant Shares, to rescind such exercise.

3

(iv) Compensation for Buy-In on Failure to Timely Deliver Certificates Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to deliver the Warrant Shares, or cause the Transfer Agent to transmit to the Holder the certificate or certificates representing the Warrant Shares pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall pay in cash to the Holder the amount as provided under Section 4.1(e) of the Purchase Agreement. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

(v) No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

(vi) Charges, Taxes and Expenses. Issuance of certificates for Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such certificate including any charges of any clearing firm, all of which taxes and expenses shall be paid by the Company, and such certificates shall be issued in the name of the Holder or in such name or names as may be directed by the Holder. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise. The Company shall (A) pay the reasonable legal fees of the Holder's choice (in an amount not to exceed \$500 per opinion, and not more often than once per week) in connection with the exercise of the Warrants, (B) cause its attorneys to promptly provide any reliance opinion to the Transfer Agent, and (C) pay the Holder the sums required under Section 2(d)(iv).

(vii) Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

(e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon not less than 61 days' prior notice to the Company, may increase the Beneficial Ownership Limitation provisions of this Section 2(e) solely with respect to the Holder's Warrant, provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any such increase will not be effective until the 61st day after such notice is delivered to the Company. The Holder may also

decrease the Beneficial Ownership Limitation provisions of this Section 2(e) solely with respect to the Holder's Warrant at any time, which decrease shall be effectively immediately upon delivery of notice to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

(a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant or pursuant to any of the other Transaction Documents), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

(b) Subsequent Equity Sales. If and whenever on or after the Initial Exercise Date, the Company issues or sells, or in accordance with this Section 3 is deemed to have issued or sold, any shares of Common Stock (including the issuance or sale of shares of Common Stock owned or held by or for the account of the Company, issued or sold or deemed to have been issued or sold) for a consideration per share (the "Base Share Price") less than a price equal to the Exercise Price in effect immediately prior to such issuance or sale or deemed issuance or sale (such Exercise Price then in effect is referred to herein as the "Applicable Price") (the foregoing a "Dilutive Issuance"), then immediately after such Dilutive Issuance, the Exercise Price then in effect shall be reduced to an amount equal to the Base Share Price. For all purposes of the foregoing (including, without limitation, determining the adjusted Exercise Price and the Base Share Price under this Section 3(b)), the following shall be applicable:

(i) Issuance of Options. If the Company in any manner grants or sells any Options and the lowest price per share for which one share of Common Stock is at any time issuable upon the exercise of any such Option or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option or otherwise pursuant to the terms thereof is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the granting or sale of such Option for such price per share. For purposes of this Section 3(b)(i), the "lowest price per share for which one share of Common Stock is issuable upon the exercise of any such Options or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option or otherwise pursuant to the terms thereof" shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to any one share of Common Stock upon the granting or sale of such Option, upon exercise of such Option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such Option or otherwise pursuant to the terms thereof and (y) the lowest exercise price set forth in such Option for which one share of Common Stock is issuable upon the exercise of any such Options or upon conversion, exercise or exchange of any Convertible Securities issuable upon exercise of any such Option or otherwise pursuant to the terms thereof minus (2) the sum of all amounts paid or payable to the holder of such Option (or any other Person) upon the granting or sale of such Option, upon exercise of such Option and upon conversion, exercise or exchange of any Convertible Security issuable upon exercise of such Option or otherwise pursuant to the terms thereof plus the value of any other consideration received or receivable by, or benefit conferred on, the holder of such Option (or any other Person). Except as contemplated below, no further adjustment of the Exercise Price shall be made upon the actual issuance of such shares of Common Stock or of such Convertible Securities upon the exercise of such Options or otherwise pursuant to the terms of or upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Convertible Securities.

(ii) Issuance of Convertible Securities. If the Company in any manner issues or sells any Convertible Securities and the lowest price per share for which one share of Common Stock is at any time issuable upon the conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof is less than the Applicable Price, then such share of Common Stock shall be deemed to be outstanding and to have been issued and sold by the Company at the time of the issuance or sale of such Convertible Securities for such price per share. For the purposes of this Section 3(b)(ii), the "lowest price per share for which one share of Common Stock is issuable upon the conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof" shall be equal to (1) the lower of (x) the sum of the lowest amounts of consideration (if any) received or receivable by the Company with respect to one share of Common Stock upon the issuance or sale of the Convertible Security and upon conversion, exercise or exchange of such Convertible Security or otherwise pursuant to the terms thereof and (y) the lowest conversion price set forth in such Convertible Security for which one share of Common Stock is issuable upon conversion, exercise or exchange thereof or otherwise pursuant to the terms thereof minus (2) the sum of all amounts paid or payable to the holder of such Convertible Security (or any other Person) upon the issuance or sale of such Convertible Security plus the value of any other consideration received or receivable by, or benefit conferred on, the holder of such Convertible Security (or any other Person). Except as contemplated below, no further adjustment of the Exercise Price shall be made upon the actual issuance of such shares of Common Stock upon conversion, exercise or exchange of such Convertible Securities or otherwise pursuant to the terms thereof, and if any such issuance or sale of such Convertible Securities is made upon exercise of any Options for which adjustment of this Warrant has been or is to be made pursuant to other provisions of this Section 3(b), except as contemplated below, no further adjustment of the Exercise Price shall be made by reason of such issuance or sale.

(iii) Change in Option Price or Rate of Conversion. "Convertible Securities" means any stock or other security (other than Options) that is at any time and under any circumstances, directly or indirectly, convertible into, exercisable or exchangeable for, or which otherwise entitles the holder thereof to acquire, any shares of Common Stock. If the purchase or exercise price provided for in any Options, the additional consideration, if any, payable upon the issue, conversion, exercise or exchange of any Convertible Securities, or the rate at which any Convertible Securities are convertible into or exercisable or exchangeable for shares of Common Stock increases or decreases at any time (other than proportional changes in conversion or exercise prices, as applicable, in connection with an event referred to in Section 3(a)), the Exercise Price in effect at the time of such increase or decrease shall be adjusted to the Exercise Price which would have been in effect at such time had such Options or Convertible Securities provided for such increased or decreased purchase price, additional consideration or increased or decreased conversion rate, as the case may be, at the time initially granted, issued or sold. For purposes of this Section 3(b)(iii), if the terms of any Option or Convertible Security that was outstanding as of the Closing Date are increased or decreased in the manner described in the immediately preceding sentence, then such Option or Convertible Security and the shares of Common Stock deemed issuable upon exercise, conversion or exchange thereof shall be deemed to have been issued as of the date of such increase or decrease. No adjustment pursuant to this Section 3(b) shall be made if such adjustment would result in an increase of the Exercise Price then in effect.

(iv) Calculation of Consideration Received. If any Option is issued in connection with the issuance or sale of any other securities of the Company together comprising one integrated transaction in which no specific consideration is allocated to such Option by the parties thereto, the Options will be deemed to have been issued for a consideration of par value of the Company's Common Stock. If any shares of Common Stock, Options or Convertible Securities are issued or sold or deemed to have been issued or sold for cash, the consideration received therefor will be deemed to be the net amount of consideration received by the Company therefor. If any shares of Common Stock, Options or Convertible Securities are issued or sold for a consideration other than cash, the amount of such consideration received by the Company will be the fair value of such consideration, except where such consideration consists of publicly traded securities, in which case the amount of consideration received by the Company for such securities will be the arithmetic average of the VWAPs of such security for each of the five Trading Days immediately preceding the date of receipt. If any shares of Common Stock, Options or Convertible Securities are issued to the owners of the non-surviving entity in connection with any merger in which the Company is the surviving entity, the amount of consideration therefor will be deemed to be the fair value of such portion of the net assets and business of the non-surviving entity as is attributable to such shares of

Common Stock, Options or Convertible Securities. The fair value of any consideration other than cash or publicly traded securities will be determined jointly by the Company and the Holder. If such parties are unable to reach agreement within 10 days after the occurrence of an event requiring valuation (the “Valuation Event”), the fair value of such consideration will be determined within five Trading Days after the 10th day following such Valuation Event by an independent, reputable appraiser jointly selected by the Company and the Holder. The determination of such appraiser shall be final and binding upon all parties absent manifest error. If such appraiser’s valuation differs by less than 5% from the Company’s proposed valuation, the fees and expenses of such appraiser shall be borne by the Holder, and if such appraiser’s valuation differs by more than 5% from the Company’s proposed valuation, the fees and expenses of such appraiser shall be borne by the Company.

(v) Record Date. If the Company takes a record of the holders of shares of Common Stock for the purpose of entitling them (A) to receive a dividend or other distribution payable in shares of Common Stock, Options or in Convertible Securities or (B) to subscribe for or purchase shares of Common Stock, Options or Convertible Securities, then such record date will be deemed to be the date of the issuance or sale of the shares of Common Stock deemed to have been issued or sold upon the declaration of such dividend or the making of such other distribution or the date of the granting of such right of subscription or purchase (as the case may be).

6

(vi) Notwithstanding the foregoing, this Section 3(b) shall not apply to any Exempt Issuances.

(c) Full Ratchet Increase in Warrant Shares. Until the Notes are no longer outstanding, whenever the Exercise Price is adjusted under Section 3(b), the number of Warrant Shares shall be increased on a full ratchet basis to the number of shares of Common Stock determined by multiplying the Exercise Price then in effect immediately prior to such adjustment by the number of Warrant Shares issuable upon exercise of this Warrant immediately prior to such adjustment and dividing the product thereof by the Exercise Price resulting from such adjustment. By way of example, if E is the total number of Warrant Shares in effect immediately prior to such Dilutive Issuance, F is the Exercise Price in effect immediately prior to such Dilutive Issuance, and G is the Dilutive Issuance Price, the adjustment to the number of Warrant Shares can be expressed in the following formula: Total number of Warrant Shares after such Dilutive Issuance = the number obtained from dividing $[E \times F]$ by G. Notwithstanding the foregoing, if the Exercise Price is being adjusted as a result of a sale of securities, this Section 3(c) shall NOT apply if the Holder is offered the right to participate (in an amount not to exceed \$50,000 unless agreed to by the Holder and the Company) and does not participate.

(d) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the “Purchase Rights”), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, to the extent that the Holder’s right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation). Notwithstanding the foregoing, no Purchase Rights will be made under this Section 3(d) in respect of an Exempt Issuance.

(e) Pro Rata Distributions. If the Company, at any time while this Warrant is outstanding, shall distribute to all holders of Common Stock (and not to the Holder) evidences of its indebtedness or assets (including cash and cash dividends) or rights or warrants to subscribe for or purchase any security other than the Common Stock (which shall be subject to Section 3(d)), then in each such case the Exercise Price shall be adjusted by multiplying the Exercise Price in effect immediately prior to the record date fixed for determination of stockholders entitled to receive such distribution by a fraction of which the denominator shall be the VWAP determined as of the record date mentioned above, and of which the numerator shall be such VWAP on such record date less the then per share fair market value at such record date of the portion of such assets or evidence of indebtedness so distributed applicable to one outstanding share of the Common Stock as determined by the Board of Directors in good faith. In either case the adjustments shall be described in a statement provided to the Holder of the portion of assets or evidences of indebtedness so distributed or such subscription rights applicable to one share of Common Stock. Such adjustment shall be made whenever any such distribution is made and shall become effective immediately after the record date mentioned above.

7

(f) Fundamental Transaction.

(i) If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions engages in any Fundamental Transaction, as defined in the Purchase Agreement, then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation on the exercise of this Warrant), at the option of the Holder the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. The Company shall not effect a Fundamental Transaction unless it gives the Holder at least 10 Trading Days prior notice together with sufficient details so the Holder can make an informed decision as to whether it elects to accept the Alternative Consideration. If a public announcement of the Fundamental Transaction has not been made, the notice to the Holder may not be given until the Company files a Form 8-K or other report disclosing the Fundamental Transaction.

(ii) Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, provided that the Warrant Shares are not registered under an effective registration statement, the Company or any Successor Entity (as defined below) shall, at the Holder’s option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction, purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction or (ii) the positive difference between the cash per share paid in such Fundamental Transaction minus the then in effect Exercise Price. “Black Scholes Value” means the value of the unexercised portion of this Warrant based on the Black and Scholes Option Pricing Model obtained from the “OV” function on Bloomberg L.P. determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg L.P. as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (D) a remaining option time equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date.

8

(iii) If Section 3(f)(i) and (ii) are not applicable, the Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Company under this Warrant and the other Transaction Documents in accordance with the provisions of this Section 3(f)(iii) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant prior to such Fundamental Transaction (without regard to any limitation on the exercise of this Warrant), and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant and the other Transaction Documents referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Company herein.

(g) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

(h) Notice to Holder.

(i) Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly email to the Holder a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment. The Holder may supply an email address to the Company and change such address.

(ii) Notice to Allow Exercise by the Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Common Stock is converted into other securities, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall deliver to the Holder at its last address as it shall appear upon the Warrant Register of the Company, at least 5 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to email such notice or any defect therein or in the emailing thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries (as determined in good faith by the Company), the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

9

Section 4. Transfer of Warrant.

(a) Transferability. Subject to compliance with any applicable securities laws and the provisions of the Purchase Agreement, this Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney. Upon such surrender, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. The Warrant, if properly assigned in accordance herewith, may be exercised by a new Holder for the purchase of Warrant Shares without having a new Warrant issued.

(b) New Warrants. This Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

(c) Warrant Register. The Company shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

(a) No Rights as Stockholder Until Exercise. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof other than as explicitly set forth in Section 3.

(b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it, and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate. In no event shall the Holder be required to deliver a bond or other security.

(c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Trading Day, then, such action may be taken or such right may be exercised on the next succeeding Trading Day.

10

(d) Authorized Shares.

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its Articles of Incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use best efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(e) Jurisdiction. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be determined in accordance with the provisions of the Purchase Agreement.

(f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered or if not exercised on a cashless basis when Rule 144 (or any successor law or rule) is available, may have restrictions upon resale imposed by state and federal securities laws.

(g) Non-waiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of the Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant or the Purchase Agreement, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

(h) Notices. Any notice, request or other document required or permitted to be given or delivered to the Holder by the Company shall be delivered in accordance with the notice provisions of the Purchase Agreement.

(i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

(j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate or that there is no irreparable harm and not to require the posting of a bond or other security.

11

(k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder of Warrant Shares.

(l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and Holders of 75% of the outstanding Warrants issued pursuant to the Purchase Agreement.

(m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

(n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

[Signature Page Follows]

12

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

BULLFROG AI HOLDINGS, INC.

By: _____

Name: Vin Singh

Title: Chief Executive Officer

NOTICE OF EXERCISE

TO: **BullFrog AI Holdings, Inc.**

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

in lawful money of the United States; or

if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue a certificate or certificates representing said Warrant Shares in the name of the undersigned or in such other name as is specified below:

(4) After giving effect to this Notice of Exercise, the undersigned will not have exceeded the Beneficial Ownership Limitation.

The Warrant Shares shall be delivered to the following DWAC Account Number or by physical delivery of a certificate to:

SIGNATURE OF HOLDER

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:

ASSIGNMENT FORM

(To assign the foregoing warrant, execute this form and supply required information. Do not use this form to exercise the warrant.)

BullFrog AI Holdings, Inc.

FOR VALUE RECEIVED, ___ all of or ___ shares of the foregoing Warrant and all rights evidenced thereby are hereby assigned to

_____ whose address is

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____

Signature Guaranteed: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatsoever, and must be guaranteed by a bank or trust company. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

WARRANT AGENT AGREEMENT

This Warrant Agent Agreement (this “Warrant Agreement”), dated as of October [], 2022 (the “Issuance Date”) between Bullfrog AI Holdings, Inc., a company incorporated under the laws of the State of Nevada (the “Company”), and VStock Transfer, LLC, a California limited liability company (the “Warrant Agent”).

WHEREAS, pursuant to the terms of that certain Underwriting Agreement (“Underwriting Agreement”), dated October [], 2022, by and among the Company and WallachBeth Capital, LLC, as representatives of the underwriters set forth therein, the Company is engaged in a public offering (the “Offering”) of up to 1,317,647 Units, each Unit consisting of: (i) one share (the “Shares”) of common stock, par value \$0.00001 per share (the “Common Stock”) of the Company; and (ii) one Warrant (the “Warrants”) to purchase one share of Common Stock (such shares of Common Stock underlying the Warrants, the “Warrant Shares”);

WHEREAS, the Company has filed with the Securities and Exchange Commission (the “Commission”) a Registration Statement on Form S-1 (File No. 333-[]) (as the same may be amended from time to time, the “Registration Statement”), for the registration under the Securities Act of 1933, as amended (the “Securities Act”), of the Shares, the Warrants and Warrant Shares, and such Registration Statement was declared effective on October [], 2022;

WHEREAS, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing to so act, in accordance with the terms set forth in this Warrant Agreement in connection with the issuance, registration, transfer, exchange and exercise of the Warrants;

WHEREAS, the Company desires to provide for the provisions of the Warrants, the terms upon which they shall be issued and exercised, and the respective rights, limitation of rights, and immunities of the Company, the Warrant Agent, and the holders of the Warrants; and

WHEREAS, all acts and things have been done and performed which are necessary to make the Warrants the valid, binding and legal obligations of the Company, and to authorize the execution and delivery of this Warrant Agreement.

NOW, THEREFORE, in consideration of the mutual agreements herein contained, the parties hereto agree as follows:

1. Appointment of Warrant Agent. The Company hereby appoints the Warrant Agent to act as agent for the Company with respect to the Warrants, and the Warrant Agent hereby accepts such appointment and agrees to perform the same in accordance with the express terms and conditions set forth in this Warrant Agreement (and no implied terms or conditions).

2. Warrants.

2.1. Form of Warrants. The Warrants shall be registered securities and shall be evidenced by a global certificate (the “Global Certificate”) in the form of Exhibit A to this Warrant Agreement, which shall be deposited on behalf of the Company with a custodian for The Depository Trust Company (“DTC”) and registered in the name of Cede & Co., a nominee of DTC. If DTC subsequently ceases to make its book-entry settlement system available for the Warrants, the Company may instruct the Warrant Agent regarding making other arrangements for book-entry settlement. In the event that the Warrants are not eligible for, or it is no longer necessary to have the Warrants available in, book-entry form, the Company may instruct the Warrant Agent to provide written instructions to DTC to deliver to the Warrant Agent for cancellation the Global Certificate, and the Company shall instruct the Warrant Agent to deliver to DTC separate certificates evidencing Warrants (“Definitive Certificates” and, together with the Global Certificate, “Warrant Certificates”) registered as requested through the DTC system.

-1-

2.2. Issuance and Registration of Warrants.

2.2.1. Warrant Register. The Warrant Agent shall maintain books (“Warrant Register”) for the registration of original issuance and the registration of transfer of the Warrants. Any person in whose name ownership of a beneficial interest in the Warrants evidenced by a Global Certificate is recorded in the records maintained by DTC or its nominee shall be deemed the “beneficial owner” thereof, provided that all such beneficial interests shall be held through a Participant (as defined below), which shall be the registered holder of such Warrants.

2.2.2. Issuance of Warrants. Upon the initial issuance of the Warrants, the Warrant Agent shall issue the Global Certificate and deliver the Warrants in the DTC book-entry settlement system in accordance with written instructions delivered to the Warrant Agent by the Company. Ownership of security entitlements in the Warrants shall be shown on, and the transfer of such ownership shall be effected through, records maintained (i) by DTC and (ii) by institutions that have accounts with DTC (each, a “Participant”) subject to a Holder’s right to elect to receive a Definitive Certificate. Any Holder desiring to elect to receive a Warrant in certificated form shall make such request in writing delivered to the Warrant Agent pursuant to Section 2.2.8, and shall surrender to the Warrant Agent the interest of the Holder on the books of the Participant evidencing the Warrants which are to be represented by a Definitive Certificate through the DTC settlement system. Thereupon, the Warrant Agent shall countersign and deliver to the person entitled thereto a Definitive Certificate or Definitive Certificates, as the case may be, as so requested. Alternatively, non-certificated warrants may be issued and the Warrant Agent will deliver a statement representing the book-entry position to the Holder upon written instructions from the Company, the Holder, or DTC.

2.2.3. Beneficial Owner; Holder. Prior to due presentment for registration of transfer of any Warrant, the Company and the Warrant Agent may deem and treat the person in whose name that Warrant shall be registered on the Warrant Register (the “Holder”) as the absolute owner of such Warrant for purposes of any exercise thereof, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary. Notwithstanding the foregoing, nothing herein shall prevent the Company, the Warrant Agent or any agent of the Company or the Warrant Agent from giving effect to any written certification, proxy or other authorization furnished by DTC governing the exercise of the rights of a holder of a beneficial interest in any Warrant. The rights of beneficial owners in a Warrant evidenced by the Global Certificate shall be exercised by the Holder or a Participant through the DTC system, except to the extent set forth herein or in the Global Certificate.

2.2.4. Execution. The Warrant Certificates shall be executed on behalf of the Company by any authorized officer of the Company (an “Authorized Officer”), which need not be the same authorized signatory for all of the Warrant Certificates, either manually or by facsimile signature. The Warrant Certificates shall be countersigned by an authorized signatory of the Warrant Agent, which need not be the same signatory for all of the Warrant Certificates, and no Warrant Certificate shall be valid for any purpose unless so countersigned. In case any Authorized Officer of the Company that signed any of the Warrant Certificates ceases to be an Authorized Officer of the Company before countersignature by the Warrant Agent and issuance and delivery by the Company, such Warrant Certificates, nevertheless, may be countersigned by the Warrant Agent, issued and delivered with the same force and effect as though the person who signed such Warrant Certificates had not ceased to be such officer of the Company; and any Warrant Certificate may be signed on behalf of the Company by any person who, at the actual date of the execution of such Warrant Certificate, shall be an Authorized Officer of the Company authorized to sign such Warrant Certificate, although at the date of the execution of this Warrant Agreement any such person was not such an Authorized Officer.

2.2.5. Registration of Transfer. At any time at or prior to the Expiration Date (as defined below), a transfer of any Warrants may be registered and any Warrant Certificate or Warrant Certificates may be split up, combined or exchanged for another Warrant Certificate or Warrant Certificates evidencing the same number of Warrants as the Warrant Certificate or Warrant Certificates surrendered. Any Holder desiring to register the transfer of Warrants or to split up, combine or exchange any Warrant Certificate shall make such request in writing delivered to the Warrant Agent, and shall surrender to the Warrant Agent the Warrant Certificate or Warrant Certificates evidencing the Warrants the transfer of which is to be registered or that is or are to be split up, combined or exchanged and, in the case of registration of transfer, shall provide a signature guarantee. Thereupon, the Warrant Agent shall countersign and deliver to the person entitled thereto a Warrant Certificate or Warrant Certificates, as the case may be,

as so requested. The Warrant Agent may require reasonable and customary payment, by the Holder requesting a registration of transfer of Warrants or a split-up, combination or exchange of a Warrant Certificate (but, for purposes of clarity, not upon the exercise of the Warrants and issuance of Warrant Shares to the Holder), of a sum sufficient to cover any tax or governmental charge that may be imposed in connection with such registration of transfer, split-up, combination or exchange, together with reimbursement to the Warrant Agent of all reasonable expenses incidental thereto.

2.2.6. Loss, Theft and Mutilation of Warrant Certificates. Upon receipt by the Company and the Warrant Agent of evidence reasonably satisfactory to them of the loss, theft, destruction or mutilation of a Warrant Certificate, and, in case of loss, theft or destruction, of indemnity or security in customary form and amount, and reimbursement to the Company and the Warrant Agent of all reasonable expenses incidental thereto, and upon surrender to the Warrant Agent and cancellation of the Warrant Certificate if mutilated, the Warrant Agent shall, on behalf of the Company, countersign and deliver a new Warrant Certificate of like tenor to the Holder in lieu of the Warrant Certificate so lost, stolen, destroyed or mutilated. The Warrant Agent may charge the Holder an administrative fee for processing the replacement of lost Warrant Certificates, which shall be charged only once in instances where a single surety bond obtained covers multiple certificates. The Warrant Agent may receive compensation from the surety companies or surety agents for administrative services provided to them.

-2-

2.2.7 Warrant Certificate Request. A Holder has the right to elect at any time or from time to time a Warrant Exchange (as defined below) pursuant to a Warrant Certificate Request Notice (as defined below). Upon written notice by a Holder to the Warrant Agent for the exchange of some or all of such Holder's Global Warrants for a Definitive Certificate evidencing the same number of Warrants, which request shall be in the form attached hereto as Exhibit A (a "Warrant Certificate Request Notice") and the date of delivery of such Warrant Certificate Request Notice by the Holder, the "Warrant Certificate Request Notice Date" and the deemed surrender upon delivery by the Holder of a number of Global Warrants for the same number of Warrants evidenced by a Definitive Certificate, a "Warrant Exchange"), the Warrant Agent shall promptly effect the Warrant Exchange and shall promptly issue and deliver to the Holder a Definitive Certificate for such number of Warrants in the name set forth in the Warrant Certificate Request Notice. Such Definitive Certificate shall be dated the original issue date of the Warrants, shall be electronically executed by an authorized signatory of the Company, shall be in the form attached hereto as Exhibit A, and shall be reasonably acceptable in all respects to such Holder. In connection with a Warrant Exchange, the Company agrees to deliver, or to direct the Warrant Agent to deliver, the Definitive Certificate to the Holder within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period of the Warrant Certificate Request Notice pursuant to the delivery instructions in the Warrant Certificate Request Notice ("Warrant Certificate Delivery Date"). If the Company fails for any reason to deliver to the Holder the Definitive Certificate subject to the Warrant Certificate Request Notice by the Warrant Certificate Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares evidenced by such Definitive Certificate (based on the VWAP (as defined in the Warrants) of the Common Stock on the Warrant Certificate Request Notice Date), \$10 per Business Day for each Business Day after such Warrant Certificate Delivery Date until such Definitive Certificate is delivered or, prior to delivery of such Warrant Certificate, the Holder rescinds such Warrant Exchange. The Company covenants and agrees that, upon the date of delivery of the Warrant Certificate Request Notice, the Holder shall be deemed to be the holder of the Definitive Certificate and, notwithstanding anything to the contrary set forth herein, the Definitive Certificate shall be deemed for all purposes to contain all of the terms and conditions of the Warrants evidenced by such Warrant Certificate and the terms of this Warrant Agreement. "Business Day" means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to "stay at home", "shelter-in-place", "non-essential employee" or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

2.2.8. Proxies. The Holder of a Warrant may grant proxies or otherwise authorize any person, including the Participants and beneficial holders that may own interests through the Participants, to take any action that a Holder is entitled to take under this Agreement or the Warrants; provided, however, that at all times that Warrants are evidenced by a Global Certificate, exercise of those Warrants shall be effected on their behalf by Participants through DTC in accordance the procedures administered by DTC.

2.2.9 For purposes of clarity, if there is a conflict between the express terms of this Warrant Agreement and the Definitive Certificate in the form of Exhibit A hereto with respect to terms of the Warrants, the terms of the Definitive Certificate shall govern and control.

3. Terms and Exercise of Warrants.

3.1. Exercise Price.

Each Warrant shall entitle the Holder, subject to the provisions of the applicable Warrant Certificate and of this Warrant Agreement, to purchase from the Company the number of shares of Common Stock stated therein, at the price of \$[] per whole share, subject to the subsequent adjustments provided in Section 4 hereof. The term "Exercise Price" as used in this Warrant Agreement refers to the price per share at which shares of Common Stock may be purchased at the time a Warrant is exercised.

3.2. Duration of Warrants. Warrants may be exercised only during the period ("Exercise Period") commencing on October [], 2022 and terminating at 5:00 P.M., Eastern Standard Time (the "close of business") on the fifth anniversary of the Issuance Date, October [], 2027 ("Expiration Date"). Each Warrant not exercised on or before the Expiration Date shall become void, and all rights thereunder and all rights in respect thereof under this Warrant Agreement shall cease at the close of business on the Expiration Date.

3.3. Exercise of Warrants.

3.3.1. Exercise and Payment. (a) Subject to the provisions of this Warrant Agreement, a Holder (or a Participant or a designee of a Participant acting on behalf of a Holder) may exercise Warrants by delivering to the Warrant Agent, not later than 5:00 P.M., Eastern Standard Time, on any business day during the Exercise Period an election to purchase the Warrant Shares underlying the Warrants to be exercised (i) in the form included in Exhibit B to this Warrant Agreement or (ii) via an electronic warrant exercise through the DTC system (each, an "Election to Purchase"). No later than one (1) Trading Day following delivery of an Election to Purchase, the Holder (or a Participant acting on behalf of a Holder in accordance with DTC procedures) shall: (i) (A) surrender of the Warrant Certificate evidencing the Warrants to the Warrant Agent at its office designated for such purpose or (B) deliver the Warrants to an account of the Warrant Agent at DTC designated for such purpose in writing by the Warrant Agent to DTC from time to time, and (ii) unless the cashless exercise procedure specified in Section 3.3.7(b) or (c) below is permitted and specified in the applicable Notice of Exercise, deliver to the Company the Exercise Price for each Warrant to be exercised, in lawful money of the United States of America by certified or official bank check payable to the Company or bank wire transfer in immediately available funds to:

BULLFROG AI HOLDINGS, INC.

Bank Name: []

Routing (ABA)#: []

Beneficiary Account Name: Bullfrog AI Holdings, Inc.

Beneficiary Account Number:[]

No ink-original Election to Purchase shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Election to Purchase form be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender the Warrants to the Company until the Holder has purchased all of the Warrant Shares available thereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender such Warrant to the Company for cancellation within three (3) Trading Days of the date the final Election to Purchase is delivered to the Company. Partial exercises of a Warrant resulting in purchases of a portion of the total number of Warrant Shares available thereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Election to Purchase within one (1) Business Day of receipt of such notice. **The Holder and any assignee, by acceptance of a Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant**

Any person so designated by the Holder (or a Participant or designee of a Participant on behalf of a Holder) to receive Warrant Shares shall be deemed to have become holder of record of such Warrant Shares as of the time that an appropriately completed and duly signed Election to Purchase has been delivered to the Warrant Agent, provided that the Holder (or Participant on behalf of the Holder) makes delivery of the deliverables referenced in the immediately preceding sentence by the date that is one (1) Trading Day after the delivery of the Election to Purchase. If the Holder (or Participant on behalf of the Holder) fails to make delivery of such deliverables on or prior to the Trading Day following delivery of the Election to Purchase, such Election to Purchase shall be void *ab initio*.

(b) If any of (i) the Warrants, (ii) the Election to Purchase, or (iii) the Exercise Price therefor, is received by the Warrant Agent on any date after 5:00 P.M., Eastern Standard Time, or on a date that is not a Trading Day, the Warrants with respect thereto will be deemed to have been received and exercised on the Trading Day next succeeding such date. “Business day” means a day other than a Saturday or Sunday on which commercial Banks in New York City are open for the general conduct of banking business. The “Exercise Date” will be the date on which the materials in the foregoing sentence are received by the Warrant Agent (if by 5:00 P.M., New York City time), or the following Trading Day (if after 5:00 P.M., New York City time), regardless of any earlier date written on the materials. If the Warrants are received or deemed to be received after the Expiration Date, the exercise thereof will be null and void and any funds delivered to the Company will be returned to the Holder or Participant, as the case may be, as soon as practicable. In no event will interest accrue on any funds deposited with the Company in respect of an exercise or attempted exercise of Warrants.

(c) If less than all the Warrants evidenced by a surrendered Warrant Certificate are exercised, the Warrant Agent shall split up the surrendered Warrant Certificate and return to the Holder a Warrant Certificate evidencing the Warrants that were not exercised.

Notwithstanding the foregoing in this Section 3.3.1, a holder whose interest in a Warrant is a beneficial interest in certificate(s) representing such Warrant held in registered form through DTC (or another established clearing corporation performing similar functions), shall effect exercises made pursuant to this Section 3.3.1 by delivering to DTC (or such other clearing corporation, as applicable) the appropriate instruction form for exercise, complying with the procedures to effect exercise that are required by DTC (or such other clearing corporation, as applicable), subject to a holder’s right to elect to receive a Definitive Warrant pursuant to the terms of this Warrant Agreement, in which case this sentence shall not apply. Upon giving irrevocable instructions to its Participant to exercise Warrants, solely for purposes of Regulation SHO, the holder whose interest in the Warrant is a beneficial interest shall be deemed to have exercised such Warrant, regardless of when the applicable Warrant Shares are delivered to such holder

3.3.2. Issuance of Warrant Shares.

(a) The Warrant Agent shall, on the Trading Day following the Exercise Date of any Warrant, advise the Company, the transfer agent and registrar for the Company’s Common Stock, in respect of (i) the number of Warrant Shares indicated on the Election to Purchase as issuable upon such exercise with respect to such exercised Warrants, (ii) the instructions of the Holder or Participant, as the case may be, provided to the Warrant Agent with respect to the delivery of the Warrant Shares and the number of Warrants that remain outstanding after such exercise and (iii) such other information as the Company or such transfer agent and registrar shall reasonably request.

(b) The Company shall, by no later than 5:00 P.M., Eastern Standard Time, on the second Trading Day following the delivery of the Election to Purchase (provided the payment of the Exercise Price has been submitted as required by Section 3.3.1) (such date and time, the “Delivery Time”), cause its registrar to electronically transmit the Warrant Shares issuable upon that exercise to DTC by crediting the account of DTC or of the Participant, as the case may be, through its Deposit/Withdrawal at Custodian (DWAC) system. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to an Election to Purchase by the Delivery Time, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the closing price of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Delivery Time until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable.

3.3.3. Valid Issuance. All Warrant Shares issued by the Company upon the proper exercise of a Warrant in conformity with this Warrant Agreement shall be validly issued, fully paid and non-assessable.

3.3.4. No Fractional Exercise. No fractional Warrant Shares will be issued upon the exercise of the Warrant. If, by reason of any adjustment made pursuant to Section 4, a Holder would be entitled, upon the exercise of such Warrant, to receive a fractional interest in a share, the Company shall, upon such exercise, round up or down, as applicable, to the nearest whole number the number of Warrant Shares to be issued to such Holder.

3.3.5. No Transfer Taxes. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by an assignment form duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Election to Purchase and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

3.3.6. Date of Issuance. The Company will treat an exercising Holder as a beneficial owner of the Warrant Shares as of the Exercise Date, except that, if the Exercise Date is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of such shares at the open of business on the next succeeding date on which the stock transfer books are open.

3.3.7. Restrictive Legend Events. (a) The Company shall use its reasonable best efforts to maintain the effectiveness of the Registration Statement and the current status of the prospectus included therein or to file and maintain the effectiveness of another registration statement or to file a registration statement and another current prospectus covering the Warrants and the Warrant Shares at any time that the Warrants are exercisable. The Company shall provide to the Warrant Agent and each Holder prompt written notice of any time that the Company is unable to deliver the Warrant Shares via DTC transfer or otherwise without restrictive legend because (i) the Commission has issued a stop order with respect to the Registration Statement, (ii) the Commission otherwise has suspended or withdrawn the effectiveness of the Registration Statement, either temporarily or permanently, (iii) the Company has suspended or withdrawn the effectiveness of the Registration Statement, either temporarily or permanently, (iv) the prospectus contained in the Registration Statement is not available for the issuance of the Warrant Shares to the Holder or (v) otherwise (each a “Restrictive Legend Event”). To the extent that the Warrants cannot be exercised as a result of a Restrictive Legend Event or a Restrictive Legend Event occurs after a Holder has exercised Warrants in accordance with the terms of the Warrants but prior to the delivery of the Warrant Shares, the Company shall, at the election of the Holder, which shall be given within five (5) days of receipt of such notice of the Restrictive Legend Event, either (A) rescind the previously submitted Election to Purchase and the Company shall return all consideration paid by registered holder for such shares upon such rescission, or (B) treat the attempted exercise as a cashless exercise as described in paragraph (b) below and refund the cash portion of the exercise price to the Holder. Notwithstanding anything herein to the contrary, the Company shall not be required to make any cash payments or net cash settlement to the Holder in lieu of delivery of the Warrant Shares.

(b) If a Restrictive Legend Event has occurred, the Warrant shall only be exercisable on a cashless basis. Upon a “cashless exercise”, the Holder shall be entitled to receive the

number of Warrant Shares equal to the quotient obtained by dividing (A-B) (X) by (A), where:

- (A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder’s execution of the applicable Notice of Exercise if such Notice of Exercise is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;
- (B) = the Exercise Price of this Warrant, as adjusted hereunder; and
- (X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

-5-

Notwithstanding anything to the contrary herein, a “cashless exercise” may occur after the earlier of (i) 1 Trading Day from the Initial Exercise Date of this Warrant or (ii) the time when \$10.0 million of volume is traded in the Common Shares, if the VWAP of the Common Shares on any Trading Day on or after the closing date fails to exceed the Exercise Price in effect as of the Initial Exercise Date (subject to adjustment for any stock splits, stock dividends, stock combinations, recapitalizations and similar events). In such event, the aggregate number of Warrant Shares issuable in such cashless exercise pursuant to any given Notice of Exercise electing to effect a cashless exercise shall equal the product of (x) the aggregate number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise and (y) 1.00.

If the Warrant Shares are issued in such a cashless exercise, the Company acknowledges and agrees that, in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised and the Company agrees not to take any position contrary thereto. Upon receipt of an Election to Purchase for a cashless exercise, the Warrant Agent will promptly deliver a copy of the Election to Purchase to the Company to confirm the number of Warrant Shares issuable in connection with the cashless exercise. The Company shall calculate and transmit to the Warrant Agent in a written notice, and the Warrant Agent shall have no duty, responsibility or obligation under this section to calculate, the number of Warrant Shares issuable in connection with any cashless exercise. The Warrant Agent shall be entitled to rely conclusively on any such written notice provided by the Company, and the Warrant Agent shall not be liable for any action taken, suffered or omitted to be taken by it in accordance with such written instructions or pursuant to this Warrant Agreement.

3.3.8. Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares issuable in connection with any exercise, the Company shall promptly deliver to the Holder the number of Warrant Shares that are not disputed.

3.3.9 Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 3.3.2 above pursuant to an exercise on or before the Delivery Time, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder’s brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a “Buy-In”), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder’s total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder’s right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company’s failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

-6-

3.3.10 Beneficial Ownership Limitation. The Company shall not affect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of a Warrant, pursuant to Section 3 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Election to Purchase, the Holder (together with the Holder’s Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder’s Affiliates (such Persons, “Attribution Parties”)), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of such Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, non-exercised portion of such Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or non-converted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 3.3.10, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 3.3.10 applies, the determination of whether a Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of a Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder’s determination of whether a Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of a Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 3.3.10, in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company’s most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within two Trading Days confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including such Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The “Beneficial Ownership Limitation” shall be 4.99% (or, upon election by a Holder prior to the issuance of any Warrants, 9.99%) of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of a Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 3.3.10, provided that the Beneficial Ownership Limitation in no

event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 3.3.10 shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 3.3.10 to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

4. Adjustments.

4.1. Adjustment upon Subdivisions or Combinations. If the Company at any time after the Issuance Date subdivides (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise) its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares will be proportionately increased. If the Company at any time after the Issuance Date combines (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise) its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares will be proportionately decreased. Any adjustment under this Section 4.1 shall become effective at the close of business on the date the subdivision or combination becomes effective. The Company shall promptly notify Warrant Agent of any such adjustment and give specific instructions to Warrant Agent with respect to any adjustments to the warrant register.

-7-

4.2. Adjustment for Other Distributions. In the event the Company shall fix a record date for the making of a dividend or distribution to all holders of Common Stock of any evidences of indebtedness or assets or subscription rights, options or warrants (excluding those referred to in Section 4.1 or other dividends paid out of retained earnings), then in each such case the Holder will, upon the exercise of Warrants, be entitled to receive, in addition to the number of Warrant Shares issuable thereupon, and without payment of any additional consideration therefor, the amount of such dividend or distribution, as applicable, which such Holder would have held on the date of such exercise had such Holder been the holder of record of such Warrant Shares as of the date on which holders of Common Stock became entitled to receive such dividend or distribution. Such adjustment shall be made whenever any such distribution is made and shall become effective immediately after the record date mentioned above.

4.3. Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company or any Subsidiary, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock or 50% or more of the voting power of the common equity of the Company, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires 50% or more of the outstanding shares of Common Stock or 50% or more of the voting power of the common equity of the Company (each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity (as defined below) shall, at the Holder's option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable Fundamental Transaction), purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value (as defined below) of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, that, if the Fundamental Transaction is not within the Company's control, including not approved by the Company's Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction; provided, further, that if holders of Common Stock of the Company are not offered or paid any consideration in such Fundamental Transaction, such holders of Common Stock will be deemed to have received common stock of the Successor Entity (which Entity may be the Company following such Fundamental Transaction) in such Fundamental Transaction. "Black Scholes Value" means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the "OV" function on Bloomberg, L.P. ("Bloomberg") determined as of the day of consummation of the applicable contemplated Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the public announcement of the applicable contemplated Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the greater of (i) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (ii) the highest VWAP during the period beginning on the Trading Day immediately preceding the public announcement of the applicable contemplated Fundamental Transaction (or the consummation of the applicable Fundamental Transaction, if earlier) and ending on the Trading Day of the Holder's request pursuant to this Section 3(e) and (D) a remaining option time equal to the time between the date of the public announcement of the applicable contemplated Fundamental Transaction and the Termination Date [and (E) a zero cost of borrow. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds (or such other consideration) within five Business Days of the Holder's election (or, if later, on the date of consummation of the Fundamental Transaction). The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(e) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall be added to the term "Company" under this Warrant (so that from and after the occurrence or consummation of such Fundamental Transaction, each and every provision of this Warrant and the other Transaction Documents referring to the "Company" shall refer instead to each of the Company and the Successor Entity or Successor Entities, jointly and severally), and the Successor Entity or Successor Entities, jointly and severally with the Company, may exercise every right and power of the Company prior thereto and the Successor Entity or Successor Entities shall assume all of the obligations of the Company prior thereto under this Warrant and the other Transaction Documents with the same effect as if the Company and such Successor Entity or Successor Entities, jointly and severally, had been named as the Company herein. For the avoidance of doubt, the Holder shall be entitled to the benefits of the provisions of this Section 3(e) regardless of (i) whether the Company has sufficient authorized shares of Common Stock for the issuance of

4.4. Other Events. If any event occurs of the type contemplated by the provisions of Section 4.1 or 4.2 but not expressly provided for by such provisions (including, without limitation, the granting of stock appreciation rights, Adjustment Rights, phantom stock rights or other rights with equity features to all holders of Common Stock for no consideration), then the Company's Board of Directors will, at its discretion and in good faith, make an adjustment in the Exercise Price and the number of Warrant Shares or designate such additional consideration to be deemed issuable upon exercise of a Warrant, so as to protect the rights of the registered Holder. No adjustment to the Exercise Price will be made pursuant to more than one sub-section of this Section 4 in connection with a single issuance.

4.5. Notices of Changes in Warrant. Upon every adjustment of the Exercise Price or the number of Warrant Shares issuable upon exercise of a Warrant, the Company shall give prompt written notice thereof to the Warrant Agent, which notice shall state the Exercise Price resulting from such adjustment and the increase or decrease, if any, in the number of Warrant Shares purchasable at such price upon the exercise of a Warrant, setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based. Upon the occurrence of any event specified in Sections 4.1 or 4.2, then, in any such event, the Company shall give written notice to each Holder, at the last address set forth for such holder in the Warrant Register, as of the record date or the effective date of the event. Failure to give such notice, or any defect therein, shall not affect the legality or validity of such event. The Warrant Agent shall be entitled to rely conclusively on, and shall be fully protected in relying on, any certificate, notice or instructions provided by the Company with respect to any adjustment of the Exercise Price or the number of shares issuable upon exercise of a Warrant, or any related matter, and the Warrant Agent shall not be liable for any action taken, suffered or omitted to be taken by it in accordance with any such certificate, notice or instructions or pursuant to this Warrant Agreement. The Warrant Agent shall not be deemed to have knowledge of any such adjustment unless and until it shall have received written notice thereof from the Company.

5. Restrictive Legends; Fractional Warrants. In the event that a Warrant Certificate surrendered for transfer bears a restrictive legend, the Warrant Agent shall not register that transfer until the Warrant Agent has received an opinion of counsel for the Company stating that such transfer may be made and indicating whether the Warrants must also bear a restrictive legend upon that transfer. The Warrant Agent shall not be required to effect any registration of transfer or exchange which will result in the transfer of or delivery of a Warrant Certificate for a fraction of a Warrant.

6. Other Provisions Relating to Rights of Holders of Warrants.

6.1. No Rights as Stockholder. Except as otherwise specifically provided herein, a Holder, solely in its capacity as a holder of Warrants, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant Agreement be construed to confer upon a Holder, solely in its capacity as the registered holder of Warrants, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of share capital, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights or rights to participate in new issues of shares, or otherwise, prior to the issuance to the Holder of the Warrant Shares which it is then entitled to receive upon the due exercise of Warrants.

6.2. Reservation of Common Stock. The Company shall at all times reserve and keep available a number of its authorized but unissued shares of Common Stock that will be sufficient to permit the exercise in full of all outstanding Warrants issued pursuant to this Warrant Agreement.

7. Concerning the Warrant Agent and Other Matters.

7.1. Any instructions given to the Warrant Agent orally, as permitted by any provision of this Warrant Agreement, shall be confirmed in writing by the Company as soon as practicable. The Warrant Agent shall not be liable or responsible and shall be fully authorized and protected for acting, or failing to act, in accordance with any oral instructions which do not conform with the written confirmation received in accordance with this Section 7.1.

