UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended: **December 31, 2023**

□ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from [ ] to [ ]

Commission file number 001-41600

BULLFROG AI HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Nevada	84-4786155
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

325 Ellington Blvd., Unit 317
Gaithersburg, MD 20878

(Address of principal executive offices)

Registrant's telephone number: (240) 658-6710

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, par value $0.00001 per share	BFRG	The Nasdaq Stock Market LLC (The Nasdaq Capital Market)
Tradable Warrants	BFRGW	The Nasdaq Stock Market LLC (The Nasdaq Capital Market)

Securities registered pursuant to Section 12(g) of the Act:
None

Indicate by check mark if registrant is a well-known seasoned issuer, as defined under Rule 405 of the Securities Act. Yes □ No ☒

Indicate by check mark if registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes □ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act during the preceding 12 months (or for such shorter period that the issuer was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No □

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No □

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, 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	□	Accelerated filer	□
Non-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 pursuant to Section 13(a) of the Exchange Act. □

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. □

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. □

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). □

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes □ No ☒

As of June 30, 2023, the aggregate market value of the common stock of the registrant held by non-affiliates was approximately $11.7 million. Shares of common stock held by each officer and director of the registrant on June 30, 2023 have been excluded in that such persons may be deemed to be affiliates.

The number of shares of the Registrant’s common stock outstanding as of March 27, 2024 was 7,850,550.

Documents incorporated by reference: None.

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In this report, unless the context indicates otherwise, the terms "Company," "we," "us," "our" and similar words refer to Bullfrog AI Holdings, Inc. ("Bullfrog"), a Nevada corporation.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This report contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, or the "Securities Act," and Section 21E of the Securities Exchange Act of 1934 or the "Exchange Act." These forward-looking statements are subject to certain risks and uncertainties that could cause actual results to differ materially from historical results or anticipated results.

In some cases, you can identify forward-looking statements by terms such as "may," "intend," "might," "will," "should," "could," "would," "expect," "believe," "anticipate," "estimate," "predict," "potential," or the negative of these terms. These terms and similar expressions are intended to identify forward-looking statements. The forward-looking statements in this report are based upon management's current expectations and beliefs, which management believes are reasonable. In addition, we cannot assess the impact of each factor on our business or the extent to which any factor or combination of factors, or factors we are aware of, may cause actual results to differ materially from those contained in any forward-looking statements. You are cautioned not to place undue reliance on any forward-looking statements. These statements represent our estimates and assumptions only as of the date of this report. Except to the extent required by federal securities laws, we undertake no obligation to update any forward-looking statement to reflect events or circumstances after the date hereof or to reflect the occurrence of unanticipated events.

You should be aware that our actual results could differ materially from those contained in the forward-looking statements due to a number of factors, including:

- 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 proprietary development, digital transformation technology and bio health 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.

Other risks and uncertainties include such factors, among others, as market acceptance and market demand for our products and services, pricing, the changing regulatory environment, the effect of our accounting policies, industry trends, adequacy of our financial resources to execute our business plan, our ability to attract, retain and motivate key personnel, and other risks described from time to time in periodic and current reports we file with the United States Securities and Exchange Commission, or the "SEC." You should consider carefully the statements under this report, which address additional factors that could cause our actual results to differ from those set forth in the forward-looking statements and could materially and adversely affect our business, operating results and financial condition. All subsequent written and oral forward-looking statements attributable to us or persons acting on our behalf are expressly qualified in their entirety by the applicable cautionary statements.

PART I

ITEM 1. BUSINESS

Our Corporate History and Background

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 Form 10-K are inactive textual references only. The information on our website is neither incorporated by reference into this Form 10-K.

Acquisition of BullFrog AI, Inc.

In March 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 AI Holdings, Inc. acquired BullFrog AI, Inc. pursuant to an exchange agreement under which each share of Bull Frog AI, Inc. common stock was exchanged for a share of common stock of BullFrog AI Holdings, Inc. Immediately prior to the share exchange, each outstanding common share of BullFrog AI, Inc. was split into 25 shares of common stock. 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 outstanding stock 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. held 100% of the common stock of the Company. As a result, BullFrog AI Holdings, Inc. assumed a total of $330,442 in net liabilities of BullFrog AI, Inc. Both of the entities were controlled before and after the transactions by the same controlling shareholder.

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.

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 precise[1], 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.

[1] In 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.

Recent Developments

On February 26, 2024, the Company announced the appointment of Dr. Thomas W. Chittenden, PhD, DPhil, PStat, as its new Chief Scientific Officer.

On January 31, 2024, the Company entered into an underwriting agreement with WallachBeth Capital, LLC as representative of the several underwriters named therein, relating to the issuance and sale of an aggregate of (i) 1,028,710 shares of common stock, par value $0.00001 per share and 478,429 pre-funded warrants in lieu of common stock ("Pre-Funded Warrants") or 1,507,139 shares of common stock (or Pre-Funded Warrants) in lieu thereof, and accompanying warrants to purchase 1,507,139 shares of common stock at a combined public offering price of $3.782 per share (inclusive of the Pre-Funded Warrant exercise price) for gross proceeds of approximately $5,700,000, prior to deducting underwriting discounts and offering expenses.