7.2. (a) Whether or not any Warrants are exercised, for the Warrant Agent's services as agent for the Company hereunder, the Company shall pay to the Warrant Agent such fees as may be separately agreed between the Company and Warrant Agent and the Warrant Agent's out of pocket expenses in connection with this Warrant Agreement, including, without limitation, the fees and expenses of the Warrant Agent's counsel. While the Warrant Agent endeavors to maintain out-of-pocket charges (both internal and external) at competitive rates, these charges may not reflect actual out-of-pocket costs, and may include handling charges to cover internal processing and use of the Warrant Agent's billing systems. (b) All amounts owed by the Company to the Warrant Agent under this Warrant Agreement are due within 30 days of the invoice date. Delinquent payments are subject to a late payment charge of one and one-half percent (1.5%) per month commencing 30 days from the invoice date. The Company agrees to reimburse the Warrant Agent for any attorney's fees and any other costs associated with collecting delinquent payments. (c) No provision of this Warrant Agreement shall require Warrant Agent to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties under this Warrant Agreement or in the exercise of its rights.

7.3. As agent for the Company hereunder the Warrant Agent: (a) shall have no duties or obligations other than those specifically set forth herein or as may subsequently be agreed to in writing by the Warrant Agent and the Company; (b) shall be regarded as making no representations and having no responsibilities as to the validity, sufficiency, value, or genuineness of the Warrants or any Warrant Shares; (c) shall not be obligated to take any legal action hereunder; if, however, the Warrant Agent determines to take any legal action hereunder, and where the taking of such action might, in its judgment, subject or expose it to any expense or liability it shall not be required to act unless it has been furnished with an indemnity reasonably satisfactory to it; (e) may rely on and shall be fully authorized and protected in acting or failing to act upon any certificate, instrument, opinion, notice, letter, telegram, telex, facsimile transmission or other document or security delivered to the Warrant Agent and believed by it to be genuine and to have been signed by the proper party or parties; (f) shall not be liable or responsible for any recital or statement contained in the Registration Statement or any other documents relating thereto; (g) shall not be liable or responsible for any failure on the part of the Company to comply with any of its covenants and obligations relating to the Warrants, including without limitation obligations under applicable securities laws; (h) may rely on and shall be fully authorized and protected in acting or failing to act upon the written, telephonic or oral instructions with respect to any matter relating to its duties as Warrant Agent covered by this Warrant Agreement (or supplementing or qualifying any such actions) of officers of the Company, and is hereby authorized and directed to accept instructions with respect to the performance of its duties hereunder from the Company or counsel to the Company, and may apply to the Company, for advice or instructions in connection with the Warrant Agent's duties hereunder, and the Warrant Agent shall not be liable for any delay in acting while waiting for those instructions; any applications by the Warrant Agent for written instructions from the Company may, at the option of the Agent, set forth in writing any action proposed to be taken or omitted by the Warrant Agent under this Warrant Agreement and the date on or after which such action shall be taken or such omission shall be effective; the Warrant Agent shall not be liable for any action taken by, or omission of, the Warrant Agent in accordance with a proposal included in such application on or after the date specified in such application (which date shall not be less than five business days after the date such application is sent to the Company, unless the Company shall have consented in writing to any earlier date) unless prior to taking any such action, the Warrant Agent shall have received written instructions in response to such application specifying the action to be taken or omitted; (i) may consult with counsel satisfactory to the Warrant Agent, including its in-house counsel, and the advice of such counsel shall be full and complete authorization and protection in respect of any action taken, suffered, or omitted by it hereunder in good faith and in accordance with the advice of such counsel; (j) may perform any of its duties hereunder either directly or by or through nominees, correspondents, designees, or subagents, and it shall not be liable or responsible for any misconduct or negligence on the part of any nominee, correspondent, designee, or subagent appointed with reasonable care by it in connection with this Warrant Agreement; (k) is not authorized, and shall have no obligation, to pay any brokers, dealers, or soliciting fees to any person; and (l) shall not be required hereunder to comply with the laws or regulations of any country other than the United States of America or any political subdivision thereof.

7.4. (a) In the absence of gross negligence or willful misconduct on its part (which gross negligence or willful misconduct must be determined by a final, non-appealable court of competent jurisdiction), the Warrant Agent shall not be liable for any action taken, suffered, or omitted by it or for any error of judgment made by it in the performance of its duties under this Warrant Agreement. Anything in this Warrant Agreement to the contrary notwithstanding, in no event shall Warrant Agent be liable for special, indirect, incidental, consequential or punitive losses or damages of any kind whatsoever (including but not limited to lost profits), even if the Warrant Agent has been advised of the possibility of such losses or damages and regardless of the form of action. Any liability of the Warrant Agent will be limited in the aggregate to the amount of fees paid by the Company hereunder. The Warrant Agent shall not be liable for any failures, delays or losses, arising directly or indirectly out of conditions beyond its reasonable control including, but not limited to, acts of government, exchange or market ruling, suspension of trading, work stoppages or labor disputes, fires, civil disobedience, riots, rebellions, storms, electrical or mechanical failure, computer hardware or software failure, communications facilities failures including telephone failure, war, terrorism, insurrection, earthquakes, floods, acts of God or similar occurrences. (b) In the event any question or dispute arises with respect to the proper interpretation of the Warrants or the Warrant Agent's duties under this Warrant Agreement or the rights of the Company or of any Holder, the Warrant Agent shall not be required to act and shall not be held liable or responsible for its refusal to act until the question or dispute has been judicially settled (and, if appropriate, it may file a suit in interpleader or for a declaratory judgment for such purpose) by final judgment rendered by a court of competent jurisdiction, binding on all persons interested in the matter which is no longer subject to review or appeal, or settled by a written document in form and substance satisfactory to Warrant Agent and executed by the Company and each such Holder. In addition, the Warrant Agent may require for such purpose, but shall not be obligated to require, the execution of such written settlement by all the Holders and all other persons that may have an interest in the settlement.

7.5. The Company covenants to indemnify the Warrant Agent and hold it harmless from and against any loss, liability, claim or expense ("Loss") arising out of or in connection with the Warrant Agent's duties under this Warrant Agreement, including the costs and expenses of defending itself against any Loss, unless such Loss shall have been determined by a court of competent jurisdiction to be a result of the Warrant Agent's gross negligence or willful misconduct (which gross negligence or willful misconduct must be determined by a final, non-appealable court of competent jurisdiction).

7.6. Unless terminated earlier by the parties hereto, this Agreement shall terminate 90 days after the earlier of the Expiration Date and the date on which no Warrants remain outstanding (the "Termination Date"). On the business day following the Termination Date, the Agent shall deliver to the Company any entitlements, if any, held by the Warrant Agent under this Warrant Agreement. The Agent's right to be reimbursed for fees, charges and out-of-pocket expenses as provided in this Section 8 shall survive the termination of this Warrant Agreement.

7.7. If any provision of this Warrant Agreement shall be held illegal, invalid, or unenforceable by any court, this Warrant Agreement shall be construed and enforced as if such provision had not been contained herein and shall be deemed an Agreement among the parties to it to the full extent permitted by applicable law.

7.8. The Company represents and warrants that: (a) it is duly incorporated and validly existing under the laws of its jurisdiction of incorporation; (b) the offer and sale of the Warrants and the execution, delivery and performance of all transactions contemplated thereby (including this Warrant Agreement) have been duly authorized by all necessary corporate action and will not result in a breach of or constitute a default under the articles of association, bylaws or any similar document of the Company or any indenture, agreement or instrument to which it is a party or is bound; (c) this Warrant Agreement has been duly executed and delivered by the Company and constitutes the legal, valid, binding and enforceable obligation of the Company; (d) the Warrants will comply in all material respects with all applicable requirements of law; and (e) to the best of its knowledge, there is no litigation pending or threatened as of the date hereof in connection with the offering of the Warrants.

7.9. In the event of inconsistency between this Warrant Agreement and the descriptions in the Registration Statement, as they may from time to time be amended, the terms of this Warrant Agreement shall control.

7.10. Set forth in Exhibit C hereto is a list of the names and specimen signatures of the persons authorized to act for the Company under this Warrant Agreement (the "Authorized Representatives"). The Company shall, from time to time, certify to you the names and signatures of any other persons authorized to act for the Company under this Warrant Agreement.

-11-

7.11. Except as expressly set forth elsewhere in this Warrant Agreement, all notices, instructions and communications under this Agreement shall be in writing, shall be effective upon receipt and shall be addressed, if to the Company, to its address set forth beneath its signature to this Agreement, or, if to the Warrant Agent, to Equiniti Trust Company, 1110 Centre Pointe Curve, Suite 101, Mendota Heights, MN 55120, or to such other address of which a party hereto has notified the other party.

7.12. (a) This Warrant Agreement shall be governed by and construed in accordance with the laws of the State of New York. All actions and proceedings relating to or arising from, directly or indirectly, this Warrant Agreement may be litigated in courts located within the Borough of Manhattan in the City and State of New York. The Company hereby submits to the personal jurisdiction of such courts and consents that any service of process may be made by certified or registered mail, return requested, directed to the Company at its address last specified for notices hereunder. Each of the parties hereto hereby waives the right to a trial by jury in any action or proceeding arising out of or relating to this Warrant Agreement. (b) This Warrant Agreement shall inure to the benefit of and be binding upon the successors and assigns of the parties hereto. This Warrant Agreement may not be assigned, or otherwise transferred, in whole or in part, by either party without the prior written consent of the other party, which the other party will not unreasonably withhold, condition or delay; except that (i) consent is not required for an assignment or delegation of duties by Warrant Agent to any affiliate of Warrant Agent and (ii) any reorganization, merger, consolidation, sale of assets or other form of business combination by Warrant Agent or the Company shall not be deemed to constitute an assignment of this Warrant Agreement. (c) No provision of this Warrant Agreement may be amended, modified or waived, except in a written document signed by both parties. The Company and the Warrant Agent may amend or supplement this Warrant Agreement without the consent of any Holder for the purpose of curing any ambiguity, or curing, correcting or supplementing any defective provision contained herein or adding or changing any other provisions with respect to matters or questions arising under this Agreement as the parties may deem necessary or desirable and that the parties determine, in good faith, shall not adversely affect the interest of the Holders. All other amendments and supplements shall require the vote or written consent of Holders of at least 67% of the then outstanding Warrants, provided that adjustments may be made to the Warrant terms and rights in accordance with Section 4 without the consent of the Holders.

7.13. Payment of Taxes. The Company will from time to time promptly pay all taxes and charges that may be imposed upon the Company or the Warrant Agent in respect of the issuance or delivery of Warrant Shares upon the exercise of Warrants, but the Company may require the Holders to pay any transfer taxes in respect of the Warrants or such shares. The Warrant Agent may refrain from registering any transfer of Warrants or any delivery of any Warrant Shares unless or until the persons requesting the registration or issuance shall have paid to the Warrant Agent for the account of the Company the amount of such tax or charge, if any, or shall have established to the reasonable satisfaction of the Company and the Warrant Agent that such tax or charge, if any, has been paid.

7.14. Resignation of Warrant Agent.

7.14.1. Appointment of Successor Warrant Agent. The Warrant Agent, or any successor to it hereafter appointed, may resign its duties and be discharged from all further duties and liabilities hereunder after giving thirty (30) days' notice in writing to the Company, or such shorter period of time agreed to by the Company. The Company may terminate the services of the Warrant Agent, or any successor Warrant Agent, after giving thirty (30) days' notice in writing to the Warrant Agent or successor Warrant Agent, or such shorter period of time as agreed. If the office of the Warrant Agent becomes vacant by resignation, termination or incapacity to act or otherwise, the Company shall appoint in writing a successor Warrant Agent in place of the Warrant Agent. If the Company shall fail to make such appointment within a period of 30 days after it has been notified in writing of such resignation or incapacity by the Warrant Agent, then the Warrant Agent or any Holder may apply to any court of competent jurisdiction for the appointment of a successor Warrant Agent at the Company's cost. Pending appointment of a successor to such Warrant Agent, either by the Company or by such a court, the duties of the Warrant Agent shall be carried out by the Company. Any successor Warrant Agent (but not including the initial Warrant Agent), whether appointed by the Company or by such court, shall be a person organized and existing under the laws of any state of the United States of America, in good standing, and authorized under such

laws to exercise corporate trust powers and subject to supervision or examination by federal or state authority. After appointment, any successor Warrant Agent shall be vested with all the authority, powers, rights, immunities, duties, and obligations of its predecessor Warrant Agent with like effect as if originally named as Warrant Agent hereunder, without any further act or deed, and except for executing and delivering documents as provided in the sentence that follows, the predecessor Warrant Agent shall have no further duties, obligations, responsibilities or liabilities hereunder, but shall be entitled to all rights that survive the termination of this Warrant Agreement and the resignation or removal of the Warrant Agent, including but not limited to its right to indemnity hereunder. If for any reason it becomes necessary or appropriate or at the request of the Company, the predecessor Warrant Agent shall execute and deliver, at the expense of the Company, an instrument transferring to such successor Warrant Agent all the authority, powers, and rights of such predecessor Warrant Agent hereunder; and upon request of any successor Warrant Agent the Company shall make, execute, acknowledge, and deliver any and all instruments in writing for more fully and effectually vesting in and confirming to such successor Warrant Agent all such authority, powers, rights, immunities, duties, and obligations.

-12-

7.14.2. Notice of Successor Warrant Agent. In the event a successor Warrant Agent shall be appointed, the Company shall give notice thereof to the predecessor Warrant Agent and the transfer agent for the Common Stock not later than the effective date of any such appointment.

7.14.3. Merger or Consolidation of Warrant Agent. Any person into which the Warrant Agent may be merged or converted or with which it may be consolidated or any person resulting from any merger, conversion or consolidation to which the Warrant Agent shall be a party or any person succeeding to the shareowner services business of the Warrant Agent or any successor Warrant Agent shall be the successor Warrant Agent under this Warrant Agreement, without any further act or deed. For purposes of this Warrant Agreement, "person" shall mean any individual, firm, corporation, partnership, limited liability company, joint venture, association, trust or other entity, and shall include any successor (by merger or otherwise) thereof or thereto.

8. Miscellaneous Provisions.

8.1. Persons Having Rights under this Warrant Agreement. Nothing in this Warrant Agreement expressed and nothing that may be implied from any of the provisions hereof is intended, or shall be construed, to confer upon, or give to, any person or corporation other than the parties hereto and the Holders any right, remedy, or claim under or by reason of this Warrant Agreement or of any covenant, condition, stipulation, promise, or agreement hereof.

8.2. Examination of the Warrant Agreement. A copy of this Warrant Agreement shall be available at all reasonable times at the office of the Warrant Agent designated for such purpose for inspection by any Holder. Prior to such inspection, the Warrant Agent may require any such holder to provide reasonable evidence of its interest in the Warrants.

8.3. Counterparts. This Warrant Agreement may be executed in any number of original, facsimile or electronic counterparts and each of such counterparts shall for all purposes be deemed to be an original, and all such counterparts shall together constitute but one and the same instrument.

8.4. Effect of Headings. The Section headings herein are for convenience only and are not part of this Warrant Agreement and shall not affect the interpretation thereof.

9. Certain Definitions. As used herein, the following terms shall have the following meanings:

(a) "Adjustment Right" means any right granted with respect to any securities issued in connection with, or with respect to, any issuance, sale or delivery (or deemed issuance, sale or delivery in accordance with Section 4) of Common Stock (other than rights of the type described in Section 4.2 and 4.3 hereof) that could result in a decrease in the net consideration received by the Company in connection with, or with respect to, such securities (including, without limitation, any cash settlement rights, cash adjustment or other similar rights) but excluding anti-dilution and other similar rights (including pursuant to Section 4.4 of this Agreement).

(b) "Trading Day" means any day on which the Common Stock is traded on the Trading Market, or, if the Trading Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market in the United States on which the Common Stock is then traded, provided that "Trading Day" shall not include any day on which the Common Stock is scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock is suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00 P.M., Eastern Standard Time).

(c) "Trading Market" means NYSE MKT, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange.

(d) "VWAP" means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported in the "Pink Sheets" published by OTC Markets Group, Inc. (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company

[Signature Page to Follow]

-13-

IN WITNESS WHEREOF, this Warrant Agent Agreement has been duly executed by the parties hereto as of the day and year first above written.

BULLFROG AI HOLDINGS, INC.

By: _____
Name: _____
Title: _____

VSTOCK TRANSFER LLC

By: _____
Name: _____
Title: _____

-14-

EXHIBIT A

BULLFROG AI HOLDINGS, INC.
COMMON STOCK PURCHASE WARRANT

Warrant Shares: _____

Initial Exercise Date: October [], 2022

THIS COMMON STOCK PURCHASE WARRANT (the “Warrant”) certifies that, for value received, _____ or its assigns (the “Holder”) is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the “Initial Exercise Date”) and on or prior to 5:00 p.m. (New York City time) on October [], 2027 (the “Termination Date”) but not thereafter, to subscribe for and purchase from Bullfrog AI Holdings, Inc., a Nevada corporation (the “Company”), up to _____ shares (as subject to adjustment hereunder, the “Warrant Shares”) of Common Stock. The purchase price of one share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b). This Warrant shall initially be issued and maintained in the form of a security held in book-entry form and the Depository Trust Company or its nominee (“DTC”) shall initially be the sole registered holder of this Warrant, subject to a Holder’s right to elect to receive a Warrant in certificated form pursuant to the terms of the Warrant Agency Agreement, in which case this sentence shall not apply.

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

“Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

“Bid Price” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the bid price of the Common Stock for the time in question (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Business Day” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York generally are open for use by customers on such day.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the common stock of the Company, par value \$0.00001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

-15-

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Registration Statement” means the Company’s registration statement on Form S-1 (File No. 333-[]).

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Subsidiary” means any subsidiary of the Company and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the Common Stock is traded on a Trading Market.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, OTCQB or OTCQX (or any successors to any of the foregoing).

“Transfer Agent” means VStock Transfer, LLC, the current transfer agent of the Company, and any successor transfer agent of the Company.

“Underwriting Agreement” means the underwriting agreement, dated as of October [], 2022, among the Company and WallachBeth Capital, LLC as representative of the underwriters named therein, as amended, modified or supplemented from time to time in accordance with its terms.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Common Stock for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Common Stock is not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Common Stock are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per share of the Common Stock so reported, or (d) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Common Stock Purchase Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Warrant Agency Agreement” means that certain warrant agent agreement, dated on or about the Initial Exercise Date, between the Company and the Warrant Agent.

“Warrant Agent” means the Transfer Agent and any successor warrant agent of the Company.

“Warrants” means this Warrant and other Common Stock purchase warrants issued by the Company pursuant to the Registration Statement.

Section 2. Exercise.

- a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Business Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

Notwithstanding the foregoing in this Section 2(a), a holder whose interest in this Warrant is a beneficial interest in certificate(s) representing this Warrant held in book-entry form through DTC (or another established clearing corporation performing similar functions), shall effect exercises made pursuant to this Section 2(a) by delivering to DTC (or such other clearing corporation, as applicable) the appropriate instruction form for exercise, complying with the procedures to effect exercise that are required by DTC (or such other clearing corporation, as applicable), subject to a Holder’s right to elect to receive a Warrant in certificated form pursuant to the terms of the Warrant Agency Agreement, in which case this sentence shall not apply.

- b) Exercise Price. The exercise price per share of Common Stock under this Warrant shall be \$[], subject to adjustment hereunder (the “Exercise Price”).

c) Cashless Exercise. If at the time of exercise hereof there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant may also be exercised, in whole or in part, at such time by means of a “cashless exercise” in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Common Stock on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder’s execution of the applicable Notice of Exercise if such Notice of Exercise is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

(X) = the number of Warrant Shares that would be issuable upon exercise of this Warrant in accordance with the terms of this Warrant if such exercise were by means of a cash exercise rather than a cashless exercise.

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder’s or its designee’s balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system (“DWAC”) if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company’s share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company of the Notice of Exercise (such date, the “Warrant Share Delivery Date”). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Common Stock on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, “Standard Settlement Period” means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise delivered on or prior to 12:00 p.m. (New York City time) on the Initial Exercise Date, which may be delivered at any time after the time of execution of the Underwriting Agreement, the Company agrees to deliver the Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Initial Exercise Date and the Initial Exercise Date shall be the Warrant Share Delivery Date for purposes hereunder, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received by such Warrant Share Delivery Date.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d) (i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Common Stock that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Common Stock having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of shares of Common Stock with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% (or, upon election by a Holder prior to the issuance of any Warrants, 9.99%) of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on shares of its Common Stock or any other equity or equity equivalent securities payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding shares of Common Stock into a smaller number of shares, or (iv) issues by reclassification of shares of the Common Stock any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Reserved.

c) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

e) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company or any Subsidiary, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding Common Stock (not including any Common Shares held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination)(each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of Common Stock (or shares of common stock, as applicable) of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity (as defined below) shall, at the Holder's option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable Fundamental Transaction), purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value (as defined below) of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, that, if the Fundamental Transaction is not within the Company's control, including not approved by the Company's Board of Directors, Holder shall only be entitled to receive from the Company or any Successor Entity the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of this Warrant, that is being offered and paid to the holders of Common Stock of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, stock or any combination thereof, or whether the holders of Common Stock are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction; provided, further, that if holders of Common Stock of the Company are not offered or paid any consideration in such Fundamental Transaction, such holders of Common Stock will be deemed to have received common stock of the Successor Entity (which Entity may be the Company following such Fundamental Transaction) in such Fundamental Transaction. "Black Scholes Value" means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the "OV" function on Bloomberg, L.P. ("Bloomberg") determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the 100 day volatility obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the greater of (i) the sum of the price per share being offered

in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (ii) the greater of (x) the last VWAP immediately prior to the public announcement of such Fundamental Transaction and (y) the last VWAP immediately prior to the consummation of such Fundamental Transaction and (D) a remaining option time equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Termination Date, and (E) a zero cost of borrow. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds (or such other consideration) within five Business Days of the Holder's election (or, if later, on the date of consummation of the Fundamental Transaction). The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the "Successor Entity") to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein.

-22-

f) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding treasury shares, if any) issued and outstanding.

g) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Company shall authorize the granting to all holders of the Common Stock rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Company (or any of its Subsidiaries) is a party, any sale or transfer of all or substantially all of its assets, or any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by email to the Holder at its last email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

h) Voluntary Adjustment By Company. Subject to the rules and regulations of the Trading Market, the Company may at any time during the term of this Warrant, subject to the prior written consent of the Holder, reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

Section 4. Transfer of Warrant.

a) Transferability. This Warrant and all rights hereunder (including, without limitation, any registration rights) are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

-23-

b) New Warrants. If this Warrant is not held in global form through DTC (or any successor depository), this Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Warrant Agent shall register this Warrant, upon records to be maintained by the Warrant Agent for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company and the Warrant Agent may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a “cashless exercise” pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Common Stock a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Common Stock may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

-24-

Except and to the extent as waived or consented to by the Holder, the Company shall not by any action, including, without limitation, amending its certificate of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys’ fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding. **Notwithstanding the foregoing, this exclusive forum provision shall not apply to suits brought to enforce a duty or liability created by the Exchange Act, any other claim for which the federal courts have exclusive jurisdiction or any complaint asserting a cause of action arising under the Securities Act against us or any of our directors, officers, other employees or agents. Section 27 of the Exchange Act creates exclusive federal jurisdiction over all suits brought to enforce any duty or liability created by the Exchange Act or the rules and regulations thereunder.**

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder’s rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys’ fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

-25-

h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by e-mail, or sent by a nationally recognized overnight courier service, addressed to the Company, at 323 Ellington Blvd, Unit 317, Gaithersburg, MD 20878 Attention: Vininder Singh, Chief Executive Officer, email address: [____], or such other email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the time of transmission, if such notice or communication is delivered via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the time of transmission, if such notice or communication is delivered via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of

mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Common Stock or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company, on the one hand, and the Holder of the beneficial owner of this Warrant, on the other hand.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

o) Warrant Agency Agreement. If this Warrant is held in global form through DTC (or any successor depository), this Warrant is issued subject to the Warrant Agency Agreement. To the extent any provision of this Warrant conflicts with the express provisions of the Warrant Agency Agreement, the provisions of this Warrant shall govern and be controlling.

(Signature Page Follows)

-26-

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

BULLFROG AI HOLDINGS, INC.

By: _____
Name: Vininder Singh
Title: Chief Executive Officer

-27-

NOTICE OF EXERCISE

TO: BULLFROG AI HOLDINGS, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

- in lawful money of the United States; or
- if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please register and issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number or by physical delivery of a certificate to:

(4) Accredited Investor. If the Warrant is being exercised via cash exercise, the undersigned is an "accredited investor" as defined in Regulation D promulgated under the Securities Act of 1933, as amended

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to exercise the Warrant.)

FOR VALUE RECEIVED, [] all of or [] shares of the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Phone Number: _____

Email Address: _____

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatsoever. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

EXHIBIT B

[Form of Election to Purchase]

(To Be Executed Upon Exercise of Warrants not evidenced by a Global Certificate)

The undersigned hereby irrevocably elects to exercise the right, represented by Warrants evidenced by this Warrant Certificate, to receive _____ Warrant Shares and herewith (i) tenders payment for such Warrant Shares to the order of Bullfrog AI Holdings, Inc., a Nevada corporation, in the amount of \$ _____ in accordance with the terms hereof, or (ii) if permitted, makes the payment by the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 3.3.7(b), to exercise this Warrant with respect to the above number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 3.3.7(b).

The undersigned requests that a certificate for such Warrant Shares be registered in the name of _____, whose address is _____ and that such certificate be delivered to _____, whose address is _____. If the number of Warrants being exercised hereby is less than all the Warrants evidenced by this Warrant Certificate, the undersigned requests that a new Warrant Certificate representing the remaining unexercised Warrants be registered in the name of _____, whose address is _____ and that such Warrant Certificate be delivered to _____ whose address is _____.

Signature,

Date:

[Signature Guarantee]

EXHIBIT C

AUTHORIZED REPRESENTATIVES

Name	Title	Signature
Vininder Sing	Chief Executive Officer	
Dane Saglio	Chief Financial Officer	

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this “Agreement”) is dated as of April [*], 2022, by and between BullFrog AI Holdings, Inc., a Nevada corporation (the “Company”), and each lender party that executes the signature page hereto as a purchaser (each, a “Purchaser” and collectively, the “Purchasers”).

WHEREAS, subject to the terms and conditions set forth in this Agreement and pursuant to an exemption from the registration requirements of Section 5 of the Securities Act, as defined, contained in Section 4(a)(2) thereof and/or Rule 506(b) thereunder, the Company desires to issue and sell to the Purchaser, and the Purchaser desires to purchase from the Company, securities of the Company as more fully described in this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and the Purchaser agree as follows:

ARTICLE I DEFINITIONS

1.1 Definitions. In addition to the words and terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms have the meanings set forth in this Section 1.1:

“Acquiring Person” shall have the meaning ascribed to such term in Section 5.5.

“Action” shall have the meaning ascribed to such term in Section 3.10.

“Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person as such terms are used in and construed under Rule 405 under the Securities Act.

“Board of Directors” means the board of directors of the Company.

“Closing” means the closing of the purchase and sale of the Notes pursuant to Section 2.1.

“Closing Date” means the Trading Day on which all of the Transaction Documents have been executed and delivered by the applicable parties thereto, and all conditions precedent to (i) the Purchaser’s obligations to pay the Subscription Amount and (ii) the Company’s obligations to deliver the Securities to be issued and sold, in each case, have been satisfied or waived, but in no event later than the second Trading Day following the date hereof.

“Common Stock” means the common stock of the Company, par value \$0.00001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Evaluation Date” shall have the meaning ascribed to such term in Section 3.19.

“Exchange Act” means the Securities Exchange Act of 1934, and the rules and regulations promulgated thereunder.

“Exempt Issuance” means the issuance of (a) shares of Common Stock, restricted stock units or options, and the underlying shares of Common Stock to consultants, employees, officers or directors of the Company pursuant to any stock or option plan duly adopted for such purpose, by a majority of the non-employee members of the Board of Directors or a majority of the members of a committee of non-employee directors established for such purpose for services rendered to the Company, (b) securities issued upon the exercise or exchange of or conversion of any Securities issued hereunder and/or other securities issuable pursuant to existing agreements, exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the date of this Agreement, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities (other than in connection with stock dividends, stock splits or combinations) or to extend the term of such securities, (c) securities issued pursuant, acquisitions or strategic transactions approved by a majority of the directors of the Company, provided that any such issuance shall only be to a Person (or to the equity holders of a Person) which is, itself or through its subsidiaries, an operating company or an owner of an asset in a business synergistic with the business of the Company and which shall reasonably be expected to provide to the Company additional benefits, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities, (d) securities issued pursuant to any purchase money equipment loan or capital leasing arrangement, purchasing agent or debt financing from a commercial bank or similar financial institution, (e) securities issued pursuant to any presently outstanding warrants or this Agreement; and (f) securities upon a stock split, stock dividend or subdivision of the Common Stock and shares of common stock in a public offering; (g) non-convertible loans from traditional commercial banks with interest per annum not to exceed 12% which will rank *pari passu* with the Notes issued to investors by the Company.

“Face Value” means the Subscription Amount plus original issue discount as described in the Notes.

“FCPA” means the Foreign Corrupt Practices Act of 1977, as amended.

“GAAP” shall have the meaning ascribed to such term in Section 3.8.

“Indebtedness” shall have the meaning ascribed to such term in Section 3.27.

“Intellectual Property” means all of the following in any jurisdiction throughout the world: (a) all inventions (whether patentable or unpatentable and whether or not reduced to practice), all improvements thereto, and all U.S. and foreign patents, patent applications, and patent disclosures, together with all reissues, continuations, continuations-in-part, revisions, extensions, and reexaminations thereof, (b) all trademarks, service marks, brand names, certification marks, trade dress, logos, trade names, domain names, assumed names and corporate names, together with all colorable imitations thereof, and including all goodwill associated therewith, and all applications, registrations, and renewals in connection therewith, (c) all copyrights, and all applications, registrations, and renewals in connection therewith, (d) all trade secrets under applicable state laws and the common law and know-how (including formulas, techniques, technical data, designs, drawings, specifications, customer and supplier lists, pricing and cost information, and business and marketing plans and proposals), (e) all computer software (including source code, object code, diagrams, data and related documentation), and (f) all copies and tangible embodiments of the foregoing (in whatever form or medium).

“IPO” shall mean an initial public offering by the Company that results in a listing of the Company’s Common Stock on a national securities exchange.

“Licensed Intellectual Property Agreement” means all licenses, sublicenses, agreements and permissions (each as amended to date) that any third party owns and that the Company uses, including off-the-shelf software purchased or licensed by the Company.

2

“Liens” means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction.

“Material Adverse Effect” shall have the meaning assigned to such term in Section 3.1.

“Notes” means the Original Issue Discount Convertible Promissory Notes issued to the Purchaser, in the form of Exhibit A attached hereto.

“Note Conversion Price” means the Note Conversion Price provided in the Note.

“Original Issue Date” means the date of the first issuance of the Notes, regardless of any transfers of any Note and regardless of the number of instruments which may be issued to evidence such Notes.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Purchaser Party” shall have the meaning ascribed to such term in Section 5.8.

“Registrable Securities” shall mean, collectively, the Shares and the Warrant Shares.

“Regulation FD” means Regulation FD promulgated by the SEC pursuant to the Exchange Act, as such Regulation may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the SEC having substantially the same purpose and effect as such Regulation

“Required Approvals” shall have the meaning ascribed to such term in Section 3.4.

“Rule 144” means Rule 144 promulgated by the SEC pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the SEC having substantially the same purpose and effect as such Rule.

“SEC” means the United States Securities and Exchange Commission. “Securities” means the Notes, the Warrants and the Shares.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Shares” means the Common Stock issuable upon conversion of the Notes.

“Short Sales” means all “short sales” as defined in Rule 200 of Regulation SHO under the Exchange Act (but shall not be deemed to include the location and/or reservation of borrowable shares of Common Stock).

“Subscription Amount” means, as to the Purchaser, the aggregate amount to be paid for the Note purchased hereunder as specified below the Purchaser’s name on the signature page of this Agreement and next to the heading “Subscription Amount,” in United States dollars and in immediately available funds.

3

“Subsidiary” means with respect to any entity at any date, any direct or indirect corporation, limited or general partnership, limited liability company, trust, estate, association, joint venture or other business entity of which (A) more than 50% of (i) the outstanding capital stock having (in the absence of contingencies) ordinary voting power to elect a majority of the Board of Directors or other managing body of such entity, (ii) in the case of a partnership or limited liability company, the interest in the capital or profits of such partnership or limited liability company or (iii) in the case of a trust, estate, association, joint venture or other entity, the beneficial interest in such trust, estate, association or other entity business is, at the time of determination, owned or controlled directly or indirectly through one or more intermediaries, by such entity, or (B) is under the actual control of the Company.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, the OTCQB, the OTCQX, or the OTC Pink Marketplace (or any successors to any of the foregoing).

“Transaction Documents” means this Agreement, the Notes, the Warrants, and any other documents or agreements executed in connection with the transactions contemplated hereunder, including, but not limited to, the documents referenced in Section 2.2(a).

“Transfer Agent” means VStock Transfer, LLC with a mailing address of 18 Lafayette Place, Woodmere, NY 11598, and a facsimile number of (646) 536-3179, and any successor transfer agent of the Company.

“Variable Rate Transaction” means any Equity Line of Credit or similar agreement, nor issue nor agree to issue any Common Stock, floating or Variable Priced Equity Linked Instruments nor any of the foregoing or equity with price reset rights (subject to adjustment for stock splits, distributions, dividends, recapitalizations and the like) (collectively, the “Variable Rate Transaction”). For purposes of this Agreement, “Equity Line of Credit” shall include any transaction involving a written agreement between the Company and an investor or underwriter whereby the Company has the right to “put” its securities to the investor or underwriter over an agreed period of time and at an agreed price or price formula, and “Variable Priced Equity Linked Instruments” shall include: (A) any debt or equity securities which are convertible into, exercisable or exchangeable for, or carry the right to receive additional shares of Common Stock either (1) at any conversion, exercise or exchange rate or other price that is based upon and/or varies with the trading prices of or quotations for Common Stock at any time after the initial issuance of such debt or equity security, or (2) with a fixed conversion, exercise or exchange price that is subject to being reset at some future date at any time after the initial issuance of such debt or equity security due to a change in the market price of the Company’s Common Stock since date of initial issuance, and (B) any amortizing convertible security which amortizes prior to its maturity date, where the Company is required or has the option to (or any investor in such transaction has the option to require the Company to) make such amortization payments in shares of Common Stock which are valued at a price that is based upon and/or varies with the trading prices of or quotations for Common Stock at any time after the initial issuance of such debt or equity security (whether or not such payments in stock are subject to certain equity conditions). For purposes of determining the total consideration for a convertible instrument (including a right to

purchase equity of the Company) issued, subject to an original issue or similar discount or which principal amount is directly or indirectly increased after issuance, the consideration will be deemed to be the actual cash amount received by the Company in consideration of the original issuance of such convertible instrument.

“Warrants” means, collectively, the Common Stock purchase warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof, which Warrants shall be exercisable immediately and have a term of exercise equal to five years from such initial exercise date, in the form of Exhibit B attached hereto.

“Warrant Exercise Price” means the exercise price provided in the Warrant.

4

“Warrant Shares” means the shares of Common Stock issuable upon exercise of the Warrants at the Warrant Exercise Price.

ARTICLE II. PURCHASE AND SALE

2.1 Closing. On the Closing Dates, upon the terms and subject to the conditions set forth herein, substantially concurrent with the execution and delivery of this Agreement by the parties hereto, the Company agrees to sell, and each Purchaser, severally and not jointly, agrees to purchase an aggregate of (i) Notes with a Face Value listed on the Purchaser’s signature page and (ii) Warrants to purchase shares equal to 100% of the Shares issuable upon conversion of the Note at a price equal to 110% of the IPO price or, if the Company fails to complete the IPO before October 22, 2022, 90% of the IPO price. On the Closing Date, the Purchaser shall deliver to the Company a signed copy of the Transaction Documents and, via wire transfer, immediately available funds equal to the Purchaser’s Subscription Amount. After receipt of the Subscription Amount, the Company shall deliver to the Purchaser countersigned copies of the Transaction Documents. Upon satisfaction of the closing conditions set forth in Section 2.3, the Closing shall occur at the Company’s offices or such other location as the parties shall mutually agree.

2.2 Deliveries.

(a) On or prior to the Closing Date, the Company shall deliver or cause to be delivered to the Purchaser the following:

- (i) this Agreement duly executed by the Company;
- (ii) a Note in the principal amount of <PRINCIPAL AMOUNT>, convertible at the Note Conversion Price, registered in the name of the Purchaser;
- (iii) an original Warrant to purchase <WARRANT SHARES> shares of Common Stock, exercisable at the Warrant Exercise Price, registered in the name of such Purchaser;
- (iv) a Board Consent approving the issuance of the Notes and the execution of the Transaction Documents listed above on behalf of the Company.

(b) On or prior to the Closing Date each Purchaser shall deliver or cause to be delivered to the Company the following:

- (i) this Agreement duly executed by the Purchaser; and
- (ii) the Purchaser’s Subscription Amount by wire transfer to the Company.

2.3 Closing Conditions.

(a) The obligations of the Company hereunder in connection with the Closing are subject to the following conditions being met:

- (i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) on the Closing Date of the representations and warranties of the Purchaser contained herein (unless as of a specific date therein in which case they shall be accurate as of such date);
- (ii) all obligations, covenants and agreements of the Purchaser required to be performed at or prior to the Closing Date shall have been performed; and
- (iii) the delivery by the Purchaser of the items set forth in Section 2.2(b) of this Agreement.

5

(b) The respective obligations of the Purchaser hereunder in connection with the Closing are subject to the following conditions being met:

- (i) accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) when made and on the Closing Date of the representations and warranties of the Company contained herein (unless as of a specific date therein in which case they shall be accurate as of such date);
- (ii) all obligations, covenants and agreements of the Company required to be performed at or prior to the Closing Date shall have been performed;
- (iii) the delivery by the Company of the items set forth in Section 2.2(a) of this Agreement; and
- (iv) there shall have been no Material Adverse Effect with respect to the Company since the date hereof.

ARTICLE III. REPRESENTATIONS AND WARRANTIES OF COMPANY

The Company hereby makes the following representations and warranties to each Purchaser as of the date hereof:

3.1 Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective certificate or Articles of Incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in: (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business, prospects or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company’s ability to perform in any material respect on a timely basis its obligations under any Transaction Document (any of (i), (ii) or (iii), a “Material Adverse Effect”) and no Proceeding has been instituted in any such jurisdiction revoking, limiting or

curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

3.2 Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company's stockholders in connection herewith or therewith other than in connection with the Required Approvals. Subject to obtaining the Required Approvals, this Agreement and each other Transaction Document to which it is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

6

3.3 No Conflicts. Except as set forth in Schedule 3.3, the execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Securities and the consummation by it of the transactions contemplated hereby and thereby do not and will not (i) subject to the Required Approvals, conflict with or violate any provision of the Company's or any Subsidiary's Certificate or Articles of Incorporation, bylaws or other organizational or charter documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

3.4 Filings, Consents and Approvals. Except as set forth on Schedule 3.4, the Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other governmental authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) blue sky filings or a Form D filing and (ii) such filings as are required to be made under applicable state securities laws (the "Required Approvals").

3.5 Issuance of the Securities. The Securities are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Shares, when issued upon conversion of the Notes will be validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company shall reserve from its duly authorized capital stock a number of shares of Common Stock issuable pursuant to the Notes and Warrants.

3.6 Capitalization. The capitalization of the Company is as set forth on Schedule 3.6. The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of employee stock awards under the Company's equity incentive plans, the issuance of shares of Common Stock to employees pursuant to the Company's employee stock purchase plans and pursuant to the conversion and/or exercise of Common Stock Equivalents outstanding as of the date of the most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents. Except as set forth on Schedule 3.6, as a result of the purchase and sale of the Securities, there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any shares of Common Stock or the capital stock of any Subsidiary, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional shares of Common Stock or Common Stock Equivalents or capital stock of any Subsidiary. The issuance and sale of the Securities will not obligate the Company or any Subsidiary to issue shares of Common Stock or other securities to any Person (other than the Purchaser) and will not result in a right of any holder of Company securities to adjust the exercise, conversion, exchange or reset price under any of such securities. There are no outstanding securities or instruments of the Company or any Subsidiary that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to redeem a security of the Company or such Subsidiary. The Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance with all federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. No further approval or authorization of any stockholder, the Board of Directors or others is required for the issuance and sale of the Securities. There are no stockholders' agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company's stockholders.

7

3.7 Subsidiaries. All of the direct and indirect Subsidiaries of the Company are set forth in Schedule 3.7. The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities.

3.8 Financial Statements. The consolidated financial statements of the Company, together with the related notes and schedules, present fairly, in all material respects, the consolidated financial position of the Company and any of its Subsidiaries as of the dates indicated and the consolidated results of operations, cash flows and changes in stockholders' equity of the Company for the periods specified and have been prepared in compliance with United States generally accepted accounting principles ("GAAP") applied on a consistent basis during the periods involved.

3.9 Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest financial statements: (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its stockholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company equity incentive plans. Other than as disclosed on Schedule 3.9, except for the issuance of the Securities contemplated by this Agreement, no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least one Trading Day prior to the date that this representation is made.

3.10 Litigation. Except as set forth on Schedule 3.10, there is no action, suit, inquiry, notice of violation, proceeding or investigation, inquiry or other similar proceeding of any federal or state government unit pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, governmental or administrative agency or regulatory authority (federal, state, county, local or foreign) (collectively, an "Action") which (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the issuance of the Securities or (ii) could, if

there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. The Company has no reason to believe that an Action will be filed against it in the future except as disclosed on Schedule

3.10. Neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim for fraud or breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation or inquiry by the SEC involving the Company or any current or former director or officer of the Company. The SEC has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Securities Act, and the Company has no reason to believe it will do so in the future.

3.11 Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which could reasonably be expected to result in a Material Adverse Effect. None of the Company's or its Subsidiaries' employees is a member of a union that relates to such employee's relationship with the Company or such Subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no effort is underway to unionize or organize the employees of the Company or any Subsidiary. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. There is no workmen's compensation liability matter, employment-related charge, complaint, grievance, investigation, inquiry or obligation of any kind pending, or to the Company's knowledge, threatened, relating to an alleged violation or breach by the Company or its Subsidiaries of any law, regulation or contract that could, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect.

3.12 Compliance. Except as set forth on Schedule 3.12, neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as could not have or reasonably be expected to result in a Material Adverse Effect.

3.13 Environmental Laws. The Company and its Subsidiaries (i) are in compliance with all federal, state, local and foreign laws relating to pollution or protection of human health or the environment (including ambient air, surface water, groundwater, land surface or subsurface strata), including laws relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, or toxic or hazardous substances or wastes (collectively, "Hazardous Materials") into the environment, or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Hazardous Materials, as well as all authorizations, codes, decrees, demands, or demand letters, injunctions, judgments, licenses, notices or notice letters, orders, permits, plans or regulations, issued, entered, promulgated or approved thereunder ("Environmental Laws"); (ii) have received all permits licenses or other approvals required of them under applicable Environmental Laws to conduct their respective businesses; and (iii) are in compliance with all terms and conditions of any such permit, license or approval where in each clause (i), (ii) and (iii), the failure to so comply could be reasonably expected to have, individually or in the aggregate, a Material Adverse Effect.

3.14 Regulatory Permits. The Company and each of its Subsidiaries possess all certificates, authorizations and permits issued by the appropriate regulatory authorities necessary to conduct their respective businesses, except where the failure to possess such certificates, authorizations or permits would not have, individually or in the aggregate, a Material Adverse Effect, and neither the Company nor any Subsidiary has received any notice of proceedings relating to the revocation or modification of any such certificate, authorization or permit. There is no agreement, commitment, judgment, injunction, order or decree binding upon the Company or any of its Subsidiaries or to which the Company or any of its Subsidiaries is a party which has or would reasonably be expected to have the effect of prohibiting or materially impairing any business practice of the Company or any of its Subsidiaries, any acquisition of property by the Company or any of its Subsidiaries or the conduct of business by the Company or any of its Subsidiaries as currently conducted other than such effects, individually or in the aggregate, which have not had and would not reasonably be expected to have a Material Adverse Effect on the Company or any of its Subsidiaries.

3.15 Title to Assets. Subject to the Liens of the outstanding secured senior debt, the Company and the Subsidiaries have good and marketable title in fee simple to all personal property owned by them that is material to the business of the Company and the Subsidiaries. The Company owns no real property. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance.

3.16 Intellectual Property.

(i) Subject to the Liens of the outstanding secured senior debt, to the Company's knowledge, the Company owns or possesses or has the right to use pursuant to a valid and enforceable written license, sublicense, agreement, or permission all Intellectual Property necessary for the operation of the business of the Company as presently conducted.

(ii) To the Company's knowledge, the Intellectual Property does not interfere with, infringe upon, misappropriate, or otherwise come into conflict with, any Intellectual Property rights of third parties, and the Company has no knowledge that facts exist which indicate a likelihood of the foregoing. The Company has not received any charge, complaint, claim, demand, or notice alleging any such interference, infringement, misappropriation, or conflict (including any claim that the Company must license or refrain from using any Intellectual Property rights of any third party). To the knowledge of the Company, no third party has interfered with, infringed upon, misappropriated, or otherwise come into conflict with, any Intellectual Property rights of the Company.