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. 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. On July 8, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the additional technology developed to enhance the bfLEAP™ platform. The July 8, 2022 JHU-APL license provides the Company with new intellectual property and also encompasses most of the intellectual property from the February 2018 license.

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

- 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.
- 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.
- 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 artificial intelligence/machine learning ("AI/ML") analysis of late-stage clinical data. We have acquired the rights to a series of preclinical and early clinical drug assets from universities and entered into a strategic collaboration with a world-renowned research institution to create a HSV1 viral therapeutic platform to engineer immunotherapies for colorectal cancer. 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 Johns Hopkins University Applied Physics Laboratory ("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 relationships, 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 have licensed 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 Products

Product/Platform	Description	Target Market/Indications
bfLEAP™ – AI/ML platform for analysis of preclinical and/or clinical data	AI/ML analytics platform derived from technology developed at JHU-APL 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, worldwide, 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 U.S. 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 Company recently initiated proof-of-concept studies on this asset and will use the outcome of these studies to inform a clinical development plan that would include initiation of IND-enabling studies.

Metabolic dysfunction-associated steatotic liver disease (MASLD, which until recently was called non-alcoholic fatty liver disease, or 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 metabolic dysfunction-associated steatohepatitis (MASH), with associated liver inflammation and fibrosis, and HCC. Evidence in animal models of obesity suggest that a protein called β2-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 MASH and liver cancer (Rao et al., 2021).

In February 2022, the Company entered into an exclusive, worldwide, 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 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 in humans.

In October 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from Johns Hopkins University (JHU) and the Institute of Organic Chemistry and Biochemistry (IOCB) of the Czech Academy of Sciences for rights to commercialize N-substituted prodrugs of mebendazole that demonstrate improved solubility and bioavailability. The license covers prodrug compositions and use for treating disease as claimed in multiple US and worldwide patent applications. Patents have since been issued in the United States and Australia and are still in the prosecution phase in other territories. In September 2023 the Company announced results from a preclinical study demonstrating the effectiveness of BF-223, a compound chosen from this class, in an animal model for glioblastoma. The Company is currently formulating a strategy for initiating IND-enabling studies on BF-223 and is conducting outreach to identify partners that may want to license or partner in the development of BF-223.

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 developed to enhance the bfLEAP™ platform. 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. 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.

Lieber Institute for Brain Development

On September 8, 2023, the Company entered a data use and technology partnership agreement (the "Partnership Agreement") with the Lieber Institute for Brain Development (LIBD). The Partnership Agreement covers the right of BullFrog AI to leverage its bfLEAP™ platform to mine LIBD's comprehensive brain data, including transcriptomic, genomic, DNA methylation, cell-line, clinical, and imaging data to identify previously unrecognized relationships. The goal of the partnership is to identify previously unrecognized relationships between genes and pathways in the brain and the development of neurologic and psychiatric disorders, thereby facilitating the development of more effective treatments for diseases of the human brain. The collaboration will proceed in two stages, with the first involving unsupervised construction of graphical models to reveal relationships between brain diseases and genomic/biologic attributes, with the goal of identifying new biomarkers and drug targets across disorders. The second stage will involve creating disease-specific models that will enable identification of genes and pathways within these respective disorders. The Partnership Agreement has a one-year term of data exclusivity to complete the first stages of analyses, with a two-year extension option as performance milestones are met.,

As contemplated in the Partnership Agreement, on October 16, 2023, the Company and LIBD entered into a commercial agreement (the "Commercial Agreement") that sets forth the key terms for commercialization of products and services developed under the Partnership Agreement. Pursuant to the Commercial Agreement, LIBD granted the Company a worldwide, royalty-bearing exclusive license so long as the Company receives net sales or income from the licensing of "Licensed Products" (as defined in the Commercial Agreement) in the application of machine learning and/or artificial intelligence for research and development in drug development, and specifically includes therapeutic products, patient selection strategies, and target identification, but excludes diagnostics and incidental uses of machine learning and/or artificial intelligence on data derived from research. Generally, "Licensed products" are any product or service which incorporates, results from, or is derived from LIBD's Data (meaning finished brain-related data, including but not limited to DNA methylation, RNAseq, genomic, DNA methylation, cell-line, clinical, and imaging data, and the specified data set forth in the Partnership Agreement) and that the Company or its affiliate develops during the term of the Partnership Agreement, and any improvements thereof after the term of the Partnership Agreement, and all Licensed Products or services derived therefrom by the Company or its affiliates. Licensed Products may include, but are not limited to, biomarker and target identification, target validation, mapping unmet needs, identifying genetic risk factors and predictive modeling.