(iii) With respect to each Licensed Intellectual Property Agreement:

(A) The Licensed Intellectual Property Agreement is legal, valid, binding, enforceable, and in full force and effect;

(B) To the Company's knowledge, no party to the Licensed Intellectual Property Agreement is in breach or default, and no event has occurred that with notice or lapse of time would constitute a breach or default or permit termination, modification, or acceleration thereunder, which as to any such breach, default or event could have a Material Adverse Effect on the Company;

(C) No party to such Licensed Intellectual Property Agreement has repudiated any provision thereof;

(D) Except as set forth in such Licensed Intellectual Property Agreement, the Company has not received written or verbal notice or otherwise has knowledge that the underlying item of Intellectual Property is subject to any outstanding injunction, judgment, order, decree, ruling, or charge; and

(E) Except as set forth on Schedule 3.16, the Company has not granted any sublicense or similar right with respect to the license, sublicense, agreement, or permission.

(iv) The Company has complied with and is presently in compliance with all foreign, federal, state, local, governmental (including, but not limited to, the Federal Trade Commission and State Attorneys General), administrative, or regulatory laws, regulations, guidelines, and rules applicable to any personal identifiable information.

(v) Each Person who participated in the creation, conception, invention or development of the Intellectual Property currently used in the business of the Company (each, a “Developer”) which is not licensed from third parties has executed one or more agreements containing industry standard confidentiality, work for hire and assignment provisions, whereby the Developer has assigned to the Company all copyrights, patent rights, Intellectual Property rights and other rights in the Intellectual Property, including all rights in the Intellectual Property that existed prior to the assignment of rights by such Person to the Company.

(vi) Each Developer has signed a perpetual non-disclosure agreement with the Company.

3.17 Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

3.18 Transactions With Affiliates and Employees. Except as disclosed in Schedule 3.18, none of the officers or directors of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, stockholder, member or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock award agreements under any equity incentive plan of the Company.

3.19 Sarbanes-Oxley; Internal Accounting Controls. Except as disclosed in the Schedule 3.19, the Company and the Subsidiaries are in compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002 that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the SEC thereunder that are effective as of the date hereof and as of the Closing Date. The Company and the Subsidiaries maintain a system of internal accounting controls. The Company’s certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the “Evaluation Date”). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) of the Company and its Subsidiaries that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

11

3.20 Certain Fees. Except as set forth on Schedule 3.20, no brokerage or finder’s fees or commissions are or will be payable by the Company or any Subsidiary to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Purchaser shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section that may be due by the Company in connection with the transactions contemplated by the Transaction Documents.

3.21 Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Securities, will not be or be an Affiliate of, an “investment company” within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an “investment company” subject to registration under the Investment Company Act of 1940, as amended.

3.22 Registration Rights. Except as disclosed on Schedule 3.22, no Person has any right to cause the Company or any Subsidiary to effect the registration under the Securities Act of any securities of the Company or any Subsidiary.

3.23 Listing and Maintenance Requirements; Shell Company. The Company’s Common Stock is not quoted or listed on any Trading Market. The Company is not and has never been a shell company as such term is defined in Rule 12(b)(2) under the Securities Exchange Act of 1934, as amended and the rules and regulations of the Securities and Exchange Commission thereunder.

3.24 Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti-takeover provision under the Company’s certificate of incorporation (or similar charter documents) or the laws of its state of incorporation that is or could become applicable to the Purchaser as a result of the Purchaser and the Company fulfilling their obligations or exercising their rights under the Transaction Documents, including without limitation as a result of the Company’s issuance of the Securities and the Purchaser’s ownership of the Securities.

3.25 Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company confirms that neither it nor any other Person acting on its behalf has provided the Purchaser or its agent or counsel with any information that it believes constitutes or might constitute material, non-public information which is not otherwise disclosed on Schedule 3.25. The Company understands and confirms that the Purchaser will rely on the foregoing representation in effecting transactions in securities of the Company. All of the disclosure furnished by or on behalf of the Company to the Purchaser regarding the Company and its Subsidiaries, their respective businesses and the transactions contemplated hereby, including the Disclosure Schedules to this Agreement, is true and correct and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in light of the circumstances under which they were made not misleading. The press releases disseminated by the Company during the 12 months preceding the date of this Agreement do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in light of the circumstances under which they were made and when made, not misleading. The Company acknowledges and agrees that no Purchaser makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Article IV hereof.

12

3.26 No Integrated Offering. Assuming the accuracy of the Purchaser’s representations and warranties set forth in Article IV, neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of any applicable stockholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.

3.27 Solvency. Based on the consolidated financial condition of the Company as of the Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Securities hereunder, (i) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof, and (ii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date. Schedule 3.27 sets forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments. For the purposes of this Agreement, "Indebtedness" means (x) any liabilities for borrowed money or amounts owed in excess of \$100,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company's consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$100,000 due under leases required to be capitalized in accordance with GAAP. Except as set forth on Schedule 3.27, neither the Company nor any Subsidiary is in default with respect to any Indebtedness.

3.28 Tax Status. The Company and each of its Subsidiaries have filed all federal, state, local and foreign tax returns which have been required to be filed and paid all taxes shown thereon through the date hereof, to the extent that such taxes have become due and are not being contested in good faith, except where the failure to so file or pay would not have a Material Adverse Effect. Except as otherwise disclosed in Schedule 3.28, no tax deficiency has been determined adversely to the Company or any of its Subsidiaries which has had, or would have, individually or in the aggregate, a Material Adverse Effect. The Company has no knowledge of any federal, state or other governmental tax deficiency, penalty or assessment which has been or might be asserted or threatened against it which would have a Material Adverse Effect

3.29 Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of law, or (iv) violated any provision of FCPA.

13

3.30 Acknowledgment Regarding Purchaser's Purchase of Securities. The Company acknowledges and agrees that the Purchaser is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated thereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated thereby and any advice given by any Purchaser or any of their respective representatives or agents in connection with the Transaction Documents and the transactions contemplated thereby is merely incidental to the Purchaser's purchase of the Securities. The Company further represents to the Purchaser that the Company's decision to enter into this Agreement and the other Transaction Documents has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

3.31 Acknowledgement Regarding Purchaser's Trading Activity. Notwithstanding anything in this Agreement or elsewhere to the contrary (except for Sections 4.7 and 5.12 hereof), it is understood and acknowledged by the Company that: (i) the Purchaser has not been asked by the Company to agree, nor has the Purchaser agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) past or future open market or other transactions by any Purchaser, specifically including, without limitation, Short Sales or "derivative" transactions, before or after the closing of this or future private placement transactions, may negatively impact the market price of the Company's publicly-traded securities; (iii) any Purchaser, and counter-parties in "derivative" transactions to which the Purchaser is a party, directly or indirectly, presently may have a "short" position in the Common Stock, and (iv) the Purchaser shall not be deemed to have any affiliation with or control over any arm's length counter-party in any "derivative" transaction. The Company further understands and acknowledges that (y) the Purchaser may engage in hedging activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value of the Shares deliverable with respect to Securities are being determined, and (z) such hedging activities (if any) could reduce the value of the existing stockholders' equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of any of the Transaction Documents.

3.32 Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company.

3.33 Private Placement. Assuming the accuracy of each Purchaser's representations and warranties set forth in Article IV, no registration under the Securities Act is required for the offer and sale of the Notes or the Shares issuable upon conversion thereof by the Company to the Purchasers as contemplated hereby.

3.34 No General Solicitation. Neither the Company nor any person acting on behalf of the Company has offered or sold any of the Securities by any form of general solicitation or general advertising. The Company offered the Securities for sale only to the Purchaser and certain other "accredited investors" within the meaning of Rule 501 under the Securities Act.

3.35 No Disqualification Events. With respect to the Securities to be offered and sold hereunder in reliance on Rule 506(b) under the Securities Act, none of the Company, any of its predecessors, any affiliated issuer, any director, executive officer, other officer of the Company participating in the offering hereunder, any beneficial owner of 20% or more of the Company's outstanding voting equity securities, calculated on the basis of voting power, nor any promoter (as that term is defined in Rule 405 under the Securities Act) connected with the Company in any capacity at the time of sale, nor any Person, including a placement agent, who will receive a commission or fees for soliciting purchasers (each, an "Issuer Covered Person" and, together, "Issuer Covered Persons") is subject to any of the "Bad Actor" disqualifications described in Rule 506(d)(1)(i) to (viii) under the Securities Act (a "Disqualification Event"), except for a Disqualification Event covered by Rule 506(d)(2) or (d)(3). The Company has exercised reasonable care to determine whether any Issuer Covered Person is subject to a Disqualification Event. The Company has complied, to the extent applicable, with its disclosure obligations under Rule 506(e), and has furnished to the Purchaser a copy of any disclosures provided thereunder.

14

3.36 Notice of Disqualification Events. The Company will notify the Purchaser in writing, prior to the Closing Date of (i) any Disqualification Event relating to any Issuer Covered Person and (ii) any event that would, with the passage of time, reasonably be expected to become a Disqualification Event relating to any Issuer Covered Person, in each case of which it is aware.

3.37 Office of Foreign Assets Control. Neither the Company nor any Subsidiary nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC").

3.38 U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon Purchaser's request.

3.39 Bank Holding Company Act. Neither the Company nor any of its Subsidiaries or Affiliates is subject to the Bank Holding Company Act of 1956, as amended (the “BHCA”) and to regulation by the Board of Governors of the Federal Reserve System (the “Federal Reserve”). Neither the Company nor any of its Subsidiaries or Affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

3.40 Money Laundering. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the “Money Laundering Laws”), and no Action or Proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any Subsidiary, threatened.

ARTICLE IV. REPRESENTATIONS AND WARRANTIES OF PURCHASERS

4.1 Representations and Warranties of the Purchaser. Each Purchaser, for itself and for no other Purchaser, hereby represents and warrants as of the date hereof and as of the Closing Date to the Company as follows (unless as of a specific date therein):

4.2 Organization; Authority. The Purchaser is either an individual or an entity duly incorporated or formed, validly existing and in good standing under the laws of the jurisdiction of its incorporation or formation with full right, corporate, partnership, limited liability company or similar power and authority to enter into and to consummate the transactions contemplated by this Agreement and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and performance by the Purchaser of the transactions contemplated by this Agreement have been duly authorized by all necessary corporate, partnership, limited liability company or similar action, as applicable, on the part of the Purchaser. Each Transaction Document to which it is a party has been duly executed by the Purchaser, and when delivered by the Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of the Purchaser, enforceable against it in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors’ rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

15

4.3 Understandings or Arrangements. The Purchaser is acquiring the Securities as principal for its own account and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of such Securities (this representation and warranty not limiting the Purchaser’s right to sell the Securities in compliance with applicable federal and state securities laws). The Purchaser is acquiring the Securities hereunder in the ordinary course of its business. The Purchaser understands that the Securities are “restricted securities” and have not been registered under the Securities Act or any applicable state securities law and is acquiring such Securities as principal for its own account and not with a view to or for distributing or reselling such Securities or any part thereof in violation of the Securities Act or any applicable state securities law, has no present intention of distributing any of such Securities in violation of the Securities Act or any applicable state securities law and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of such Securities in violation of the Securities Act or any applicable state securities law (this representation and warranty not limiting the Purchaser’s right to sell such Securities in compliance with applicable federal and state securities laws).

4.4 Purchaser Status. At the time the Purchaser was offered the Securities, it was, and as of the date hereof it is, an accredited investor within the meaning of Rule 501 under the Securities Act. The Purchaser is not subject to any of the “Bad Actor” disqualifications described in Rule 506(d)(1)(i) to (viii) under the Securities Act (a “Disqualification Event”), except for a Disqualification Event covered by Rule 506(d)(2) or (d)(3).

4.5 Experience of the Purchaser. The Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. The Purchaser is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.

4.6 Access to Information. The Purchaser acknowledges that it has had the opportunity to review the Transaction Documents (including all exhibits and schedules thereto) and has been afforded, subject to Regulation FD, (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities; (ii) access to information about the Company and its financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (iii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment; provided, however, that the Purchaser has not requested nor been provided by the Company with any non-public information regarding the Company, its financial condition, results of operations, business, properties, management and prospects. The Purchaser acknowledges and agrees that neither the Company nor anyone else has provided the Purchaser with any information or advice with respect to the Securities nor is such information or advice necessary or desired.

16

4.7 Certain Transactions and Confidentiality. Other than consummating the transactions contemplated hereunder, the Purchaser has not, nor has any Person acting on behalf of or pursuant to any understanding with the Purchaser, directly or indirectly executed any purchases or sales, including Short Sales, of the securities of the Company during the period commencing as of the time that the Purchaser first received a term sheet (written or oral) from the Company or any other Person representing the Company setting forth the material terms of the transactions contemplated hereunder and ending immediately prior to the execution hereof. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of the Purchaser’s assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of the Purchaser’s assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement. Other than to other Persons party to this Agreement or to the Purchaser’s representatives, including, without limitation, its officers, directors, partners, legal and other advisors, employees, agents and Affiliates, the Purchaser has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Notwithstanding the foregoing, for avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to the identification of the availability of, or securing of, available shares to borrow in order to effect Short Sales or similar transactions in the future.

The Company acknowledges and agrees that the representations contained in this Article 4 shall not modify, amend or affect the Purchaser’s right to rely on the Company’s representations and warranties contained in this Agreement or any representations and warranties contained in any other Transaction Document or any other document or instrument executed and/or delivered in connection with this Agreement or the consummation of the transaction contemplated hereby.

ARTICLE V. OTHER AGREEMENTS OF THE PARTIES

5.1 Removal of Legends

The Shares, the Warrants and Warrant Shares may only be disposed of in compliance with state and federal securities laws. In connection with any transfer of the

Shares, Warrants or Warrant Shares other than pursuant to an effective registration statement or Rule 144, to the Company or to an Affiliate of a Purchaser or in connection with a pledge as contemplated in Section 5.1(b), the Company may require the transferor to provide to the Company an opinion of counsel selected by the transferor and reasonably acceptable to the Company at the cost of the Company, the form and substance of which opinion shall be reasonably satisfactory to the Company, to the effect that such transfer does not require registration of such transferred Shares, Warrants or Warrant Shares under the Securities Act.

(a) Each Purchaser agrees to the imprinting, so long as is required by this Section 5.1, of a legend on any of the Shares, the Warrants or Warrant Shares in the following form:

NEITHER THIS SECURITY NOR THE SECURITIES INTO WHICH THIS SECURITY IS EXERCISABLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS. THIS SECURITY AND THE SECURITIES ISSUABLE UPON EXERCISE OF THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT WITH A REGISTERED BROKER-DEALER OR OTHER LOAN WITH A FINANCIAL INSTITUTION THAT IS AN "ACCREDITED INVESTOR" AS DEFINED IN RULE 501(a) UNDER THE SECURITIES ACT OR OTHER LOAN SECURED BY SUCH SECURITIES.

17

(b) The Company acknowledges and agrees that a Purchaser may from time to time pledge pursuant to a bona fide margin agreement with a registered broker-dealer or grant a security interest in some or all of the Shares or Warrant Shares to a financial institution that is an "accredited investor" as defined in Rule 501(a) under the Securities Act and who agrees to be bound by the provisions of this Agreement and, if required under the terms of such arrangement, such Purchaser may transfer pledged or secured Shares or Warrant Shares to the pledgees or secured parties. Such a pledge or transfer would not be subject to approval of the Company and no legal opinion of legal counsel of the pledgee, secured party or pledgor shall be required in connection therewith. Further, no notice shall be required of such pledge. At the appropriate Purchaser's expense, the Company will execute and deliver such reasonable documentation as a pledgee or secured party of Shares and Warrant Shares may reasonably request in connection with a pledge or transfer of the Shares or Warrant Shares.

(c) Certificates evidencing the Shares and the Warrant Shares (or the Transfer Agent's records if held in book entry form) shall not contain any legend (including the legend set forth in Section 5.1(a) hereof): (i) while a registration statement covering the resale of such securities is effective under the Securities Act (the "Effective Date"), (ii) following any sale of such Shares or Warrant Shares pursuant to Rule 144, (iii) if such Shares or Warrant Shares are eligible for sale under Rule 144, without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such Shares or Warrant Shares and without volume or manner-of-sale restrictions or (iv) if such legend is not required under applicable requirements of the Securities Act (including Sections 4(a)(1) and 4(a)(7) judicial interpretations and pronouncements issued by the staff of the SEC). The Company shall, if any of the provisions in clause (i)–(iv) above are applicable, at its expense, cause its counsel to issue a legal opinion to the Transfer Agent promptly after the Effective Date if required by the Transfer Agent to effect the removal of the legend hereunder. If all or any portion of a Note is converted or a Warrant is exercised at a time when there is an effective registration statement to cover the resale of the Shares or the Warrant Shares, or if such Shares or Warrant Shares may be sold under Rule 144 and the Company is then in compliance with the current public information required under Rule 144, or if the Shares or Warrant Shares may be sold under Rule 144 without the requirement for the Company to be in compliance with the current public information required under Rule 144 as to such Shares or Warrant Shares and without volume or manner-of-sale restrictions or if such legend is not otherwise required under applicable requirements of the Securities Act (including Sections 4(a)(1) and 4(a)(7), judicial interpretations and pronouncements issued by the staff of the SEC) then such Shares or Warrant Shares shall be issued or reissued free of all legends. The Company agrees that following the effective date of any registration statement or at such time as such legend is no longer required under this Section 5.1(c), it will, no later than two Trading Days following the delivery by a Purchaser to the Company or the Transfer Agent of a certificate representing restricted Shares or Warrant Shares, as applicable, issued with a restrictive legend (such second Trading Day, the "Legend Removal Date"), deliver or cause to be delivered to such Purchaser a certificate representing such Shares or Warrant Shares that is free from all restrictive and other legends. The Company may not make any notation on its records or give instructions to the Transfer Agent that enlarge the restrictions on transfer set forth in this Section 5.1. Certificates for Shares or Warrant Shares subject to legend removal hereunder shall be transmitted by the Transfer Agent to the Purchaser by crediting the account of the Purchaser's prime broker with the Depository Trust Company system as directed by such Purchaser. The Company shall be responsible for any delays caused by its Transfer Agent.

18

(d) In addition to such Purchaser's other available remedies, (i) the Company shall pay to a Purchaser, in cash, as partial liquidated damages and not as a penalty, for each \$1,000 of the principal amount of the Notes being converted or the value of the Warrant Shares for which a Warrant is being exercised (based on the Warrant Exercise Price), \$20 per Trading Day for each Trading Day after the Legend Removal Date (increasing to \$20 per Trading Day after the fifth Trading Day) until such certificate is delivered without a legend. Nothing herein shall limit such Purchaser's right to pursue actual damages for the Company's failure to deliver certificates representing any Securities as required by the Transaction Documents, and such Purchaser shall have the right to pursue all remedies available to it at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief, and (ii) if after the Legend Removal Date such Purchaser purchases (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by such Purchaser of all or any portion of the number of shares of Common Stock, or a sale of a number of shares of Common Stock equal to all or any portion of the number of shares of Common Stock that such Purchaser anticipated receiving from the Company without any restrictive legend, then, the Company shall pay to such Purchaser, in cash, an amount equal to the excess of such Purchaser's total purchase price (including brokerage commissions and other out-of-pocket expenses, if any) for the shares of Common Stock so purchased (including brokerage commissions and other out-of-pocket expenses, if any) (the "Buy-In Price") over the product of (A) such number of Shares or Warrant Shares that the Company was required to deliver to such Purchaser by the Legend Removal Date multiplied by (B) the highest closing sale price of the Common Stock on any Trading Day during the period commencing on the date of the delivery by such Purchaser to the Company of the applicable Shares or Warrant Shares (as the case may be) and ending on the date of such delivery and payment under this Section 5.1(d).

(e) In the event a Purchaser shall request delivery of unlegended shares as described in this Section 5.1 and the Company is required to deliver such unlegended shares, (i) it shall pay all fees and expenses associated with or required by the legend removal and/or transfer including but not limited to legal fees, Transfer Agent fees and overnight delivery charges and taxes, if any, imposed by any applicable government upon the issuance of Common Stock; and (ii) the Company may not refuse to deliver unlegended shares based on any claim that such Purchaser or anyone associated or affiliated with such Purchaser has not complied with Purchaser's obligations under the Transaction Documents, or for any other reason, unless, an injunction or temporary restraining order from a court, on notice, restraining and or enjoining delivery of such unlegended shares shall have been sought and obtained by the Company and the Company has posted a surety bond for the benefit of such Purchaser in the amount of the greater of (i) 150% of the amount of the aggregate purchase price of the Shares (based on amount of principal and/or interest of the Note which was converted) and Warrant Shares (based on exercise price in effect upon exercise) which is subject to the injunction or temporary restraining order, or (ii) the VWAP of the Common Stock on the Trading Day before the issue date of the injunction multiplied by the number of unlegended shares to be subject to the injunction, which bond shall remain in effect until the completion of the litigation of the dispute and the proceeds of which shall be payable to such Purchaser to the extent Purchaser obtains judgment in Purchaser's favor.

5.2 Furnishing of Information.

(a) Until the earliest of the time that (i) no Purchaser owns Shares and Warrant Shares or (ii) the Warrants have expired, the Company covenants to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act even if the Company is not then subject to the reporting requirements of the Exchange Act.

(b) At any time during the period commencing from the six month anniversary of the date hereof and ending at such time on the earlier to occur that the Warrants are not outstanding, terminated or that all of the Warrant Shares (assuming cashless exercise) may be sold without the requirement for the Company to be in compliance with Rule 144(c)(1) and otherwise without restriction or limitation pursuant to Rule 144, if the Company (i) shall fail for any reason to satisfy the current public information requirement under Rule 144(c) for a period of more than 30 consecutive days or (ii) has ever been an issuer described in Rule 144(i)(1)(i) or becomes an issuer in the future, and the Company shall fail to satisfy any condition set forth in Rule 144(i)(2) for a period of more than 30 consecutive days (a "Public Information Failure") then, in addition to such Purchaser's other available remedies, the Company shall pay to a Purchaser, in cash, as partial liquidated damages and not as a penalty, by reason of any such delay in or reduction of its ability to sell the Shares and/or Warrant Shares, an amount in cash equal to two percent of the aggregate Note Conversion Price of such Purchaser's Note(s) and/or Warrant Exercise Price of such Purchaser's Warrants on the day of a Public Information Failure and on every 30th day (pro-rated for periods totaling less than thirty days) thereafter until the earlier of (a) the date such Public Information Failure is cured and (b) such time that such public information is no longer required for the Purchasers to transfer the Shares and/or Warrant Shares pursuant to Rule 144. Public Information Failure Payments shall be paid on the earlier of (i) the last day of the calendar month during which such Public Information Failure Payments are incurred and (ii) the second Trading Day after the event or failure giving rise to the Public Information Failure payments is cured. In the event the Company fails to make Public Information Failure payments in a timely manner, such Public Information Failure payments shall bear interest at the rate of one and one-half percent per month (prorated for partial months) until paid in full. Nothing herein shall limit such Purchaser's right to pursue actual damages for the Public Information Failure, and such Purchaser shall have the right to pursue all remedies available to it at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief.

5.3 Integration. The Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2(a)(1) of the Securities Act) that would be integrated with the offer or sale of the Securities for purposes of the rules and regulations of any Trading Market such that it would require stockholder approval prior to the closing of such other transaction unless stockholder approval is obtained before the closing of such subsequent transaction.

5.4 Securities Laws Disclosure; Publicity. The Company shall not publicly disclose the name of any Purchaser, or include the name of any Purchaser in any filing with the SEC or any regulatory agency or Trading Market, without the prior written consent of the Purchaser, except (a) as required by federal securities law in connection with the filing of final Transaction Documents with the SEC and (b) to the extent such disclosure is required by law or Trading Market regulations, in which case the Company shall provide the Purchaser with prior notice of such disclosure permitted under this clause (b).

5.5 Stockholder Rights Plan. No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that any Purchaser is an "Acquiring Person" under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement in effect or hereafter adopted by the Company, or that any Purchaser could be deemed to trigger the provisions of any such plan or arrangement, by virtue of receiving Securities under the Transaction Documents or under any other agreement between the Company and the Purchaser.

5.6 Non-Public Information. When the Company's Common Stock is quoted or listed on a Trading Market, to the extent that any notice provided pursuant to any Transaction Document or any other communications made by the Company, or information provided, to the Purchaser constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice or other material information with the SEC pursuant to a Current Report on Form 8-K. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company. In addition to any other remedies provided by this Agreement or other Transaction Documents, if the Company knowingly provides any material, non-public information to the Purchasers without their prior written consent, and it fails to immediately (no later than that Trading Day) file a Form 8-K, once it is required to do so, disclosing this material, non-public information, it shall pay the Purchasers as partial liquidated damages and not as a penalty a sum equal to \$1,000 per day for each \$100,000 of each Purchaser's Subscription Amount beginning with the day the information is disclosed to the Purchaser and ending and including the day the Form 8-K disclosing this information is filed.

5.7 Use of Proceeds. The Company shall use the net proceeds from the sale of the Securities hereunder for working capital purposes, and shall not use such proceeds: (a) for the satisfaction of any Indebtedness as defined in the Note, (b) for the redemption of any Common Stock or Common Stock Equivalents, (c) in violation of FCPA or OFAC regulations, or (d) to lend money, give credit, or make advances to any officers, directors, employees or affiliates of the Company.

5.8 Indemnification of Purchaser.

Subject to the provisions of this Section 5.8, the Company will indemnify and hold each Purchaser and its directors, officers, stockholders, members, partners, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title), each Person who controls the Purchaser (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, stockholders, agents, members, partners or employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of such controlling persons (each, a "Purchaser Party") harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys' fees and costs of investigation (including local counsel, if retained) that any such Purchaser Party may suffer or incur as a result of or relating to (a) any breach of any of the representations, warranties, covenants or agreements made by the Company in this Agreement or in the other Transaction Documents, (b) any action instituted against the Purchaser Parties in any capacity, or any of them or their respective Affiliates, by any stockholder of the Company who is not an Affiliate of such Purchaser Party, with respect to any of the transactions contemplated by the Transaction Documents (unless such action is solely based upon a breach of such Purchaser Party's representations, warranties or covenants under the Transaction Documents or any agreements or understandings such Purchaser Party may have with any such stockholder or any violations by such Purchaser Party of state or federal securities laws or any conduct by such Purchaser Party which constitutes fraud, gross negligence, willful misconduct or malfeasance) or (c) any untrue or alleged untrue statement of a material fact contained in any registration statement, any prospectus or any form of prospectus or in any amendment or supplement thereto or in any preliminary prospectus, or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading. If any action shall be brought against any Purchaser Party in respect of which indemnity may be sought pursuant to this Agreement, such Purchaser Party shall promptly notify the Company in writing, and the Company shall have the right to assume the defense thereof with counsel of its own choosing reasonably acceptable to the Purchaser Party. Any Purchaser Party shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Purchaser Party except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of counsel, a material conflict on any material issue between the position of the Company and the position of such Purchaser Party, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel (in addition to local counsel, if retained). The Company will not be liable to any Purchaser Party under this Agreement (y) for any settlement by a Purchaser Party effected without the Company's prior written consent, which shall not be unreasonably withheld or delayed; or (z) to the extent, but only to the extent that a loss, claim, damage or liability is attributable to any Purchaser Party's breach of any of the representations, warranties, covenants or agreements made by such Purchaser Party in this Agreement or in the other Transaction Documents. The Purchaser Parties shall have the right to settle any action against any of them by the payment of money provided that they cannot agree to any equitable relief and the Company, its officers, directors and Affiliates receive unconditional releases in customary form. The indemnification required by this Section 5.8 shall be made by periodic payments of the amount thereof during the investigation or defense, as and when bills are received or are incurred. The indemnity agreements contained herein shall be in addition to any cause of action or similar right of any Purchaser Party against the Company or others and any liabilities the Company may be subject to pursuant to law.

5.9 Settlement Without Consent if Failure to Reimburse. If an indemnified party shall have requested an indemnifying party to reimburse the indemnified party for reasonable fees and expenses of counsel, such indemnifying party agrees that it shall be liable for any settlement of the nature contemplated by Section 5.8 effected without its written consent if (1) such settlement is entered into more than 45 days after receipt by such indemnifying party of the aforesaid request, (2) such indemnifying party shall have received notice of the terms of such settlement at least 30 days prior to such settlement being entered into and (3) such indemnifying party shall not have reimbursed such indemnified party in accordance with such request prior to the date of such settlement.

5.10 Listing of Common Stock. The Company agrees, if the Company applies to have the Common Stock traded on any Trading Market, it will then include in such application all of the Shares, and will take such other action as is necessary to cause all of the Shares to be listed or quoted on such other Trading Market as promptly as possible. The Company will then take all action necessary to continue the listing and trading of its Common Stock on a Trading Market and will comply in all respects with the Company's reporting, filing and other obligations under the bylaws or rules of the Trading Market. The Company agrees to maintain the eligibility of the Common Stock for electronic transfer through the Depository Trust Company or another established clearing corporation, including, without limitation, by timely payment of fees to the Depository Trust Company or such other established clearing corporation in connection with such electronic transfer.

5.11 Senior Debt. The Company shall not issue any new indebtedness which is senior in rank to the Notes while the Notes are outstanding.

5.12 Certain Transactions and Confidentiality. The Purchaser covenants that neither it nor any Affiliate acting on its behalf or pursuant to any understanding with it will execute any purchases or sales, including Short Sales of any of the Company's securities during the period commencing with the execution of this Agreement and ending at such time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release. Each Purchaser covenants that until such time as the transactions contemplated by this Agreement are publicly disclosed by the Company pursuant to the initial press release, the Purchaser will maintain the confidentiality of the existence and terms of this transaction and the information included in the Disclosure Schedules. Notwithstanding the foregoing and notwithstanding anything contained in this Agreement to the contrary, the Company expressly acknowledges and agrees that (i) no Purchaser makes any representation, warranty or covenant hereby that it will not engage in effecting transactions in any securities of the Company after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release, (ii) no Purchaser shall be restricted or prohibited from effecting any transactions in any securities of the Company in accordance with applicable securities laws from and after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release and (iii) no Purchaser shall have any duty of confidentiality or duty not to trade in the securities of the Company to the Company or its Subsidiaries after the issuance of the initial press release. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of the Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of the Purchaser's assets, the covenant set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement.

22

5.13 Conversion Procedures. The forms of Conversion Notice included in the Notes set forth the totality of the procedures required of the Purchaser to exercise the Notes. No additional legal opinion, other information or instructions shall be required of the Purchaser to convert their Note. Without limiting the preceding sentences, no ink-original Conversion Notice shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Conversion Notice form be required to convert the Notes. The Company shall honor conversions of the Notes and shall deliver Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

5.14 DTC Program. For so long as any of the Notes are outstanding, the Company will employ as the Transfer Agent for the Common Stock and Shares a participant in the Depository Trust Company Automated Securities Transfer Program and cause the Common Stock to be transferable pursuant to such program.

5.15 Maintenance of Property. The Company shall keep all of its property necessary for the operations of its business, which is necessary or useful to the conduct of its business, in good working order and condition, ordinary wear and tear excepted.

5.16 Preservation of Corporate Existence. The Company shall preserve and maintain its corporate existence, rights, privileges and franchises in the jurisdiction of its incorporation, and qualify and remain qualified, as a foreign corporation in each jurisdiction in which such qualification is necessary in view of its business or operations and where the failure to qualify or remain qualified might reasonably have a Material Adverse Effect upon the financial condition, business or operations of the Company taken as a whole.

5.17 No Registration of Securities on Form S-1. Other than the registration rights provided hereunder, for the initial six months the Notes are outstanding, the Company will not file any registration statements on Form S-1. For the avoidance of doubt, the foregoing shall not prevent the Company from filing a Registration Statement on Form S-8 with respect to equity compensation plans.

5.18 Variable Rate Transactions. While any of the Notes are outstanding, the Company shall be prohibited from entering a Variable Rate Transaction without the prior consent of the holders of more than 50% in principal amount of the then outstanding Notes.

5.19 Registration Rights and Lock-Up Agreement.

(a) With respect to the Shares and Warrant Shares, the Company shall:

(1) With the next Registration Statement on Form S-1 filed by the Company, include the Registrable Securities in such Registration Statement and use its best efforts to cause the Registration Statement to become effective and remain effective as provided herein.

(2) Prepare and file with the SEC such amendments, including post-effective amendments, to the Registration Statement as may be necessary to keep the Registration Statement continuously effective as to the applicable Registrable Securities until such time as all of the Registrable Securities have been sold by the Holder or he is eligible to otherwise remove the restrictive legend and effect a sale other than through the Registration Statement.

(3) Use its best efforts to avoid the issuance of, or, if issued, obtain the withdrawal of, (i) any order suspending the effectiveness of the Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any U.S. jurisdiction, at the earliest practicable moment.

23

(4) Furnish to the Holder, without charge, at least one conformed copy of each Registration Statement and each amendment thereto, including financial statements and schedules, all documents incorporated or deemed to be incorporated therein by reference, and all exhibits to the extent requested by the Holder (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the SEC.

(b) The Purchaser agrees that, without the prior written consent of the Company, the Purchaser shall not, during the period ending 90 days after the date of the prospectus filed with the SEC in connection with the Registration Statement on Form S-1 described in Section 5.19(a): (1) offer, pledge, announce the intention to sell, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, or otherwise transfer or dispose of, directly or indirectly, any Registrable Securities or (2) enter into any swap or other agreement that transfers, in whole or in part, any of the economic consequences of ownership

**ARTICLE IV.
MISCELLANEOUS**

6.1 Termination. This Agreement may be terminated by the Purchaser by written notice to the other parties, if the Closing has not been consummated on or before [May 15], 2022; provided, however, that no such termination will affect the right of any party to sue for any breach by any other party (or parties).

6.2 Fees and Expenses. Except as expressly set forth below and in the Transaction Documents to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all Transfer Agent fees (including, without limitation, any fees required for same-day processing of any instruction letter delivered by the Company and any exercise notice delivered by a Purchaser), stamp taxes and other taxes and duties levied in connection with the delivery of any Securities to the Purchaser.

6.3 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, contain the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules.

6.4 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the date of transmission, if such notice or communication is delivered by email attachment at the email address as set forth on the signature pages attached hereto at or prior to 5:30 p.m. (Eastern Standard or Daylight Savings Time, as applicable) on a Trading Day, (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via email attachment at the email address as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second Trading Day following the date of transmission, if sent by U.S. nationally recognized overnight delivery service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall, if the Company's Common Stock is quoted or listed on a Trading Market, simultaneously file such notice with the SEC pursuant to a Current Report on Form 8-K, or which failure to do so will subject the Company to the liquidated damages provided for in Article 5.

24

6.5 Amendments; Waivers. Except as provided in the last sentence of this Section 6.5, no provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and a majority in interest of the outstanding balance of the Note or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right. Any amendment effected in accordance with accordance with this Section 6.5 shall be binding upon the Purchaser and holder of Securities and the Company.

6.6 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

6.7 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser. Each Purchaser may assign any or all of its rights under this Agreement to any Person to whom such Purchaser assigns or transfers any Securities, provided that such transferee agrees in writing to be bound, with respect to the transferred Securities, by the provisions of the Transaction Documents that apply to the Purchaser.

6.8 No Third-Party Beneficiaries. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except as otherwise set forth in Section 6.7 and this Section 6.8.

6.9 Governing Law; Exclusive Jurisdiction; Attorneys' Fees. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal Proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, stockholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the New York County, New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the New York County, New York for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any Action or Proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such Action or Proceeding is improper or is an inconvenient venue for such Proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such Action or Proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If any party shall commence an Action or Proceeding to enforce any provisions of the Transaction Documents, then, in addition to the obligations of the Company elsewhere in this Agreement, the prevailing party in such Action or Proceeding shall be reimbursed by the non-prevailing party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such Action or Proceeding.

6.10 Survival. The representations and warranties contained herein shall survive the Closing and the delivery of the Securities.

25

6.11 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. In the event that any signature is delivered by facsimile transmission or by e-mail delivery of a ".pdf" format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such facsimile or ".pdf" signature page were an original thereof.

6.12 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

6.13 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) any of the other Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then that Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company,

any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights; provided, however, that in the case of a rescission of a conversion of a Note, the Purchaser shall be required to return any Shares subject to any such rescinded Conversion Notice concurrently with the restoration of such Purchaser's right to acquire such shares pursuant to the Purchaser's Note.

6.14 Replacement of Securities. If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction without requiring the posting of any bond.

6.15 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each Purchaser and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any Action for specific performance of any such obligation the defense that a remedy at law would be adequate.

6.16 Payment Set Aside. To the extent that the Company makes a payment or payments to any Purchaser pursuant to any Transaction Document or a Purchaser enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

26

6.17 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Purchaser pursuant hereto or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights including, without limitation, the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any Proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. The Company has elected to provide all Purchasers with the same terms and Transaction Documents for the convenience of the Company and not because it was required or requested to do so by any of the Purchasers. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company and a Purchaser, solely, and not between the Company and the Purchasers collectively and not between and among the Purchasers.

6.18 Liquidated Damages. The Company's obligations to pay any partial liquidated damages or other amounts owing under the Transaction Documents is a continuing obligation of the Company and shall not terminate until all unpaid partial liquidated damages and other amounts have been paid notwithstanding the fact that the instrument or security pursuant to which such partial liquidated damages or other amounts are due and payable shall have been canceled.

6.19 Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Trading Day, then such action may be taken or such right may be exercised on the next succeeding Trading Day.

6.20 Construction. The parties agree that each of them and/or their respective counsel have reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments thereto. In addition, each and every reference to share prices and shares of Common Stock in any Transaction Document shall be subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

6.21 Waiver of jury trial. In any action, suit, or proceeding in any jurisdiction brought by any party against any other party, the parties each knowingly and intentionally, to the greatest extent permitted by applicable law, hereby absolutely, unconditionally, irrevocably and expressly waive forever trial by jury.

6.22 Non-Circumvention. The Company hereby covenants and agrees that the Company will not, by amendment of its Articles of Incorporation, including any Certificates of Designation, or Bylaws or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Agreement, and will at all times in good faith carry out all of the provision of this Agreement and take all action as may be required to protect the rights of all holders of the Securities. Without limiting the generality of the foregoing or any other provision of this Agreement or the other Transaction Documents, the Company (a) shall not increase the par value of any Shares issuable upon conversion of the Notes above the Note Conversion Price then in effect and (b) shall take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Shares upon the conversion of the Notes. Notwithstanding anything herein to the contrary, if after 180 days from the original issuance date, the Purchasers are not permitted to convert the Note, in full, for any reason, subject to the Purchaser's compliance with Rule 144 the Company shall use its best efforts to promptly remedy such failure, including, without limitation, obtaining such consent or approvals as necessary to permit such conversion or exercise.

(Signature Pages Follow)

27

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

BullFrog AI Holdings, Inc.

Address for Notice:

By: _____
Name: Vin Singh
Title: Chief Executive Officer

325 Ellington Blvd. #317
Gaithersburg, MD 20878

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGE FOR PURCHASER FOLLOWS]

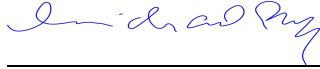
PURCHASER SIGNATURE PAGE TO

SECURITIES PURCHASE AGREEMENT

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: Bigger Capital Fund, LP

Signature of Authorized Signatory of Purchaser:



Name of Authorized Signatory: Michael Bigger

Title of Authorized Signatory: Managing Member of the GP

Email Address of Authorized Signatory: biggercapital@gmail.com

Facsimile Number of Authorized Signatory: _____

Address for Notice to Purchaser: 11700 West Charleston BLVD. #170-659
Las Vegas, NV, 89135

Address for Delivery of Securities to Purchaser (if not same as address for notice):

Face Value _____

Subscription Amount: \$250,000

EIN Number: 90-0131165

Purchaser Signature Page

EXHIBIT D
Form of Consent

BullFrog AI Holdings, Inc. (the "Company") has information or notice of a proposed event (collectively, the "Information") that it is either required to provide you pursuant to that certain Securities Purchase Agreement dated April [*], 2022 ("Agreement") between you and the Company or believes that you would be interested in obtaining.

If the Company is required to provide this Information to you under the Agreement, you acknowledge that receipt of this information may restrict you from trading in the Company's securities until this Information is made public in accordance with the Agreement.

If the Company is not required to provide this Information to you under the Agreement, you acknowledge that this may restrict you from trading in the Company's securities until this Information is made public in accordance with the Agreement. Provided, however, if the Company does not immediately file a Form 8-K publicly disclosing this Information, you shall be entitled to remedies under the Agreement including liquidated damages under Section 5.6.

Please respond in writing if you do or do not want to be provided with the Information. If the Company does not receive your response within three business days, we will have the right to assume that you have chosen not to receive the Information and, if applicable, waived your right to any piggyback registration rights, subsequent offering rights and any other rights provided for under the Agreements that require notice, for which this Information (including notice) is being given.

Please sign below and check the appropriate box below.

Sincerely,

BullFrog AI Holdings, Inc.

By: _____
Name: Vin Singh
Title: Chief Executive Officer

Yes. Please provide we with the Information

No. Do not provide me with the Information

Exhibit D

NEITHER THIS SECURITY NOR THE SECURITIES INTO WHICH THIS SECURITY IS CONVERTIBLE HAVE BEEN REGISTERED WITH THE SECURITIES AND EXCHANGE COMMISSION OR THE SECURITIES COMMISSION OF ANY STATE IN RELIANCE UPON AN EXEMPTION FROM REGISTRATION UNDER THE SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), AND, ACCORDINGLY, MAY NOT BE OFFERED OR SOLD EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO AN AVAILABLE EXEMPTION FROM, OR IN A TRANSACTION NOT SUBJECT TO, THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND IN ACCORDANCE WITH APPLICABLE STATE SECURITIES LAWS AS EVIDENCED BY A LEGAL OPINION OF COUNSEL TO THE TRANSFEROR TO SUCH EFFECT, THE SUBSTANCE OF WHICH SHALL BE REASONABLY ACCEPTABLE TO THE COMPANY. THIS SECURITY AND THE SECURITIES ISSUABLE UPON CONVERSION OF THIS SECURITY MAY BE PLEDGED IN CONNECTION WITH A BONA FIDE MARGIN ACCOUNT OR OTHER LOAN SECURED BY SUCH SECURITIES.

Original Issue Date: April [*], 2022

\$<Amount> Principal and Face Value

\$<Amount> Purchase Price and Subscription Amount

\$<Amount> Original Issue Discount

ORIGINAL ISSUE DISCOUNT CONVERTIBLE PROMISSORY NOTE

THIS ORIGINAL ISSUE DISCOUNT CONVERTIBLE PROMISSORY NOTE is duly authorized and validly issued at a 10% original issue discount by Bullfrog AI Holdings, Inc., a Nevada corporation (the “Company”) (the “Note”).

FOR VALUE RECEIVED, the Company promises to pay to <Holder Name>, or its permitted assigns (the “Holder”), the principal sum of <Amount> on October 31, 2022 (the “Maturity Date”) or such earlier date as this Note is required or permitted to be repaid as provided hereunder, and to pay interest to the Holder on the aggregate unconverted and then outstanding principal amount of this Note in accordance with the provisions hereof. This Note is subject to the following additional provisions:

Section 1. Definitions. For the purposes hereof, (a) capitalized terms not otherwise defined herein shall have the meanings set forth in the Purchase Agreement and (b) the following words and phrases shall have the following meanings:

“Alternate Consideration” shall have the meaning set forth in Section 5(e).

“Bankruptcy Event” means any of the following events: (a) the Company or any Subsidiary thereof commences a case or other proceeding under any bankruptcy, reorganization, arrangement, adjustment of debt, relief of debtors, dissolution, insolvency or liquidation or similar law of any jurisdiction relating to the Company or any Subsidiary thereof, (b) there is commenced against the Company or any Subsidiary thereof any such case or proceeding that is not dismissed within 60 days after commencement, (c) the Company or any Subsidiary thereof is adjudicated insolvent or bankrupt or any order of relief or other order approving any such case or proceeding is entered, (d) the Company or any Subsidiary thereof suffers any appointment of any custodian or the like for it or any substantial part of its property that is not discharged or stayed within 60 calendar days after such appointment, (e) the Company or any Subsidiary thereof makes a general assignment for the benefit of creditors, (f) the Company or any Subsidiary thereof calls a meeting of its creditors with a view to arranging a composition, adjustment or restructuring of its debts or (g) the Company or any Subsidiary thereof, by any act or failure to act, expressly indicates its consent to, approval of or acquiescence in any of the foregoing or takes any corporate or other action for the purpose of effecting any of the foregoing.

“Base Conversion Price” shall have the meaning set forth in Section 5(b).

“Beneficial Ownership Limitation” shall have the meaning set forth in Section 4(f).

“Black Scholes Value” means the value of the outstanding principal amount of this Note, plus all accrued and unpaid interest hereon based on the Black and Scholes Option Pricing Model obtained from the “OV” function on Bloomberg L.P. (“Bloomberg”) determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Maturity Date, (B) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg as of the Trading Day immediately following the public announcement of the applicable Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (D) a remaining option time equal to the time between the date of the public announcement of the applicable Fundamental Transaction and the Maturity Date.

“Buy-In” shall have the meaning set forth in Section 4(d)(v).

“Change of Control Transaction” means the occurrence after the date hereof of any of (a) an acquisition after the date hereof by an individual or legal entity or “group” (as described in Rule 13d-5(b)(1) promulgated under the Exchange Act) of effective control (whether through legal or beneficial ownership of capital stock of the Company, by contract or otherwise) of in excess of 50% of the voting securities of the Company (other than by means of conversion, exercise or exchange of this Note or the Warrants issued together with this Note), (b) the Company merges into or consolidates with any other Person, or any Person merges into or consolidates with the Company and, after giving effect to such transaction, the shareholders of the Company immediately prior to such transaction own less than 50% of the aggregate voting power of the Company or the successor entity of such transaction, (c) the Company sells or transfers all or substantially all of its assets to another Person, (d) a replacement at one time or within a three year period of more than one-half of the members of the Board of Directors which is not approved by a majority of those individuals who are members of the Board of Directors on the Original Issue Date (or by those individuals who are serving as members of the Board of Directors on any date whose nomination to the Board of Directors was approved by a majority of the members of the Board of Directors who are members on the date hereof), or (d) the execution by the Company of an agreement to which the Company is a party or by which it is bound, providing for any of the events set forth in clauses (a) through (d) above.