The Company was also granted the right to sublicense, to use the deliverables under the Partnership Agreement, and LIBD's intellectual property rights in the data, to (i) use, sell, distribute for sale, have distributed for sale, offer for sale, have sold, import and have imported Licensed Products and (ii) to develop, have developed, make, have made Licensed Products that are derived from Licensed Products developed during the term of the Partnership Agreement, and any improvements made following the term. The Company is prohibited from sublicensing LIBD Data. The Company shall pay LIBD a royalty based on net sales of all Licensed Products sold by the Company and/or its affiliates.

The Commercial Agreement, generally, may be terminated at any time by either the Company or LIBD if either party defaults or breaches any material term of the agreement or files for protection under bankruptcy laws, makes an assignment for the benefit of creditors, appoints or suffers appointment of a receiver, trustee, or similar agent over its property.

Summary for CATIE Schizophrenia Case Study

The Company 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, bfLEAP™ 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 bfLEAP 2.0 but focused on one particular drug named Olanzapine. Our bfLEAP™ 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.

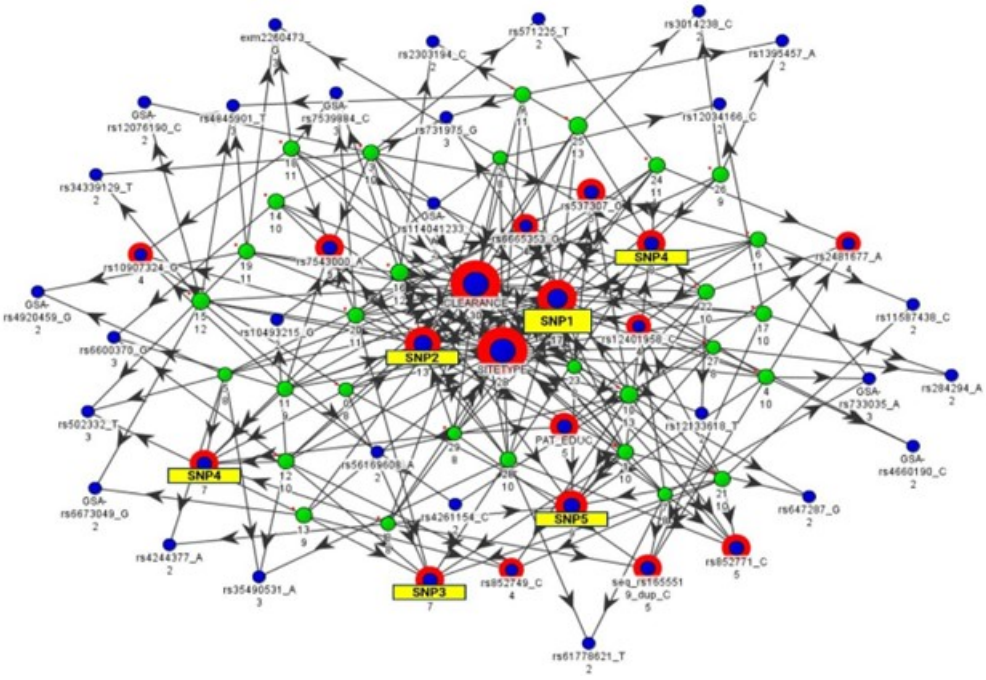
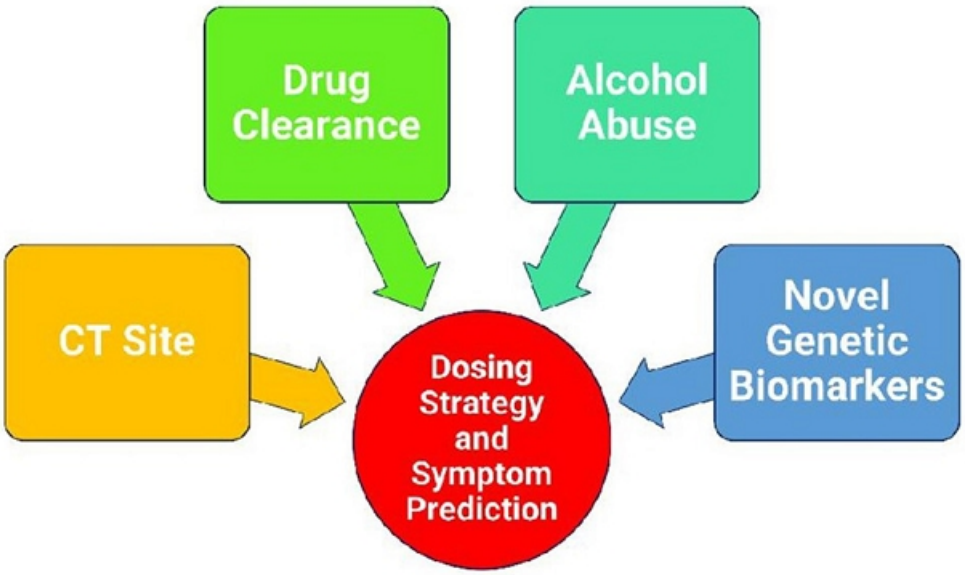