“Conversion” shall have the meaning ascribed to such term in Section 4.

“Conversion Date” shall have the meaning set forth in Section 4(a).

“Conversion Price” shall have the meaning set forth in Section 4(c).

“Conversion Shares” means, collectively, the shares of Common Stock issuable upon conversion of this Note in accordance with the terms hereof.

“Default Interest Rate” shall have the meaning set forth in Section 2(a).

“Dilutive Issuance” shall have the meaning set forth in Section 5(b).

“Dilutive Issuance Notice” shall have the meaning set forth in Section 5(b)(5).

2

“DWAC” means the Deposit or Withdrawal at Custodian system at The Depository Trust Company.

“Event of Default” shall have the meaning set forth in Section 7(a).

“Exchange Act” means the Securities Exchange Act of 1934, and the rules and regulations promulgated thereunder.

“Fundamental Transaction” shall have the meaning set forth in Section 5(e).

“IPO” shall have the meaning set forth in Section 4(b).

“Liens” shall have the meaning set forth in the Purchase Agreement.

“Note Register” shall have the meaning set forth in Section 3(c).

“Notice of Conversion” shall have the meaning set forth in Section 4(a).

“Mandatory Default Amount” shall have the meaning set forth in Section 7(b).

“Option Value” means the value of a Common Stock Equivalent based on the Black Scholes Option Pricing model obtained from the “OV” function on Bloomberg determined as of (A) the Trading Day prior to the public announcement of the issuance of the applicable Common Stock Equivalent, if the issuance of such Common Stock Equivalent is publicly announced or (B) the Trading Day immediately following the issuance of the applicable Common Stock Equivalent if the issuance of such Common Stock Equivalent is not publicly announced, for pricing purposes and reflecting (i) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the remaining term of the applicable Common Stock Equivalent as of the applicable date of determination, (ii) an expected volatility equal to the greater of 100% and the 100 day volatility obtained from the HVT function on Bloomberg as of (A) the Trading Day immediately following the public announcement of the applicable Common Stock Equivalent if the issuance of such Common Stock Equivalent is publicly announced or (B) the Trading Day immediately following the issuance of the applicable Common Stock Equivalent if the issuance of such Common Stock Equivalent is not publicly announced, (iii) the underlying price per share used in such calculation shall be the highest VWAP of the Common Stock during the period beginning on the Trading Day prior to the execution of definitive documentation relating to the issuance of the applicable Common Stock Equivalent and ending on (A) the Trading Day immediately following the public announcement of such issuance, if the issuance of such Common Stock Equivalent is publicly announced or (B) the Trading Day immediately following the issuance of the applicable Common Stock Equivalent if the issuance of such Common Stock Equivalent is not publicly announced, (iv) a zero cost of borrow and (v) a 360 day annualization factor.

“Original Issue Date” means the date of the first issuance of this Note, regardless of any transfers of this Note and regardless of the number of instruments which may be issued to evidence this Note.

“Permitted Indebtedness” means (a) the indebtedness evidenced by this Note, (b) senior secured non-convertible loans from traditional commercial banks with interest per annum not to exceed 12%, (c) capital lease obligations and purchase money indebtedness incurred in connection with the acquisition of machinery and equipment as long as such capital leases and indebtedness are approved in advance by the Holder and (d) the Indebtedness set forth on Schedule 3.27 to the Purchase Agreement.

3

“Permitted Lien” means the individual and collective reference to the following: (a) Liens for taxes, assessments and other governmental charges or levies not yet due or Liens for taxes, assessments and other governmental charges or levies being contested in good faith and by appropriate proceedings for which adequate reserves (in the good faith judgment of the management of the Company) have been established in accordance with GAAP, (b) Liens imposed by law which were incurred in the ordinary course of the Company’s business, such as carriers’, warehousemen’s and mechanics’ Liens, statutory landlords’ Liens, and other similar Liens arising in the ordinary course of the Company’s business, and which (x) do not individually or in the aggregate materially detract from the value of such property or assets or materially impair the use thereof in the operation of the business of the Company and its consolidated Subsidiaries or (y) are being contested in good faith by appropriate proceedings, which proceedings have the effect of preventing for the foreseeable future the forfeiture or sale of the property or asset subject to such Lien, (c) Liens incurred in connection with Permitted Indebtedness under clauses (a) through (d) thereunder, and Liens set forth on Schedule 3.1(aa) to the Purchase Agreement.

“Purchase Agreement” means the Securities Purchase Agreement, dated as of April [*], 2022, among the Company and the original Holders, as amended, modified or supplemented from time to time in accordance with its terms.

“Share Delivery Date” shall have the meaning set forth in Section 4(d)(ii).

“Successor Entity” shall have the meaning set forth in Section 5(e)(2).

“Transaction Documents” means the Note, the Purchase Agreement and the Warrant.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Common Stock is then listed or quoted on a Trading Market, the daily volume weighted average price of the Common Stock for such date (or the nearest preceding date) on the Trading Market on which the Common Stock is then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)) (or a similar organization or agency succeeding to its functions of reporting prices), (b) if no volume weighted average price of the Common Stock is reported for the Trading Market, the most recent bid price per share of the Common Stock so reported, or (c) in all other cases, the fair market value of a share of Common Stock as determined by an independent appraiser selected in good faith by the Holder and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

Section 2. Interest.

Interest shall accrue to the Holder on the aggregate unconverted and then outstanding principal amount of this Note at the rate of 6% per annum, calculated on the basis of a 360-day year and shall accrue daily commencing on the Original Issue Date until payment in full of the outstanding principal (or conversion to the extent applicable), together with all accrued and unpaid interest, liquidated damages and other amounts which may become due hereunder, has been made. During the existence of an Event of Default, interest shall accrue at the lesser of (i) the rate of 18% per annum, or (ii) the maximum amount permitted by law (the lesser of clause (i) or (ii), the “Default Interest Rate”). Once an Event of Default is cured, the interest rate shall return to 6%.

Section 3. Registration of Transfers and Exchanges.

(a) Different Denominations. This Note is exchangeable for an equal aggregate principal amount of Notes of different authorized denominations, as requested by the Holder surrendering the same. No service charge or other fees will be payable for such registration of transfer or exchange.

(b) Investor Representations. This Note has been issued subject to certain investment representations of the original Holder set forth in the Purchase Agreement and may be transferred or exchanged only in compliance with the Purchase Agreement and applicable federal and state securities laws and regulations.

4

(c) Reliance on Note Register. Prior to due presentment for transfer to the Company of this Note, the Company and any agent of the Company may treat the Person in whose name this Note is duly registered on the Note Register as the owner hereof for the purpose of receiving payment as herein provided and for all other purposes, whether or not this Note is overdue, and neither the Company nor any such agent shall be affected by notice to the contrary.

Section 4. Conversion.

(a) Voluntary Conversion. After the Original Issue Date until this Note is no longer outstanding, this Note shall be convertible, in whole or in part, at any time, and from time to time, into Conversion Shares at the option of the Holder. The Holder shall effect conversions by delivering to the Company a Notice of Conversion, the form of which is attached hereto as Annex A (each, a "Notice of Conversion"), specifying therein the principal amount of this Note to be converted and the date on which such conversion shall be effected (such date, the "Conversion Date"). If no Conversion Date is specified in a Notice of Conversion, the Conversion Date shall be the date that such Notice of Conversion is deemed delivered hereunder. No ink-original Notice of Conversion shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Conversion form be required. To effect conversions hereunder, the Holder shall not be required to physically surrender this Note to the Company unless the entire principal amount of this Note, plus all accrued and unpaid interest thereon, has been so converted. Conversions hereunder shall have the effect of lowering the outstanding principal amount of this Note in an amount equal to the applicable conversion. The Holder and the Company shall maintain records showing the principal amount(s) converted in each conversion, the date of each conversion, and the Conversion Price in effect at the time of each conversion. The Company may deliver an objection to any Notice of Conversion within two Trading Days of delivery of such Notice of Conversion. In the event of any dispute or discrepancy, the records of the Holder shall be controlling and determinative in the absence of manifest error. **The Holder, and any assignee by acceptance of this Note, acknowledge and agree that, by reason of the provisions of this paragraph, following conversion of a portion of this Note, the unpaid and unconverted principal amount of this Note may be less than the amount stated on the face hereof.**

(b) Mandatory Conversion. This Note shall convert into Conversion Shares upon the completion of an initial public offering by the Company that results in a listing of the Company's Common Stock on a national securities exchange (the "IPO").

(c) Conversion Price. The "Conversion Price" shall be at the lesser of a 20% discount to the IPO price or a \$27 million pre-money valuation. All such Conversion Price determinations are to be appropriately adjusted for any stock dividend, stock split, stock combination, reclassification or similar transaction that proportionately decreases or increases the Common Stock.

(d) Mechanics of Conversion or Prepayment.

(i) Conversion Shares Issuable Upon Conversion of Principal Amount. The number of Conversion Shares issuable upon a conversion hereunder shall be determined by the quotient obtained by dividing (x) the outstanding principal amount of this Note to be converted by (y) the Conversion Price in effect at the time of such conversion.

(ii) Delivery of Certificate Upon Conversion. Not later than two Trading Days after each Conversion Date (the "Share Delivery Date"), the Company shall deliver, or cause to be delivered, to the Holder any certificate or certificates required to be delivered by the Company under this Section 4(d) which shall be free of restrictive legends and trading restrictions except as provided by the Securities Act (other than those which may then be required by the Purchase Agreement) and such shares shall be delivered electronically through the Depository Trust Company or another established clearing corporation performing similar functions.

5

(iii) Failure to Deliver Conversion Shares. If, in the case of any Notice of Conversion, such Conversion Shares are not delivered to or as directed by the applicable Holder by the Share Delivery Date, the Holder shall be entitled to elect by written notice to the Company at any time on or before its receipt of such Conversion Shares, to rescind such conversion, in which event the Company shall promptly return to the Holder any original Note delivered to the Company.

(iv) Obligation Absolute; Partial Liquidated Damages. The Company's obligations to issue and deliver the Conversion Shares upon conversion of this Note in accordance with the terms hereof, are absolute and unconditional, irrespective of any action or inaction by the Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Holder or any other Person of any obligation to the Company or any violation or alleged violation of law by the Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Company to the Holder in connection with the issuance of such Conversion Shares. In the event the Holder of this Note shall elect to convert any or all of the outstanding principal amount hereof, the Company may not refuse conversion based on any claim that the Holder or anyone associated or affiliated with the Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to Holder, restraining and or enjoining conversion of all or part of this Note shall have been sought and obtained, and the Company posts a surety bond for the benefit of the Holder in accordance with Section 5.1(d) of the Purchase Agreement. The exercise of any such rights shall not prohibit the Holder from seeking to collect damages under this Note, the Purchase Agreement or under applicable law.

(v) Compensation for Buy-In on Failure to Timely Deliver Conversion Shares Upon Conversion. In addition to any other rights available to the Holder, if the Company fails for any reason to deliver to the Holder such Conversion Shares by the Share Delivery Date pursuant to Section 4(d)(ii), and if after such Share Delivery Date the Holder is required by its brokerage firm to purchase (in an open market transaction or otherwise), or the Holder's brokerage firm otherwise purchases, shares of Common Stock to deliver in satisfaction of a sale by the Holder of the Conversion Shares which the Holder was entitled to receive upon the conversion relating to such Share Delivery Date (a "Buy-In"), then the Company shall have the remedies provided for in accordance with Section 5.1(d) of the Purchase Agreement. Nothing herein or therein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver Conversion Shares upon conversion of this Note as required pursuant to the terms hereof.

(vi) Fractional Shares. No fractional shares or scrip representing fractional shares shall be issued upon the conversion of this Note. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such conversion, the Company shall at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round up to the next whole share.

(vii) Transfer Taxes and Expenses. The issuance of Conversion Shares on conversion of this Note shall be made without charge to the Holder hereof for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Conversion and all fees to the Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Conversion Shares.

6

(viii) Attorneys' Fees etc. The Company shall (A) pay the reasonable fees of the law firm of the Holder's choice (in an amount not to exceed \$500 per opinion) in connection with the conversion of the Note, (B) cause its attorneys to promptly provide any reliance opinion to the Transfer Agent, and (C) pay the Holder the sums required under Section 4(d)(iv).

(e) Holder's Conversion Limitations. The Company shall not effect any conversion of this Note, and a Holder shall not have the right to convert any portion of this Note, to the extent that after giving effect to the conversion set forth on the applicable Notice of Conversion, the Holder (together with the Holder's Affiliates, and any Persons acting as a group together with the Holder or any of the Holder's Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of shares of Common Stock beneficially owned by the Holder and its Affiliates shall include the number of shares of Common Stock issuable upon conversion of this Note with respect to which such determination is being made, but shall exclude the number of shares of Common Stock which are issuable upon (i) conversion of the remaining, unconverted principal amount of this Note beneficially owned by the Holder or any of its Affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company subject to a limitation on conversion or exercise analogous to the limitation contained herein (including, without limitation, any other Notes or the Warrants) beneficially owned by the Holder or any of its Affiliates. Except as set forth in the preceding sentence, for purposes of this Section 4(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. To the extent that the limitation contained in this Section 4(e) applies, the determination of whether this Note is convertible (in relation to other securities owned by the Holder together with any Affiliates) and of which principal amount of this Note is convertible shall be in the sole discretion of the Holder, and the submission of a Notice of Conversion shall be deemed to be the Holder's determination of whether this Note may be converted (in relation to other securities owned by the Holder together with any Affiliates) and which principal amount of this Note is convertible, in each case subject to the Beneficial Ownership Limitation. To ensure compliance with this restriction, the Holder will be deemed to represent to the Company each time it delivers a Notice of Conversion that such Notice of Conversion has not violated the restrictions set forth in this Section 4(e) and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 4(e), in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as stated in the most recent of the following: (i) the Company's most recent periodic or annual report filed with the SEC, as the case may be, (ii) a more recent public announcement by the Company, or (iii) a more recent written notice by the Company or the Company's transfer agent setting forth the number of shares of Common Stock outstanding. Upon the written or oral request of a Holder, the Company shall within two Trading Days confirm orally and in writing to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Note, by the Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was reported. The "Beneficial Ownership Limitation" shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock issuable upon conversion of this Note held by the Holder. The Holder, upon not less than 61 days' prior notice to the Company, may increase the Beneficial Ownership Limitation provisions of this Section 4(e) to 9.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon conversion of this Note held by the Holder. In all events, the provisions of this Section 4(e) shall continue to apply. Any such increase or decrease will not be effective until the 61st day after such notice is delivered to the Company. The Holder may also decrease the Beneficial Ownership Limitation provisions of this Section 4(e) solely with respect to the Holder's Note at any time, which decrease shall be effectively immediately upon delivery of notice to the Company. The Beneficial Ownership Limitation provisions of this Section 4(e) shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 4(e) to correct any portion which may be defective or inconsistent with the intended Beneficial Ownership Limitation contained herein or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this Section 4(d) shall apply to a successor holder of this Note.

7

Section 5. Certain Adjustments.

(a) Stock Dividends and Stock Splits. If the Company, at any time while this Note is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock on shares of Common Stock or any Common Stock Equivalents, (ii) subdivides outstanding shares of Common Stock into a larger number of shares, (iii) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares or (iv) issues, in the event of a reclassification of shares of the Common Stock, any shares of capital stock of the Company, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Company) outstanding immediately before such event, and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event. Any adjustment made pursuant to this Section 5(a) shall become effective immediately after the record date for the determination of shareholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

(b) Subsequent Equity Sales. (1) At any time, for so long as the Note or any amounts accrued and payable thereunder remain outstanding, the Company or any Subsidiary, as applicable, sells or grants any option to purchase or sells or grants any right to reprice, or otherwise disposes of or issues (or announces any sale, grant or any option to purchase or other disposition), any Common Stock or Common Stock Equivalents entitling any Person to acquire shares of Common Stock at an effective price per share that is lower than the Conversion Price then in effect (such lower price, the "Base Conversion Price" and each such issuance or announcement a "Dilutive Issuance"), then the Conversion Price shall be immediately reduced to equal the Base Conversion Price. Such adjustment shall be made whenever such Common Stock or Common Stock Equivalents are issued.

(2) If any Common Stock Equivalent is amended or adjusted, and such price as so amended shall be less than the Conversion Price in effect at the time of such amendment or adjustment, then the Conversion Price shall be adjusted upon each such issuance or amendment as provided in this Section 5(b). In case any Common Stock Equivalent is issued in connection with the issue or sale of other securities of the Company, together comprising one integrated transaction, (x) the Common Stock Equivalents will be deemed to have been issued for the Option Value of such Common Stock Equivalents and (y) the other securities issued or sold in such integrated transaction shall be deemed to have been issued or sold for the difference of (I) the aggregate consideration received by the Company less any consideration paid or payable by the Company pursuant to the terms of such other securities of the Company, less (II) the Option Value. If any shares of Common Stock or Common Stock Equivalents are issued or sold or deemed to have been issued or sold for cash, the amount of such consideration received by the Company will be deemed to be the net amount received by the Company therefor. If any shares of Common Stock or Common Stock Equivalents are issued or sold for a consideration other than cash, the amount of such consideration received by the Company will be the fair value of such consideration, except where such consideration consists of publicly traded securities, in which case the amount of consideration received by the Company will be the average VWAP of such public traded securities for the ten days prior to the date of receipt. If any shares of Common Stock or Common Stock Equivalents are issued to the owners of the non-surviving entity in connection with any merger in which the Company is the surviving entity, the amount of consideration therefor will be deemed to be the fair value of such portion of the net assets and business of the non-surviving entity as is attributable to such shares of Common Stock or Common Stock Equivalents, as the case may be.

8

(3) If the holder of Common Stock or Common Stock Equivalents outstanding on the Original Issue Date or issued after the Original Issuance Date shall at any time, whether by operation of purchase price adjustments, reset provisions, floating conversion, exercise or exchange prices or otherwise, or due to warrants, options or rights per share which are issued in connection with such issuance, be entitled to receive shares of Common Stock at an effective price per share that is lower than the Conversion Price then in effect, such issuance shall be deemed to have occurred for less than the Conversion Price on such date and such issuance shall be deemed to be a Dilutive Issuance.

(4) If the Company enters into a Variable Rate Transaction despite the prohibition set forth in the Purchase Agreement, the Company shall be deemed to have issued Common Stock or Common Stock Equivalents at the lowest possible conversion price at which such securities may be converted or exercised under the terms of such Variable Rate Transaction.

(5) The Company shall notify the Holder in writing, no later than the Trading Day following the issuance of any Common Stock or Common Stock Equivalents subject to this Section 5(b), indicating therein the applicable issuance price, or applicable reset price, exchange price, conversion price and other pricing terms (such notice, the “Dilutive Issuance Notice”). For purposes of clarification, whether or not the Company provides a Dilutive Issuance Notice pursuant to this Section 5(b), upon the occurrence of any Dilutive Issuance, the Holder is entitled to receive a number of Conversion Shares based upon the Base Conversion Price on or after the date of such Dilutive Issuance, regardless of whether the Holder accurately refers to the Base Conversion Price in the Notice of Conversion.

(6) The provisions of this Section 5(b) shall apply each time a Dilutive Issuance occurs after the Original Issue Date for so long as the Note or any amounts accrued and payable thereunder remain outstanding, but any adjustment of the Conversion Price pursuant to this Section 5(b) shall be downward only.

(7) The provisions of this Section 5(b) shall not apply to Exempt Issuances.

(c) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 5(a) above, if at any time the Company grants, issues or sells any Common Stock, Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of shares of Common Stock (the “Purchase Rights”), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of this Note (without regard to any limitations on conversion hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, to the extent that the Holder’s right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such shares of Common Stock as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

9

(d) Pro Rata Distributions. During such time as this Note is outstanding, if the Company shall declare or make any dividend or other distribution of its assets or rights or warrants to acquire its assets, or subscribe for or purchase any security other than Common Stock, to holders of shares of Common Stock, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (a “Distribution”), at any time after the issuance of this Note, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete conversion of this Note (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution (provided, however, to the extent that the Holder’s right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation with respect to the Company or any other publicly-traded corporation subject to Section 13(d) of the Exchange Act, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any shares of Common Stock as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation with respect to the Company or any other publicly-traded corporation subject to Section 13(d) of the Exchange Act).

(e) Fundamental Transaction. (1) If, at any time while this Note is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Common Stock are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Common Stock, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property, (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a “Fundamental Transaction”), then, upon any subsequent conversion of this Note, the Holder shall have the right to receive, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction (without regard to any limitation on the conversion of this Note), the number of shares of Common Stock of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of shares of Common Stock for which this Note is convertible immediately prior to such Fundamental Transaction (without regard to any limitation on the conversion of this Note). For purposes of any such conversion, the determination of the Conversion Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Company shall apportion the Conversion Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Note following such Fundamental Transaction. The Company shall not effect a Fundamental Transaction unless it gives the Holder at least 10 Trading Days prior notice together with sufficient details so the Holder can make an informed decision as to whether it elects to accept the Alternate Consideration. If a public announcement of the Fundamental Transaction has not been made, the notice to the Holder may not be given until the Company files a Form 8-K or other report disclosing the Fundamental Transaction.

10

(2) Notwithstanding anything to the contrary, provided that the Warrant Shares are not registered under an effective registration statement, in the event of a Fundamental Transaction that is (x) an all cash transaction, (y) a “Rule 13e-3 transaction” as defined in Rule 13e-3 under the Exchange Act, or (z) a Fundamental Transaction involving a person or entity not traded on a national securities exchange or trading market (with such exchange or market including, without limitation, the Nasdaq Global Select Trading Market, the Nasdaq Global Market, or the Nasdaq Capital Market, the New York Stock Exchange, Inc., the NYSE American or any market operated by the OTC Markets, Inc.), the Company or any Successor Entity (as defined below) shall, at the Holder’s option, concurrently with the consummation of the Fundamental Transaction, purchase this Note from the Holder by paying to the Holder the higher of (i) an amount of cash equal to the Black Scholes Value of the outstanding principal of this Note on the date of the consummation of such Fundamental Transaction, or (ii) the product of (a) the number of Conversion Shares issuable upon full conversion of this Note (without regard to any limitation on conversion of this Note) and (b) the positive difference between the cash per share paid in such Fundamental Transaction minus the then in effect Conversion Price. (3)

(3) If Section 5(e)(1) and (2) are not applicable, the Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Company under this Note and the other Transaction Documents in accordance with the provisions of this Section 5(e) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Note a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Note which is convertible for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the shares of Common Stock acquirable and receivable upon conversion of this Note (without regard to any limitations on the conversion of this Note) prior to such Fundamental Transaction, and with a conversion price which applies the Conversion Price hereunder to such shares of capital stock (but taking into account the relative value of the shares of Common Stock pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such conversion price being for the purpose of protecting the economic value of this Note immediately prior to the consummation of such Fundamental Transaction), and

which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Note and the other Transaction Documents referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Note and the other Transaction Documents with the same effect as if such Successor Entity had been named as the Company herein. Notwithstanding anything in this Section 5(e), an Exempt Issuance (as defined in the Purchase Agreement) shall not be deemed a Fundamental Transaction.

(f) Calculations. All calculations under this Section 5 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 5, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Company) issued and outstanding.

(g) Notice to the Holder.

(i) Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 5, the Company shall promptly deliver to each Holder a notice setting forth the Conversion Price after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

11

(ii) Notice to Allow Conversion by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on its Common Stock, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of its Common Stock, (C) the Company shall authorize the granting to all holders of its Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any shareholders of the Company shall be required in connection with any reclassification of its Common Stock, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby its Common Stock is converted into other securities, cash or property or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be filed at each office or agency maintained for the purpose of conversion of this Note, and shall cause to be delivered to the Holder at its last address as it shall appear upon the Note Register, at least 5 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of its Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of its Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries (as determined in good faith by the Company), the Company or its successor shall simultaneously file such notice with the SEC pursuant to a Current Report on Form 8-K. If the Company does not simultaneously file the required Form 8-K, the Holder shall be entitled penalties in accordance with Section 5.6 of the Purchase Agreement. The Holder shall remain entitled to convert this Note during the 20-day period commencing on the date of such notice through the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 6. Negative Covenants. As long as any portion of this Note remains outstanding, unless the holders of at least 50% in principal amount of the then outstanding Notes shall have otherwise given prior written consent, the Company shall not, and shall not permit any of the Subsidiaries to, directly or indirectly:

(a) other than Permitted Indebtedness, enter into, create, incur, assume, guarantee or suffer to exist any indebtedness for borrowed money of any kind, including, but not limited to, a guarantee, on or with respect to any of its property or assets now owned or hereafter acquired or any interest therein or any income or profits therefrom;

(b) other than Permitted Liens, enter into, create, incur, assume or suffer to exist any Liens of any kind, on or with respect to any of its property or assets now owned or hereafter acquired or any interest therein or any income or profits therefrom;

(c) amend its charter documents, including, without limitation, its articles of incorporation and bylaws, in any manner that materially and adversely affects any rights of the Holder, increases in authorized shares and stock splits shall not be deemed to materially and adversely affects any rights of the Holder;

(d) purchase or otherwise acquire more than a de minimis number of shares of its Common Stock or Common Stock Equivalents;

12

(e) repay, or offer to repay, any Indebtedness, other than Permitted Indebtedness, as such terms Indebtedness and Permitted Indebtedness are in effect as of the Original Issue Date;

(f) pay cash dividends or distributions on any equity securities of the Company;

(g) enter into any transaction with any Affiliate of the Company which would be required to be disclosed in any public filing with the SEC assuming that the Company is subject to the Securities Act or the Exchange Act, unless such transaction is made on an arm's-length basis and expressly approved by a majority of the disinterested directors of the Company (even if less than a quorum otherwise required for board approval);

(h) issue any equity securities of the Company other than pursuant to the provisions of the Purchase Agreement or an Exempt Issuance; or

(i) enter into any agreement with respect to any of the foregoing.

Section 7. Events of Default

(a) "Event of Default" means, wherever used herein, any of the following events (whatever the reason for such event and whether such event shall be voluntary or involuntary or effected by operation of law or pursuant to any judgment, decree or order of any court, or any order, rule or regulation of any administrative or governmental body):

(i) any default in the payment of (A) principal and interest payment under this Note or any other Indebtedness, or (B) late fees, liquidated damages and other amounts owing to the Holder of this Note, as and when the same shall become due and payable (whether on a Conversion Date, or the Maturity Date, or by acceleration or otherwise), which default, solely in the case of a default under clause (B) above, is not cured within five Trading Days;

(ii) the Company shall fail to observe or perform any other covenant or agreement contained in this Note (other than a breach by the Company of its obligations to deliver Conversion Shares, which breach is addressed in clause (x) below) or any Transaction Document which failure is not cured, if possible to cure, within the earlier to occur of 15 Trading Days after notice of such failure is sent by the Holder or by any other Holder to the Company and (B) 10 Trading Days after the Company has become aware of such failure;

(iii) except for payment defaults covered under Section 7(a)(i), the Company shall breach, or a default or event of default (subject to any grace or cure period

provided in the applicable agreement, document or instrument) shall occur under, (A) any of the Transaction Documents or (B) any other material agreement, lease, document or instrument to which the Company or any Subsidiary is obligated (and not covered by any other clause of this Section 7) which default or event of default if not cured, if possible to cure, within the earlier to occur of (i) 10 Trading Days after notice of such default sent by Holder or by any other holder to the Company and (ii) five Trading Days after the Company has become aware of such default;

(iv) any representation or warranty made in this Note, any other Transaction Document, any written statement pursuant hereto or thereto or any other report, financial statement or certificate made or delivered to the Holder or any other Holder shall be untrue or incorrect in any material respect as of the date when made or deemed made, which failure is not cured, if possible to cure, within the earlier to occur of 10 Trading Days after notice of such failure is sent by the Holder or by any other Holder to the Company;

13

(v) the Company or any Subsidiary shall be subject to a Bankruptcy Event;

(vi) the Company or any Subsidiary shall: (A) apply for or consent to the appointment of a receiver, trustee, custodian or liquidator of it or any of its properties; (B) admit in writing its inability to pay its debts as they mature; (C) make a general assignment for the benefit of creditors; (D) be adjudicated as bankrupt or insolvent or be the subject of an order for relief under Title 11 of the United States Code or any bankruptcy, reorganization, insolvency, readjustment of debt, dissolution or liquidation law or statute of any other jurisdiction or foreign country; or (E) file a voluntary petition in bankruptcy, or a petition or an answer seeking reorganization or an arrangement with creditors or to take advantage of any bankruptcy, reorganization, insolvency, readjustment of debt, dissolution or liquidation law or statute, or an answer admitting the material allegations of a petition filed against it in any proceeding under any such law, or (F) take or permit to be taken any action in furtherance of or for the purpose of effecting any of the foregoing;

(vii) if any order, judgment or decree shall be entered, without the application, approval or consent of the Company or any Subsidiary, by any court of competent jurisdiction, approving a petition seeking liquidation or reorganization of the Company or any Subsidiary, or appointing a receiver, trustee, custodian or liquidator of the Company or any Subsidiary, or of all or any substantial part of its assets, and such order, judgment or decree shall continue unstayed and in effect for any period of 60 days;

(viii) the occurrence of any levy upon or seizure or attachment of, or any uninsured loss of or damage to, any property of the Company or any Subsidiary having an aggregate fair value or repair cost (as the case may be) in excess of \$100,000 individually or in the aggregate, and any such levy, seizure or attachment shall not be set aside, bonded or discharged within 45 days after the date thereof;

(ix) any monetary judgment, writ or similar final process shall be entered or filed against the Company, any Subsidiary or any of their respective property or other assets for more than \$100,000, and such judgment, writ or similar final process shall remain unvacated, unbonded or unstayed for a period of 30 days;

(x) any Material Adverse Effect occurs;

(xi) any provision of any Transaction Document shall at any time for any reason (other than pursuant to the express terms thereof) cease to be valid and binding on or enforceable against the parties thereto, or the validity or enforceability thereof shall be contested by any party thereto, or a proceeding shall be commenced by the Company or any Subsidiary or any governmental authority having jurisdiction over any of them, seeking to establish the invalidity or unenforceability thereof, or the Company or any Subsidiary shall deny in writing that it has any liability or obligation purported to be created under any Transaction Document;

(xii) the Company fails to use the proceeds in the manner as described in Section 5.7 of the Purchase Agreement;

(xiii) the Company shall be a party to any Change of Control Transaction or shall agree to sell or dispose of all or in excess of 50% of its assets in one transaction or a series of related transactions (whether or not such sale would constitute a Change of Control Transaction);

(xiv) from and after 90 days after the Original Issue Date, the Company fails to have authorized and reserved the amount of shares designated in Section 3.5 of the Purchase Agreement (without regard to any limitations on conversion hereof, including without limitation, the Beneficial Ownership Limitation);

14

(xv) the Company shall fail for any reason, except if caused by the action or inaction of the Holder to deliver Conversion Shares to the Holder prior to the third Trading Day after a Conversion Date pursuant to Section 4 or the Company shall provide at any time notice to the Holder, including by way of public announcement, of the Company's intention to not honor requests for conversions of this Note in accordance with the terms hereof; or

(xvi) the Company fails to file with the SEC any required reports under Section 13 or 15(d) of the Exchange Act within the time required (including any applicable extension period) by the rules and regulations thereunder.

(b) Remedies Upon Event of Default. If any Event of Default occurs, the outstanding principal amount of this Note, plus liquidated damages and other amounts owing in respect thereof through the date of acceleration, shall become, at the Holder's election, immediately due and payable in cash (the "Mandatory Default Amount"). Upon the payment in full of the Mandatory Default Amount, the Holder shall promptly surrender this Note to or as directed by the Company. In connection with such acceleration described herein, the Holder need not provide, and the Company hereby waives, any presentment, demand, protest or other notice of any kind, and the Holder may immediately and without expiration of any grace period enforce any and all of its rights and remedies hereunder and all other remedies available to it under applicable law. Such acceleration may be rescinded and annulled by Holder at any time prior to payment hereunder and the Holder shall have all rights as a holder of the Note until such time, if any, as the Holder receives full payment pursuant to this Section 7(b). No such rescission or annulment shall affect any subsequent Event of Default or impair any right consequent thereon.

(c) Interest Rate Upon Event of Default. Commencing on the occurrence of any Event of Default and until such Event of Default is cured, this Note shall accrue interest at an interest rate equal to the Default Interest Rate.

(d) Conversion Price Upon Event of Default. Commencing on the occurrence of any Event of Default and until such Event of Default is cured, this Note shall be convertible at the Default Conversion Price.

Section 8. Miscellaneous.

(a) No Rights as Stockholder Until Conversion. This Note does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the conversion hereof other than as explicitly set forth in Section 5.

(b) Notices. All notices, offers, acceptance and any other acts under this Agreement (except payment) shall be in writing, and shall be sufficiently given if delivered to the addressees in person, by FedEx or similar receipted next day delivery, or at the Company's registered address or such other address as any of them, by notice to the other may designate from time to time. Time shall be counted to, or from, as the case may be, the date of delivery.

(c) Absolute Obligation. Except as expressly provided herein, no provision of this Note shall alter or impair the obligation of the Company, which is absolute and

unconditional, to pay the principal of, liquidated damages and accrued interest and late fees, as applicable, on this Note at the time, place, and rate, and in the coin or currency, herein prescribed. This Note is a direct debt obligation of the Company.

(d) Lost or Mutilated Note. If this Note shall be mutilated, lost, stolen or destroyed, the Company shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated Note, or in lieu of or in substitution for a lost, stolen or destroyed Note, a new Note for the principal amount of this Note so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of this Note, and of the ownership hereof, reasonably satisfactory to the Company.

15

(e) Exclusive Jurisdiction; Governing Law; Prevailing Party Attorneys' Fees. All questions concerning the construction, validity, enforcement and interpretation of this Note and venue shall be governed by and construed and enforced in accordance with Section 6.9 of the Purchase Agreement. If any party shall commence an Action or Proceeding to enforce or otherwise relating to this Note, then, in addition to the other obligations of the Company elsewhere in this Note, the prevailing party in such action or proceeding shall be reimbursed by the non-prevailing party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such Action or Proceeding.

(f) Waiver. Any waiver by the Company or the Holder of a breach of any provision of this Note shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Note. The failure of the Company or the Holder to insist upon strict adherence to any term of this Note on one or more occasions shall not be considered a waiver or deprive that party of the right thereafter to insist upon strict adherence to that term or any other term of this Note on any other occasion. Any waiver by the Company or the Holder must be in writing.

(g) Severability. If any provision of this Note is invalid, illegal or unenforceable, the balance of this Note shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any interest or other amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law. The Company covenants (to the extent that it may lawfully do so) that it shall not at any time insist upon, plead, or in any manner whatsoever claim or take the benefit or advantage of, any stay, extension or usury law or other law which would prohibit or forgive the Company from paying all or any portion of the principal of or interest on this Note as contemplated herein, wherever enacted, now or at any time hereafter in force, or which may affect the covenants or the performance of this Note, and the Company (to the extent it may lawfully do so) hereby expressly waives all benefits or advantage of any such law, and covenants that it will not, by resort to any such law, hinder, delay or impede the execution of any power herein granted to the Holder, but will suffer and permit the execution of every such as though no such law has been enacted.

(h) Remedies, Characterizations, Other Obligations, Breaches and Injunctive Relief. The remedies provided in this Note shall be cumulative and in addition to all other remedies available under this Note and any of the other Transaction Documents at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the Holder's right to pursue actual and consequential damages for any failure by the Company to comply with the terms of this Note. The Company covenants to the Holder that there shall be no characterization concerning this instrument other than as expressly provided herein. Amounts set forth or provided for herein with respect to payments, conversion and the like (and the computation thereof) shall be the amounts to be received by the Holder and shall not, except as expressly provided herein, be subject to any other obligation of the Company (or the performance thereof). The Company acknowledges that a breach by it of its obligations hereunder will cause irreparable harm to the Holder and that the remedy at law for any such breach would be inadequate. The Company therefore agrees that, in the event of any such breach or threatened breach, the Holder shall be entitled, in addition to all other available remedies, to an injunction restraining any such breach or any such threatened breach, without the necessity of showing economic loss and without any bond or other security being required. The Company shall provide all information and documentation to the Holder that is requested by the Holder to enable the Holder to confirm the Company's compliance with the terms and conditions of this Note.

(i) Next Trading Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Trading Day, such payment shall be made on the next succeeding Trading Day.

(j) Headings. The headings contained herein are for convenience only, do not constitute a part of this Note and shall not be deemed to limit or affect any of the provisions hereof.

(Signature Pages Follow)

16

IN WITNESS WHEREOF, the Company has caused this Note to be duly executed by a duly authorized officer as of the date first above indicated.

BullFrog AI Holdings, Inc.

By: 
Name: Vin Singh
Title: Chief Executive Officer

ANNEX A NOTICE OF CONVERSION

The undersigned hereby elects to convert principal under the Original Issue Discount Convertible Note due October 31, 2022 of BullFrog AI Holdings, Inc, a Nevada corporation (the "Company"), into shares of common stock (the "Common Stock"), of the Company according to the conditions hereof, as of the date written below.

By the delivery of this Notice of Conversion the undersigned represents and warrants to the Company that its ownership of the Common Stock does not exceed the amounts specified under Section 4 of this Note, as determined in accordance with Section 13(d) of the Exchange Act.

The undersigned agrees to comply with the prospectus delivery requirements under the applicable securities laws in connection with any transfer of the aforesaid shares of Common Stock.

Conversion calculations:

Date to Effect Conversion:

Principal Amount of Note to be Converted:

Number of shares of Common Stock to be issued:

Signature:

Name:

DWAC Instructions:

Broker No:

Account No:



October 17, 2022

Bullfrog AI Holdings, Inc.
325 Ellington Blvd., Unit 317
Gaithersburg, MD 20878

Re: Bullfrog AI Holdings, Inc. S-1 Registration Statement (File No. 333-[____])

Ladies and Gentlemen:

We refer to the above-captioned registration statement on Form S-1 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Act"), filed by Bullfrog AI Holdings, Inc., a Nevada corporation (the "Company"), with the Securities and Exchange Commission.

The Registration Statement pertains to an underwritten offering (the "Offering") and relates to the issuance and sale by the Company of (i) units (the "Units") consisting of one share of common stock, par value \$0.00001 (the "Shares") and one warrant to purchase one share of common stock (the "Warrants"), (ii) shares of common stock issuable upon exercise of the Warrants ("Warrant Shares"), (iii) warrants to purchase shares of common stock to be issued to the underwriters thereunder (the "Representative's Warrants"), and (iv) shares of common stock issuable upon exercise of the Representative's Warrants (the "Representative's Warrant Shares"). We understand that the Units, Warrants, and Representative's Warrants are to be sold as described in the Registration Statement.

We have examined the originals, photocopies, certified copies or other evidence of such records of the Company, certificates of officers of the Company and public officials, and other documents as we have deemed relevant and necessary as a basis for the opinion hereinafter expressed. In such examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as certified copies or photocopies and the authenticity of the originals of such latter documents.

Based on the foregoing, and subject to the assumptions, limitations and qualifications set forth herein, we are of the opinion that:

1. the issuance and sale of the Units, Warrants, and Representative's Warrants has been duly authorized by all necessary corporate action on the part of the Company and, when issued and sold in the manner described in the Registration Statement, the Units, Warrants, and Representative's Warrants will be validly issued, fully paid and non-assessable; and
2. the issuance and sale of the Warrants and Representative's Warrants has been duly authorized, and when issued and sold in the manner described in the Registration Statement, the Warrants and Representative's Warrants will be validly issued and will constitute the valid and binding obligations of the Company in accordance with the terms thereof; and the Warrant Shares and Representative's Warrant Shares have been duly authorized and, when issued in the manner described in the Registration Statement and in accordance with the terms and conditions of the Warrants and Representative's Warrants, respectively, (including the due payment of any exercise price therefor specified in the Warrants and Representative's Warrants) the Warrant Shares and Representative's Warrants will be validly issued, fully paid and non-assessable.

Without limiting any of the other limitations, exceptions and qualifications stated elsewhere herein, we express no opinion with regard to the applicability or effect of the laws of any jurisdiction other than the corporate laws of the State of Nevada and the laws of the State of New York, as currently in effect (based solely upon our review of a standard compilation thereof). This opinion letter deals only with the specified legal issues expressly addressed herein, and you should not infer any opinion that is not explicitly stated herein from any matter addressed in this opinion letter.

We hereby consent to the filing of this opinion as Exhibit 5.1 to the Registration Statement and to the reference to our firm under "Legal Matters" in the related Prospectus. In giving the foregoing consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Act, or the rules and regulations of the Securities and Exchange Commission.

Very truly yours,

/s/ Sichenzia Ross FERENCE LLP

1185 Avenue of the Americas | 31st Floor | New York, NY | 10036
T (212) 930 9700 | F (212) 930 9725 |
WWW.SRF.LAW

EXCHANGE AGREEMENT

This Exchange Agreement is made this 2nd day of June, 2020 by and between Bullfrog AI Holdings, Inc. a Nevada corporation (“Holdings”), and Vininder (Vin) Singh.

WITNESSETH

WHEREAS, Vininder Singh (“Shareholder”) desires to exchange his shares in Bullfrog AI, Inc., a Delaware corporation, Bullfrog Delaware for shares in Holdings;

WHEREAS, Holdings desires to accommodate this exchange;

NOW THEREFORE, the Shareholder hereby transfers and assigns to Holdings all rights, interest and title to his shares in Bullfrog Delaware in exchange for 10,918,755 shares of Holdings common stock.

IN WITNESS WHEREOF, the undersigned have set their respective hands and seals this 2nd day of June, 2020.

DocuSigned by:
Vin Singh
9F617F725108429

Shareholder

BULLFROG AI HOLDINGS, INC.

DocuSigned by:
Vin Singh
9F617F725108429

By: _____
Vin Singh, President

LICENSE AGREEMENT

This license agreement (the “Agreement”) is entered into and made effective as of July 8, 2022 (the “Effective Date”) between The Johns Hopkins University Applied Physics Laboratory LLC, a Maryland limited liability company, having business offices at 11100 Johns Hopkins Road, Laurel, Maryland 20723 (“APL”) and BullfrogAI, Inc., a Delaware corporation having business offices at P.O. Box 336, Boyds, Maryland 20841 (“Licensee”). For purposes of this Agreement, APL and Licensee may be individually referred to as a “Party,” and collectively referred to as the “Parties.”

This Agreement includes attached Appendix A (APL Patent Rights), Appendix B (APL Copyrights), Appendix C (APL Know-how), Appendix D (Stock Issuance Agreement), Appendix E (Fees and Payment Options), Appendix F (Form of Diligence and Annual Report), and Appendix G (Form of Quarterly Sales and Royalty Report), the entire contents of which are incorporated herein by reference.

BACKGROUND

WHEREAS, The Johns Hopkins University (“JHU”) through APL has acquired or is entitled to acquire through assignment or otherwise all right, title, and interest, with the exception of any applicable retained rights by the United States government, in certain intellectual property, including patentable and non-patentable intellectual property as described in Appendices A, B, and C, and JHU has granted APL responsibility for, as well as operating control and unencumbered use of, the intellectual property;

WHEREAS, APL desires to have the APL IP (as defined below) perfected and marketed as soon as possible so that resulting products and services may be available for public use and benefit; and

WHEREAS, Licensee desires to acquire a license under the APL IP for the purposes of exploiting Licensed Products and Licensed Services in the Territory and in the Field of Use, as set forth and defined below.

NOW, THEREFORE, in consideration of the premises and mutual covenants herein contained, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

1. DEFINITIONS

Unless otherwise specifically provided herein, the following defined terms shall have the following meanings:

- 1.1 “Accounting Standards” shall mean the accounting standards applicable to Licensee, its Affiliates or Sublicensees as reported in their audited financial statements, and may include Generally Accepted Accounting Principles (GAAP) or International Financial Reporting Standards (IFRS).
- 1.2 “Affiliate” shall mean any corporation or other business entity controlled by, controlling, or under common control with, APL or Licensee. For this purpose, “control” shall mean direct or indirect beneficial ownership of at least a fifty percent (50%) of the equity interests of, or at least a fifty percent (50%) interest in the income of such corporation or other business entity, or any business entity that is more than fifty percent (50%) owned by a business entity that owns more than fifty percent (50%) of APL or Licensee, or such other relationship as in fact, constitutes actual control.
-
- 1.3 “APL Copyrights” shall mean (a) APL’s copyrights in or related to the APL Know-How and APL Patent Rights, and (b) the copyrights specifically set forth in Appendix B.
- 1.4 “APL IP” shall mean collectively, the APL Patent Rights, the APL Copyrights, and the APL Know-How.
- 1.5 “APL Know-How” shall mean any Know-How (a) Controlled by APL as of the Effective Date and that is described in the APL Patent Rights or is uniquely necessary to practice the inventions claimed in the APL Patent Rights, or (b) described or specifically set forth in Appendix C, and in each case, not general know-how broadly applicable across multiple technologies.
- 1.6 “APL Patent Rights” shall mean:
- (a) the patents and patent applications specifically set forth in Appendix A and any United States patents that issue therefrom or on inventions originally disclosed therein (including any and all divisionals, continuations, and continuations-in-part solely to the extent that all of the claims of any such continuations-in-part are wholly supported by the patents, patent applications, and/or invention disclosures set forth in Appendix A) together with re-examinations or reissues of such United States patents; and
 - (b) any foreign (non-United States) patents and patent applications claiming priority to any patents or patent applications specifically set forth in Appendix A and any patents issuing therefrom or on inventions originally disclosed therein (including any and all divisionals, continuations, and continuations-in-part solely to the extent that all of the claims of any such continuations-in-part are wholly supported by the patents and/or patent applications set forth in Appendix A) together with any re-examinations or reissues of such foreign patents.
- 1.7 “Calendar Quarter” shall mean a period of three (3) consecutive months ending on the last day of March, June, September, or December, respectively.
- 1.8 “Calendar Year” shall mean a period of twelve (12) consecutive months beginning on January 1 and ending on December 31.
- 1.9 “Control” shall mean, with respect to any intellectual property right, the possession of the right (whether by ownership, license, or otherwise (other than pursuant to a license granted under this Agreement)), to assign, or grant a license, sublicense, or other right to or under, such intellectual property right as provided for herein without violating the terms of any agreement or other arrangement with any Third Party.