FIGURE 1 – bfLEAP™ Analytical Map

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

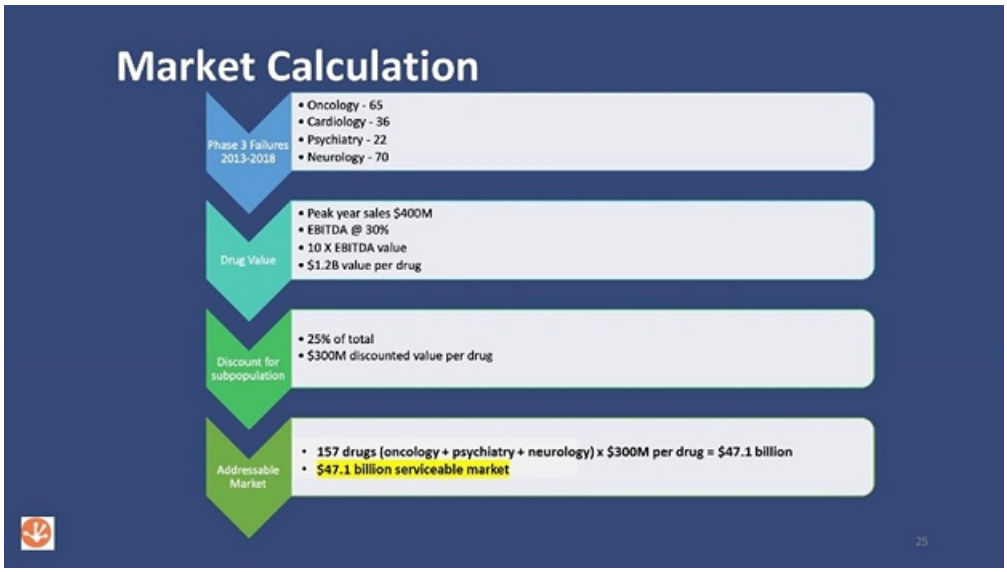
The Company worked with an international collaborator in cardiovascular devices to analyze data from an ongoing clinical trial for a new device. BullFrog analyzed data from ~55 patients, with a library of almost 15,000 unique attributes of data for each patient. The data also included adverse events, and key demographic information. For this collaborator, 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-variates for the ongoing trial, and also provided a starting point for deeper physiological and molecular studies.

Our Supply Chain and Customer Base

We have launched our businesses using funds from our initial public 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 worldwide rights to a Phase 2 ready glioblastoma drug and a discovery phase hepatocellular carcinoma drug from universities. Since we intend to conduct late-stage clinical trials with partners on 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 partnered 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, the establishment of third-party relationships for execution and completion of clinical trials.

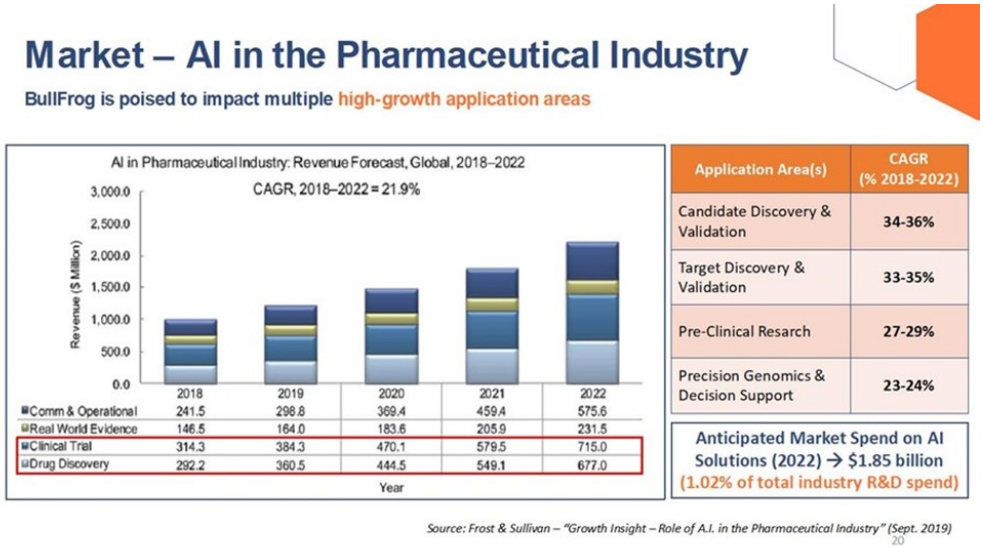
Our Market Opportunity

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.



Identification of candidates with potential for rescue may be challenging and require significant resources, and once these assets are identified the Company may find it challenging to license them under favorable terms in order to create value for shareholders. Subsequent development of these assets for clinical testing may require significant effort and resources. Ultimately, these assets must undergo rigorous clinical testing and approval by FDA or comparable regulatory authorities in other countries in order to be marketed. A key part of our strategy is to partner our R&D programs. In addition, we do not intend on commercializing drugs and instead will seek to divest each drug asset to a company that will commercialize the drug. The Company may receive future royalties in come transactions.

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.



Intellectual Property

Patents

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

Mebendazole Polymorph For Treatment And Prevention Of Tumors

Serial Number	Country	Status	Issue Date	Expiration Date
62/112,706	United States	Converted	N/A	N/A
PCT/US2016/016968	PCT	Nationalized	N/A	N/A
11,110,079	United States	Granted	9/7/2021	2/8/2036
17/402,131	United States	Abandoned	N/A	N/A
18/525,209	United States	Pending	N/A	N/A
16747414.7	Europe	Granted	12/15/2021	2/8/2036
16747414.7	Czech Republic	Granted	12/15/2021	2/8/2036
16747414.7	France	Granted	12/15/2021	2/8/2036
60 2016 067 384.3	Germany	Granted	12/15/2021	2/8/2036
16747414.7	Ireland	Granted	12/15/2021	2/8/2036
502022000018341	Italy	Granted	12/15/2021	2/8/2036
16747414.7	Spain	Granted	12/15/2021	2/8/2036
16747414.7	Switzerland	Granted	12/15/2021	2/8/2036
16747414.7	United Kingdom	Granted	12/15/2021	2/8/2036
253854	Israel	Granted	6/26/2021	2/8/2036
2016800144274	China	Granted	6/25/2021	2/8/2036
201717028684	India	Granted	12/1/2020	2/8/2036
2017-541687	Japan	Granted	11/18/2020	2/8/2036

Mebendazole Prodrugs with Enhanced Solubility and Oral Bioavailability

Serial Number	Country	Status	Issue Date	Expiration Date
62/627,810	United States	Converted	N/A	N/A
PCT/US2019/017291	PCT	Nationalized	N/A	N/A
11,712,435	United States	Granted	8/1/2023	2/8/2039
2019216757	Australia	Granted	1/4/2024	2/8/2039
19751700.6	Europe	Pending	N/A	N/A
3,090,691	Canada	Pending	N/A	N/A

Inhibition of SPTBN1 to treat Obesity/NASH and Obesity/NASH-driven cancer

Serial Number	Country	Status	Filing Date	Expiration Date
63/113,745	United States	Converted	11/13/2020	N/A
63/147,141	United States	Converted	2/8/2021	N/A
PCT/US2021/059245	United States	Nationalized	11/12/2021	N/A
2023-528428	Japan	Filed	11/12/2021	N/A
18/252,771	United States	Filed	5/12/2023	N/A
21892928.9	Europe	Filed	6/13/2023	N/A
2021800763877	Canada	Filed	11/12/2021	N/A

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	BullFrog AI Holdings	Worldwide, exclusive rights for therapeutics development
Johns Hopkins University	BullFrog AI Holdings	Worldwide, exclusive rights for therapeutics development

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, one (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 percent (5%) of the then fully diluted equity base of the Company, which shall be diluted following the closing of the IPO. Under the terms of the License Agreement, JHU will be entitled to eight percent (8%) royalty on net sales for the services provided by the Company in which the JHU licensed technology was utilized, as well as fifty percent (50%) 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.

On July 8, 2022, the company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the additional technology developed to enhance the bfLEAP™ platform. 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. In consideration of the new license, the Company issued 39,879 shares of common stock. Under the terms of the new License Agreement, JHU will be entitled to eight percent (8%) of net sales for the services provided by the Company to other parties and three percent (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. The financial terms of the new license agreement replace the original terms and are not duplicative.

On May 31, 2023, the Company and JHU-APL entered into Amendment number 1 of the July 8, 2022 License Agreement whereby the Company gained access to certain improvements including additional patents and knowhow in exchange for a series of payments totaling $275,000. The first of these payments for $75,000 was due in July 2023 followed by payments of $75,000, $75,000, and $50,000 in years 2025, 2026 and 2027, respectively. The amendment also reduced the 2023 minimum annual royalty payment to $60,000, all other financial terms remain the same. As of December 31, 2023, we have accrued $60,000 of the 2023 minimum annual royalty payments.

George Washington University - Beta2-spectrin siRNA License

On January 14, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from GWU for rights to use siRNA targeting Beta2-spectrin in the treatment of human diseases, including 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 Company has not yet initiated development activities or IND-enabling studies on this asset; however, the plan is to conduct this work over the next 24 months. All R&D to date on this candidate has been conducted by the licensor of the technology, George Washington University. 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 been 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 β2-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 a New Drug Application (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 an NDA to the U.S. FDA. Future milestones on sales revenue are limited to $1 million on the first $20 million in net sales.

As of December 31, 2023 and 2022, there has been no accrual for royalties since we have not begun to generate applicable revenue. The Company assessed whether the license should be capitalized and determined that the licensed program is in the early stage and therefore may not be recoverable; 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, worldwide, royalty-bearing license from 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 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 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 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 $1 million on the first $20 million in sales revenue, $2 million in the first-year cumulative sales revenue exceeds $100 million, $10 million in the first-year cumulative sales revenue exceeds $500 million, and $20 million in the first-year cumulative sales revenue exceeds $1 billion. As of December 31, 2023 and 2022, the balance of accrued expense related to this license agreement was $10,000 and $242,671, respectively. The Company assessed whether the license should be capitalized and determined that the licensed program is in the early stage and therefore may not be recoverable; the Company expensed the license fee and will expense development costs until commercial viability is likely.