- 1.10 “Excluded Entity” shall mean (a) the United States government including any agency, department, commission, board, corporation, or instrumentality of the United States government, (b) any Person associated with the development or commercialization of alcohol, tobacco products, private prisons, military armaments, or pornography, or (c) any Person on any list of prohibited individuals or entities enacted under United States economic sanctions and anti-boycott Laws.
- 1.11 “Field of Use” shall mean analytical services for applications in biological and chemical derived pharmaceutical therapeutics, and application of analytics in the development and testing of pharmaceutical products.
- 1.12 “First Commercial Sale” shall mean, on a country-by-country and Licensed Product-by-Licensed Product or Licensed Service-by-Licensed Service basis, the first commercial transfer or disposition for value of such Licensed Product or Licensed Service in such country to a Third Party by Licensee, or any of its Affiliates or Sublicensees, in each case, after all necessary Governmental Approvals have been obtained for such country.
- 1.13 “Governmental Approval” shall mean, with respect to a Licensed Product or Licensed Service in a country or region, all approvals, licenses, registrations, and authorizations of the relevant Governmental Authority, if applicable, required for the commercialization of such Licensed Product or Licensed Service in such country.
- 1.14 “Governmental Authority” shall mean any: (a) nation, principality, state, commonwealth, province, territory, county, municipality, district, or other jurisdiction of any nature; (b) federal, provincial, state, local, municipal, foreign, or other government; (c) governmental or quasi-governmental authority of any nature (including any governmental division, subdivision, department, agency, bureau, branch, office, commission, council, board, instrumentality, officer, official, representative, organization, unit, body, or entity and any court or other tribunal); (d) multi-national or supranational organization or body; or (e) individual, entity, or body exercising, or entitled to exercise, any executive, legislative, judicial, administrative, regulatory, police, military, or taxing authority of any nature.
- 1.15 “Improvements” shall mean any and all Know-How, Patent Rights, copyrights, or other intellectual property conceived or created by APL or created by or on behalf of Licensee incorporating or based upon the APL IP on or after the Effective Date.
- 1.16 “Know-How” shall mean any proprietary results, data, inventions, trade secrets, and other information, in any tangible or intangible form, including databases, discoveries, practices, methods, tests, assays, techniques, specifications, processes, formulations, formulae, protocols, procedures, drawings, plans, designs, diagrams, sketches, documentation, and materials, including pharmaceutical, chemical, and biological materials and their sequences.
- 1.17 “Law” or “Laws” shall mean all applicable laws, statutes, rules, regulations, ordinances, and other pronouncements having the binding effect of Law of any Governmental Authority.

- 1.18 “Licensed Product” shall mean any product or part thereof made, developed, discovered, used, or sold by Licensee or an Affiliate or Sublicensee of Licensee, which:
- (a) is covered in whole or in part by a Valid Claim; or
 - (b) employs or incorporates the APL Know-How or APL Copyrights.
- 1.19 “Licensed Analytic Product” shall mean any Licensed Product that includes software or data.
- 1.20 “Licensed Pharmaceutical Product” shall mean any Licensed Product that is a pharmaceutical.
- 1.21 “Licensed Service” shall mean any process, method, or part thereof, made, developed, used, or sold by Licensee or an Affiliate or Sublicensee of Licensee, which:
- (a) is covered in whole or in part by a Valid Claim; or
 - (b) employs or incorporates the APL Know-How or APL Copyrights.
- 1.22 “Net Sales” shall mean and include everything of value received by Licensee, its Affiliates, and its Sublicensees for the sale, license, lease, or other transfer of Licensed Products and for the performance of Licensed Services, but does not include Non-Royalty Sublicensing Income or sublicensee end sales of Licensed Pharmaceutical Product. Net Sales include currency and the fair market value of equity, intangible rights, services, and other things of value provided to, or received by, Licensee, its Affiliates, and its Sublicensees for the sale, license, lease, or other transfer of Licensed Products and/or for the performance of Licensed Services, other than Non-Royalty Sublicensing Income. Net Sales may be calculated using the accrual or cash method, but such calculation must (a) be consistent from month to month and year to year and (b) use the same method used generally by Licensee in reporting its business activity for applicable Accounting Standards. The following items are excluded from Net Sales only to the extent that they are separately billed to purchasers of Licensed Products or Licensed Services: (i) import, export, excise and sales taxes, custom duties, and shipping charges; (ii) costs of packing, insurance covering damage during shipping, and transportation from the place of manufacture to the customer’s premises or point of installation; and (iii) credits (including credit card charge-backs) or allowances, refunds or discounts, if any, actually granted on account of price adjustments, recalls, rejection or return of services previously sold, leased or otherwise disposed of; provided, that such deductions or exclusions shall be determined in accordance with applicable Accounting Standards, consistently and strictly applied. If a Licensed Product is sold in combination with other products, services, ingredients, or substances or as part of a kit or package, Net Sales of such Licensed Product shall include revenues and fees received for the entire combination, kit, or package. If a Licensed Service is provided in combination with other products, services, ingredients, or substances or results in the production of a kit or package, Net Sales of such Licensed Service shall include revenues and fees received for the entire combination, kit, or package.

- 1.23 “Non-Royalty Sublicensing Income” (“NRSI”) shall mean everything of value received by Licensee in consideration for any Sublicense; provided that the following shall be excluded from the gross amount received for the Sublicense when calculating NRSI:
- (a) the reasonable cost of research and development services to be performed thereafter by Licensee for or on behalf of Sublicensee, if Licensee is required to perform such services for Sublicensee, including under a written agreement to perform such services;
 - (b) reimbursement of the amount paid for patent fees incurred by Licensee;

- (c) royalty payments to Licensee based on Sublicensee's sale of Licensed Products or Licensed Services, where royalties are provided and will be paid to APL on Sublicensee's Net Sales under this Agreement; and
- (d) the amount of any milestone payment made to APL under this Agreement as a result of activity of Licensee or Sublicensee, which results in a milestone payment by Sublicensee to Licensee under the Sublicense; provided that the difference between the milestone payment to be paid to APL and the milestone payment paid to Licensee by Sublicensee shall be considered NRSI.
- 1.24 "Patent Rights" shall mean any of the following, whether existing now or in the future anywhere in the world: issued patents, including inventor's certificates, substitutions, extensions, confirmations, reissues, re-examinations, renewals, or any like governmental grant for protection of inventions, and any pending provisional or non-provisional applications for any of the foregoing.
- 1.25 "Person" shall mean any natural person, corporation, firm, business trust, joint venture, association, organization, company, partnership, or other business entity, or any Governmental Authority or political subdivision thereof.
- 1.26 "Sublicense" shall mean an agreement entered into by Licensee and any Third Party including a license or option to obtain a license to research, develop, make, have made, use, sell, offer to sell, import, perform, or offer to perform a Licensed Product or Licensed Service, or including a covenant not to sue or any transfer of rights to the APL IP.
- 1.27 "Sublicensee" shall mean any Third Party to whom Licensee has entered into a Sublicense.
- 1.28 "Territory" shall mean worldwide.
- 1.29 "Third Party" shall mean any Person other than APL, Licensee, or any of their respective Affiliates.
- 1.30 "Valid Claim" shall mean a claim of (a) an issued, unexpired patent in the APL Patent Rights, which claim has not been revoked or held unenforceable or invalid by a decision of a court or Governmental Authority of competent jurisdiction from which no appeal can be taken, or with respect to which an appeal is not taken within the time allowed for appeal, and that has not been disclaimed or admitted to be invalid or unenforceable through reissue, disclaimer, or otherwise; or (b) a pending patent application in the APL Patent Rights, which claim has not been abandoned, disclaimed, allowed to lapse, or finally determined to be unallowable by the applicable Governmental Authority in a decision from which no appeal can be taken, or with respect to which an appeal is not taken within the time allowed for appeal.

The definition of each of the following terms is set forth in the section of the Agreement indicated below.

<u>Defined Term</u>	<u>Section</u>
2018 License	4.5(a)(i)
Achievement Date	3.2(a)
Agreement	Preamble
APL	Preamble
APL Indemnitees	8.1
Confidential Information	10.1
Diligence Milestone	3.2(a)
Diligence Report	5.1(a)
Disclosing Party	10.1
Effective Date	Preamble
Federal Laws	2.2(b)(i)
Government	2.2(b)(i)
Independent Accountant	5.4
JHU	Recitals
JHU Names	12.3(b)
Key Employees	12.1
Liabilities	8.1
License	2.1
Licensee	Preamble
Milestone	4.2(b)
Milestone Payment	4.2(b)
New Securities	4.5(d)
Non-Sales Fees	4.3(a)(ii)
Notice	4.5(d)
Party	Preamble
Parties	Preamble

<u>Defined Term</u>	<u>Section</u>
Patent Costs	7.2
Performance Milestone	4.2(a)
Performance Milestone Payment	4.2(a)
Receiving Party	10.1
Royalty	4.3(a)
Royalty Report	5.2(a)
Royalty Term	4.3(d)
Sale of the Company	4.5(f)
Sales Milestone	4.2(b)
Sales Milestone Payment	4.2(b)
Shares	4.5(a)
Term	11.1
Third Party IP	4.3(c)(i)

All terms defined in this Agreement may be used in the singular or plural, and a reference to the singular includes the plural and vice versa.

2. LICENSE GRANT

2.1 **License Grants.** APL hereby grants to Licensee and Licensee hereby accepts an exclusive license in the Territory for the Field of Use, under the APL IP, to research, develop, make, have made, use, sell, offer to sell, import, perform, and offer to perform the Licensed Products and/or Licensed Services (the “License”).

2.2 Retained Rights.

- (a) **Retained Rights.** APL retains on behalf of itself and its Affiliates a non-exclusive, royalty-free, perpetual, irrevocable, worldwide right to practice, make, and use, or allow others to practice, make, and use, APL IP for any research and development use for its non-profit purposes, including educational, clinical, and government purposes, and research purposes including sponsored research and collaborations with commercial entities outside of the Field of Use.
- (b) **Government Rights; Related Licensee Obligations.**
 - (i) APL IP arising from research funded in whole or in part by United States government (the “Government”) research funding may be subject to Title 35 U.S.C. Sections 200-212, the Federal Acquisition Regulation (FAR), the Defense Federal Acquisition Regulation Supplement (DFARS) or other supplements to the FAR, and other federal laws and regulations (collectively, the “Federal Laws”). Any action taken by APL to fulfill its obligations thereunder shall be and hereby is deemed to be consistent with APL’s obligations hereunder.

7

APL PROPRIETARY/CONFIDENTIAL
BullfrogAI Prometheus License, July 2022

- (ii) APL’s obligations under the Federal Laws may include the grant of a non-exclusive, nontransferable, irrevocable, paid-up worldwide license to APL IP by APL to the Government, and a statement of Government patent rights on certain APL Patent Rights.
 - (iii) Any and all determinations of Government funding will be made solely by APL, and APL’s determination shall be final and binding on Licensee, its Affiliates, and its Sublicensees.
 - (iv) Any Licensed Products embodying, or produced through the use of, APL IP, arising from research funded in whole or in part by the Government, that are used or sold in the United States must be manufactured substantially in the United States for so long as the License remains exclusive, unless Licensee obtains a prior written waiver from the Government, if required, specifically authorizing the manufacture of Licensed Products outside of the United States.
- (c) **Right to Refuse.** APL shall at all times retain the right to refuse to accept any subcontract or other agreement to perform any work under any such subcontract or other agreement between APL and Licensee in APL’s sole discretion. APL has a technical direction agent relationship with the Government, which requires that APL refrain from performing any work under any contract or agreement that would jeopardize its or its employees’ ability to act for the Government as an impartial or neutral evaluator.
- (d) **Exclusions.**
- (i) Except for those rights specifically granted by APL to Licensee under this Agreement, APL does not grant to Licensee any other rights, implied, or otherwise, regardless of whether any other rights are or may be required to exploit any APL IP.
 - (ii) Except as otherwise specifically provided in this Agreement, APL does not have any obligation to provide to Licensee any additional information, know how, inventions, data, results, materials, or other assistance after the Effective Date hereof.
 - (iii) Notwithstanding the License grant, Licensee shall not have the right to use the APL IP to solicit or conduct research or development with or for the benefit of Excluded Entities, unless Licensee has obtained the prior written approval of APL.

8

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2.3 Sublicensing.

- (a) **Right to Sublicense.** Subject to the terms and conditions of this Section 2.3 and otherwise as set forth in the Agreement, Licensee may grant Sublicenses to Third Parties without any right to sublicense further; provided, that Licensee has requested and obtained the prior written approval of APL for Licensed Analytic Product or Licensed Services, which approval shall not be unreasonably withheld (provided, that it shall not be unreasonable to withhold consent if the applicable Third Party is an Excluded Entity). APL shall provide a response to a request for a sublicense within 30 business days.
- (b) **Mandatory Terms of Sublicenses.** Each and every Sublicense granted by Licensee to Sublicensees (as permitted under Section 2.3(a) above) for Licensed Analytic Product or Licensed Services must comply with all of the following requirements:
 - (i) the Sublicense shall be made specifically subject to all of the terms and conditions of this Agreement;
 - (ii) the Sublicense shall specifically provide that the Sublicensee is not permitted to further sublicense;
 - (iii) the Sublicense shall specifically include for the benefit of APL the provisions of Section 5 (“Reports and Records”), Section 8 (“Indemnification, Assumption of Liability, Limitation of Liability, Disclaimers, and Insurance”), Section 9 (“Marking and Standards”), Section 10 (“Confidentiality”), and Section 12.3 (“Use of Name”) of this Agreement, and APL shall expressly be made a third party beneficiary of all such provisions;
 - (iv) the Sublicense shall provide that upon the expiration or earlier termination of this Agreement (pursuant to Section 11 hereof) all of Licensee’s rights in such Sublicense shall, at APL’s sole discretion, be transferred to APL, including the right to receive all royalty payments owed by Sublicensee under the terms thereof, without offset for debts or obligations owed by Licensee to Sublicensee; and

(v) the Sublicense shall not be valid against APL as to terms, conditions, obligations, or limitations that exceed or conflict with the terms and conditions of this Agreement as applicable to APL.

(c) Licensee shall provide APL with a copy of each Sublicense agreement and any other agreement that transfers intellectual property rights granted hereunder to a Third Party, within five (5) business days following the execution of such agreement.

(d) Notwithstanding the Sublicensee's payment obligation to Licensee, Licensee shall be directly responsible for all Royalties and payments due pursuant to [Section 4](#).

2.4 **Delivery of APL IP.** APL shall deliver Licensee requested physical or tangible APL IP, existing on the Effective Date, to Licensee within thirty (30) days of the Effective Date.

9

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3. DILIGENCE

3.1 **Diligence.** Licensee shall use commercially reasonable efforts to develop, manufacture, market, and sell Licensed Products and Licensed Services in the Territory.

3.2 Diligence Milestones.

(a) Licensee, at its sole expense, shall achieve each event listed below (each, a "Diligence Milestone") by the corresponding achievement date (each, an "Achievement Date"):

<u>Diligence Milestone</u>	<u>Achievement Date</u>
First service contract, memorandum of understanding (MOU), or equivalent	June 30, 2022
Raise \$5,000,000 or initial public offering	December 31, 2022
Company reaches \$50,000 net sales	December 31, 2022
Company reaches \$300,000 net sales	December 31, 2023
Company reaches \$1,000,000 net sales	December 31, 2024

(b) Licensee, upon written request to and approval from APL, may be granted an extension of one or more of the above Diligence Milestones by six (6) months up to two (2) times for a total possible extension of twelve (12) months; provided, that Licensee pays APL five thousand dollars (\$5,000.00) per extension. If APL agrees to extend a particular Diligence Milestone, all subsequent Diligence Milestones will be extended by the same time period.

4. FEES, MILESTONE PAYMENTS, ROYALTIES, AND OTHER CONSIDERATION

4.1 Annual License Fees.

Licensee shall pay APL annual license fees as follows:

<u>Payment Date</u>	<u>Amount Due</u>
Within 90 days of Effective Date	\$10,000
First anniversary of the Effective Date and each year thereafter	\$1,500

4.2 Intentionally Omitted.

4.3 Royalties.

(a) Royalty. As further consideration for the License, during the Royalty Term, Licensee shall pay to APL a non-refundable, non-creditable royalty (the "Royalty") equal to:

(i) Eight percent (8%) of quarterly Net Sales of Licensed Services or Licensed Analytic Products, on a Licensed Service-by-Licensed Service or Licensed Analytic Product-by-Licensed Analytic Product basis, regardless of whether sold by Licensee or a Sublicensee or Affiliate of Licensee,

10

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(ii) Three percent (3%) of quarterly Net Sales of Licensed Pharmaceutical Products, on a Licensed Pharmaceutical Product-by-Licensed Pharmaceutical Product basis, regardless of whether sold by Licensee or an Affiliate of Licensee, and

(iii) Eight percent (8%) of quarterly profit or fees realized on each contract performed by Licensee, its Affiliates, and its Sublicensees using any Licensed Service or Licensed Analytic Product, but excluding any amounts otherwise included in Net Sales of Licensed Services or License Analytic Product (the "Non-Sales Fees").

Notwithstanding Licensee's obligation to pay to APL the Royalties as specified in this [Section 4.3\(a\)](#), Licensee shall pay to APL minimum annual royalty payments (each, a "Minimum Annual Royalty Payment") in the amounts and by the dates indicated below:

<u>Payment Date</u>	<u>Minimum Annual Royalty Payment</u>
December 31, 2022	\$ 30,000
December 31, 2023	\$ 80,000
December 31, 2024	\$ 300,000
December 31 of each year after 2024 during the Royalty Term	\$ 300,000

For the avoidance of doubt, Licensee shall pay a Minimum Annual Royalty Payment for a calendar year even if the Royalties for that calendar year do not reach the amount of the Minimum Annual Royalty Payment.

- (b) Licensee shall make quarterly payments to APL of all Royalties due under this [Section 4.3](#) on a quarterly basis as set forth in [Section 4.7](#). If Licensed Products are made, used, imported, or offered for sale by Licensee, any Affiliate and/or any Sublicensee on or before the date of expiration or termination of any Valid Claim or APL Copyright, then Licensee shall pay to APL the full Royalty payment required under this [Section 4.3](#) based on Net Sales earned by Licensee, its Affiliate and/or its Sublicensee from the sale of such Licensed Products, even if such Licensed Products are sold after the date of expiration or termination of this Agreement.

11

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- (c) Royalty Reduction.
- (i) Notwithstanding anything in this [Section 4.3](#), if a Third Party Controls a patent relating to a Licensed Product or Licensed Service, a license or other right to which is necessary for the use, manufacture, sale, import, export, performance, or other exploitation of such Licensed Product or Licensed Service without infringing that intellectual property, then Licensee shall have the right (but not the obligation) to obtain a license to such Third Party intellectual property (the "[Third Party IP](#)"). In the event Licensee obtains such license, fifty percent (50%) of the royalties that Licensee actually pays to such Third Party for the exploitation of such Licensed Product or Licensed Service in a country during a Calendar Quarter may be credited against Royalties otherwise payable by Licensee to APL under [Section 4.3\(a\)](#) for such Licensed Product or Licensed Service in such country in such Calendar Quarter.
- (ii) The maximum aggregate reduction in the Royalty otherwise payable by Licensee to APL under [Section 4.3\(a\)](#) with respect to any Licensed Product or Licensed Service in any country during a given Calendar Quarter during the applicable Royalty Term pursuant to [Section 4.3\(d\)](#) shall be fifty percent (50%).
- (d) Royalty Term. Unless prohibited by Applicable Law, Licensee's obligation to pay Royalties with respect to a Licensed Product or Licensed Service in a particular country in the Territory, even if reduced as provided in this [Section 4.3](#), shall commence upon the First Commercial Sale of such Licensed Product or Licensed Service in such country and shall expire on a country-by-country and Licensed Product-by-Licensed Product and Licensed Service-by-Licensed Service basis on the later of (i) the expiration of the last to expire Valid Claim that covers (in whole or in part) a Licensed Product or Licensed Service (if applicable) in such country or (ii) the date that is twenty (20) years after First Commercial Sale of such Licensed Product or Licensed Service in such country (the "[Royalty Term](#)"). Upon expiration of the Royalty Term with respect to a Licensed Product or Licensed Service in a country, the License shall become fully paid-up, royalty-free, perpetual, and irrevocable for such Licensed Product or Licensed Service in such country. If a Licensed Product or Licensed Service is not covered by a Valid Claim or APL Copyright at any period during a Royalty Term, then the Royalty otherwise payable shall be reduced by 50%.

4.4 Non-Royalty Sublicensing Income.

- (a) Licensee shall pay APL on the following graduated scale for NRSI received from each sublicensee, on a per sublicensee basis, for any NRSI that includes an Licensed Analytic Product or Licensed Service:
- (i) Fifty percent (50%) of the first five-hundred thousand dollars (\$500,000) of NRSI received from each sublicensee;
- (ii) Twenty-Five percent (25%) of NRSI over five-hundred thousand dollars (\$500,000) received from each sublicensee.
- (b) Licensee shall pay APL three percent (3%) of NRSI received from licensees for NRSI on Licensed Pharmaceutical Products.

12

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4.5 Equity.

- (a) Equity Grant.
- (i) Licensee confirms that Licensee previously issued to APL a warrant to acquire that number of shares of common stock of Licensee equal to five percent (5%) of the outstanding shares of stock of Licensee as of March 31, 2019 (the "2019 Shares"), pursuant to the Stock Purchase Agreement executed in connection with the previous license effective February 27, 2018 between APL and Licensee (the "2018 License"). To the extent that the terms of section 4.5 under this Agreement are inconsistent with the terms of Section 6.2 (b) of the 2018 License, the terms of Section 4.5 under this Agreement shall control.
- (ii) As further consideration for this License, Licensee shall additionally issue to APL that number of shares of common stock of Licensee equal to one percent (1%) of the outstanding shares of stock of Licensee as of the Effective Date (collectively with the 2019 Shares known hereinafter as the "[Shares](#)"), pursuant to the Stock Issuance Agreement attached hereto as [Appendix D](#).
- (b) Anti-Dilution. If at any time after the Effective Date and prior to an initial public offering, and before Licensee receives a total of five million dollars (\$5,000,000) cash in exchange for the issuance of Licensee's equity securities and/or debt securities that are convertible into or exercisable or exchangeable for Licensee's equity securities, Licensee issues any (i) shares of Licensee's common stock or (ii) securities that are convertible into or exercisable for shares of Licensee's common stock, then Licensee shall issue additional shares of common stock to APL such that immediately after such issuance to APL the total number of shares of common stock issued to APL under this [Section 4.5](#) remains and constitutes one percent (1%) of the outstanding shares of stock of Licensee.
- (c) Information Rights. If, at any time, prior to an initial public offering, and as long as APL owns any Shares (including any issued pursuant to [Section 4.5\(b\)](#)), Licensee shall promptly provide to APL annual and quarterly financial statements, annual operating plan, and quarterly capitalization table updates. Additionally, Licensee shall provide to APL such other information respecting the business, affairs, and financial condition of Licensee as APL may reasonably request from time to time.

- (d) **Preemptive Rights.** If, at any time, prior to an initial public offering, if Licensee proposes to offer and sell any equity securities (other than pursuant to an equity incentive plan) (“New Securities”), Licensee shall offer APL its pro rata share (on a fully-diluted, as converted, basis) of such New Securities. Licensee will provide written notice to APL of the anticipated date of the closing of the sale of such New Securities (the “Notice”), which date shall be no less than twenty (20) days after the date of the Notice. APL may exercise its right to purchase all or any of its pro rata portion of the New Securities by providing written notice to Licensee no less than ten (10) days prior to the proposed closing date of the sale of such New Securities. Except as otherwise agreed by the Parties, the equity securities purchased by APL shall be issued under the same terms and subject to the same conditions as those offered to the other purchasers of the New Securities.

- (e) **Registration Rights.** Until such time as APL is permitted to sell all of its shares in the Licensee pursuant to Rule 144 under Securities Act of 1933, as amended (the “Securities Act”), if Licensee at any time proposes to register any of its securities under the Securities Act for sale to the public, whether for its own account or for the account of other security holders or both (except with respect to registration statements on Forms S-4, S-8 or another form not available for registering the registrable securities for sale to the public), each such time it will give prompt written notice to APL of its intention to do so. Upon the written request of APL, received by Licensee within thirty (30) days after giving of any such notice by Licensee, to register any of the Shares (including any issued pursuant to Section 4.5(b)), Licensee will use its commercially reasonable efforts to effect such registration, cause it to become effective promptly and maintain it as effective for at least thirty six (36) months (or less if all the shares of capital stock included therein are sooner sold). If so requested by APL, Licensee shall enter into an underwriting agreement in customary form with any underwriter selected by Licensee with respect to such registration. Notwithstanding any other provision of this Section 4.5(e), if the underwriter(s) advise(s) Licensee in writing that marketing factors require a limitation on the number of shares to be underwritten, then Licensee shall so advise APL, and the number of Shares that may be included in the underwriting shall be allocated among stockholders that have notified Licensee of their intention to include shares in the registration, including APL, in proportion (as nearly as practicable) to the number of shares owned by each such stockholder. Notwithstanding anything in this Section, Licensee shall have the right to terminate or withdraw any registration initiated by it before the effective date of such registration, whether or not APL has elected to include Shares in such registration. All expenses incurred by Licensee and APL in connection with any registration hereunder for the Shares (including any issued pursuant to Section 4.5(b)), including reasonable fees and disbursements of accountants and counsel for APL, but excluding underwriting discounts and commissions and transfer taxes, shall be borne solely by Licensee.
- (f) **Drag-Along Rights.** If, at any time, prior to an initial public offering, the holders of at least a majority of the then-outstanding capital stock of Licensee and the Board of Directors of Licensee approve a sale, in any one transaction or a series of related private transactions (irrespective of how structured), of capital stock of Licensee which, in the aggregate, represents more than fifty percent (50%) of the outstanding capital stock of Licensee on a fully-diluted basis (a “Sale of the Company”), then Licensee has the right to require APL to participate in such Sale of the Company with respect to the Shares (including any issued pursuant to Section 4.5(b)), on a pro rata basis for the same consideration per share and otherwise on the same terms as the other shareholders who are disposing their shares of the same class. APL shall not be required to comply with the foregoing sentence in connection with any proposed Sale of the Company unless:
- (i) any representations and warranties to be made by APL in connection with such transaction are limited to those related to authority, ownership, and ability to convey title to the Shares;
 - (ii) APL shall not be liable for the inaccuracy of any representation or warranty made by any other Person other than Licensee (except to the extent that funds may be paid out of an escrow established to cover breach of representations, warranties and covenants of Licensee as well as breach by any stockholder of any identical representations, warranties, and covenants provided by all stockholders);
 - (iii) liability shall be limited to APL’s applicable share of a negotiated aggregate indemnification amount that applies equally to all stockholders (not to exceed the amount of consideration payable to the stockholders);
 - (iv) upon the consummation of the proposed Sale of the Company each holder of each class or series of capital stock will receive the same amount of consideration per share as is received by other holders in respect of their shares of such class or series of capital stock; and
 - (v) subject to clause (iv) above, if any holders of any capital stock of Licensee are given an option as to the form and amount of consideration to be received as a result of the proposed Sale of the Company, all holders of such class or series of capital stock will be given the same option.
- (g) **Tag-Along Rights.** If, at any time, prior to an initial public offering, any of the shareholders of Licensee propose to sell in any one or more private transactions, capital stock of Licensee which, in the aggregate, represents more than fifty percent (50%) of the outstanding capital stock of Licensee on a fully-diluted basis (other than in a reorganization of Licensee employees) and have not required APL to sell a pro rata portion of its Shares in such transaction, then APL shall have the right to participate in such sale with respect to the Shares (including any issued pursuant to Section 4.5(b)), on a pro rata basis for the same consideration per share and otherwise on the same terms as the other shareholders who are disposing their shares of the same class.

4.6 **Currency.** All payments hereunder shall be made in U.S. dollars. Royalties in dollars shall be computed by converting the Royalty in the currency of the country in which the sales were made at the exchange rate for dollars prevailing at the close of the last business day of the relevant calendar quarter for which Royalties are being calculated, as quoted by the United States Federal Reserve Bank.

4.7 **Payment Terms.**

- (a) All payments due hereunder are payable by check or wire transfer to the address listed in Section 12.6 or using the wiring instructions provided by APL, as applicable, and shall be deemed received when the complete payment is credited to APL’s bank account. Until all funds are received by APL, the payment by Licensee is not considered to be complete. No transfer, exchange, collection, or other charges, including any wire transfer fees, shall be deducted from such payments.
- (b) Royalties shall be paid by Licensee to APL, in amounts set forth in Section 4.3, for each Calendar Quarter within sixty (60) days of the end of such Calendar Quarter, until the applicable Royalty Term expires. If this Agreement terminates before the end of a Calendar Quarter and the obligation to pay Royalties does not survive such termination, the payment for that terminal fractional portion of a Calendar Quarter shall be made within sixty (60) days after the date of termination of this Agreement.
- (c) All payments (including Royalties and Milestone Payments) payable hereunder that are overdue shall bear interest until paid at a rate equal to one and one half percent (1.5%) per month, but in no event to exceed the maximum rate of interest permitted by Applicable Law. This provision for interest shall not be construed as a waiver of any rights APL has as a result of Licensee’s failure to make timely payment of any amounts.

4.8 **Taxes.**

- (a) In the event that any taxes, withholding or otherwise, are levied by any taxing authority of any Governmental Authority in connection with accrual or payment of any Royalties or other payments payable to APL under this Agreement, Licensee shall be solely responsible to pay such taxes to the local tax authorities on behalf of APL, as a nonprofit, tax-exempt organization as defined in Section 501(c)(3) of the Internal Revenue Code.
- (b) Should Licensee be required under any Law of any Governmental Authority to withhold or deduct any portion of the payments on Royalties or other payments due to APL, then the sum payable to APL shall be increased by the amount necessary to yield to APL an amount equal to the sum it would have received had no withholdings or deductions been made. No such withholdings or deductions shall be creditable against any payments Licensee makes or is required to make to APL. APL shall cooperate reasonably with Licensee in the event Licensee elects to assert, at its own expense, any exemption from any such tax or deduction.

4.9 **Payments and Reports Due During Pendency of Any Dispute.** All payments and obligations accrued and owing hereunder shall be and remain due and owing notwithstanding any dispute between the Parties hereto, and any such dispute shall not suspend any obligations of the Parties under this Agreement. Licensee understands and agrees that all payments made by Licensee to APL shall be non-refundable even if the APL IP is later determined by a court of competent jurisdiction to be invalid or not applicable to any particular Licensed Product or Licensed Service. In addition, during the pendency of any dispute Licensee must continue to submit all reports required hereunder.

5. **REPORTS AND RECORDS**

5.1 **Diligence Reports.**

- (a) During the Term, Licensee shall deliver to APL a written annual diligence report (each, a “Diligence Report”) within thirty (30) days of the end of each Calendar Year. Each Diligence Report will cover Licensee’s (and any of its Affiliates’ and Sublicensees’) activities related to the development and commercialization of all Licensed Products and Licensed Services and obtaining any Governmental Approvals necessary for commercialization of Licensed Products and Licensed Services.
- (b) Each Diligence Report shall be in the same form and substance as the Form of Diligence and Annual Report set forth in Appendix F, and will include information to demonstrate the progress made in the development and commercialization of Licensed Products and Licensed Services during the applicable year, and at a minimum shall include the following to the extent applicable:
 - (i) summary of development and commercialization conducted during such period;
 - (ii) key scientific and technical discoveries;
 - (iii) summary of work in progress;
 - (iv) good faith estimate of resources (dollar value) spent by or on behalf of Licensee, its Affiliates and its Sublicensees in the reporting period on the development and commercialization of Licensed Products and Licensed Services; and

current schedule of anticipated events or milestones, including anticipated timeline for achievement of the Diligence Milestones.

Royalty Reports are Confidential Information of Licensee.

5.2 **Royalty Reports.**

- (a) No later than sixty (60) days after the end of each Calendar Quarter, Licensee shall provide to APL a written report (each, a “Royalty Report”) covering all sales of Licensed Products and Licensed Services in the Territory by Licensee, its Affiliates, and Sublicensees, all profits or fees realized on contracts performed by Licensee, its Affiliates, and Sublicensees using Licensed Products or Licensed Services, as well as all NRSI received by Licensee, its Affiliates, and Sublicensees.

- (b) Each such Royalty Report shall be in the same form and substance as the Form of Quarterly Sales and Royalty Report as set forth in Appendix G, and at a minimum shall set forth in reasonable detail:
 - (i) the total gross sales (including all service, implementation, maintenance and other related fees) for each Licensed Product and Licensed Service on a country-by-country basis;
 - (ii) the calculation of the amount of Net Sales for each Licensed Product and Licensed Service on a country-by-country basis;
 - (iii) the Non-Sales Fees on a Licensed Product-by-Licensed Product and Licensed Service-by-Licensed Service basis;
 - (iv) pursuant to Section 4.3, the calculation of the amount of Royalties due on such Net Sales for each Licensed Product and Licensed Service on a country-by-country basis, and the Non-Sales Fees for each Licensed Product and Licensed Service, including any exchange rate used and any offsets against or decreases in Royalties due pursuant to Section 4; and
 - (v) the NRSI on a Licensed Product-by-Licensed Product and Licensed Service-by-Licensed Service basis.

Royalty Reports are Confidential Information of Licensee.

- 5.3 **Books and Records.** For a period of five (5) years from the date of each report pursuant to [Section 5.2](#), Licensee shall maintain accurate books and records adequate to verify the Royalties and Milestone Payments due and payable under this Agreement. Such books and records shall be maintained at Licensee's principal place of business and shall be available for inspection in accordance with [Section 5.4](#).
- 5.4 **Audit.** Licensee shall make available its books and records for audit by an independent certified public accountant or accounting firm selected by APL and reasonably acceptable to Licensee (the "[Independent Accountant](#)"), on reasonable notice (but not less than five (5) business days) during regular business hours, not to exceed once per calendar year, and following the initial public offering, not during the period in which the independent public accounting firm engaged by Licensee is conducting its annual audit of Licensee's financial statements. Licensee's acceptance of APL's selection of said Independent Accountant shall not be unreasonably withheld. Such Independent Accountant shall not disclose to APL any information other than that information relating solely to the accuracy of, or necessity for, the reports and payments made hereunder. The fees and expense of the Independent Accountant performing such verification shall be borne by APL, unless the audit reveals an underpayment of Royalty by more than five percent (5%), in which case the cost of the audit shall be paid by Licensee.

- 5.5 **Licensee Self-audit.** Prior to an initial public offering Licensee will conduct an independent audit of sales, Non-Sales Fees, NRSI, and Royalties paid and payable to APL at least once every two (2) years if the cumulative sum of annual sales of Licensed Products and Licensed Services, annual Non-Sales Fees, and annual NRSI exceeds Ten Million Dollars (\$10,000,000). The audit will address the amount of gross sales and gross profits for contracts, by or on behalf of Licensee, its Affiliates, and Sublicensees during the audit period, the amount of funds owed to APL under this Agreement, and whether the amount owed has been paid to APL, as reflected in the records of Licensee, its Affiliates, and Sublicensees. Licensee shall pay all self-audit costs and shall submit the auditor's report promptly to APL upon completion. The independent certified public accountant or accounting firm may include the accounting firm that Licensee engages to audit its financial statements.

6. COMPLIANCE WITH LAWS

- 6.1 **Compliance with Applicable Laws.** Licensee shall at all times during the Term and for so long as it shall exercise its rights to the APL IP under the License comply with all Laws that may apply with respect to the import, export, manufacture, use and other commercial exploitation of the APL IP or any other activity undertaken pursuant to this Agreement.
- 6.2 **Government Rights.** Licensee understands that the APL IP may have been developed under a funding agreement with the Government and, if so, that the Government may have certain rights relative thereto. This Agreement is explicitly made subject to the Government's rights under any funding agreement and any applicable Law. If there is a conflict between a funding agreement with the Government, applicable Law, and this Agreement, the terms of the funding agreement with the Government or applicable Law shall prevail. Specifically, this Agreement may be subject to terms and conditions specified in the Federal Laws, and Licensee agrees to take all reasonable action necessary on its part to enable APL to satisfy its obligations thereunder, relating to the APL IP.
- 6.3 **Export Control Regulations.** It is understood that APL and Licensee are subject to United States Laws controlling the export of technical data, computer software, laboratory prototypes and other commodities (including the Arms Export Control Act, as amended and the Export Administration Act of 1979), and that the obligations of APL hereunder are contingent on compliance with applicable United States export Laws. The transfer of certain technical data and commodities may require a license from the cognizant agency of the Government and/or written assurances by Licensee that Licensee shall not export data or commodities to certain foreign countries without prior approval of such agency. APL neither represents that a license shall or shall not be required nor that, if required, it shall be issued. Licensee represents and warrants that it will comply with, and will cause its Sublicensees and Affiliates to comply with all United States export control Laws, rules, and regulations. Licensee is solely responsible for any violation of such Laws by itself or its Affiliates or Sublicensees, and it will indemnify, defend, and hold APL and its Affiliates harmless for the consequences of any such violation.

- 6.4 **Committee on Foreign Investment in the United States.** The regulations of the Government require submission of a declaration or notice to the Committee on Foreign Investment in the United States forty-five (45) days before consummation of certain transactions with a foreign person. In order to facilitate the exchange of technical information under this Agreement, Licensee shall not, without appropriate prior notice to the Committee on Foreign Investment in the United States and simultaneous prior written notice to APL, pursue or complete any covered transaction as defined under 31 CFR 800.207 or 31 CFR 801.210. Failure by Licensee to provide such prior written notice to APL or appropriate prior notice to the Committee on Foreign Investment in the United States shall constitute a material breach of this Agreement. APL, at its sole discretion, may allow Licensee to cure such material breach in accordance with [Section 11.2\(b\)](#). APL neither represents that notice to the Committee on Foreign Investment in the United States of any particular transaction is required, nor that, if required, any such transaction will be permitted to proceed by the Government.

7. INTELLECTUAL PROPERTY

- 7.1 **Improvements.**
- (a) Licensee hereby grants to APL a non-exclusive, fully paid up, perpetual, irrevocable, and worldwide license under Licensee-owned Improvements for internal research and development use for its non-profit purposes, including educational, clinical, public service, and government purposes.
 - (b) APL hereby grants to Licensee a non-exclusive, fully paid up, perpetual, irrevocable, and worldwide license, within the Field of Use and Territory, for any APL-owned Improvements created by one or more APL employees where said Improvements were fully funded by Licensee under a separate research and development agreement, wherein this section 7.1(b) is subject to the terms and conditions of said separate research and development agreement.
 - (c) APL grants to Licensee an exclusive option to negotiate a license, within the Field of Use and Territory and subject to any contractual or statutory restrictions, for any APL-owned Improvements created by one or more APL employees and not funded by Licensee. Licensee may exercise said option within ninety (90) days of Licensee's notice of said Improvement by informing APL in writing. Upon exercise of said option, and for a reasonable period not to exceed sixty (60) calendar days, APL and Licensee agree to negotiate in good faith to establish the terms of a new license agreement or an amendment to this Licensee.
 - (d) Upon request by APL or Licensee, the other party shall provide a report of available Improvements within the field of use to the requesting party within sixty (60) days. Upon request, Improvements subject to [Section 7.1\(a\)](#) or [Section 7.1\(b\)](#), shall be provided within ninety (90) days, subject to the terms of this agreement.

- 7.2 **Patent Costs.** The Parties shall each pay for X percent (X%) of the costs of patent preparation, filing, prosecution, maintenance, and management, including all interferences, reissues, re-examinations, oppositions, or requests for patent term extensions, including reasonable attorneys' fees (collectively, "Patent Costs"), for each APL Patent Right. Licensee shall reimburse APL for X percent (X%) of all past Patent Costs for each APL Patent Right within thirty (30) days of receipt of an invoice from APL, which will indicate the total number of licensees for each APL Patent Right. For each APL Patent Right, Licensee agrees to pay to APL X percent (X%) of all future Patent Costs incurred after the Effective Date and throughout the Term hereof. For these purposes, X is 1 divided by the total number of licensees (including APL) of the APL Patent Rights times 100. For example, if there are 4 licensees, each licensee is responsible for 1/4 or 25% of the Patent Costs. Licensee may terminate its obligation with respect to future Patent Costs for a particular APL Patent Right in any particular country upon three (3) months advance written notice to APL. Upon APL's receipt of such notice, Licensee's rights under any license to such APL Patent Rights shall terminate immediately. APL may elect to maintain such APL Patent Rights at its sole discretion and expense and shall be free to license any such rights to Third Parties without further obligation to Licensee with respect to such terminated APL Patent Rights.
- 7.3 **Patent Prosecution and Maintenance.** APL or its designee shall have sole control over the filing, prosecution, maintenance, and management of all issued patents and pending and future patent applications encompassing the APL Patent Rights. During the Term of this Agreement, APL shall keep Licensee reasonably informed, at Licensee's expense, of substantive official actions and written correspondence with any patent office regarding APL Patent Rights. APL will provide Licensee with draft copies of any nonprovisional patent applications claiming inventions(s) included in the materials listed in Appendices A, B, or C, at least seven (7) days in advance of filing. Licensee shall provide any feedback to APL within five (5) days. If no feedback is received, or if filing deadlines require, APL will proceed with the filing in order to meet such deadlines. APL will be under no obligation to incorporate feedback provided by Licensee into the patent applications prior to filing.
- 7.4 **Third Party Infringement and Invalidity.**
- (a) Notification. Each Party will notify the other promptly in writing when any actual, alleged or threatened infringement of APL IP by another is discovered or reasonably suspected.
 - (b) Licensee's First Right to Enforce. Licensee shall have the first right, at its own expense, to enforce the APL IP licensed under Section 2.1 against any infringement or alleged infringement thereof in the Field of Use. Licensee shall not initiate an infringement action without the prior written consent of APL, which consent shall not be unreasonably withheld or delayed, and without a good faith belief in the validity of the asserted claims of infringement after reasonable investigation. Licensee shall consult with and keep APL informed of the status of any action. Licensee may, at its own expense, control and defend such action in a manner consistent with the terms of the Agreement.
 - (c) No Final Disposition Without APL Consent. No settlement, consent judgment or other voluntary final disposition of an infringement suit may be concluded without the prior written consent of APL, which consent shall not be unreasonably withheld or delayed. APL shall reasonably cooperate in any such litigation at Licensee's sole expense.

- (d) APL's Secondary Right to Enforce. Licensee understands and agrees that APL has no obligation to bring suit against Third Parties for infringement of APL IP. However, if Licensee does not initiate an infringement action with respect to the APL IP licensed under Section 2.1 within ninety (90) days after notification of the alleged infringement, then APL may, at its sole option and expense, take whatever steps APL deems necessary (consistent with the terms hereof) to enforce any APL IP, to control, settle, and defend any patent infringement suit APL may bring in any court of competent jurisdiction, and to recover for APL's own account any resulting damages, awards, or settlements. Upon initiation of any action to enforce the APL IP by APL, Licensee shall thereafter have no right to enter into a sublicense or otherwise reach an agreement with the alleged infringer that would have the effect of settling, terminating, or foreclosing APL's action.
- (e) Patent Invalidity Suit. Licensee shall defend at Licensee's expense any declaratory judgment or other action brought by a Third Party naming Licensee or APL, or their respective Affiliates, as a defendant and alleging invalidity of any APL IP licensed under Section 2.1; provided, however, Licensee shall not defend such action to the extent that such action resulted from the gross negligence or willful misconduct of such APL Indemnitee or material breach of this Agreement by APL; and , and provided further that APL notifies Licensee promptly of any such lawsuit, claim, demand or other action. APL in its discretion may elect to solely defend any such action at its own expense, in which case Licensee shall cooperate fully with APL in connection therewith.
- (f) Recovery. Licensee shall pay to APL a share of forty percent (40%) of any infringement recovery by Licensee in connection with each suit or settlement, less reasonable attorneys' fees and out-of-pocket expenses paid to Third Parties, which shall be equally apportioned between Licensee and APL.

8. INDEMNIFICATION, ASSUMPTION OF LIABILITY, LIMITATION OF LIABILITY, DISCLAIMERS, AND INSURANCE

- 8.1 **Indemnification.** Licensee will defend, with counsel reasonably acceptable to APL, indemnify, and hold harmless APL and its Affiliates, and its and their trustees, officers, faculty, employees, and students (the "APL Indemnitees") against any and all losses, expenses, claims, actions, lawsuits, and judgments thereon (including attorney's fees through the appellate levels) (collectively "Liabilities") which may be brought against APL Indemnitees by Third Parties as a result of or arising out of: (a) any negligent act or omission of Licensee, its Sublicensees or Affiliates, or its or their agents or employees; (b) any breach of this Agreement; or (c) the manufacture, use, production, sale, offer for sale, lease, importation, consumption, or advertisement by Licensee, its Sublicensees or Affiliates, or its or their agents or employees of any Licensed Products, Licensed Services, or APL IP licensed under Section 2.1; provided, however, Licensee shall not defend, indemnify, or hold harmless any APL Indemnitee from any Liabilities to the extent that such Liabilities are finally determined to have resulted from the gross negligence or willful misconduct of such APL Indemnitee. APL and Licensee shall promptly notify the other Party of any lawsuit, claim, demand, or other action related to the APL IP. Licensee's obligation to indemnify APL Indemnitees shall survive the expiration or termination of this Agreement, and shall continue after any assignment of this Agreement by Licensee under Section 12.2.

- 8.2 **Assumption of Liability.** Licensee hereby assumes full liability for any and all lawsuits, claims, demands, judgments, costs, fees (including attorney's fees), expenses, injuries, or losses arising from or relating to the Licensed Products, Licensed Services, or any APL IP licensed under Section 2.1 provided, however, Licensee shall not be responsible for any Liabilities to the extent that such Liabilities are finally determined to have resulted from the gross negligence or willful misconduct of APL.
- 8.3 **Limitation of Liability.**

- (a) APL and its Affiliates shall have no liability to Licensee for any loss or damages Licensee may incur as a result of the invalidity of any of the APL Patent Rights.
- (b) APL and its Affiliates shall have no responsibility with respect to Licensee's own trademarks and trade name, and Licensee in respect to the use thereof will defend, indemnify, and hold harmless APL and its Affiliates against any and all Third Party claims.
- (c) NOTWITHSTANDING ANYTHING TO THE CONTRARY IN THIS AGREEMENT, NEITHER PARTY NOR ITS AFFILIATES SHALL BE LIABLE FOR ANY SPECIAL, LOST PROFIT, EXPECTATION, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, EXEMPLARY, OR OTHER INDIRECT DAMAGES IN CONNECTION WITH ANY CLAIM ARISING OUT OF OR RELATED TO THIS AGREEMENT, WHETHER GROUNDED IN TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, CONTRACT, OR OTHERWISE. EXCEPT WITH RESPECT TO EITHER PARTY'S CONFIDENTIALITY OBLIGATIONS, APL'S TOTAL LIABILITY FOR ANY AND ALL CLAIMS OR ACTIONS ARISING FROM OR RELATED TO THIS AGREEMENT WILL IN NO EVENT EXCEED THE TOTAL AMOUNT PAID BY LICENSEE TO APL.

8.4 **DISCLAIMER OF WARRANTIES.** APL AND ITS AFFILIATES MAKE NO WARRANTIES, EXPRESS OR IMPLIED, AND HEREBY DISCLAIM ALL SUCH WARRANTIES, AS TO ANY MATTER WHATSOEVER, INCLUDING THE CONDITION OF ANY APL IP, LICENSED PRODUCT OR LICENSED SERVICE, WHETHER TANGIBLE OR INTANGIBLE, LICENSED UNDER THIS AGREEMENT; OR OF MERCHANTABILITY, OR FITNESS FOR A PARTICULAR PURPOSE, OF SUCH APL IP, LICENSED PRODUCT OR LICENSED SERVICE. APL PROVIDES LICENSEE THE RIGHTS GRANTED UNDER THIS AGREEMENT AS IS AND WITH ALL FAULTS, AND MAKES NO WARRANTY OR REPRESENTATION (A) REGARDING THE VALIDITY OR SCOPE OF THE APL IP; (B) THAT EXPLOITATION OF THE APL IP WILL NOT INFRINGE ANY PATENTS OR OTHER INTELLECTUAL PROPERTY RIGHTS OF A THIRD PARTY; OR (C) THAT ANY THIRD PARTY IS NOT CURRENTLY INFRINGING OR WILL NOT INFRINGE THE PATENT RIGHTS.

22

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8.5 **Insurance.**

- (a) Prior to First Commercial Sale of any Licensed Product or Licensed Service, Licensee shall obtain and maintain comprehensive general liability insurance, including insurance for product liability, professional liability, worker's compensation, and umbrella coverage with a reputable and financially secure insurance carrier, to cover any liability arising from or relating to the Licensed Products or Licensed Services. Such insurance policy shall also name the APL Indemnitees as additional insureds. Licensee shall furnish a Certificate of Insurance or other evidence of compliance with this insurance requirement upon APL's request. All insurance obtained by Licensee shall be primary coverage; any other insurance that may be obtained by APL or APL Indemnitees will be excess and noncontributory.
- (b) Licensee shall not cancel such insurance without thirty (30) days prior notice to APL. Unless replaced by comparable insurance, such cancellation shall be cause for termination of this Agreement.

9. **MARKING AND STANDARDS**

- 9.1 Licensee agrees to mark and have its Sublicensees mark any and all Licensed Products (or their containers or labels) that are made, sold, or otherwise disposed of by Licensee or Sublicensees under the License, in accordance with any applicable marking statute; provided, that Licensee does not need to mark Licensed Products (or their containers or labels) if such Licensed Products are used solely for Licensee's own internal research purposes and/or used for validation studies on Licensee's behalf.
- 9.2 Licensee shall act in good faith to maintain satisfactory standards in respect to the nature of the Licensed Product or Licensed Service manufactured and/or sold by Licensee. Licensee shall act in good faith to ensure that all Licensed Products or Licensed Services manufactured and/or sold by it shall be of a quality that is appropriate to products or processes of the type here involved. Licensee agrees that similar provisions shall be included in all Sublicenses.

23

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10. **CONFIDENTIALITY**

- 10.1 **Confidential Information.** From time to time during the Term, a Party (the "Disclosing Party") may disclose or make available to the other Party (the "Receiving Party") information about its business affairs, confidential intellectual property, trade secrets, Know-How, copyrights, trademarks, designs, data, algorithms, code, patent applications and oral communications relating to the Disclosing Party's IP, Third Party confidential information, and other sensitive or proprietary information, with such information indicated and/or marked by the Disclosing Party to be "Confidential" or "Proprietary" (collectively, "Confidential Information"). Confidential Information shall not include information that, at the time of disclosure and as established by documentary evidence:
 - (a) is or becomes generally available to and known by the public other than as a result of, directly or indirectly, any breach of this Section 10 by the Receiving Party or any of its employees, agents or representatives;
 - (b) is or becomes available to the Receiving Party on a non-confidential basis from a Third Party source, provided, that such Third Party is not and was not prohibited from disclosing such Confidential Information;
 - (c) was known by or in the possession of the Receiving Party or its employees, agents or representatives prior to being disclosed by or on behalf of the Disclosing Party; or
 - (d) was or is independently developed by the Receiving Party without reference to or use of, in whole or in part, any of the Disclosing Party's Confidential Information.
- 10.2 **Receiving Party Obligations.** The Receiving Party shall:
 - (a) protect and safeguard the confidentiality of the Disclosing Party's Confidential Information with at least the same degree of care as the Receiving Party would protect its own Confidential Information, but in no event with less than a commercially reasonable degree of care;
 - (b) not use the Disclosing Party's Confidential Information, or permit it to be accessed or used, for any purpose other than to exercise its rights or perform its obligations under this Agreement;

- (c) not disclose any such Confidential Information to any Person, except to the Receiving Party's its Affiliates' employees, agents or representatives who need to know the Confidential Information to assist the Receiving Party (or its Affiliates), or act on its behalf, to exercise its rights or perform its obligations under this Agreement and who are bound by written obligations of confidentiality and restrictions on use that cover such Confidential Information and are at least as stringent as those set forth in this Agreement; and
- (d) immediately notify the Disclosing Party upon discovery of an unauthorized disclosure or use of such Confidential Information, cooperate with the Disclosing Party to retrieve such Confidential Information, and take reasonable steps to prevent any further unauthorized disclosure or use of such Confidential Information.

- 10.3 **Court or Government Order.** Notwithstanding anything in this Agreement to the contrary, the Receiving Party may make disclosures of Confidential Information of the Disclosing Party to the extent required to be disclosed pursuant to applicable federal, state or local Law or a valid order issued by a court or governmental agency of competent jurisdiction; provided, that (a) the Receiving Party gives the Disclosing Party prompt written notice of such requirement prior to disclosure, (b) the Receiving Party reasonably cooperates with the Disclosing Party's efforts to limit the scope of the information to be provided or to obtain an order protecting the information from public disclosure, and (c) the Receiving Party discloses only that portion of the Confidential Information that is legally required to be disclosed.
- 10.4 **Return Of Confidential Information.** Upon expiration or termination of this Agreement, the Receiving Party and its employees, agents and representatives shall promptly return to the Disclosing Party all copies, whether in written, electronic or other form or media, of the Disclosing Party's Confidential Information, or destroy all such copies and, at the Disclosing Party's written request, certify in writing to the Disclosing Party that such Confidential Information has been destroyed.
- 10.5 **APL Right to Publish.** APL may publish manuscripts, abstracts or the like describing any APL IP, provided that such publications do not contain any of Licensee's Confidential Information, unless APL obtains the prior written approval of Licensee to include Licensee's Confidential Information in any such publications. APL shall provide thirty (30) days written notice to Licensee for Licensee's review and comments of each proposed publication that contains Licensee's Confidential Information.
- 10.6 **Remedies.** The Receiving Party shall be responsible for any breach of this Section 10 caused by any of its employees, agents, or representatives. The Disclosing Party may seek equitable relief (including injunctive relief) against the Receiving Party to prevent the breach or threatened breach of this Section 10 and to secure its enforcement, in addition to all other remedies available at Law.
- 10.7 **Survival.** The provisions of this Section 10 shall survive the expiration or termination of this Agreement for ten (10) years, except that the provisions of this Section 10 shall be perpetual with respect to trade secrets.

11. TERM; TERMINATION

- 11.1 **Term.** This Agreement shall commence as of the Effective Date and remain in force until the expiration of all applicable Royalty Terms unless terminated earlier as provided herein (the "Term").
- 11.2 **Termination.**
 - (a) **For Convenience.** Licensee shall have the right to terminate this Agreement upon sixty (60) days prior written notice to APL; provided, that Licensee ceases (i) using the License, (ii) developing, making, using, selling or otherwise exploiting Licensed Products or Licensed Services, and (iii) certifies that it has returned or destroyed all proprietary and confidential Know-How in its (and its Affiliates' and Sublicensees') possession.

- (b) **For Material Breach.** APL and Licensee shall each have the right to terminate this Agreement if the other Party commits a material breach of an obligation under this Agreement and fails to cure any such breach within sixty (60) days of receipt of written notice from the non-breaching Party. If the material breach is not curable, or if not cured within such period, the non-breaching Party may terminate this Agreement effective immediately. A material breach shall include but not be limited to the following: (i) failure to deliver to APL any payment at the time such payment is due under this Agreement, (ii) failure to meet or achieve a Diligence Milestone by the applicable Achievement Date (and any permitted extension), (iii) failure to possess and maintain required insurance coverage, and (iv) delivery of a false report to APL. Such termination shall be effective upon further written notice to the breaching Party after failure by the breaching Party to cure. If Licensee commits a material breach of an obligation under this Agreement and fails to cure any such breach within sixty (60) days of receipt of written notice from APL, APL, instead of terminating this Agreement, may, in its sole discretion, elect to convert the License into a non-exclusive license.
- (c) **For Insolvency.** The License and rights granted in this Agreement have been granted on the basis of the special capability of Licensee to perform research and development work leading to the manufacture and commercialization of the Licensed Product(s) or Licensed Service(s). Accordingly, Licensee covenants and agrees that in the event any proceedings under Title 11, United States Code or any amendment thereto, be commenced by or against Licensee, and, if against Licensee, said proceedings shall not be dismissed with prejudice before either an adjudication in bankruptcy or the confirmation of a composition, arrangement, or plan of reorganization, or in the event Licensee shall be adjudged insolvent or make an assignment for the benefit of its creditors, or if a writ of attachment or execution be levied upon the License hereby created and not be released or satisfied within ten (10) days thereafter, or if a receiver be appointed in any proceeding or action to which Licensee is a party with authority to exercise any of the rights or privileges granted hereunder and such receiver be so discharged within a period of forty-five (45) days after his appointment, any such event shall be deemed to constitute a breach of this Agreement by Licensee and, APL, at the election of APL, but not otherwise, ipso facto, and without notice or other action by APL, may terminate this Agreement and all rights of Licensee hereunder and all rights of any and all persons claiming under Licensee.

- (d) **For Patent Challenge.** APL may terminate this Agreement immediately if Licensee or any of its Sublicensees or Affiliates directly or indirectly initiate or prosecute any lawsuit or any other civil or administrative proceeding making any claim or counterclaim, of any kind in any court, tribunal, agency, or governmental entity anywhere in the world, challenging the validity or enforceability of the APL Patent Rights. Licensee or any of its Sublicensees or Affiliates shall provide advance written notice to APL before Licensee or any of its Sublicensees or Affiliates initiates such challenge, and shall pay royalties to APL at the rate of two (2) times the rates provided for in [Section 4.3\(a\)](#) during the pendency of the challenge. Should the outcome of such challenge determine that any claim of APL Patent Rights is both valid and infringed, Licensee or any of its Sublicensees or Affiliates shall thereafter pay royalties to APL at the rate of three (3) times the rates provided for in [Section 4.3\(a\)](#). Licensee or any of its Sublicensees or Affiliates shall pay APL directly all royalties due under this [Section 11.2\(d\)](#) instead of paying such royalties into an escrow or other similar account. In the event that the challenge brought by Licensee or any of its Sublicensees or Affiliates is successful, Licensee or any of its Sublicensees or Affiliates will not have the right to recover or recoup any royalties paid before or during the pendency of the challenge. Whether the challenge brought by the Licensee or any of its Sublicensees or Affiliates is successful or unsuccessful, Licensee or any of its Sublicensees or Affiliates shall be required to pay for all reasonable costs and attorney fees incurred by APL as a result of the challenge.

11.3 Effects of Termination.

- (a) Upon termination of this Agreement for any reason, Licensee shall remain responsible to pay to APL any amounts accrued and due to APL under this Agreement as of the effective date of such termination. Any termination of this Agreement shall be without prejudice to APL's right to recover all amounts accruing to APL prior to the effective date of termination. Except as otherwise provided, should this Agreement be terminated for any reason, Licensee shall have no rights, express or implied, under any intellectual property rights which are the subject matter of this Agreement, nor have the right to recover any Royalties, fees, payments, or costs paid to APL hereunder.
- (b) Upon termination, except under [Section 11.2\(a\)](#), Licensee shall have the right to dispose of Licensed Products then in its possession and to complete existing contracts for such Licensed Products, so long as contracts are completed within six (6) months from the date of termination, and subject to the payment of Royalties to APL as provided in [Section 4](#) hereof. Licensee agrees to destroy progeny and derivatives thereof remaining in Licensee's possession after six (6) months from the date of termination. Failure to terminate on any basis shall not prejudice or impact APL's rights and ability to subsequently terminate for the same or a related basis.
- (c) Termination of this Agreement shall not preclude either Party from pursuing all rights and remedies it may have hereunder or at Law or in equity with respect to any breach of this Agreement nor prejudice either Party's right to obtain performance of any obligation. Licensee agrees that breach of terms of this Agreement would immediately and irreparably damage APL in a way not capable of being fully compensated by monetary damages and accordingly, APL is entitled to seek injunctive relief in addition to such other relief to which it may be entitled at Law or in equity.

26

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- 11.4 **Survival.** All representations, warranties, covenants, and agreements made herein and which by their express terms or by implication are to be performed or continue to apply after the execution and/or termination hereof, or are prospective in nature, shall survive such execution and/or termination, as the case may be. In addition and for avoidance of doubt, the following sections shall survive any termination or expiration: Sections 1 (Definitions), 4.3(b) (Royalty Upon Termination or Expiration), 4.5 (Equity), 4.7 (Payment Terms), 5.3 (Books and Records), 8 (Indemnification, Assumption of Liability, Limitation of Liability, Disclaimers, and Insurance), 10 (Confidentiality), 11 (Term; Termination), and 12 (Miscellaneous Provisions). In addition, if Licensee is required to continue to pay Royalties on Net Sales after termination or expiration, then all of the terms and conditions of this Agreement shall remain in full force and effect other than Sections 2 (License Grant), 3 (Diligence), 4.1 (Annual License Fees), 4.2 (Milestone Payments), 5.1 (Diligence Reports), and 7 (Intellectual Property).

12. MISCELLANEOUS PROVISIONS

- 12.1 **Restrictive Covenant.** Certain employees of APL possess knowledge, expertise, or skills that are related to the APL IP that is licensed hereunder to Licensee ("Key Employees"). During the Term and for a period of two (2) years thereafter, neither Licensee nor any of its Affiliates or its or their representatives, will solicit, recruit, or hire any Key Employee of APL to work for another party other than APL, or engage in any activity that would cause any Key Employee of APL to violate any agreement with APL.

12.2 Assignment.

- (a) Licensee may assign or delegate its rights or obligations under this Agreement only under the following circumstances:
- (i) by providing APL with written notice of the proposed assignment, including the proposed assignee's contact information, at least thirty (30) days prior to the date of assignment, and obtaining APL's express written consent to the proposed assignment, which consent shall not be unreasonably withheld; or
- (ii) as part of a sale or change of control, regardless of whether such a sale or change of control occurs by operation of Law or through an asset sale, stock sale, merger or other combination, or any other transfer of Licensee's entire business.
- (b) Prior to any assignment (including an assignment by operation of Law), (i) the proposed assignee must agree in writing to APL to be bound by this Agreement, and (ii) Licensee must pay APL an assignment fee in the amount of twenty thousand dollars (\$20,000) due within thirty (30) days of assignment agreement execution.
- (c) Any attempt by Licensee to assign this Agreement that fails to comply with [Section 12.2\(a\)](#) and [12.2\(b\)](#) is null and void.
- (d) This Agreement shall extend to and be binding upon the successors and legal representatives and permitted assigns of APL and Licensee.

27

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12.3 Use of Name.

- (a) Except as specifically provided in this [Section 12.3](#), nothing contained in this Agreement confers any right to either party hereto to use in advertising, publicity, or other promotional activities any name, trade name, trademark, or other designation of the other party hereto (including any contraction, abbreviation, or simulation of any of the foregoing).

(b) The name of The Johns Hopkins University Applied Physics Laboratory LLC, The Johns Hopkins University or any of its constituent parts, or any contraction thereof (collectively, the “JHU Names”), shall not be used for any purpose in any advertising, promotional literature, Web sites, electronic media applications, sales literature, fundraising documents, press releases, or other print or electronic communications, without prior written consent from an authorized representative of APL, or the respective institution, as applicable. Any request to make use of any names under the JHU Names shall be made at least fifteen (15) business days’ in advance of any proposed use and shall be made by written request.

(c) APL may disclose to all APL inventors or creators of APL IP licensed under Section 2.1 the terms and conditions of this Agreement upon their request.

(d) APL may acknowledge to Third Parties the existence of this Agreement and the extent of the Licenses granted to Licensee under Section 2.1, but APL shall not disclose the financial terms of this Agreement to Third Parties, except where APL is required by law to do so. Licensee hereby grants APL permission to include Licensee’s name and a link to Licensee’s website in APL’s annual reports and on APL’s website to showcase technology transfer-related stories.

(e) Licensee may acknowledge to Third Parties the existence of this Agreement and the extent of the Licenses granted to Licensee under Section 2.1, but Licensee shall not disclose the financial terms of this Agreement to Third Parties, except where APL is required by law to do so or to potential investors that have executed confidentiality agreements with terms at least as stringent as those in Section 10.

(f) APL shall have the right to list Licensee and display the logotype or symbol of Licensee on APL’s website and on APL publications.

12.4 **Independent Parties.** Nothing in this Agreement shall be construed to create any agency, employment, partnership, joint venture, or similar relationship between the Parties other than that of a licensor/licensee. Neither Party shall have any right or authority whatsoever to incur any liability or obligation (express or implied) or otherwise act in any manner in the name or on the behalf of the other, or to make any promise, warranty, or representation binding on the other.

12.5 **Notice of Claim.** Each Party shall give the other Party or its representative immediate notice of any suit or action filed, or prompt notice of any claim made, against them arising out of the performance of this Agreement.

12.6 **Notices.** Any notice, request, approval, or consent required or permitted to be given under this Agreement shall be in writing and directed to a Party at its address or e-mail address shown below or such other address or e-mail address as such Party shall have last given by notice to the other Party. A notice will be deemed received: if delivered personally, on the date of delivery; if mailed, five (5) days after deposit in the United States mail; if sent via overnight courier, one (1) business day after deposit with the courier service; or if sent via e-mail, upon confirmation of receipt by the intended recipient.

For APL:

with a copy (which shall not constitute notice) to:

The Johns Hopkins University
Applied Physics Laboratory LLC
Attn: Office of Technology Transfer
11100 Johns Hopkins Road
Laurel, MD 20723-6099
E-mail:

Royalty and other payments to APL shall be addressed as follows:

The Johns Hopkins University
Applied Physics Laboratory
Attention: Accounting & Finance Group
Development Fund Accountant
MS: MP1-S186
11100 Johns Hopkins Road
Laurel, MD 20723-6099

For Licensee:

with a copy (which shall not constitute notice) to:

Bullfrog AI, Inc.
P.O. Box 336
Boyd, Maryland 20841
E-Mail: vin@bullfrogai.com

12.7 **No Waivers; Severability.** No waiver of any breach of this Agreement shall constitute a waiver of any other breach of the same or other provision of this Agreement, and no waiver shall be effective unless made in writing and signed by the Party waiving. Any provision hereof prohibited by or unenforceable under any applicable Law of any jurisdiction shall as to such jurisdiction be deemed ineffective and deleted without affecting any other provision of this Agreement, which shall be interpreted so as to most fully achieve the intentions of the Parties.

12.8 **Entire Agreement.** Except for the 2018 License, this Agreement supersedes all previous agreements and understandings relating to the subject matter hereof, whether oral or in a writing, and constitutes the entire agreement of the Parties hereto and shall not be amended or altered in any respect except in a writing executed by the Parties. In the event of conflicting terms between this License and the 2018 License, the terms of this License will control.

12.9 **No Agency.** Licensee agrees that no representation or statement by any APL employee shall be deemed to be a statement or representation by APL, and that Licensee was not induced to enter this Agreement based upon any statement or representation of APL, or any employee of APL. APL is not responsible for any publications, experiments, or results reported by any APL employee prior to, or after, the Effective Date.

12.10 **Binding Agreement.** Exchange of this Agreement in draft or final form between the Parties shall not be considered a binding offer, and this Agreement shall not be deemed final or binding on either Party until the final Agreement has been signed by both Parties.

- 12.11 **Delays or Omissions.** Except as expressly provided herein, no delay or omission to exercise any right, power, or remedy accruing to any Party hereto, shall impair any such right, power, or remedy to such Party nor shall it be construed to be a waiver of any such breach or default, or an acquiescence therein, or in any similar breach or default be deemed a waiver of any other breach or default theretofore or thereafter occurring. Any waiver, permit, consent, or approval of any kind or character on the part of any Party of any breach or default under this Agreement, or any waiver on the part of any Party of any provisions or conditions of this Agreement, must be in writing and shall be effective only to the extent specifically set forth in such writing. All remedies either under this Agreement or by Law or otherwise afforded to any Party, shall be cumulative and not alternative.
- 12.12 **No Third Party Beneficiaries.** Nothing in this Agreement shall be construed as giving any Person, other than the Parties hereto and their successors and permitted assigns, any right, remedy or claim under or in respect of this Agreement or any provision hereof.
- 12.13 **Headings.** Article headings are for convenient reference and not a part of this Agreement. All Exhibits are incorporated herein by this reference.

- 12.14 **Interpretation.** All references to particular Exhibits, Articles, or Sections shall mean the Exhibits to, and Sections and Articles of, this Agreement, unless otherwise specified. Any reference herein to any defined term shall include both the singular and the plural, whether or not both forms are included in the reference. The words “including,” “include,” and “includes” and the phrases “such as,” and “for example,” and the equivalents of such words and phrases shall be deemed to be followed by “without limitation.” Unless otherwise specified, any action requiring the consent of a Party shall be read to mean that such Party is expected to act reasonably in considering whether to provide consent and that consent, if provided, shall be provided without unreasonable delay. As used herein, any calculation of an equity interest on a “fully diluted basis” shall be performed assuming the conversion of all outstanding shares of preferred stock into common stock and the exercise, conversion and/or exchange of all outstanding stock options and warrants to acquire shares of capital stock or any other securities exercisable, convertible and/or exchangeable into shares of capital stock. Except as otherwise expressly provided herein, all terms of an accounting or financial nature shall be construed in accordance with GAAP, as in effect from time to time. Unless the context otherwise requires, countries shall include territories. References to any specific Law or article, section or other division thereof shall be deemed to include the applicable then-current amendments or any replacement Law or article, section or other division thereof.
- 12.15 **Governing Law.** The laws of the State of Maryland, without giving effect to its choice of law provisions, shall govern all matters arising out of or relating to this Agreement, including its interpretation, construction, performance, and enforcement. Any legal suit, action, or proceeding arising out of or relating to this Agreement shall be brought in the Circuit Court for Baltimore City or in the United States District Court for the District of Maryland. Each of the Parties waives, to the fullest extent permitted by law, any objection which it may now or later have to the exclusive jurisdiction of or the laying of venue in the Circuit Court for Baltimore City, Maryland or the United States District Court for the District of Maryland, including any objections based upon inconvenient forum. The Parties agree that a final judgment in any such suit, action, or proceeding may be enforced in other jurisdictions as provided by law. As specifically provided by Md. COMMERCIAL LAW Code Ann. § 22-104, APL and Licensee agree that this Agreement shall not be governed by the Maryland Uniform Computer Information Transactions Act as adopted in Maryland under Title 22 of the Commercial Law Article of the Maryland Annotated Code, as may be amended from time to time.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized to be effective as of the Effective Date.

Bullfrog AI, Inc.

The Johns Hopkins University
Applied Physics Laboratory LLC

Signature

Signature

Printed Name

Printed Name

Printed Title

Printed Title

APPENDIX A

APL Patent Rights

<u>APL ID#</u>	<u>US Patent App. No.</u>	<u>Filing/Issue Date</u>	<u>Title</u>
3591-SPL	U.S. Patent No. 10,146,801	12/04/2018	“Apparatus and Method for Distributed Graph Processing”
4097-SPL	U.S. Patent No. 10,936,965	03/02/2021	“Method and Apparatus for Analysis and Classification of High Dimensional Data Sets”
4601-SPL	U.S. Patent No. 10,839,256	11/17/2020	“Generalized Low Entropy Mixture Model”

APPENDIX B

APL Copyrights

<u>APL ID#</u>	<u>IP Protection</u>	<u>Title</u>
6191-SPL	Copyright	Software and documentation for the PROMETHEUS software package for correlation, probabilistic, and network analysis
5863-SPL	Copyright	Software and documentation for the SEAGULL software package for time-series analysis

5849-SPL	Copyright	Software and documentation for Clique Tree Mixture Model for probabilistic analysis within the PROMETHEUS analytic software package
6644-SPL	Copyright	Software and documentation for the Minimum Subspace for Maximum Information algorithm within the PROMETHEUS analytic software package
6645-SPL	Copyright	Software and documentation for the Unsupervised Determination of Maximum Information Spaces algorithm within the PROMETHEUS analytic software package
3591-SPL	Copyright	Software and documentation for “Socrates: Scalable Graph Analytics”
3592-SPL	Copyright	Software and documentation for “Activity Pattern Exploration – APEX”
4097-SPL	Copyright	Software and documentation for “Clique Tree”; as implemented within Socrates
4601-SPL	Copyright	Software and documentation for “Generalized Low Entropy Mixture Model (Galileo)”
4463-SPL	Copyright	Software and documentation for “Scalable Correlation Engine”
5850-SPL	Copyright	Software and documentation for “Random Subspace Mixture Model”

APPENDIX C

APL Know-How

<u>APL ID#</u>	<u>IP Protection</u>	<u>Title</u>
6191-SPL	Confidential Information	Know-how associated with the PROMETHEUS software package for correlation, probabilistic, and network analysis
5863-SPL	Confidential Information	Know-how associated with the SEAGULL software package for time-series analysis
5849-SPL	Confidential Information	Know-how associated with the Clique Tree Mixture Model for probabilistic analysis within the PROMETHEUS analytic software package
6644-SPL	Confidential Information	Know-how associated with the Minimum Subspace for Maximum Information algorithm within the PROMETHEUS analytic software package
6645-SPL	Confidential Information	Know-how associated with the Unsupervised Determination of Maximum Information Spaces algorithm within the PROMETHEUS analytic software package
3591-SPL	Confidential Information	Know-how associated with “Socrates: Scalable Graph Analytics”
3592-SPL	Confidential Information	Know-how associated with “Activity Pattern Exploration – APEX”
4097-SPL	Confidential Information	Know-how associated with “Clique Tree”; as implemented within Socrates
4601-SPL	Confidential Information	Know-how associated with “Generalized Low Entropy Mixture Model (Galileo)”
4463-SPL	Confidential Information	Know-how associated with “Scalable Correlation Engine”
5850-SPL	Confidential Information	Know-how associated with “Random Subspace Mixture Model”

APPENDIX D

Stock Issuance Agreement

This Stock Issuance Agreement (this “Agreement”) is entered into and made effective as of July 8, 2022 (the “Effective Date”) between The Johns Hopkins University Applied Physics Laboratory LLC, a Maryland limited liability company, having business offices at 11100 Johns Hopkins Road, Laurel, Maryland 20723 (“APL”) and BullfrogAI Holdings, Inc., a Nevada corporation, having business offices at 325 Ellington Blvd. #317, Gaithersburg, MD 20878 (the “Company”). For purposes of this Agreement, each of APL and Company may be individually referred to as a “Party,” and collectively referred to as the “Parties.”

WHEREAS, concurrent with the execution of this Agreement, the Parties are entering into a License Agreement dated as of the Effective Date (the “License Agreement”), pursuant to which APL is granting the Company a license to certain intellectual property owned or controlled by APL; and

WHEREAS, in partial consideration for the execution and delivery by APL of the License Agreement and the grant of the license therein by APL to the Company thereunder, the Parties hereto agreed to enter into this Agreement in order to provide for, among other things, the issuance by the Company to APL of shares of common stock of the Company in accordance with the terms and subject to the conditions of this Agreement.

NOW, THEREFORE, in consideration of the foregoing and the mutual promises, covenants and agreements contained herein and for other good and valuable consideration, the receipt and sufficiency of which the Parties hereby acknowledge, the Parties agree as follows:

1. ACQUISITION OF SHARES.

(a) **Equity Issuance.** Pursuant to Section 4.5 of the License Agreement, the Company hereby issues to APL 279,159 shares (the “Shares”) of the common stock, par value \$0.00001 per share, of the Company (the “Common Stock”).

(b) **Consideration.** APL agrees to grant the Company a license to certain intellectual property pursuant to the License Agreement in exchange for, among other consideration, the Shares. The Company and APL agree that the Fair Market Value of such consideration is at least \$270,000, or \$0.96 per Share, based on a valuation of at least \$27,000,000 for the Company.

(c) **Closing.** The issuance of the Shares will occur contemporaneously with the execution and delivery of this Agreement at the closing (the “Closing”) held at a time and place, or via the exchange of documents and signatures, as mutually agreed upon by the Parties. At the Closing, each Party will deliver an executed copy of this Agreement and such other documents as the Parties may mutually agree.

(d) **Defined Terms.** Capitalized terms not defined above are defined in Section 7(a) of this Agreement.

2. RIGHT OF FIRST REFUSAL.

(a) **Right of First Refusal.** In the event that APL proposes to sell, pledge or otherwise transfer to a third party any Shares prior to the earlier of the IPO or one year from the date hereof of the “Transfer Shares”), the Company shall have the right of first refusal to purchase all (and not less than all) of such Transfer Shares (the “Right of First Refusal”). If APL desires to transfer the Transfer Shares, APL shall promptly deliver to the Company a written notice describing fully the proposed transfer, including the number of Transfer Shares, the proposed transfer price, the name and address of the proposed Transferee and proof satisfactory to the Company that the proposed sale or transfer will not violate any applicable federal, state or foreign securities laws (the “Transfer Notice”). The Transfer Notice shall be signed both by APL and the proposed Transferee and must constitute a binding commitment of both parties to the transfer of the Transfer Shares. The Company shall have the right to purchase all, and not less than all, of the Transfer Shares on the terms of the proposal described in the Transfer Notice (subject, however, to any change in such terms permitted under Section 2(b) below) by delivery of a notice of exercise of the Right of First Refusal within thirty (30) days after the date when the Transfer Notice was received by the Company.

(b) **Transfer of Transfer Shares.** If the Company fails to exercise its Right of First Refusal within thirty (30) days after receiving the Transfer Notice, APL may, not later than ninety (90) days after the Company received the Transfer Notice, conclude a transfer of the Transfer Shares subject to the Transfer Notice to the proposed Transferee on the terms and conditions described in the Transfer Notice; provided that any such sale is made in compliance with applicable federal, state and foreign securities laws and not in violation of any other contractual restrictions to which APL is bound. Any proposed transfer on terms and conditions different from those described in the Transfer Notice, as well as any subsequent proposed transfer by APL after the ninety (90) day period described above, shall again be subject to the Right of First Refusal and shall require compliance with the procedure described in Section 2(a) above. If the Company exercises its Right of First Refusal, the Parties shall consummate the sale of the Transfer Shares on the terms set forth in the Transfer Notice within sixty (60) days after the Company notifies APL of its intent to exercise the Right of First Refusal (or within such longer period as may have been specified in the Transfer Notice); provided, however, that in the event the Transfer Notice provided that payment for the Transfer Shares was to be made in a form other than cash or cash equivalents paid at the time of transfer, the Company shall have the option of paying for the Transfer Shares with cash or cash equivalents equal to the present value of the consideration described in the Transfer Notice.

(c) **Permitted Transfers.** This Section 2 shall not apply to a transfer to an Affiliate of APL.

3. APL REPRESENTATIONS; OTHER RESTRICTIONS ON TRANSFER.

(a) **APL Representations.** In connection with the issuance and acquisition of Shares under this Agreement, APL hereby represents and warrants to the Company as follows:

(i) APL is acquiring and will hold the Shares for investment for its account only and not with a view to, or for resale in connection with, any “distribution” thereof within the meaning of the Securities Act.

(ii) APL understands that the Shares have not been registered under the Securities Act by reason of a specific exemption therefrom and that the Shares must be held indefinitely, unless they are subsequently registered under the Securities Act or APL obtains an opinion of counsel, in form and substance satisfactory to the Company and its counsel, that such registration is not required. APL further acknowledges and understands that the Company is under no obligation to register the Shares.

(iii) APL is aware of the adoption of Rule 144 by the Securities and Exchange Commission under the Securities Act, which permits limited public resales of securities acquired in a non-public offering, subject to the satisfaction of certain conditions, including (without limitation) the availability of certain current public information about the issuer, the resale occurring only after the holding period required by Rule 144 has been satisfied, the sale occurring through an unsolicited “broker’s transaction,” and the amount of securities being sold during any three-month period not exceeding specified limitations. APL acknowledges and understands that the conditions for resale set forth in Rule 144 have not been satisfied and that the Company has no plans to satisfy these conditions in the foreseeable future.

(iv) APL will not sell, transfer or otherwise dispose of the Shares in violation of the Securities Act, the Securities Exchange Act of 1934, or the rules promulgated thereunder, including Rule 144 under the Securities Act. APL agrees that it will not dispose of the Shares unless and until he or she has complied with all requirements of this Agreement applicable to the disposition of Shares and he or she has provided the Company with written assurances, in substance and form satisfactory to the Company, that (A) the proposed disposition does not require registration of the Shares under the Securities Act or all appropriate action necessary for compliance with the registration requirements of the Securities Act or with any exemption from registration available under the Securities Act (including Rule 144) has been taken and (B) the proposed disposition will not result in the contravention of any transfer restrictions applicable to the Shares under state securities law.

(v) APL is an “accredited investor” as defined in Rule 501(a) under the Securities Act.

(b) **Securities Law Restrictions.** Regardless of whether the offering and sale of Shares under this Agreement have been registered under the Securities Act or have been registered or qualified under the securities laws of any State, the Company at its discretion may impose restrictions upon the sale, pledge or other transfer of the Shares (including the placement of appropriate legends on stock certificates or the imposition of stop-transfer instructions) if, in the judgment of the Company, such restrictions are necessary or desirable in order to achieve compliance with the Securities Act, the securities laws of any State or any other law.

(c) **Rights of the Company.** The Company shall not be required to (i) transfer on its books any Shares that have been sold or transferred in contravention of this Agreement or (ii) treat as the owner of Shares, or otherwise to accord voting, dividend or liquidation rights to, any Transferee to whom Shares have been transferred in contravention of this Agreement.

4. COMPANY REPRESENTATIONS AND WARRANTIES. The Company hereby represents, warrants, acknowledges and agrees as follows:

(a) **Organization and Corporate Power.** The Company is a corporation duly organized, validly existing and in good standing under the laws of the State of Maryland and has all requisite corporate power and authority to carry on its business as presently conducted.

(b) **Authorization.** All corporate action required to be taken by the Company’s Board of Directors and stockholders in order to authorize the Company to enter into this Agreement and the License Agreement, and to issue the Shares hereunder, has been taken. All action on the part of the officers of the Company necessary for the execution and delivery of the Transaction Agreements, the performance of all obligations of the Company under the Transaction Agreements, and the issuance and delivery of the Shares has been taken. The Transaction Agreements, when executed and delivered by the Company, shall constitute valid and legally binding obligations of the Company, enforceable against the Company in accordance with their respective terms except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium, fraudulent conveyance, or other laws of general application relating to or affecting the enforcement of creditors’ rights generally, and (ii) as limited by laws relating to the availability of specific performance, injunctive relief, or other equitable remedies.

(c) **Capitalization.**

(i) The authorized capital of the Company consists, as of the date hereof and immediately prior to the issuance of the Shares, of (A) 100,000,000 shares of Common Stock, 27,915,863 shares of which are issued and outstanding, and (B) 10,000,000 shares of preferred stock, par value \$0.00001 per share ("Preferred Stock"), none of which are issued and outstanding. All of the outstanding shares of Common Stock have been duly authorized, are fully paid and nonassessable and were issued in compliance with all applicable federal and state securities laws.

(ii) As of the date hereof and immediately following the issuance of the Shares, except for up to 15% of the Company's outstanding common stock which may be granted from time to time in accordance with the Company's to be adopted Equity Incentive Plan and the securities identified on Schedule 4(c)(ii) below, there are no outstanding options, warrants, rights (including conversion or preemptive rights and rights of first refusal or similar rights) or agreements, orally or in writing, to purchase or acquire from the Company any shares of Common Stock, or any securities convertible into or exchangeable for shares of Common Stock.

The table below reflects BullFrog AI Holdings, Inc. capital table including shares reserved for option, warrant exercises and convertible debt conversions. The last three items are estimates of the shares that would be issued for debt conversion based on the anticipated IPO.

BullFrog AI Holdings	
Capital Table @	5/31/2022
BullFrog Security	Number Shares
Outstanding Common Stock	27,915,863
Options	579,525
Warrants	5,183,097
Convertible Debt	178,409
New Bridge - Inv & Fee Warrants	319,917
New Bridge - Debt	271,806
Fully diluted Share base	34,448,617

(d) **Valid Issuance of Shares.** The Shares, when issued, sold and delivered in accordance with the terms and for the consideration set forth in this Agreement, will be validly issued, fully paid and nonassessable and free of restrictions on transfer other than restrictions on transfer under the Transaction Agreements, applicable state and federal securities laws and liens or encumbrances created by or imposed by APL. Assuming the accuracy of the representations of APL in Section 3 of this Agreement and subject to required federal and state securities filings, the Shares will be issued in compliance with all applicable federal and state securities laws.

(e) **Company Documents.** The Company has furnished to APL true, correct and complete copies of (i) the Certificate of Incorporation and (ii) the Bylaws of the Company, which remain in full force and effect as of the date hereof.

5. ASSIGNMENT.

Except as otherwise expressly provided to the contrary, the provisions of this Agreement shall inure to the benefit of, and be binding upon, the Company and its successors and assigns and be binding upon APL and its legal representatives, heirs, legatees, distributees, assigns and transferees by operation of law, whether or not any such person has become a party to this Agreement or has agreed in writing to join herein and to be bound by the terms, conditions and restrictions hereof.

6. LEGENDS.

All certificates evidencing Shares shall bear the following legends:

"THE SHARES REPRESENTED BY THIS CERTIFICATE ARE SUBJECT TO CERTAIN RESTRICTIONS ON TRANSFER AND A RIGHT OF FIRST REFUSAL AS SET FORTH IN THE STOCK ISSUANCE AGREEMENT BETWEEN THE COMPANY AND THE REGISTERED HOLDER WITH RESPECT TO THESE SHARES, A COPY OF WHICH IS ON FILE AT THE PRINCIPAL OFFICE OF THE COMPANY."

"THE SHARES REPRESENTED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE SECURITIES ACT OF 1933, AS AMENDED OR APPLICABLE STATE SECURITIES LAWS. THESE SHARES HAVE NOT BEEN ACQUIRED WITH A VIEW TO DISTRIBUTION OR RESALE, AND MAY NOT BE SOLD, MORTGAGED, PLEDGED, HYPOTHECATED OR OTHERWISE TRANSFERRED WITHOUT AN EFFECTIVE REGISTRATION STATEMENT FOR SUCH SHARES UNDER THE SECURITIES ACT OF 1933, AS AMENDED, AND ANY APPLICABLE STATE SECURITIES OR AN OPINION OF COUNSEL, SATISFACTORY TO THE COMPANY AND ITS COUNSEL, THAT SUCH REGISTRATION IS NOT REQUIRED UNDER THE SECURITIES ACT OF 1933, AS AMENDED, OR UNDER APPLICABLE STATE SECURITIES LAWS."

If required by the authorities of any State in connection with the issuance of the Shares, the legend or legends required by such State authorities shall also be endorsed on all such certificates.

7. MISCELLANEOUS.

(a) **Definitions.** Capitalized terms used herein shall have the meanings set forth below.

"Agreement" has the meaning set forth in the Preamble.

"APL" has the meaning set forth in the Preamble.

"Board of Directors" means the Board of Directors of the Company, as constituted from time to time.

"Closing" has the meaning set forth in Section 1(c).

"Common Stock" has the meaning set forth in Section 1(a).

"Company" has the meaning set forth in the Preamble.

“Effective Date” has the meaning set forth in the Preamble.

“Fair Market Value” means the fair market value of a Share, as determined by the Board of Directors in good faith. Such determination shall be conclusive and binding on all persons.

“License Agreement” has the meaning set forth in the Recitals.

“Party” or “Parties” has the meaning set forth in the Preamble.

“Preferred Stock” has the meaning set forth in Section 4(c)(i).

“Right of First Refusal” has the meaning set forth in Section 2(a).

“Securities Act” means the Securities Act of 1933, as amended.

“Shares” has the meaning set forth in Section 1(a).

“Transferee” means any person to whom APL has directly or indirectly transferred any Share.

“Transfer Notice” has the meaning set forth in Section 2(a).

“Transfer Shares” has the meaning set forth in Section 2(a).

(b) **Entire Agreement.** This Agreement contains the entire agreement of the Parties and there are no other promises or conditions in any other agreement between the Parties, whether oral or written, concerning the subject matter hereof. This Agreement supersedes any prior written or oral agreements between the Parties concerning the subject matter hereof.

(c) **Governing Law.** The laws of the State of Maryland, without giving effect to its choice of law provisions, shall govern all matters arising out of or relating to this Agreement, including, without limitation, its interpretation, construction, performance, and enforcement. Any legal suit, action, or proceeding arising out of or relating to this Agreement shall be brought in the Circuit Court for Baltimore City or in the United States District Court for the District of Maryland. Each of the parties waives, to the fullest extent permitted by law, any objection which it may now or later have to the exclusive jurisdiction of or the laying of venue in the Circuit Court for Baltimore City, Maryland or the United States District Court for the District of Maryland, including any objections based upon inconvenient forum. The parties agree that a final judgment in any such suit, action, or proceeding may be enforced in other jurisdictions as provided by law.

(d) **Amendment; Waiver.** No amendment, alteration or modification of any of the provisions of this Agreement shall be valid or effective unless made in writing and signed by the duly authorized representatives of the Parties hereto. No waiver of any provision of this Agreement shall be valid or effective unless made in writing and signed by a duly authorized representative of the Party to be bound by such waiver. Failure of a Party to exercise any right to enforce any provision, or to require strict performance by the other Party of any provision, shall not release any Party of its obligations under this Agreement and shall not operate as a waiver of any right to insist upon strict performance, or of any Party’s rights or remedies under this Agreement or at law.

(e) **Notices.** All notices, requests and other communications hereunder must be in writing and delivered personally, by facsimile transmission (receipt verified), or by overnight courier (signature required) or by e-mail to the Parties at the following addresses or facsimile numbers:

For APL: *with a copy (which shall not constitute notice) to:*

The Johns Hopkins University
Applied Physics Laboratory, LLC
Attn: Office of Technology Transfer
11100 Johns Hopkins Road
Laurel, MD 20723-6099
E-mail:

For Company: *with a copy (which shall not constitute notice) to:*

Bullfrog AI Holdings, Inc. Sichenzia Ross Ference LLP
325 Ellington Blvd. #317 1185 Avenue of Americas, 31st Floor
Gaithersburg, Maryland 20878 New York, NY 10036
E-Mail: vin@bullfrogai.com

(f) **Severability.** If any provision of this Agreement is held invalid by any law, rule, order, or regulation of any government or by the final determination of any court of competent jurisdiction, such invalidity shall not affect the enforceability of any other provisions and such provisions shall be interpreted so as to best accomplish the objectives of such invalid provisions within the limits of applicable law or court decision.