Johns Hopkins University – Mebendazole Prodrug License

On October 13, 2022, the Company entered into an exclusive, worldwide, royalty-bearing license from JHU and the Institute of Organic Chemistry and Biochemistry (IOCB) of the Czech Academy of Sciences for rights to commercialize N-substituted prodrugs of mebendazole that demonstrate improved solubility and bioavailability. The license covers prodrug compositions and use for treating disease as claimed in multiple US and worldwide patent applications. The term of the agreement began on October 13, 2022 and continues until the date of expiration of the last to expire patent, or for 20 years from the effective date of the agreement if no patents are issued. The license can be terminated by the Company upon 90 days' written notice, or by the licensor in the event of any material breach of the license that is not cured by the Company within 30 days.

In consideration for the rights granted to the Company under the License Agreement JHU and IOCB will receive a staggered upfront license fee of $100,000. The Company will also reimburse JHU and IOCB for previously incurred patent costs totaling $33,265 and will be responsible for reimbursing licensors for future patent costs. Under the terms of the License Agreement, the licensors will be entitled to a four percent (4%) royalty on net sales subject to annual minimums upon first commercial sale of a licensed product, as well sublicense or assignment fees in the event the Company sublicenses or assigns their rights to use the technology. The Sublicense fee amount declines as the Company advances the clinical development of licensed technology. The Company is required to pay minimum annual royalties (MAR) beginning in year 4 of the agreement. The MAR for year 4 will be $5,000, increasing to $10,000 in year 5, $20,000 in year 6, $30,000 in year 7, and $50,000 in year 8 and subsequent years. The Company will be responsible for milestone payments for patent issuance of up to $50,000 and clinical development milestones up to and including approval of an NDA totaling up to $2.3 million. The Company will be required to pay a commercial milestone of $1 million once sales reach $20 million in the US, $2 million when sales in the US reach $100 million, $10 million when US sales reach $500 million, and $20 million when US sales exceed $1 billion.

As of December 31, 2023 and 2022, the balance of accrued expense related to this license agreement was $0 and $133,238, respectively. The Company assessed whether the license should be capitalized and determined that the licensed program is in the early stage and therefore may not be recoverable; the Company expensed the license fee and will expense development costs until commercial viability is likely.

On September 26, 2023, the Company announced positive data in a preclinical study investigating the anti-cancer activity of a novel prodrug of mebendazole for the treatment of glioblastoma. The study assessed the relative efficacy of BF-222, a novel formulation of mebendazole that has been evaluated in clinical trials, and BF-223, a novel prodrug of mebendazole with improved solubility and bioavailability relative to BF-222, compared with placebo in mice that had been implanted with tumor cells as a model for human glioblastoma. Animals treated with BF-223 had an average survival time of 27.9 days compared with 27.3 days for mice treated with BF-222 and 23.4 days for mice given placebo. Mice treated with BF-223 were administered 80% of the dose that mice treated with BF-222 received, and improved outcomes for both treatment groups were statistically significant compared to placebo. In addition, animals treated with equivalent doses of BF-222 and BF-223 showed comparable and significant reduction in tumor growth compared to control animals during the study.

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. Finally, bfLEAP has the ability to extract the most important features for analysis out of extremely large complex data sets using unsupervised machine learning algorithms, thereby greatly simplifying complex problems. Since data quality is a problem that exists in the healthcare industry, we see these as major differentiators. 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. We believe most of the competitors rely on open-source algorithms and we also 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) and individual 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.

Human Capital Resources

As of February 10, 2023, the Company has 4 full-time employees and consultants, including its Chief Executive Officer Vininder Singh and its Chief Financial Officer, Dane Saglio and 7 part-time employees, advisors, and consultants. 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 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. Our website address is *www.bullfrogai.com*. The references to our website in this annual report are inactive textual references only. The information on our website is neither incorporated by reference into this annual report nor intended to be used in connection with this annual report. All of our operations are currently conducted through BullFrog AI Holdings, Inc.

Available Information

We file annual, quarterly, and current reports, proxy statements and other information with the U.S. Securities Exchange Commission (the "SEC"). These filings are available to the public through the SEC's website at http://www.sec.gov. All statements made in any of our securities filings, including all forward-looking statements or information, are made as of the date of the document in which the statement is included unless otherwise specified, and we do not assume or undertake any obligation to update any of those statements or documents unless we are required to do so by law.

ITEM 1A. RISK FACTORS

Smaller reporting companies are not required to provide the information required by this item.

ITEM 1B. UNRESOLVED STAFF COMMENTS

Smaller reporting companies are not required to provide the information required by this item.

ITEM 1C. CYBERSECURITY

We have established policies and processes for assessing, identifying, and managing material risk from cybersecurity threats, and have integrated these processes into our overall risk management systems and processes. We routinely assess material risks from cybersecurity threats, including any potential unauthorized occurrence on or conducted through our information systems that may result in adverse effects on the confidentiality, integrity, or availability of our information systems or any information residing therein.