(g) **Counterparts.** This Agreement may be executed in one or more counterparts, including by electronic (PDF) transmission, each of which shall be deemed an original, but all of which together shall constitute one and the same instrument.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their respective officers thereunto duly authorized to be effective as of the

Effective Date.

BullfrogAI Holdings, Inc.

The Johns Hopkins University
Applied Physics Laboratory LLC

Signature

Signature

Printed Name

Printed Name

Printed Title

Printed Title

APPENDIX E

Fees and Payment Options

Automated Clearing House (ACH) for payments through U.S. banks only

APL encourages its licensees to submit electronic funds transfer payments through the Automated Clearing House (ACH).

Electronic Funds Wire Transfers

The following account information is provided for wire payments. In order to process payment via Electronic Funds Wire Transfer sender MUST supply the following information within the transmission:

Wiring Information (Domestic):

Company:	The Johns Hopkins University Applied Physics Laboratory LLC
Bank:	PNC Bank
Bank Address:	One East Pratt Street Baltimore, MD 21201
Bank POC:	Marcella (Marcy) Kraus (410)237-5736
Bank Account:	Checking
Bank Account #:	5300445194
Routing Number:	031000053

Wiring Information with Swift Code (foreign):

Company:	The Johns Hopkins University Applied Physics Laboratory LLC
Bank:	PNC Bank
Bank Address:	One East Pratt Street Baltimore, MD 21201
Bank POC:	Marcella (Marcy) Kraus (410)237-5736
Bank Account:	Checking
Bank Account #:	5300445194
Routing Number:	031000053
Swift Code:	PNCCUS33

Checks

All checks should be made payable to "JHU/APL" and sent by US Postal Service to the following address:

Johns Hopkins University
Applied Physics Laboratory LLC
11100 Johns Hopkins Road
Laurel, MD 20723-6099
Attn: Accounting/Finance Group, DevFund Acct MS: MP1-S186

APPENDIX F

Form of Diligence and Annual Report

DATED: _____

PERIOD: From _____ To _____

A. Progress made by Licensee, Affiliates and/or Sublicensees toward commercialization of Licensed Products and/or Licensed Services, including completed work, key scientific discoveries, summary of work-in-progress, current schedule of anticipated events or milestones, market plans (if any) for introduction of Licensed Products and/or Licensed Services, and significant transactions by Licensee, Affiliates and/or Sublicensees involving or relevant to Licensed Products and/or Licensed Services:

B. Notice of all FDA and other relevant governmental filings and/or approvals regarding any Licensed Products and/or Licensed Services made or obtained by Licensee, Affiliates and/or Sublicensees, the APL IP pertaining thereto, and the commercial names thereof:

C. A Certificate of Insurance or other evidence of insurance (copy attached):

D. Affiliates and Sublicensees which have exercised any rights to any APL IP:

_____ NONE

_____ List attached with description of rights exercised.

E. Diligence and other milestones achieved:

F. Diligence and other milestones expected to be achieved this year:

G. Sublicensees entered into during this year:

_____ NONE

Identification of Sublicensees (copy of each Sublicense attached):

H. Equity funding received:

I. Change of control, name change or other significant change in Licensee, Affiliates, and/or Sublicensees relevant to the Agreement or Licensee:

_____ NONE

Details:

J. Awards, grants and other non-equity funding received:

APPENDIX G

Form of Quarterly Sales and Royalty Report

DATED: _____

Period Covered: From: / / Through / /

TOTAL ROYALTIES DUE FOR THIS PERIOD \$ _____

TOTAL NON-ROYALTY SUBLICENSING INCOME (NRSI) DUE FOR THIS PERIOD \$ _____

If the licenses granted in the Agreement cover several product/service lines, or several contracts performed using APL IP, please prepare a separate report for each Licensed Product/Licensed Service line and/or contract; then combine all Licensed Product lines, Licensed Service lines, and contracts into a summary report.

If units were sold, or contracts performed, by any Affiliates, Sublicensees or any party other than Licensee, clearly identify the responsible party or parties and the extent to which each such party was responsible for each such activity.

- Report type: Single Licensed Product/Licensed Service Report.
 Trademark of Licensed Product or Licensed Service
- Single Contract Report
- Multi-product/service/contract Summary Report
 Licensee's Tradenames for Licensed Product/Licensed Service Lines

Country	Units Sold	Gross Sales	*Less Allowances	Net Sales	Profits/Fees	Royalty Rate	Conv. Rate	Period Royalty Amount in U.S. dollars
U.S.A							1.0	
Canada								
Europe:								
Japan								
Other:								
TOTAL								

* On a separate page, please indicate the reasons for any significant adjustment. Also note any unusual occurrences that affected royalty payment amounts during this period.

I hereby certify, as a duly authorized officer of Licensee, that the information set forth above is correct and complete and meets all of the reporting requirements set forth in the Agreement.

By (please sign): _____ Date: _____
 Printed Name and Title: _____


Greentree Financial Group, Inc.

FL Office
 7951 SW 6th St., Ste. 216
 Plantation, Florida 33324
 Tel: 954-424-2345
 Fax: 954-424-2230

NC Office
 19720 Jetton Road, 3rd Floor
 Cornelius, NC 28301
 Tel: 704-892-8733
 Fax: 704-892-6487

June 23, 2021

PERSONAL AND CONFIDENTIAL

BullFrog AI Holdings, Inc.
 325 Ellington Blvd., #317
 Gaithersburg, MD 20878
 Attn: Vin Singh – Chief Executive Officer

Dear Mr. Singh,

This service agreement (“Agreement”) confirms the terms and conditions of the engagement of Greentree Financial Group, Inc. (“Greentree”) by BullFrog AI Holdings, Inc., a Nevada Corporation (the “Company”) to render certain professional services to the Company.

1. Services. Greentree agrees to perform the following services:

- (a) Assist the Company in responding to comments from the NASDAQ Listing Qualifications Staff, if requested;
- (b) Assist the Company in preparing a Code of Conduct applicable to all directors, officers and employees, including but not limited to, insiders trading policies, if requested;
- (c) Assist the Company in preparing employment agreements for all directors and executive officers, if requested;
- (d) Assist the Company to setup the Company’s nomination system for all directors;
- (e) Advise and assist the Company in the conversion of its financial reporting systems, including its projected financial statements, to a format that is consistent with United States GAAP (Generally Accepted Accounting Principles);
- (f) Review and advise the Company on all documents and accounting systems relating to its finances and transactions, with the purpose of bringing such documents and systems into compliance with United States GAAP or disclosures required by SEC;

Client initials: VS

www.gtfinancial.com


Greentree Financial Group, Inc.

FL Office
 7951 SW 6th St., Ste. 216
 Plantation, Florida 33324
 Tel: 954-424-2345
 Fax: 954-424-2230

NC Office
 19720 Jetton Road, 3rd Floor
 Cornelius, NC 28301
 Tel: 704-892-8733
 Fax: 704-892-6487

- (g) Provide necessary consulting services and support as a liaison for the Company to third- party service providers, including coordination amongst the Company and their related attorneys, CPAs and the transfer agent;
- (h) Provide management training to the senior management of the Company, pertaining to usual and customary practices for public companies with business plans similar to the Company’s business plan;
- (i) Assist the Company with Edgarization of Initial Public Offering related filings with the United States Securities and Exchange Commission, including Forms S-1 and XBRL Filings for the financial statements and footnotes;

2. Fees. The Company agrees to pay Greentree for its services a professional service fee (“Service Fee” or “Securities”) of:

Common Shares: Three Percent (3%) of the fully diluted equity of the company as measured by the capital equity table immediately prior to listing on NASDAQ or any other Exchange, with a ‘true-up’ amount to be delivered within thirty days prior to its expected listing day.

Warrants: The Company shall grant Greentree five-year warrants to purchase 400,000 shares of the Company’s common stock at \$1.00 per share. These warrants will vest 30 days prior to an expected going public transaction. The form of warrants is attached hereto as Exhibit B.

In, addition to the initial Service Fee, Greentree and the Company may enter into additional agreements such as bridge financing agreements or annual service agreements as mutually acceptable to Greentree and the Company.

Note:

- i. Except as provided by the vesting provisions of the warrants, the Service Fee shall be deemed fully earned upon signing this Agreement.

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Greentree Financial Group, Inc.

FL Office
7951 SW 6th St., Ste. 216
Plantation, Florida 33324
Tel: 954-424-2345
Fax: 954-424-2230

NC Office
19720 Jetton Road, 3rd Floor
Cornelius, NC 28301
Tel: 704-892-8733
Fax: 704-892-6487

- ii. In addition to any fees that may be payable to Greentree under this Agreement, the Company agrees to reimburse Greentree, upon request made from time to time, for its reasonable out-of-pocket expenses incurred in connection with Greentree's activities under this Agreement, including the reasonable fees and travel expenses for the meetings on behalf of the Company. All such fees, expenses and costs will be pre-approved by the Company in writing, and billed at any time by Greentree and are payable by the Company when invoiced. Upon expiration of the Agreement any unreimbursed fees and expenses will be immediately due and payable.

3. Term. The term of this Agreement shall commence on signing of this Agreement and end on March 31, 2022 (the "Term"). This Agreement may be renewed upon mutual written agreement of the parties hereto. This agreement may be terminated by the Company prior to its expiration or services being rendered with 45 days prior written notice to Greentree. Any obligation pursuant to this Paragraph 3, and pursuant to Paragraphs 2 (payment of fees), 4 (indemnification), 5 (matters relating to engagement), 7 (governing law); 8 (attorney fees) and 11 (miscellaneous) hereof, shall survive the termination or expiration of this Agreement. As stated in the foregoing sentence, the parties specifically agree that in the event the Company terminates this Agreement prior to expiration of the Term for any reason other than material breach of this Agreement by Greentree, the full Service Fee shall become immediately due and payable.

4. Indemnification. In addition to the payment of fees and reimbursement of fees and expenses provided for above, the Company agrees to indemnify Greentree and its affiliates with regard to the matters contemplated herein, as set forth in Exhibit A, attached hereto, which is incorporated by reference as if fully set forth herein.

5. Matters Relating to Engagement. The Company acknowledges that Greentree has been retained solely to provide the services set forth in this Agreement.

In rendering such services, Greentree shall act as an independent contractor, and any duties of Greentree arising out of its engagement hereunder shall be owed solely to the Company. The Company further acknowledges that Greentree may perform certain of the services described herein through one or more of its affiliates.

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The Company acknowledges that Greentree is a consulting firm that is engaged in providing consulting services. The Company acknowledges and agrees that in connection with the performance of Greentree's services hereunder (or any other services) that neither Greentree nor any of its employees will be providing the Company with legal, tax or accounting advice or guidance (and no advice or guidance provided by Greentree or its employees to the Company should be construed as such) and that neither Greentree nor its employees hold itself or themselves out to be advisors as to legal, tax, accounting or regulatory matters in any jurisdiction. Greentree may retain attorneys and accountants that are for Greentree's benefit, and Greentree may recommend a particular law firm or accounting firm to be engaged by the Company and may pay the legal expenses or accounting expenses associated with that referral on behalf of the Company, after full disclosure to the Company and the Company's consent that Greentree make such payment on its behalf. However, Greentree makes no recommendation as to the outcome of such referrals. The Company shall consult with its own legal, tax, accounting and other advisors concerning all matters and advice rendered by Greentree to the Company, and the Company shall be responsible for making its own independent investigation and appraisal of the risks, benefits and suitability of the advice and guidance given by Greentree to the Company. Neither Greentree nor its employees shall have any responsibility or liability whatsoever to the Company or its affiliates with respect thereto.

The Company recognizes and confirms that in performing its duties pursuant to this Agreement, Greentree will be using and relying on data, material, and other information furnished by the Company, a third party provider, or their respective employees and representatives ("the Information"). The Company will cooperate with Greentree and will furnish Greentree with all Information concerning the Company and any financial information or organizational or transactional information which Greentree deems appropriate, and Company will provide Greentree with access to the Company's officers, directors, employees, independent accountants and legal counsel for the purpose of performing Greentree's obligations pursuant to this Agreement.

The Company hereby agrees and represents that all Information furnished to Greentree pursuant to this Agreement shall be accurate and complete in all material respects at the time provided, and that, if the Information becomes materially inaccurate, incomplete or misleading during the term of Greentree's engagement hereunder, the Company shall promptly advise Greentree in writing. Accordingly, Greentree assumes no responsibility for the accuracy and completeness of the Information. In rendering its services, Greentree will be using and relying upon the Information without independent verification evaluation thereof.

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6. Representations and Warranties by Greentree. Greentree, by its acceptance of the Promissory Note, represents and warrants to Company as follows:

(a) Greentree is acquiring the Promissory Note with the intent to hold as an investment and not with a view of distribution.

(b) Greentree is an "accredited investor" within the definition contained in Rule 501(a) under the Securities Act of 1933, as amended (the "Securities Act"), and is acquiring the Promissory Note for its own account, for investment, and not with a view to, or for sale in connection with, the distribution thereof or of any interest therein. Greentree has adequate net worth and means of providing for its current needs and contingencies and is able to sustain a complete loss of the investment in the Promissory Note, and has no need for liquidity in such investment. Greentree, itself or through its officers, employees or agents, has sufficient knowledge and experience in financial and business matters to be capable of evaluating the merits and risks of an investment such as an investment in the Securities, and Greentree, either alone or through its officers, employees or agents, has evaluated the merits and risks of the investment in the Promissory Note.

(c) Greentree acknowledges and agrees that it is acquiring the Promissory Note hereunder based upon its own inspection, examination and determination with respect thereto as to all matters, and without reliance upon any express or implied representations or warranties of any nature, whether in writing, orally or otherwise, made by or on behalf of or imputed to the Company.

(d) Greentree has no contract, arrangement or understanding with any broker, finder, investment bank, financial intermediary or similar agent with respect to any of the transactions contemplated by this Agreement.

(e) Greentree understands that in lieu of this Promissory Note, Greentree has the right to receive an up-front cash payment prior to Greentree rendering services to the Company pursuant to the Advisory Agreement. It is further acknowledged and agreed that the value of the Promissory Note, or the securities into which it may be converted, at any given time, could be less than the value of the Service Fee had Greentree elected an up-front payment, and Greentree accepts the investment risk associated therewith.

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7. Governing Law and Consent to Jurisdiction. This Agreement shall be governed by and construed in accordance with the laws of the State of Florida, without regard to conflict of laws provisions. All disputes arising out of or in connection with this agreement, or in respect of any legal relationship associated with or derived from this agreement, shall only be heard in any competent court residing in Broward County Florida. Company agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any manner provided by law. The Company further waives any objection to venue in any such action or proceeding on the basis of inconvenient forum. The Company agrees that any action on or proceeding brought against the Greentree shall only be brought in such courts.

8. Attorney Fees. In the event Greentree hereof shall refer this Agreement to an attorney to enforce the terms hereof, the Company agrees to pay all the costs and expenses incurred in attempting or effecting the enforcement of the Greentree's rights, including reasonable attorney's fees, whether or not suit is instituted.

9. No Brokers. The Company represents and warrants to Greentree that there are no brokers, representatives or other persons which have an interest in compensation due to Greentree from any services contemplated herein.

10. Authorization. The Company and Greentree represent and warrant that each has all requisite power and authority, and all necessary authorizations, to enter into and carry out the terms and provisions of this Agreement and the execution, delivery and performance of this Agreement does not breach or conflict with any agreement, document or

instrument (including contracts, wills, agreements, records and wire receipts, etc.) to which it is a party or bound.

11. Miscellaneous. This Agreement constitutes the entire understanding and agreement between the Company and Greentree with respect to the subject matter hereof and supersedes all prior understandings or agreements between the parties with respect thereto, whether oral or written, express or implied. Any amendments or modifications must be executed in writing by both parties. This Agreement and all rights, liabilities and obligations hereunder shall be binding upon and inure to the benefit of each party's successors but may not be assigned without the prior written approval of the other party. If any provision of this Agreement shall be held or made invalid by a statute, rule, regulation, decision of a tribunal or otherwise, the remainder of this Agreement shall not be affected thereby and, to this extent, the provisions of this Agreement shall be deemed to be severable. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but such counterparts shall, together, constitute only one instrument. The descriptive headings of the Paragraphs of this Agreement are inserted for convenience only, do not constitute a part of this Agreement and shall not affect in any way the meaning or interpretation of this Agreement.

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Please confirm that the foregoing correctly sets forth our agreement by signing below in the space provided and returning this Agreement to Greentree for execution, which shall constitute a binding agreement as of the date first above written.

Thank you. We look forward to a mutually rewarding relationship.

GREENTREE FINANCIAL GROUP, INC.

By: _____
Name: **R. Chris Cottone**
Title: **Vice President**

AGREED TO AND ACCEPTED DATE: JUNE 23, 2021

BULLFROG AI HOLDINGS, INC.

By: _____
Name: **Vin Singh**
Title: **Chief Executive Officer**

AGREED TO AND ACCEPTED DATE: JUNE 23, 2021

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EXHIBIT A: INDEMNIFICATION

The Company agrees to indemnify Greentree, its employees, directors, officers, agents, affiliates, and each person, if any, who controls it within the meaning of either Section 20 of the Securities Exchange Act of 1934 or Section 15 of the Securities Act of 1933 (each such person, including Greentree is referred to as "Indemnified Party") from and against any losses, claims, damages and liabilities, joint or several (including all legal or other expenses reasonably incurred by an Indemnified Party in connection with the preparation for or defense of any threatened or pending claim, action or proceeding, whether or not resulting in any liability) ("Damages"), to which such Indemnified Party, in connection with providing its services or arising out of its engagement hereunder, may become subject under any applicable Federal or state law or otherwise, including but not limited to liability or loss (i) caused by or arising out of an untrue statement or an alleged untrue statement of a material fact or omission or alleged omission to state a material fact by the Company necessary in order to make a statement not misleading in light of the circumstances under which it was made, (ii) caused by or arising out of any act or failure to act by the Company, or (iii) arising out of Greentree's engagement or the rendering by any Indemnified Party of its services under this Agreement; provided, however, that the Company will not be liable to the Indemnified Party hereunder to the extent that any Damages resulted from the negligence, gross negligence or willful misconduct of the Indemnified Party seeking indemnification hereunder.

These indemnification provisions shall be in addition to any liability which the Company may otherwise have to any Indemnified Party.

If for any reason, other than a final non-appealable judgment finding an Indemnified Party liable for Damages for its gross negligence or willful misconduct the foregoing indemnity is unavailable to an Indemnified Party or insufficient to hold an Indemnified Party harmless, then the Company shall contribute to the amount paid or payable by an Indemnified Party as a result of such Damages in such proportion as is appropriate to reflect not only the relative benefits received by the Company and its shareholders on the one hand and the Indemnified Party on the other, but also the relative fault of the Company and the Indemnified Party as well as any relevant equitable considerations.

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Promptly after receipt by the Indemnified Party of notice of any claim or of the commencement of any action in respect of which indemnity may be sought, the Indemnified Party will notify the Company in writing of the receipt or commencement thereof and the Company shall have the right to assume the defense of such claim or action (including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of fees and expenses of such counsel and any monetary settlement), provided that the Indemnified Party shall have the right to control its defense if, in the opinion of its counsel, the Indemnified Party's defense is unique or separate to it as the case may be, as opposed to a defense pertaining to the Company. In any event, the Indemnified Party shall have the right to retain counsel reasonably satisfactory to the Company, at the Company's sole expense, to represent it in any claim or action in respect of which indemnity may be sought and agrees to cooperate with the Company and the Company's counsel in the defense of such claim or action. In the event that the Company does not promptly assume the defense of a claim or action, the Indemnified Party shall have the right to employ counsel to defend such claim or action. Any obligation pursuant to this Annex shall survive the termination or expiration of the Agreement

BULLFROG AI HOLDINGS, INC.

A handwritten signature in black ink, appearing to read "Vin Singh", is written over a horizontal line.

By: _____
Name: **Vin Singh**
Title: **Chief Executive Officer**

AGREED TO AND ACCEPTED DATE: JUNE 23, 2021

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Gerald R. Newman & Associates

162 N. Hamel Drive
Suite 101
Beverly Hills, California 90211

Tel. (310) 871-3996
Fax (310) 289-1015
Email gman90211@gmail.com

June 23, 2021

PERSONAL AND CONFIDENTIAL

BullFrog AI Holdings, Inc.
325 Ellington Blvd., #317
Gaithersburg, MD 20878
Attn: Vin Singh – Chief Executive Officer

Dear Mr. Singh,

This Business Services Development Agreement (the “Agreement”) confirms the terms and conditions of the engagement of Gerald R. Newman, (“CONSULTANT”) by BullFrog AI Holdings, Inc., a Delaware Corporation (the “Company”) to render certain professional services to the Company.

Whereas, CONSULTANT has assisted hundreds of companies over the past 40 years with business development, including helping both private and public companies with improving valuation, strategic relationships, acquisitions, licensing, recruiting key personnel, improving domestic/international distribution, public company resources, both as a consultant and/or business attorney (now recently retired), and

Whereas, CONSULTANT has of June 18, 2021 commenced to assist the Company with general business consulting, strategic relationships and the recruiting of certain key personnel, and

Whereas, CONSULTANT and the Company desire to memorialize their prior oral agreement with this written Business Services Development Agreement,

Consultant GRN Company VS (initial)

NOW THEREFOR, FOR ADEQUATE CONSIDERATION, THE PARTIES HEREBY AGREE AS FOLLOWS:

1. Business Goals of the Company

(a) The CEO of the Company has indicated that he would like assistance in building value for the Company by having:

- 1) New customer acquisition opportunities that could be beneficial to the Company
- 2) Intellectual Property (IP) acquisition and licensing opportunities that could be beneficial to the Company
- 3) New product opportunities that could be beneficial to the Company
- 4) New domestic and international distribution channels that could be beneficial to the Company
- 5) New advertising and marketing opportunities that could be beneficial to the Company
- 6) Service providers who can assist the Company in the process of obtaining a Nasdaq listing, including an experienced and available PCAOB Auditor, an experienced and available SEC Attorney, and an experienced and available NASDAQ Process Coordinator.
- 7) Service providers to assist with Company Public Press Releases
- 8) Service providers to assist with Company Investor Relations
- 9) Service providers who can assist with opening Stock Brokerage Accounts for thousands of the Company’s shareholders
- 10) Such other assistance the Company and the CONSULTANT may agree upon during the term of the CONSULTANT’S engagement.

2. CONSULTANT shall provide the following services, if requested, to Assist the Company with its Business Goals

- (a) Sales goals - at the request of the CEO review the Company sales plans, resources, personnel requirements and potential challenges. Offer such advice and referral of experts as may be helpful
- (b) Business acquisition opportunities – CONSULTANT has over the years established connections with business brokers and M&A firms, both domestic and international, and is familiar with the relevant databases of such opportunities
- (c) Intellectual Property (IP) acquisition and licensing – CONSULTANT has over the years established business connections with patent attorneys and licensing attorneys and is familiar with the relevant databases of such opportunities
- (d) New product opportunities – CONSULTANT has over the years established business connections with new product developers and has access to the relevant databases.
- (e) New domestic and international distribution channels – CONSULTANT has owned, operated and partnered in various businesses and has become familiar with domestic and international distribution channels on a worldwide basis
- (f) New advertising and marketing opportunities – CONSULTANT has owned and operated a national advertising and marketing firm, including print, radio, TV, digital and nationwide commercials (one of which did over \$100 million in sales)

Consultant GRN Company VS (initial)

(g) Service providers who can assist with a Nasdaq listing

- 1) PCAOB Auditor – CONSULTANT has sourced an experienced and available Auditor and the Company has the opportunity to enter into an agreement with the Auditor that it deems acceptable. CONSULTANT will continue to work with the Auditor and the Company to make sure the audit is completed in a timely and professional manner.
 - 2) SEC Attorney – CONSULTANT has sourced an experienced and available SEC Attorney and the Company has the opportunity to enter into an agreement with the Attorney that it deems acceptable. CONSULTANT will continue to work with the SEC attorney and the Company to make sure the necessary legal process for a NASDAQ listing is completed in a timely and professional manner.
 - 3) NASDAQ Process Coordinator – CONSULTANT has sourced an experienced and available NASDAQ Process Coordinator and the Company has the opportunity to enter into an agreement with the NASDAQ Process Coordinator that it deems acceptable. CONSULTANT will continue to work with the NASDAQ Process Coordinator to make sure the necessary NASDAQ listing process is completed in a timely and professional manner (*for details see 1), below*).
- (h) Service provider for Public Press Releases – CONSULTANT has advised numerous public companies and has business connections with various firms that write and publish public company press releases
- (i) Service provider for Investor Relations – CONSULTANT has advised numerous public companies and has business connections with various Investor Relations firms
- (j) Service provider for shareholder Stock Brokerage Accounts – CONSULTANT has assisted the shareholders of various public companies to open Stock Brokerage Accounts including a company CONSULTANT took public and that at the time had four thousand individual investors

1) *Details:* NASDAQ financial requirements coordinator, underwriter negotiator, and NASDAQ listing process supervisor for the Company (the “NASDAQ Process Coordinator”) working in conjunction with the CONSULTANT will:

- Assist the Company in responding to comments from the NASDAQ Listing Qualifications Staff, if requested;
- Assist the Company in preparing a Code of Conduct applicable to all directors, officers and employees, including but not limited to, insiders trading policies, if requested;
- Assist the Company in preparing employment agreements for all directors and executive officers, if requested;
- Assist the Company to setup the Company’s nomination system for all directors;
- Advise and assist the Company in the conversion of its financial reporting systems, including its projected financial statements, to a format that is consistent with United States GAAP (Generally Accepted Accounting Principles);
- Review and advise the Company on all documents and accounting systems relating to its finances and transactions, with the purpose of bringing such documents and systems into compliance with United States GAAP or disclosures required by SEC;

Consultant__GRN

Company VS (initial)

Page 3 of 10

- Provide necessary consulting services and support as a liaison for the
- Company to third-party service providers, including coordination amongst the Company and their related attorneys, CPAs and the transfer agent;
- Provide management training to the senior management of the Company, pertaining to usual and customary practices for public companies with business plans similar to the Company’s business plan;
- Assist the Company with Edgarization of Initial Public Offering related filings with the United States Securities and Exchange Commission, including Forms S-1, XBRL Filings for financial statements, footnotes.

3. Services Fees. The Company agrees to pay CONSULTANT for the services set forth in this Agreement a professional service fee (“Services Fee” or “Securities”) consisting of:

Common Shares: Three Percent (3%) of the fully diluted equity of the Company as measured by the capital equity table immediately prior to listing on NASDAQ or any other Exchange. The Company will, within 14 days of signing of this Agreement, deliver a copy of a stock certificate for common shares representing 3% of the current and outstanding equity with a ‘true-up’ amount to be delivered within thirty days prior to its expected listing day.

Warrants: The Company shall grant CONSULTANT five-year warrants to purchase 1,000,000 shares of the Company’s common stock at \$1.00 per share. All warrants will vest 30 days prior to an expected going public transaction. The parties agree to attach a Form of Warrants, including cash-less exercise, as Exhibit B within thirty days of its expected listing day.

Considering that the Company is in the process of finalizing its capitalization, the Company is authorized to reduce the CONSULTANT’S warrants so that the Consultant beneficially owns no more than 9.95% of the Company’s capital stock when combined with granted and vested warrants as of the time of listing.

Consultant__GRN

Company VS (initial)

Page 4 of 10

Leak-out Transition Fee. It is contemplated that CONSULTANT will be under a stock lock- up/leak-out agreement once the Company is listed as a public company, therefore CONSULTANT shall be entitled to be paid as an independent contractor on the first of each month the sum of seven thousand five hundred dollars first commencing when the Company is publicly listed and ending twelve months thereafter.

- i. Except as provided by the vesting provisions of the warrants, the Services Fee shall be deemed fully earned upon signing this Agreement. The Consultant makes no representations with respect to the success of his and the Company’s efforts to achieve their above stated Business Goals.
- ii. In addition to any fees that may be payable to CONSULTANT under this Agreement, the Company agrees to reimburse CONSULTANT, upon request made from time to time, for its reasonable out-of-pocket expenses incurred in connection with CONSULTANT’S activities under this Agreement, including the reasonable fees and travel expenses for the meetings on behalf of the Company. All such fees, expenses and costs will be pre-approved by the Company in writing, and billed at any time by CONSULTANT and are payable by the Company when invoiced. Upon expiration of the Agreement any unreimbursed fees and expenses will be immediately due and payable.

4. Term. The term of this Agreement shall commence on June 23, 2021 and end on June 23, 2023, (the "Term"). This Agreement may be renewed upon mutual written agreement of the parties hereto. Any obligation pursuant to this Paragraph 4, and pursuant to Paragraphs 3 (payment of fees), 5 (indemnification), 6 (matters relating to engagement), 7 (governing law); 8 (attorney fees) and 11 (miscellaneous) hereof, shall survive the termination or expiration of this Agreement. As stated in the foregoing sentence, the parties specifically agree that in the event the Company terminates this Agreement prior to expiration of the Term for any reason other than material breach of this Agreement by CONSULTANT, the full Service Fee shall become immediately due and payable.
5. Indemnification. In addition to the payment of fees and reimbursement of fees and expenses provided for above, the Company agrees to indemnify CONSULTANT and its affiliates with regard to the matters contemplated herein, as set forth in Exhibit A, attached hereto, which is incorporated by reference as if fully set forth herein.
6. Matters Relating to Engagement. The Company acknowledges that CONSULTANT has been retained solely to provide the services set forth in this Agreement.

In rendering such services, CONSULTANT shall act as an independent contractor, and any duties of CONSULTANT arising out of its engagement hereunder shall be owed solely to the Company. The Company further acknowledges that CONSULTANT may perform certain of the services described herein through one or more of its affiliates, and provide similar services for other non-competitive companies. Consultant acknowledges that they will devote sufficient time to performing its services under the Agreement.

Consultant__GRN

Company VS (initial)

Page 5 of 10

The Company acknowledges and agrees that in connection with the performance of CONSULTANT's services hereunder (or any other services) that neither CONSULTANT nor any of its employees will be providing the Company with legal, tax or accounting advice or guidance (and no advice or guidance provided by CONSULTANT or its employees to the Company should be construed as such) and that neither CONSULTANT nor its employees hold itself or themselves out to be advisors as to legal, tax, accounting, financing or regulatory matters in any jurisdiction, nor will the CONSULTANT be responsible for obtaining any investments in the Company. CONSULTANT may retain attorneys and accountants that are for CONSULTANT's benefit, and CONSULTANT may recommend a particular law firm, accounting/audit firm, broker-dealer / Investment Banking firm, Investor Relations firm, or digital marketing firm to be engaged by the Company. However, CONSULTANT makes no recommendation as to the outcome of such referrals, nor does CONSULTANT guarantee or warrant the work product of any referral. The Company shall consult with its own legal, tax, accounting and financial advisors concerning all matters and advice rendered by CONSULTANT to the Company, and the Company shall be responsible for making its own independent investigation and appraisal of the risks, benefits and suitability of the advice and guidance given by CONSULTANT to the Company. Neither CONSULTANT nor its employees shall have any responsibility or liability whatsoever to the Company or its affiliates with respect thereto.

The Company recognizes and confirms that in performing its duties pursuant to this Agreement, CONSULTANT will be using and relying on data, material, and other information furnished by the Company, a third-party provider, or their respective employees and representatives ("the Information"). The Company will cooperate with CONSULTANT and will furnish CONSULTANT with all Information concerning the Company and any financial information or organizational or transactional information which CONSULTANT deems appropriate, and Company will provide CONSULTANT with access to the Company's officers, directors, employees, independent accountants and legal counsel for the purpose of performing CONSULTANT's obligations pursuant to this Agreement.

The Company hereby agrees and represents that all Information furnished to CONSULTANT pursuant to this Agreement shall be accurate and complete in all material respects at the time provided, and that, if the Information becomes materially inaccurate, incomplete or misleading during the term of CONSULTANT's engagement hereunder, the Company shall promptly advise CONSULTANT in writing. Accordingly, CONSULTANT assumes no responsibility for the accuracy and completeness of the Information. In rendering its services, CONSULTANT will be using and relying upon the Information without independent verification evaluation thereof.

Consultant__GRN

Company VS (initial)

Page 6 of 10

7. Representations and Warranties by CONSULTANT. CONSULTANT, by his acceptance of the Securities he agrees to accept for payment, represents and warrants to Company as follows:
 - (a) CONSULTANT is acquiring the Securities he agrees to accept for payment with the intent to hold as an investment and not with a view of distribution.
 - (b) CONSULTANT is an "accredited investor" within the definition contained in Rule 501(a) under the Securities Act of 1933, as amended (the "Securities Act"), and is acquiring the Securities for its own account, for investment, and not with a view to, or for sale in connection with, the distribution thereof or of any interest therein. CONSULTANT has adequate net worth and means of providing for his current needs and contingencies and is able to sustain a complete loss of the investment in the Securities, and has no need for liquidity in such investment. CONSULTANT, himself or through his officers, employees or agents, has sufficient knowledge and experience in financial and business matters to be capable of evaluating the merits and risks of an investment such as an investment in the Securities, and CONSULTANT, either alone or through his officers, employees or agents, has evaluated the merits and risks of the investment in the Securities.
 - (c) CONSULTANT acknowledges and agrees that it is acquiring the Securities hereunder based upon his own inspection, examination and determination with respect thereto as to all matters, and without reliance upon any express or implied representations or warranties of any nature, whether in writing, orally or otherwise, made by or on behalf of or imputed to the Company.
 - (d) CONSULTANT has no contract, arrangement or understanding with any broker, finder, investment bank, financial intermediary, or similar agent with respect to any of the transactions contemplated by this Agreement.
8. Governing Law, Consent to Jurisdiction, Attorney Fees. This Agreement shall be governed by and construed in accordance with the laws of the State of California, without regard to conflict of laws provisions. All disputes arising out of or in connection with this agreement, or in respect of any legal relationship associated with or derived from this agreement, shall only be heard in any competent court residing in Los Angeles County, California. Company agrees that a final judgment in any such action or proceeding shall be conclusive and may be enforced in other jurisdictions by suit on the judgment or in any manner provided by law. The Company further waives any objection to venue in any such action or proceeding on the basis of inconvenient forum. The Company agrees that any action on or proceeding brought against CONSULTANT shall only be brought in such courts. In the event CONSULTANT shall refer this Agreement to an attorney to enforce the terms hereof, the Company agrees to pay all the costs and expenses incurred in attempting or effecting the enforcement of the CONSULTANT's rights, including reasonable attorney's fees, whether or not suit is instituted.

9. No Brokers. The Company represents and warrants to CONSULTANT that there are no brokers, representatives, service providers under this Agreement or other persons which have an interest in compensation due to CONSULTANT from any services contemplated herein.
10. Authorization. The Company and CONSULTANT represent and warrant that each has all requisite power and authority, and all necessary authorizations, to enter into and carry out the terms and provisions of this Agreement and the execution, delivery and performance of this Agreement does not breach or conflict with any agreement, document or instrument (including third-party contracts, wills, court orders, regulatory orders, etc.) to which it is a party or bound.
11. Miscellaneous. This Agreement constitutes the entire understanding and agreement between the Company and CONSULTANT with respect to the subject matter hereof and supersedes all prior understandings or agreements between the parties with respect thereto, whether oral or written, express or implied. Any amendments or modifications must be executed in writing by both parties. This Agreement and all rights, liabilities and obligations hereunder shall be binding upon and inure to the benefit of each party's successors, but may not be assigned without the prior written approval of the other party. If any provision of this Agreement shall be held or made invalid by a statute, rule, regulation, decision of a tribunal or otherwise, the remainder of this Agreement shall not be affected thereby and, to this extent, the provisions of this Agreement shall be deemed to be severable. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original, but such counterparts shall, together, constitute only one instrument. The descriptive headings of the paragraphs of this Agreement are inserted for convenience only, do not constitute a part of this Agreement and shall not affect in any way the meaning or interpretation of this Agreement. CONSULTANT hereby discloses that he is a retired attorney, in good standing, whose Bar license in California is currently non-active; he is not providing legal services under this Agreement nor being paid for such by the Company.
12. Previous Agreement. CONSULTANT and the Company having previously entered into a Non-Disclosure and Non-Circumvention Agreement, regarding persons hired by the Company, CONSULTANT agrees to issue a full and complete release and waiver to the Company upon CONSULTANT receiving the shares and warrants herein provided for in this Agreement.

Please confirm that the foregoing correctly sets forth our agreement by signing below in the space provided, placing your initials on the bottom left of each page and returning this Agreement to CONSULTANT fully executed, which shall constitute a binding agreement as of the date first above written.


Consultant__GRN

Company VS (initial)**CONSULTANT**

By: Gerald R. Newman
 Name: **Gerald R. Newman, an individual**

AGREED TO AND ACCEPTED
 DATE: JUNE 23, 2021

BullFrog AI Holdings, Inc.

By: 
 Name: **Vin Singh**
 Title: **Chief Executive Officer**

AGREED TO AND ACCEPTED DATE: JUNE 23, 2021

Consultant__GRN

Company VS (initial)**EXHIBIT A: INDEMNIFICATION**

The Company agrees to indemnify CONSULTANT, its employees, directors, officers, agents, affiliates, and each person, if any, who controls it within the meaning of either Section 20 of the Securities Exchange Act of 1934 or Section 15 of the Securities Act of 1933 (each such person, including CONSULTANT is referred to as "Indemnified Party") from and against any losses, claims, damages and liabilities, joint or several (including all legal or other expenses reasonably incurred by an Indemnified Party in connection with the preparation for or defense of any threatened or pending claim, action or proceeding, whether or not resulting in any liability) ("Damages"), to which such Indemnified Party, in connection with providing its services or arising out of its engagement hereunder, may become subject under any applicable Federal or state law or otherwise, including but not limited to liability or loss (i) caused by or arising out of an untrue statement or an alleged untrue statement of a material fact or omission or alleged omission to state a material fact by the Company necessary in order to make a statement not misleading in light of the circumstances under which it was made, (ii) caused by or arising out of any act or failure to act by the Company, or (iii) arising out of CONSULTANT's engagement or the rendering by any Indemnified Party of its services under this Agreement; provided, however, that the Company will not be liable to the Indemnified Party hereunder to the extent that any Damages resulted from the negligence, gross negligence or willful misconduct of the Indemnified Party seeking indemnification hereunder.

These indemnification provisions shall be in addition to any liability which the Company may otherwise have to any Indemnified Party.

If for any reason, other than a final non-appealable judgment finding an Indemnified Party liable for Damages for its gross negligence or willful misconduct the foregoing indemnity is unavailable to an Indemnified Party or insufficient to hold an Indemnified Party harmless, then the Company shall contribute to the amount paid or payable by an Indemnified Party as a result of such Damages in such proportion as is appropriate to reflect not only the relative benefits received by the Company and its shareholders on the one hand and the Indemnified Party on the other, but also the relative fault of the Company and the Indemnified Party as well as any relevant equitable considerations.

Promptly after receipt by the Indemnified Party of notice of any claim or of the commencement of any action in respect of which indemnity may be sought, the Indemnified Party will notify the Company in writing of the receipt or commencement thereof and the Company shall have the right to assume the defense of such claim or action (including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of fees and expenses of such counsel and any monetary settlement), provided that the Indemnified Party shall have the right to control its defense if, in the opinion of its counsel, the Indemnified Party's defense is unique or separate to it as the case may be, as opposed to a defense pertaining to the Company. In any event, the Indemnified Party shall have the right to retain counsel reasonably satisfactory to the Company, at the Company's sole expense, to represent it in any claim or action in respect of which indemnity may be sought and agrees to cooperate with the Company and the Company's counsel in the defense of such claim or action. In the event that the Company does not promptly assume the defense of a claim or action, the Indemnified Party shall have the right to employ counsel to defend such claim or action. Any obligation pursuant to this Annex shall survive the termination or expiration of the Agreement.

BullFrog AI Holdings, Inc.



By: _____

Name: **Vin Singh**

Title: **Chief Executive Officer**

Dated: **June 23, 2021**

Consultant__GRN

Company VS (initial)

BULLFROG AI HOLDINGS, INC.

EMPLOYMENT AGREEMENT

This **EMPLOYMENT AGREEMENT** (this "*Agreement*") is entered into effective May 16, 2022 (the "*Effective Date*"), by Vininder Singh ("*Executive*") and Bullfrog AI Holdings, Inc. (the "*Company*"), together with Executive, the "*Parties*").

RECITALS

A. WHEREAS, the Company desires to hire Executive as Chief Executive Officer of the Company and to compensate Executive for Executive's services to the Company;

B. WHEREAS, Executive wishes to be employed by the Company and provide services to the Company in return for certain compensation; and

C. WHEREAS, the Company and Executive desire to enter into this Agreement .

Accordingly, in consideration of the mutual promises and covenants contained in this Agreement and for other good and valuable consideration, the sufficiency of which is acknowledged, the parties agree to the following:

1. DEFINITIONS.

1.1 "*Affiliates*" means, with respect to a Party, any entity which, directly or indirectly, is controlled by or is under common control with such Party.

1.2 "*Board of Directors*" or "*Board*" means the Board of Directors of the Company.

1.3 "*Office Location*" means the current location of the Company's offices in Gaithersburg, Maryland or such other location the Company may elect to relocate such offices.

1.4 "*Cause*" will be limited to mean the following:

(i) Willful misfeasance or nonfeasance by Executive that materially injures the reputation, business or business relationships of the Company or its Affiliates, or any of their respective officers, directors or employees and such action or failure is not remedied or reasonable steps to affect such remedy are not commenced within thirty (30) days following receipt of written notice;

(ii) Any act involving moral turpitude or conviction of a crime that reflects in some material fashion unfavorably upon the business or business relationships of the Company, its Affiliates, or any of its officers, directors or employees;

(iii) The willful and continued failure to perform substantially the Executive's duties or to follow the reasonable direction of the principal executive within thirty (30) business days after receipt by Executive of written notice of such failure, other than by reason of Disability (as defined below) or approved leave of absence; or

(iv) Willful and prolonged absence from work by Executive, other than by reason of Disability, approved leave of absence, or otherwise in compliance with Company Policies, whether paid or unpaid.

1.5 "*Code*" will mean the Internal Revenue Code of 1986, as amended from time to time, and the regulations promulgated thereunder.

1.6 “Company Policies” will mean all policies and procedures of the Company and its Affiliates that are applicable to employees of the Company as they may be adopted, revised or deleted from time to time in the sole discretion of the Company or its Affiliates, as the case may be, in whatever form such policies and procedures (including all revisions and updates thereto) are made available to Executive after notification of such availability.

1.7 “Disability” will mean the earliest of the date on which Executive is deemed disabled under: (i) the long-term disability policy maintained by the Company as set forth in Section 7(d)(1) of this Agreement; (ii) Code Section 22(e)(3); or (iii) the determination of the Social Security Administration. Notwithstanding the foregoing, Executive will not be considered to have suffered a Disability under subparagraph (ii) above if Executive timely provides medical certification from a qualified licensed physician that Executive is able to perform the essential functions of Executive’s position, with or without reasonable accommodation.

1.8 “Good Reason” will mean the occurrence of any of the following without Executive’s prior written consent:

(i) the removal of Executive as Chief Executive Officer of the Company, assignment to Executive of any duties or responsibilities materially inconsistent with Executive’s position, including any material diminution of Executive’s status, title, authority, duties or responsibilities or any other action that results in a material diminution in such status, title, authority, duties or responsibilities;

(ii) the reduction by five percent (5%) or more of Executive’s base salary or the reduction by five percent (5%) or more of the aggregate of Executive’s base salary and Incentive Compensation target cumulatively during any one year period, without Executive’s consent, or any action that materially adversely affects Executive’s overall compensation and benefits package, provided that the Company may change the benefits package if those changes are made on a non-discriminatory basis for all employees who participate in the benefits plans available to Executive;

(iii) the failure of the Company to pay to Executive any portion or installment of any salary, Incentive Compensation or deferred compensation within thirty (30) days of the date such compensation is due; or

(iv) requiring Executive perform her duties at a location outside of the Office Location.

1.9 “Restricted Business” will mean the business of Business of the Company existing as of the Termination Date, which as of the date of this Agreement means the business of artificial intelligence-driven biotech.

1.9 “Termination Date” will mean Executive’s last day of employment, regardless of whether termination is on account of death, Disability, with or without Cause, or a resignation with or without Good Reason.

2. EMPLOYMENT BY THE COMPANY.

2.1 POSITION. Subject to the terms set forth in this Agreement, the Company agrees to employ Executive in the position of Chief Executive Officer and Executive hereby accepts such employment and position. In addition, while the Executive is serving as Chief Executive Officer, the Executive shall be nominated as a director of the Company and shall serve as the Chairman of the Board. During the term of Executive’s employment with the Company, Executive will devote Executive’s best efforts and substantially all of Executive’s business time and attention to the business of the Company.

2.2 DUTIES. Executive will report to the Board of Directors of the Company and will perform such duties as are normally associated with Executive’s position as are assigned to Executive from time to time. Executive will perform Executive’s duties under this Agreement at the Company’s Office Location.

2.3 TERM. The term of this Agreement will run from the Effective Date until such time as it is terminated in accordance with the terms of this Agreement.

2.4 COMPANY POLICIES AND BENEFITS. The employment relationship between the parties will be subject to the Company Policies. Subject to any specific exceptions or conditions set forth in Section 3.3, Executive will be eligible to participate on substantially the same basis as similarly situated Executives in the Company's benefit plans and programs in effect from time to time during Executive's employment; *provided, however*, that participation and awards under any equity compensation or equity Incentive Compensation plan or program will be determined by the Board on an individual, case-by-case basis. All matters of eligibility for coverage or benefits under any benefit plan or program will be determined in accordance with the provisions of such plan or program. The Company reserves the right to change, alter, or terminate any benefit plan or program in its sole discretion; *provided, however*, that no such change, alteration or termination will change any vested or accrued benefits or rights of Executive. Notwithstanding the foregoing, in the event that the terms of this Agreement expressly provide Executive with benefits that differ from the Company's generally available benefits, then the terms of this Agreement will control.

3. COMPENSATION AND BENEFITS.

3.1 SALARY. Executive will receive for Executive's services to be rendered under this Agreement an initial annualized base salary of \$400,000 (the "**Base Salary**"), subject to bi-annual review and adjustment from time to time by the Company. The Base Salary will be payable in accordance with Company's standard payroll practices.

(a) **Annual Bonus.** Executive shall be eligible to earn annual bonus compensation based on the achievement of certain goals and performance criteria established by the Board. The Company agrees that Executive's target annual bonus for fiscal year(s) 2022-2025 will be minimum of 20% of the current Base Salary with a maximum payout of up to 100% based on target achievement. For fiscal year 2022, target achievement shall be based on the completion of the following milestone events:

- (1) The Company achieves \$500,000 in sales;
- (2) the filing of an Investigational New Drug (IND) Application with the United States Food and Drug Administration (FDA) for mebandazole;
- (3) the Company enters into two (2) strategic partnerships; and
- (4) the Company commences partner negotiations with a third party for HSV-1, bf-114 or bf-222.

Based on the achievement of these milestones, the Board will determine the appropriate level of bonus the Executive will be entitled to. It shall not be a requirement that all of the milestones are reached to be awarded a bonus.

(b) **Equity Incentive.**

(1) **Initial Grant.** Executive is eligible to participate in the Company's Incentive Stock Plan, subject to Board approval.

3.2 EXPENSE REIMBURSEMENT. The Company will reimburse Executive for reasonable business expenses incurred by Executive during the period Executive is employed by the Company, in accordance with the Company's standard expense reimbursement policy.

3.3 PAID TIME OFF. Executive is entitled to five weeks' paid vacation during each calendar year. If Executive does not take the full vacation available in any year, the unused vacation may be carried over to the next calendar year, and Executive will be compensated for it.

3.4 BENEFITS. As provided in Section 2.4, Executive will receive benefits in accordance with the Company's standard benefits plan and policies, as amended from time to time.

4. NON-COMPETITION; NON-SOLICITATION; CONFIDENTIALITY.

4.1 NON-COMPETITION. Executive acknowledges that Executive will gain extensive and valuable experiences and knowledge in the business conducted by the Company and its Affiliates and will have extensive contacts with customers of the Company and its Affiliates. Accordingly, in consideration of the mutual promises contained in this Agreement, Executive covenants and agrees with the Company that, during the term of this Agreement and for the Applicable Severance Payout Period (as defined in Section 7.2(c)) following the Executive's Termination Date, Executive will not compete directly or indirectly with the Company or its Affiliates. Competing directly or indirectly with the Company and its Affiliates will mean engaging or having a material interest, directly or indirectly, as owner, employee, officer, director, partner, venturer, stockholder, capital investor, consultant, agent, principal, advisor or otherwise, either alone or in association with others, in the operation of any entity's division or group which engages in the Restricted Business. Competing directly or indirectly with the Company or its Affiliates, as used in this Agreement, will not include having an ownership interest as an inactive investor, which for purposes of this Agreement will mean the beneficial ownership of less than five percent (5%) of the outstanding shares of any series or class of securities of any competitor of the Company, which shares are publicly traded in the securities markets. This Section 4.1 will cease to apply in the event the Company is in breach of any obligations to provide severance benefits in accordance with Section 7.2 and fails to cure such breach within twenty (20) days of receiving written notice of such breach from Executive. Executive agrees that any violation of this Section 4.1 by Executive, as determined by a court of law, will result in termination of the Company's obligations to provide severance benefits under this Agreement and in the event of such termination, Executive will be required to repay to the Company any such severance benefits previously received.

4.2 NON-SOLICITATION. Executive acknowledges that Executive will have extensive contacts with employees and customers of the Company. Accordingly, in consideration of the mutual promises contained in this Agreement, Executive covenants and agrees that during the term of this Agreement, and for the Applicable Severance Payout Period following Executive's Termination Date, Executive will not (i) solicit, raid, entice or induce any employee of the Company or its Affiliates to leave the employ of the Company or its Affiliates; (ii) interfere with the relationship of the Company or its Affiliates with any such employees, including, but not limited to, hiring such employee (except pursuant to a general solicitation which is not directed specifically to any such employees); or (iii) personally target or solicit customers of the Company or its Affiliates to purchase products or services in competition with the Company's or its Affiliates products or services or to terminate a relationship with the Company or its Affiliates. This Section 4.2 will cease to apply in the event the Company is in breach of any obligations to provide severance benefits in accordance with Section 7.2 and fails to cure such breach within twenty (20) days of receiving notice of such breach from Executive. Executive agrees that any violation of this Section 4.2 by Executive, as determined by a court of law, will result in termination of the Company's obligations to provide severance benefits hereunder and in the event of such termination, Executive will be required to repay to the Company any such severance benefits previously received.

4.3 CONFIDENTIALITY. Executive acknowledges that Executive will have access to certain information related to the business, operations, future plans and customers of the Company and its Affiliates, the disclosure or use of which could cause the Company substantial losses and damages. Accordingly, Executive acknowledges and affirms the terms and conditions of the confidentiality agreement signed by Executive with the Company on the date hereof in connection with Executive's employment (the "*Confidentiality Agreement*"), which is incorporated by reference. The terms and conditions of Sections 4.1 and 4.2 will take precedence over any non-competition/non-solicitation provisions contained in the Confidentiality and Non-Compete Agreement

4.4 DEROGATORY STATEMENTS. During the term of this Agreement and for the Applicable Severance Payout Period (as defined in Section 7.2(c)) following the Executive's Termination Date, each Party (on behalf of such Party and such Party's Affiliates) agrees that such Party will not during such period make public statements in derogation of the other Party or its Affiliates; provided, that, the foregoing covenant regarding making public statements in derogation of the other Party or its Affiliates shall not restrict such Party from exercising protected rights to the extent that such rights cannot be waived by agreement or from complying with any applicable law or regulation or a valid order of a court of competent jurisdiction or an authorized government agency; provided, further, that such compliance does not exceed that required by the law, regulation, or order and such Party provides prompt written notice of any such order to the other Party.

5. OUTSIDE ACTIVITIES. Except with the prior written consent of the principal executive of the Company, Executive will not, while employed by the Company, undertake or engage in any other employment, occupation, consulting, advisory, or other business enterprise or business activities that would interfere with Executive's responsibilities and the performance of Executive's duties under this Agreement with the exception that engaging in charitable, civic, community activities and serving on boards of directors of charitable or civic organizations will not constitute interference, provided the time spent in such activities does not negatively impact Executive's performance of Executive's duties under this Agreement.

6. NO CONFLICT WITH EXISTING OBLIGATIONS. Executive represents that Executive's performance of all the terms of this Agreement and as an executive of the Company does not and will not breach any agreement or obligation of any kind made prior to Executive's employment by the Company, including agreements or obligations Executive may have with prior employers or entities for which Executive has provided services. Executive has not entered into, and Executive agrees that Executive will not enter into, any agreement or obligation, either written or oral, that conflicts with Executive's obligations hereunder, it being acknowledged and agreed that Executive (i) shall not continue to perform any services under any agreement entered into prior to the date hereof without the Company's prior written consent and (ii) has delivered true and complete copies of all such agreements to the Company prior to the date hereof.

7. TERMINATION OF EMPLOYMENT. Executive's employment under this Agreement shall terminate:

(a) **Resignation by Executive.** Upon the effective date (if any) of Executive's resignation.

(b) **Termination by the Company for Cause.** Immediately upon written notice by the Company to Executive for Cause as defined in Section 1.4 hereof.

(c) **Death.** Immediately upon the death of Executive; or

(d) **Disability.** Upon the date that is 10 days after the Company gives written notice to Executive stating that Executive's employment is being terminated on account of Executive's "**Disability**" (as defined below).

(i) "**Disability**" shall be deemed to exist if Executive is unable, despite reasonable accommodation, to perform the essential functions of her current position due to physical illness, injury or other medical condition for a period of not less than six (6) full months in any 12-month period.

7.1 STANDARD TERMINATION PAYMENTS.

a. Salary and Reimbursements. Regardless of the reason for termination, the Company will pay Executive on the first regularly scheduled payroll date following Executive's Termination Date any Base Salary accrued but unpaid as of Executive's Termination Date, the value of any accrued paid time off unused by Executive as of Executive's Termination Date, and any unpaid Expense Reimbursement, so long as the Expense Reimbursement complies with the Company guidelines for such requests.

7.2 SEVERANCE BENEFITS — TERMINATION WITH CAUSE/RESIGNATION

a. Company's Right to Terminate. The Company will have the right to terminate Executive's employment under this Agreement for any of the following reasons:

- (i) upon Executive's Disability in accordance with Section 7.3;
- (ii) for Cause, by giving notice as described in Section 7.6;

b. Executive's Right to Terminate. Executive will have the right to resign Executive's employment with the Company at any time, as well as following an event constituting Good Reason.

c. Severance Benefits. In the event that the Company terminates Executive's employment with Cause or Executive resigns for Good Reason, Executive will receive, in addition to the Standard Termination Payments, the following:

(i) **Severance Payments.** Provided that Executive delivers to the Company a fully executed and complete release (excluding the release of any obligations of the Company or its affiliates, or any claims Executive may have without revocation, in favor of the Company and its Affiliates, and in form and substance satisfactory to the Company (the "**Release**") within thirty (30) days of Executive's Termination Date (the "**Execution Deadline**"), the Company will provide to Executive (a) an amount equal to twelve (12) months of Executive's then-current Base Salary. The Severance Payments will be payable in equal installment payments over the **twelve (12) month period** ("**Applicable Severance Payout Period**") starting retroactively from the Termination Date in accordance with the Company's regular bi-weekly paydays, or if different, in accordance with the Company's customary payroll practices.

(ii) **COBRA Benefits.** In the event Executive elects continuation coverage pursuant to the Consolidated Omnibus Budget Reconciliation Act of 1985 ("**COBRA**") in accordance with the COBRA materials that will be provided to Executive by the Company or the Company's third party COBRA administrator, the Company will pay the Company's portion (based upon the Company's monthly premium subsidy immediately prior to the Termination Date) of Executive's COBRA premium for the same medical, dental and vision benefit plan coverage ("**Group Health Plan Coverage**") Executive and Executive's dependents had as of the Termination Date for the Applicable Severance Payout Period, or until Executive elects to receive group medical, dental and vision insurance from another source, whichever occurs first. Payment of COBRA premiums ("**COBRA Benefits**") will be made by the Company on Executive's and Executive's dependents behalf directly to the Group Health Plan's COBRA administrator. Executive will be mailed a COBRA packet at her last known address. Such packet will contain additional information about Executive's COBRA rights and responsibilities.

(iii) **Severance Benefits Contingent on Execution of Release.** Notwithstanding the foregoing, any Severance Payments that are otherwise payable before the Execution Deadline will be withheld pending Executive's execution and delivery of the Release and will be paid on the payroll date immediately following the Execution Deadline. For the avoidance of doubt, Executive will forfeit the right to receive any Severance Payments or COBRA Benefits (to the extent such forfeiture of COBRA Benefits is permissible under applicable law) if Executive fails to deliver the Release by the Execution Deadline. For this forfeiture to take effect, the Release will not materially alter

Executive's rights to receive any payments or benefits under this Agreement; enlarge Executive's obligations under this Agreement, including without limitation, Executive's covenants of non-competition and non-solicitation; or impose material new obligations on Executive.

d. Compliance with Code Section 409A. The Company and Executive intend that (i) payments under Section 7.2(c)(i) will be made on account of an involuntary separation from service within the meaning of Treasury Regulation section 1.409A-1(n)(1) or a separation from service for good reason within the meaning of Treasury Regulation section 1.409A-1(n)(2), (ii) amounts paid under Section 7.2(c)(i) constitute separation pay exempt from Internal Revenue Code Section 409A under Treasury Regulation section 1.409A-1(b)(9)(iii), and (iii) Payments under Section 7.2(c)(ii) will be exempt from Code Section 409A as a non-taxable fringe benefit to Executive, but neither party will be liable to the other in the event any such payment receives different tax treatment. In the event any of these payments is determined to be deferred compensation subject to Internal Revenue Code Section 409A, the payments will comply with Section 7.7.

7.3 TERMINATION UPON DEATH OR DISABILITY OF EXECUTIVE.

a. Upon Executive's death while employed pursuant to this Agreement, this Agreement will automatically terminate.

b. Subject to applicable state and federal law, the Company will at all times have the right, upon thirty (30) days written notice to Executive, to terminate this Agreement based on Executive's Disability.

c. In the event Executive's employment is terminated due to Executive's death or Disability, the Company will pay to Executive or Executive's heirs or estate all Standard Termination Payments together with any other compensation and benefits payable to Executive through the Executive's Termination Date under any compensation or benefit plan, program or arrangement during such period. In addition, if Executive, or if Executive is deceased, a participant on Executive's health insurance plan, elects COBRA coverage, the Company will pay its third party administrator the full cost of COBRA coverage for twelve (12) months from the Executive's Termination Date.

7.4 Notice; Effective Date of Termination.

a. Termination of Executive's employment pursuant to this Agreement will be effective on the earliest of:

(i) excluding a termination due to Executive's death or Disability, the date on which the Company gives notice to Executive of Executive's termination, with or without Cause, unless the Company specifies a later date, in which case, termination will be effective as of such later date;

(ii) the date of Executive's death;

(iii) ten (10) days after the Company gives notice to Executive of Executive's termination on account of Executive's Disability; or

(iv) thirty (30) days after Executive gives written notice to the Company of Executive's resignation, *provided* that the Company may set a termination date at any time between the date of notice and the 30th day thereafter (*i.e.*, the effective date of resignation, but for this Section 7.5(a)), in which case the Executive's resignation will be effective as of such earlier date (the date on which Executive's resignation becomes effective, the "*Actual Resignation Effective Date*").

b. In the event that notice of a termination is given orally, at the other party's request, the party giving notice must provide written confirmation of such notice within five (5) business days of the request. In the event of a termination for Cause, written confirmation will specify the subsection(s) of the definition of Cause being relied on by the Company to support the decision to terminate for Cause, to afford Executive a reasonable opportunity to effect a cure, if permitted and possible under the applicable subsections of the definition of Cause. In the event of a resignation for Good Reason, written

confirmation will specify the subsection(s) of the definition of Good Reason being relied on by Executive to support the decision to resign for Good Reason, to afford the Company a reasonable opportunity to cure under the applicable subsections of the definition of Good Reason.

7.5 COOPERATION WITH THE COMPANY AFTER TERMINATION OF EMPLOYMENT.

Notwithstanding anything to the contrary contained herein, payment of the amounts specified in this Agreement is conditional upon Executive reasonably cooperating with the Company in connection with all matters relating to Executive's employment with the Company, assisting the Company as reasonably requested in transitioning Executive's responsibilities to Executive's replacement, and Executive being available to answer questions and provide transition assistance to the Company through the end of the period during which Severance Benefits are to be paid. Following Executive's Termination Date, such assistance will be provided at mutually acceptable times, and in reasonable amounts, taking into account other commitments that Executive may have. Executive agrees to use Executive's best efforts to minimize any conflicts with other commitments to facilitate this assistance. The Company agrees to reimburse Executive for reasonable out of pocket, pre-approved expenses incurred in providing such assistance.

7.6 APPLICATION OF SECTION 280G. In the event that it is determined that the Severance Benefit payable to Executive pursuant to Section 7 of this Agreement, when added to any other payment or benefit to Executive from the Company that would be considered a "parachute payment" (a "**Parachute Payment**"), within the meaning of section 280G of the Code, would cause Executive to be considered to receive an "excess parachute payment" within the meaning of section 280G of the Code (an "**Excess Parachute Payment**"), the amount payable to Executive pursuant to Section 7 of this Agreement will be reduced to the maximum amount that, when added to any other Parachute Payments made to Executive, could be paid to Executive without causing Executive to receive an Excess Parachute Payment. Notwithstanding the foregoing, the Severance Benefit payable to Executive pursuant to Section 7 of this Agreement will not be reduced if (i) the net amount payable to Executive without the reduction described in the preceding sentence, but reduced by all Federal, state and local income and employment taxes payable by Executive on the Severance Benefit payable pursuant to this Agreement and all other Parachute Payments plus the excise tax payable on the Excess Parachute Payment pursuant to Section 4999 of the Code, is greater than (ii) the net amount that would be payable to Executive with the reduction described in the preceding sentence and reduced by all Federal, state and local income and employment taxes payable by Executive on the Severance Benefit payable pursuant to this Agreement and all other Parachute Payments. For purposes of this Section 7.7, Executive will be deemed to pay Federal income tax and employment taxes at the highest marginal rate of Federal income and employment taxation in the calendar year in which the Excess Parachute Payment would occur and state and local income taxes at the highest marginal rate of taxation in the state and locality of Executive's residence in the calendar year in which the Excess Parachute Payment would be made, net of the reduction in Federal income taxes that Executive may obtain from the deduction of such state and local income taxes. In addition, all determinations to be made under this Section 7.7 will be made by the Company's independent public accountant (the "**Accounting Firm**") immediately before the date the Severance Benefit under Section 7 is to be paid. The Accounting Firm will provide its determinations and any supporting calculations and work papers both to the Company and to Executive within ten (10) days of such date, and any such determination by the Accounting Firm will be binding upon the Company and Executive.

7.7 DEFERRED COMPENSATION SUBJECT TO CODE SECTION 409A. Notwithstanding anything to the contrary set forth herein, any payments and benefits provided under this Agreement that constitute "deferred compensation" within the meaning of Code Section 409A will not commence in connection with Executive's termination of employment unless and until Executive has also incurred a "separation from service" (as such term is defined in Treasury Regulation Section 1.409A-1(h) ("**Separation From Service**")), unless the Company reasonably determines that such amounts may be provided to Executive without causing Executive to incur additional tax under Code Section 409A. It is intended that each installment of Severance Benefits provided for in this Agreement is a separate "payment"

for purposes of Treasury Regulation Section 1.409A-2(b)(2)(i). For the avoidance of doubt, it is intended that Severance Benefits set forth in this Agreement satisfy, to the greatest extent possible, the exceptions from the application of Section 409A provided under Treasury Regulation Sections 1.409A-1(b)(4), 1.409A-1(b)(5), and 1.409A-1(b)(9). If the Company (or, if applicable, the successor entity thereto) determines that any payments or benefits constitute "deferred compensation" under Code Section 409A and Executive is, on the termination of service, a "specified Executive" of the Company or any successor entity thereto, as such term is defined in Section 409A(a)(2)(B)(i) of the Code, then, solely to the extent necessary to avoid the incurrence of the adverse personal tax consequences to Executive under Section 409A, the timing of the payments and benefits will be delayed until the earlier to occur of: (a) the date that is six (6) months and one day after Executive's Separation From Service, or (b) the date of Executive's death (such applicable date, the "*Specified Executive Initial Payment Date*"). On the Specified Executive Initial Payment Date, the Company (or the successor entity thereto, as applicable) will (i) pay to Executive a lump sum amount equal to the sum of the payments and benefits that Executive would otherwise have received through the Specified Executive Initial Payment Date if the commencement of the payment of such amounts had not been so delayed pursuant to this Section 7.7 and (ii) commence paying the balance of the payments and benefits in accordance with the applicable payment schedules set forth in this Agreement.

8. GENERAL PROVISIONS.

8.1 NOTICES. Any notice required or permitted under this Agreement will be given in writing by delivery in hand, express courier or by postage prepaid, United States first class mail; registered or certified mail, return receipt requested; facsimile at the party's specified address; by email (including a confirmation of receipt); or as otherwise specified by a party. Notice will be effective upon receipt.

8.2 RIGHT TO INJUNCTIVE RELIEF. Executive agrees and acknowledges that a violation of the covenants contained in Section 4 of this Agreement will cause irreparable damage to the Company, and that it is and will be impossible to estimate or determine the damage that will be suffered by the Company in the event of breach by Executive of any such covenant. Therefore, Executive further agrees that, in the event of any violation or threatened violation of such covenants, the Company will be entitled to an injunction issued by any court of competent jurisdiction restraining such violation or threatened violation by Executive, such right to an injunction to be cumulative and in addition to whatever other remedies the Company may have.

8.3 Reserved

8.4 WAIVER. If either party should waive any breach of any provisions of this Agreement, such party will not thereby be deemed to have waived any preceding or succeeding breach of the same or any other provision of this Agreement. It is agreed that no delay or omission to exercise any right, power or remedy accruing to either party, upon any breach, default or noncompliance by the other party under this Agreement will impair any such right, power or remedy, nor will it be construed to be a waiver of any such breach, default or noncompliance, or any acquiescence therein, or of or in any similar breach, default or noncompliance thereafter occurring. It is further agreed that any waiver, permit, consent or approval of any kind or character on either party's part of any breach, default or noncompliance under this Agreement or any waiver on such party's part of any provisions or conditions of the Agreement must be in writing and will be effective only to the extent specifically set forth in such writing. All remedies, either under this Agreement by law, or otherwise afforded to either party, will be cumulative and not alternative.

8.5 WITHHOLDING. All amounts payable hereunder will be reduced by any and all federal, state, and local taxes imposed upon the Executive that are required to be paid or withheld by the Company.

8.6 COMPLETE AGREEMENT. This Agreement constitutes the entire agreement between Executive and the Company with regard to the subject matter hereof. This Agreement is the complete, final, and exclusive embodiment of the parties' agreement with regard to this subject matter and supersede any prior

oral discussions or written communications and agreements, including but not limited to any previous agreements. In the event of a conflict between this Agreement and any other agreement the provisions of this Agreement will control. This Agreement is entered into without reliance on any promise or representation other than those expressly contained herein, and it cannot be modified or amended except in writing signed by Executive and an authorized officer of the Company. The parties may enter into, or may have entered into, separate agreement(s) related to stock options, stock awards or other matters relative to Executive's service with the Company or its affiliates. These separate agreements govern (or may govern) other aspects of the relationship between the parties, have or may have provisions that survive termination of Executive's employment under this Agreement, may be amended or superseded by the parties without regard to this Agreement and are enforceable according to their terms without regard to the enforcement provision of this Agreement, and it is not the intent of the Parties that this Agreement, the offer letter, or the Confidentiality Agreement modify or otherwise supersede the terms of such separate agreements.

8.7 COUNTERPARTS. This Agreement may be executed in separate counterparts, including facsimile, PDF, or other electronic counterparts, any one of which need not contain signatures of more than one party, but all of which taken together will constitute one and the same Agreement.

8.8 HEADINGS. The headings of the sections hereof are inserted for convenience only and will not be deemed to constitute a part hereof nor to affect the meaning thereof.

8.9 SUCCESSORS AND ASSIGNS. The Company may assign this Agreement and its rights and obligations hereunder in whole, but not in part, to any company or other entity with or into which the Company may hereafter merge, consolidate, or be acquired by, or to which the Company may transfer all or substantially all of its assets. Executive may not assign or transfer this Agreement or any rights or obligations hereunder, other than to Executive's estate upon Executive's death.

8.10 CHOICE OF LAW / VENUE. All questions concerning the construction, validity and interpretation of this Agreement will be governed by the internal, substantive laws of the State of New York, as applied to agreements made and to be performed solely within the State of New York and without regard to the principles of conflicts of laws of the State of New York or of any other jurisdiction that would result in the application of the laws of any other jurisdiction to this Agreement. Any action brought to enforce this Agreement will be brought in Florida in a court of competent jurisdiction.

8.11 ATTORNEYS' FEES. In any action brought to enforce this Agreement, the substantially prevailing party in such dispute will be entitled to recover from the losing party all reasonable fees, costs and expenses of enforcing any right of such substantially prevailing party under or with respect to this Agreement, including without limitation, such reasonable fees and expenses of attorneys, which will include, without limitation, all fees, costs and expenses of appeal.

[Remainder of Page Intentionally Blank, Signature Page Follows]

IN WITNESS WHEREOF, the parties have executed this Agreement on the day and year first written above.

Company:

BULLFROG AI HOLDINGS, INC.

By: *Vin Singh*

Name: Vininder Singh

Title: CEO and Chairman

Vin Singh
Executive: Vininder Singh

[Signature Page to Employment Agreement]

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the inclusion in this Registration Statement on Form S-1 of our report dated June 10, 2022, of Bullfrog AI Holdings, Inc., relating to the consolidated audit of the consolidated financial statements for the periods ending December 31, 2021 and 2020, and the reference to our firm under the caption "Experts" in the Registration Statement.

/s/ M&K CPAS, PLLC

www.mkcpas.com
Houston, Texas

October 19, 2022

**CHARTER OF THE AUDIT COMMITTEE
OF
BULLFROG AI HOLDINGS, INC.**

Membership

The Audit Committee (the “**Committee**”) of the board of directors (the “**Board**”) of Bullfrog AI Holdings, Inc. (the “**Company**”) shall consist of three or more directors. Each member of the Committee shall be independent in accordance with the requirements of Rule 10A-3 of the Securities Exchange Act of 1934 and the rules of the NASDAQ Stock Market LLC (“**NASDAQ**”). No member of the Committee can have participated in the preparation of the Company’s or any of its subsidiaries’ financial statements at any time during the past three years.

Each member of the Committee must be able to read and understand fundamental financial statements, including the Company’s balance sheet, income statement, and cash flow statement. At least one member of the Committee must have past employment experience in finance or accounting, requisite professional certification in accounting, or other comparable experience or background that leads to financial sophistication. At least one member of the Committee must be an “audit committee financial expert” as defined in Item 407(d)(5)(ii) of Regulation S-K. A person who meets the definition of audit committee financial expert will also be presumed to have financial sophistication, including being or having been a chief executive officer, chief financial officer, or other senior officer with financial oversight responsibilities

No member of the Committee may serve simultaneously on the audit committee of more than two other public companies without prior approval of the Board.

The members of the Committee shall be appointed by the Board based on recommendations from the nominating and corporate governance committee of the Board. The members of the Committee shall be appointed for one-year terms and shall serve for such term or terms as the Board may determine or until earlier resignation or death. The Board may remove any member from the Committee at any time with or without cause.

Purpose

The purpose of the Committee is to oversee the Company’s accounting and financial reporting processes and the audit of the Company’s financial statements.

The primary role of the Committee is to oversee the financial reporting and disclosure process. To fulfill this obligation, the Committee relies on: management for the preparation and accuracy of the Company’s financial statements; both management and the Company’s internal audit department/management for establishing effective internal controls and procedures to ensure the Company’s compliance with accounting standards, financial reporting procedures, and applicable laws and regulations; and the Company’s independent auditors for an unbiased, diligent audit or review, as applicable, of the Company’s financial statements and the effectiveness of the Company’s internal controls. The members of the Committee are not employees of the Company and are not responsible for conducting the audit or performing other accounting procedures.

1

Duties and Responsibilities

The Committee shall have the following authority and responsibilities:

- To (1) select and retain an independent registered public accounting firm to act as the Company’s independent auditors for the purpose of auditing the Company’s annual financial statements, books, records, accounts, and internal controls over financial reporting, subject to ratification by the Company’s stockholders of the selection of the independent auditors, (2) set the compensation of the Company’s independent auditors, (3) oversee the work done by the Company’s independent auditors, and (4) terminate the Company’s independent auditors, if necessary.
- To select, retain, compensate, oversee, and terminate, if necessary, any other registered public accounting firm engaged for the purpose of preparing or issuing an audit report or performing other audit, review, or attest services for the Company.
- To approve all audit engagement fees and terms, pre-approve all audit and permitted non-audit and tax services that may be provided by the Company’s independent auditors or other registered public accounting firms, and establish policies and procedures for the Committee’s pre-approval of permitted services by the Company’s independent auditors or other registered public accounting firms on an on-going basis.
- At least annually, to obtain and review a report by the Company’s independent auditors that describes (1) the accounting firm’s internal quality control procedures, (2) any material issues raised by the most recent internal quality control review, peer review, Public Company Accounting Oversight Board review, inspection of the firm, or any other inquiry or investigation by governmental or professional authorities in the past five years regarding one or more audits carried out by the firm and any steps taken to deal with any such issues, and (3) all relationships between the firm and the Company or any of its subsidiaries. The Committee shall discuss this report with the Company’s independent auditors and any relationships or services that may impact the objectivity and independence of the auditors.
- To review and discuss with the Company’s independent auditors (1) the auditors’ responsibilities under generally accepted auditing standards and the responsibilities of management in the audit process, (2) the overall audit strategy, (3) the scope and timing of the annual audit, (4) any significant risks identified during the auditors’ risk assessment procedures, and (5) when completed, the results, including significant findings, of the annual audit.
- To review and discuss with the Company’s independent auditors (1) all critical accounting policies and practices to be used in the audit, (2) all alternative treatments of financial information within generally accepted accounting principles (“**GAAP**”) that have been discussed with management, the ramifications of the use of such alternative treatments and the treatment preferred by the auditors, and (3) other material written communications between the auditors and management.
- To review with management and the Company’s independent auditors any major issues regarding accounting principles and financial statement presentation, including any significant changes in the Company’s selection or application of accounting principles, any significant financial reporting issues and judgments made in connection with the preparation of the Company’s financial statements, including the effects of alternative GAAP methods, and the effect of regulatory and accounting initiatives and off-balance sheet structures on the Company’s financial statements.

2

- To keep the Company’s independent auditors informed of the Committee’s understanding of the Company’s relationships and transactions with related parties that are significant to the company and to review and discuss with the Company’s independent auditors the auditors’ evaluation of the Company’s identification of, accounting for, and disclosure of its relationships and transactions with related parties, including any significant matters arising from the audit regarding the Company’s relationships and transactions with related parties.

- To review with management, and the Company's independent auditors the adequacy and effectiveness of the Company's financial reporting processes, internal control over financial reporting and disclosure controls and procedures, including any significant deficiencies or material weaknesses in the design or operation of; any material changes in the Company's processes, controls and procedures; any special audit steps adopted in light of any material control deficiencies; and any fraud involving management or other employees with a significant role in such processes, controls, and procedures. The Committee shall also review and discuss with management and the Company's independent auditors disclosure relating to the Company's financial reporting processes, internal control over financial reporting, and disclosure controls and procedures; the independent auditors' report on the effectiveness of the Company's internal control over financial reporting; and the required management certifications to be included in or attached as exhibits to the Company's annual report on Form 10-K or quarterly report on Form 10-Q, as applicable.
- To review and discuss with the Company's independent auditors any other matters required to be discussed by PCAOB Auditing Standards No. 1301, *Communications with Audit Committees*, including, without limitation, the auditors' evaluation of the quality of the company's financial reporting, information relating to significant unusual transactions, the business rationale for such transactions, the auditors' evaluation of the Company's ability to continue as a going concern, and other applicable requirements of the PCAOB and the SEC.
- To review and discuss with the Company's independent auditors and management the Company's annual audited financial statements (including the related notes), the form of audit opinion to be issued by the auditors on the financial statements, and the disclosure under "Management's Discussion and Analysis of Financial Condition and Results of Operations" to be included in the Company's annual report on Form 10-K before the Form 10-K is filed.
- To recommend to the Board that the audited financial statements and the MD&A section be included in the Company's Form 10-K and whether the Form 10-K should be filed with the SEC. The Committee will also be responsible for preparing the audit committee report required to be included in the Company's proxy statement.
- To review and discuss with the Company's independent auditors and management the Company's quarterly financial statements and the disclosure under "Management's Discussion and Analysis of Financial Condition and Results of Operations" to be included in the Company's quarterly report on Form 10-Q before the Form 10-Q is filed and to review and discuss the Form 10-Q for filing with the SEC.
- To set Company hiring policies for employees or former employees of the Company's independent auditors that participated in any capacity in any Company audit.

- To establish and oversee procedures for the receipt, retention, and treatment of complaints received by the Company regarding accounting, internal accounting controls, or auditing matters and the confidential, anonymous submission by Company employees of concerns regarding questionable accounting or auditing matters.
- To review, with the General Counsel (if any) and outside legal counsel legal and regulatory matters, including legal cases against or regulatory investigations of the Company and its subsidiaries, that could have a significant impact on the Company's financial statements.
- To review, approve, and oversee any transaction between the Company and any related person (as defined in Item 404 of Regulation S-K) and any other potential conflict of interest situations on an ongoing basis in accordance with Company policies and procedures and to develop policies and procedures for the Committee's approval of related party transactions.
- To oversee the Company's internal audit department, including reviewing its organizational structure, budget, staffing, and performance and the scope and results of the internal audit program.
- To oversee the Company's enterprise risk management program, including data privacy and security.

Outside Advisors

The Committee shall have the authority, in its sole discretion, to retain and obtain the advice and assistance of independent outside counsel and such other advisors as it deems necessary to fulfill its duties and responsibilities under this Charter. The Committee shall set the compensation and oversee the work of any outside counsel and other advisors.

The Committee shall receive appropriate funding from the Company, as determined by the Committee in its capacity as a committee of the Board, for the payment of compensation to the Company's independent auditors, any other accounting firm engaged to perform services for the Company, any outside counsel, and any other advisors to the Committee.

Structure and Operations

The Board shall designate a member of the Committee as the chairperson. The Committee shall meet at least quarterly at such times and places as it deems necessary to fulfill its responsibilities. The Committee shall report to the Board on its discussions and actions, including any significant issues or concerns that arise at its meetings, and shall make recommendations to the Board as appropriate. The Committee is governed by the same rules regarding meetings (including meetings in person or by telephone or other similar communications equipment), action without meetings, notice, waiver of notice, and quorum and voting requirements applicable to the Board.

The Committee shall meet separately and periodically with management, representatives of the Company's independent auditors, and the internal audit group, and shall invite such individuals to its meetings as it deems appropriate, to assist in carrying out its duties and responsibilities. However, the Committee shall meet regularly without such individuals present.

The Committee shall have the right to consult with and have free and private access to the Company's independent accounting firm, internal audit, financial management, and legal staff.

The Committee shall review this Charter at least annually and recommend any proposed changes to the Board for approval.

Delegation of Authority

The Committee shall have the authority to delegate any of its responsibilities, along with the authority to take action in relation to such responsibilities, to one or more subcommittees as the Committee may deem appropriate in its sole discretion.

**CHARTER OF THE COMPENSATION COMMITTEE
OF
BULLFROG AI HOLDINGS, INC.**

Membership

The Compensation Committee (the “**Committee**”) of the board of directors (the “**Board**”) of Bullfrog AI Holdings, Inc. (the “**Company**”) shall consist of two or more directors. Each member of the Committee shall be independent in accordance with the rules of the NASDAQ Stock Market LLC (“**NASDAQ**”) and the Company’s independence guidelines.

At least two members of the Committee must qualify as “non-employee directors” for the purposes of Rule 16b-3 under the Securities Exchange Act of 1934, as amended (the “**Exchange Act**”).

The members of the Committee shall be appointed by the Board. The members of the Committee shall serve for such term or terms as the Board may determine or until earlier resignation or death. The Board may remove any member from the Committee at any time with or without cause.

Purpose

The purpose of the Committee is to carry out the responsibilities delegated by the Board relating to the review and determination of executive compensation, as well as overseeing the Company’s management of human capital.

Duties and Responsibilities

The Committee shall have the following authority and responsibilities:

- To annually review and approve the corporate goals and objectives applicable to the compensation of the chief executive officer (“**CEO**”), evaluate at least annually the CEO’s performance in light of those goals and objectives, and determine and approve the CEO’s compensation level based on this evaluation. The CEO cannot be present during any voting or deliberations by the Committee on his or her compensation. In evaluating and making recommendations to the Board regarding the CEO’s compensation, the Committee shall consider the results of the most recent stockholder advisory vote on executive compensation (“**Say on Pay Vote**”) required by Section 14A of the Exchange Act.
- To review and make recommendations to the Board regarding the compensation of all other executive officers. In evaluating and making recommendations to the Board regarding executive compensation, the Committee shall consider the results of the most recent Say on Pay Vote.
- To review and make recommendations to the Board regarding incentive compensation plans and equity-based plans, which includes the ability to adopt, amend and terminate such plans. The Committee shall also have the authority to administer the Company’s incentive compensation plans and equity-based plans, including designation of the employees to whom the awards are to be granted, the amount of the award or equity to be granted and the terms and conditions applicable to each award or grant, subject to the provisions of each plan. In reviewing and making recommendations to the Board regarding incentive compensation plans and equity-based plans, including whether to adopt, amend or terminate any such plans, the Committee shall consider the results of the most recent Say on Pay Vote.

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- To review and discuss with management the Company’s Compensation Discussion and Analysis (“**CD&A**”) and related executive compensation information, recommend that the CD&A and related executive compensation information be included in the Company’s annual report on Form 10-K and proxy statement, and produce the compensation committee report on executive officer compensation required to be included in the Company’s proxy statement or annual report on Form 10-K.
 - To review and recommend to the Board for approval the frequency with which the Company will conduct Say on Pay Votes, taking into account the results of the most recent stockholder advisory vote on frequency of Say on Pay Votes required by Section 14A of the Exchange Act, and review and approve the proposals regarding the Say on Pay Vote and the frequency of the Say on Pay Vote to be included in the Company’s proxy statement.
 - To the extent deemed necessary, to determine stock ownership guidelines for the CEO and other executive officers and monitor compliance with such guidelines.
 - To the extent deemed necessary, to review and make recommendations to the Board regarding all employee benefit plans for the Company, which includes the ability to adopt, amend and terminate such plans.
 - Annually review the Company’s policies, programs and initiatives for diversity, equity and inclusion and human capital management and provide guidance to the Board and management on these matters as the Committee deems appropriate.
 - To review the Company’s incentive compensation arrangements to determine whether they encourage excessive risk-taking, to review and discuss at least annually the relationship between risk management policies and practices and compensation, and to evaluate compensation policies and practices that could mitigate any such risk.
 - To review all director compensation and benefits for service on the Board and Board committees at least once a year and to recommend any changes to the Board as necessary.
 - To oversee, in conjunction with the Board, engagement with stockholders and proxy advisory firms on executive compensation matters.
 - To review the Company’s peer companies and data sources for purposes of evaluating compensation competitiveness.

Outside Advisors

The Committee shall have the authority, in its sole discretion, to select, retain and obtain the advice of a compensation consultant as necessary to assist with the execution of its duties and responsibilities as set forth in this Charter. The Committee shall set the compensation and oversee the work of the compensation consultant. The Committee shall have the authority, in its sole discretion, to retain and obtain the advice and assistance of outside legal counsel and such other advisors as it deems necessary to fulfill its duties and responsibilities under this Charter. The Committee shall set the compensation and oversee the work of its outside legal counsel and other advisors. The Committee shall receive appropriate funding from the Company, as determined by the Committee in its capacity as a committee of the Board, for the payment of compensation to its compensation consultants, outside legal counsel and any other advisors. However, the Committee shall not be required to implement or act consistently with the advice or recommendations of its compensation consultant, legal counsel, or other advisor to the compensation committee, and the authority granted in this Charter shall not affect the ability or obligation of the Committee to exercise its own judgment in fulfillment of its duties under this Charter.

The Committee has the sole authority to retain consultants and advisors as it may deem appropriate. The Committee has the sole authority to approve related fees and other retention terms. The Committee must assess such advisor's independence before retention of such advisors (other than advisors whose role is limited to activities for which no disclosure would be required under Item 407(e)(3)(iii) of Regulation S-K), taking into consideration the following factors: (i) whether the compensation consulting firm employing the compensation advisor is providing any other services to the Company; (ii) how much the compensation consulting firm who employs the compensation advisor has received in fees from the Company, as a percentage of that person's total revenue; (iii) what policies and procedures have been adopted by the compensation consulting firm employing the compensation advisor to prevent conflicts of interest; (iv) whether the compensation advisor has any business or personal relationship with a member of the Committee; (v) whether the compensation advisor owns any stock of the Company; and (vi) whether the compensation advisor or the person employing the advisor has any business or personal relationship with an executive officer of the Company.

Structure and Operations

The Board shall designate a member of the Committee as the chairperson. The Committee shall meet at least once a year at such time and place as it deems necessary to fulfill its responsibilities. The Committee shall report regularly to the Board regarding its actions and make recommendations to the Board as appropriate. The Committee is governed by the same rules regarding meetings (including meetings in person or by telephone or other similar communications equipment), action without meetings, notice, waiver of notice, and quorum and voting requirements as are applicable to the Board.

The Committee may invite such members of management to its meetings as it deems appropriate. However, the Committee shall meet regularly without such members present, and in all cases the CEO and any other such officers shall not be present at meetings at which their compensation or performance is discussed or determined.

The Committee shall review this Charter at least annually and recommend any proposed changes to the Board for approval.

Delegation of Authority

The Committee shall have the authority to delegate any of its responsibilities, along with the authority to take action in relation to such responsibilities, to one or more subcommittees as the Committee may deem appropriate in its sole discretion.

Performance Evaluation

The Committee shall conduct an annual evaluation of the performance of its duties under this charter and shall present the results of the evaluation to the Board. The Committee shall conduct this evaluation in such manner as it deems appropriate.

Consent to be Named as a Director Nominee

In connection with the filing by BullFrog AI Holdings, Inc. of the Registration Statement on Form S-1 with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), I hereby consent, pursuant to Rule 438 of the Securities Act, to being named as a nominee to the board of directors of BullFrog AI Holdings, Inc. in the Registration Statement and any and all amendments and supplements thereto. I also consent to the filing of this consent as an exhibit to such Registration Statement and any amendments thereto.

Dated: May __, 2022

Jason Monroe

Consent to be Named as a Director Nominee

In connection with the filing by BullFrog AI Holdings, Inc. of the Registration Statement on Form S-1 with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), I hereby consent, pursuant to Rule 438 of the Securities Act, to being named as a nominee to the board of directors of BullFrog AI Holdings, Inc. in the Registration Statement and any and all amendments and supplements thereto. I also consent to the filing of this consent as an exhibit to such Registration Statement and any amendments thereto.

Dated: May __, 2022

William Enbright

Consent to be Named as a Director Nominee

In connection with the filing by BullFrog AI Holdings, Inc. of the Registration Statement on Form S-1 with the Securities and Exchange Commission under the Securities Act of 1933, as amended (the "Securities Act"), I hereby consent, pursuant to Rule 438 of the Securities Act, to being named as a nominee to the board of directors of BullFrog AI Holdings, Inc. in the Registration Statement and any and all amendments and supplements thereto. I also consent to the filing of this consent as an exhibit to such Registration Statement and any amendments thereto.

Dated: May __, 2022

Jason Hanson

Calculation of Filing Fee Tables

Form S-1
(Form Type)

Bullfrog AI Holdings, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered Securities

	<u>Security Type</u>	<u>Security Class Title</u>	<u>Fee Calculation or Carry Forward Rule</u>	<u>Amount Registered</u>	<u>Proposed Maximum Offering Price Per Unit</u>	<u>Maximum Aggregate Offering Price</u>	<u>Fee Rate</u>	<u>Amount of Registration Fee</u>
Primary Offering								
Fees to be Paid	Equity	Units consisting of shares of Common Stock, par value \$0.00001 per share ("Common Stock"), Warrants to purchase Common Stock (1)	457(o)	1,515,294	—	\$ 9,659,999.25(2)	0.00011020	\$ 1064.54
	Equity	Common Stock, par value \$0.0001 per share, included as part of the Units	457(o)	—	—	Included with above Units.	—	—
	Other	Warrants to purchase Common Stock, included as part of the Units	457(o) and 457(g)	—	—	Included with above Units.	—	—
	Equity	Common Stock issuable upon exercise of the Warrants included as part of the Units	457(o)	1,515,294	—	\$ 8,400,000(2)	0.00011020	\$ 925.68
	Other	Representative's Warrant(3)	457(g)	—	—	—	—	—
	Equity	Common Stock issuable upon exercise of the Representative's Warrant(4)	457(o)	90,917	—	\$ 637,559.95	0.00011020	\$ 70.26
Secondary Offering								
Fees to be Paid	Equity	Common Stock, par value \$0.00001 per share	457(o)	1,682,997	—	\$ 10,729,106(5)	0.00011020	\$ 1,182.35
		Total Primary Offering Amount				\$ 18,697,559	—	\$ 2,060.47
		Total Secondary Offering Amount				\$ 10,729,106	—	\$ 1,182.35
		Total Fees Previously Paid						\$ 0
		Net Fee Due						\$ 3,242.82

(1) This registration statement also includes an indeterminate number of securities that may become offered, issuable or sold to prevent dilution resulting from stock splits, stock dividends and similar transactions, which are included pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act").

(2) Estimated solely for the purpose of computing the registration fee in accordance with Rule 457(o) under the Securities Act.

(3) No fee required pursuant to Rule 457(g) under the Securities Act.

(4) Represents a warrant to purchase a number of securities equal to 6% of the shares of common stock sold in this offering at an exercise price equal to 110% of the assumed public offering price per Unit, or \$7.35 per share based on the assumed offering price of \$6.375 per Unit

(5) For purposes of calculating the proposed maximum aggregate offering price, we have multiplied 1,682,997 representing the number of shares covered by the resale prospectus by an assumed price of \$6.375 per Unit.