We conduct periodic risk assessments to identify cybersecurity threats, as well as assessments in the event of a material change in our business practices that may affect information systems that are vulnerable to such cybersecurity threats. These risk assessments include identification of reasonably foreseeable internal and external risks, the likelihood and potential damage that could result from such risks, and the sufficiency of existing policies, procedures, systems, and safeguards in place to manage such risks.

Following these risk assessments, we re-design, implement, and maintain reasonable safeguards to minimize identified risks; reasonably address any identified gaps in existing safeguards; and regularly monitor the effectiveness of our safeguards. Primary responsibility for assessing, monitoring and managing our cybersecurity risks rests with our Chief Information Officer who reports to our Chief Commercial Officer, to manage the risk assessment and mitigation process.

We engage consultants, or other third parties in connection with our risk assessment processes. These service providers assist us to design and implement our cybersecurity policies and procedures, as well as to monitor and test our safeguards. We require each third-party service provider to certify that it has the ability to implement and maintain appropriate security measures, consistent with all applicable laws, to implement and maintain reasonable security measures in connection with their work with us, and to promptly report any suspected breach of its security measures that may affect our company.

We have not encountered cybersecurity challenges that have materially impaired our operations or financial standing.

Governance

Our board of directors addresses the Company's cybersecurity risk management as part of its general oversight function. The board of directors' audit committee is responsible for overseeing Company's cybersecurity risk management processes, including oversight and mitigation of risks from cybersecurity threats.

Our cybersecurity risk assessment and management processes are implemented and maintained by certain Company management, including the information technology team at the direction of our Chief Information Officer. Our executive team including our Chief Executive Officer, and Chief Financial Officer are responsible for hiring appropriate personnel, helping to integrate cybersecurity risk considerations into the Company's overall risk management strategy, and communicating key priorities to relevant personnel. This executive team is responsible for approving budgets, helping prepare for cybersecurity incidents, approving cybersecurity processes, and reviewing security assessments and other security-related reports.

Our cybersecurity incident response and vulnerability management policies are designed to escalate certain cybersecurity incidents to members of management depending on the circumstances, including our Chief Executive Officer, and Chief Financial Officer. In addition, the Company's incident response and vulnerability management policies include reporting to the audit committee of the board of directors for certain cybersecurity incidents including significant breaches to the Company's networks or systems. The audit committee receives regular reports from the information technology team concerning the Company's significant cybersecurity threats and risk and the processes the Company has implemented to address them. The audit committee also has access to various reports, summaries or presentations related to cybersecurity threats, risk and mitigation.

ITEM 2. PROPERTIES

The Company's principal business address is 325 Ellington Blvd, Unit 317, Gaithersburg, MD 20878, and the telephone number at such address is 240-658-6710. Currently, the Company does not own any real property. All of the Company's employees work virtually.

ITEM 3. LEGAL PROCEEDINGS

We are not currently a party to any legal or administrative proceedings. Our current officers and directors have not been convicted in a criminal proceeding nor have they been permanently or temporarily enjoined, barred, suspended, or otherwise limited from involvement in any type of business, securities or banking activities.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5. MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Information with Respect to our Common Stock and Tradeable Warrants

Our common stock is publicly traded on the Nasdaq Capital Market, or Nasdaq, and began trading under the symbol "BFRG" on February 14, 2023. Our tradeable warrants are traded on Nasdaq and began trading under the symbol "BFRGW" on February 14, 2023.

Holders of Record

As of March 27, 2024 we had 17 shareholders of record of our common stock. This number does not include beneficial owners whose shares are held by nominees in street name.

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 the 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.

Recent Sales of Unregistered Securities

None.

Securities Authorized for Issuance under Equity Compensation Plans

The information required by this item with respect to securities authorized for issuance under equity compensation plans is set forth in Part III, Item 12 of this Annual Report on Form 10-K, and is incorporated herein by reference.

Issuer Purchases of Equity Securities

The Company did not repurchase any of its equity securities during the fourth quarter ended December 31, 2023.

Use of Proceeds from the Sale of Registered Securities

On February 13, 2023, our Registration Statement, as amended, and originally filed on Form S-1 (File No. 333-267951) was declared effective by the SEC for our initial public offering of 1,317,647 units, including 197,647 additional common stock, tradeable warrants and/or non-tradeable warrants, by the underwriters pursuant to the exercise of the over-allotment option, each at an offering price of $6.48 per share, $0.01 per tradeable warrant, and/or $0.01 per non-tradeable warrant, for aggregate gross proceeds of approximately $8.4 million. After deducting underwriting discounts and commissions and other estimated offering expenses incurred by us of approximately $1.1 million, the net proceeds from the offering were approximately $7.3 million. WallachBeth Capital LLC acted as sole book-running manager and the representative of the underwriters of the initial public offering. No offering costs were paid or are payable, directly, or indirectly, to our directors or officers, to persons owning 10% or more of any class of our equity securities, or to any of our affiliates. Our common stock and tradeable warrants are traded on Nasdaq under the symbols "BFRG" and "BFRGW", respectively.

There has been no material change in the expected use of the net proceeds from our IPO as described in our final prospectus filed with the SEC on February 16, 2023. Upon receipt, the net proceeds from our IPO were held in cash, cash equivalents and short-term investments. We initially used a portion of the net proceeds from the IPO, primarily on D&O Insurance, repayment of debt that was not converted in the IPO and accrued expenses for technology access, consultants and compensation. We also used and continue to use the proceeds for costs for operations. Pending such uses, we plan to continue investing the unused proceeds from the IPO in fixed, non-speculative income instruments and money market funds.

On February 5, 2024 the Company received net proceeds of approximately $4.9 million dollars from an underwritten public offering of 1,507,139 shares of common stock (or pre-funded warrants in lieu thereof) and accompanying warrants to purchase 1,507,139 shares of common stock at an offering price of $3.782. The 5 year warrants have an exercise price of $4.16. On February 21, 2024, the underwriters elected to exercise the over-allotment option for the purchase of an additional 218,382 shares of common stock, and the Company received additional net proceeds of approximately $750,000, pursuant to the exercise of the over-allotment.

ITEM 6. [RESERVED]

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OR PLAN OF OPERATION

The following discussion and analysis of the results of operations and financial condition of Bullfrog AI Holdings, Inc. ("Bullfrog") as of and for the years ended December 31, 2023 and 2022 should be read in conjunction with our consolidated financial statements and the notes to those consolidated financial statements that are included elsewhere in this Annual Report. References in this Management's Discussion and Analysis of Financial Condition and Results of Operations to "us", "we", "our" and similar terms refer to the Company. This Management's Discussion and Analysis of Financial Condition and Results of Operations contains statements that are forward-looking. These statements are based on current expectations and assumptions that are subject to risk, uncertainties, and other factors. These statements are often identified by the use of words such as "may," "will," "expect," "believe," "anticipate," "intend," "could," "estimate," or "continue," and similar expressions or variations. Actual results could differ materially because of the factors discussed in "Risk Factors" elsewhere in this Annual Report, and other factors that we may not know.

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 2018, BullFrog AI Holdings secured the original exclusive, worldwide, 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. We entered into a license agreement in July 2022 that provides the Company with new intellectual property and also encompasses most of the intellectual property from the February 2018 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, worldwide, 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. 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 developed 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. On May 31, 2023, the Company and JHU-APL entered into Amendment number 1 of the July 8, 2022 License Agreement whereby the Company gained access to certain improvements including additional patents and knowhow in exchange for a series of payments totaling $275,000. The first of these payments for $75,000 was due in July 2023 followed by annual payments of $75,000, $75,000 and $50,000 in years 2024, 2025 and 2026, respectively. The amendment also reduced the 2023 minimum annual royalty payment to $60,000, all other financial terms remain the same. As a result of this Amendment, the minimum annual payments are set to be $30,000 for 2022, $60,000 for 2023, and $300,000 for 2024 and beyond, all of which are creditable by royalties.

We intend to continue to evolve and improve bfLEAP™, either in-house or with development partners like JHU-APL. 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 have staffed our business using funds from our initial public offering and have entered into partnerships and relationships and recently completed our first commercial service contract 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 JHU 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 candidates 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 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, any clinical development programs will also require, in all cases, partners and the establishment of third-party relationships for execution and completion of clinical trials.

Since completing our IPO on February 14, 2023, aided by the receipt of the IPO proceeds, we have initiated several initiatives: Investor relations and marketing to promote and raise awareness of the company in the financial and business sectors, research and development, collaboration with J Craig Venter Institute and in the quarter ended September 30, 2023, completed a preclinical study for our Mebendazole prodrug program. The Company is actively engaged in developing and seeking out new intellectual property as it strives to continuously evolve its AI/ML platform. Additionally, the Company has engaged a business development firm specializing in the biopharmaceutical industry to seek and secure a strategic development partner for our Mebendazole program.

Internally, the Company has added incremental staff to accelerate execution, and the development of processes and custom scripts for use in performing analytical services for customers, while also launching initiatives targeting large public health data sources and seeking access to proprietary health data sources. We also transitioned our accounting and financial reporting systems and processes to enhance our internal control environment as a public company. Capital from the IPO was also used to retire two notes that were sold to fund the Company through the IPO that did not convert into common stock as well as other debts accrued over time to our staff, employees and consultants as well as obligations related to the acquisition of our licensed drug programs.

In February 2024 the Company received net proceeds of approximately $4.9 million dollars from an underwritten public offering of 1,507,139 shares of common stock (or pre-funded warrants in lieu thereof) and accompanying warrants to purchase 1,507,139 shares of common stock at an offering price of $3.782. The 5 year warrants have an exercise price of $4.16. On February 21, 2024, the underwriters elected to exercise the over-allotment option for the purchase of an additional 218,382 shares of common stock, and the Company received additional net proceeds of approximately $750,000, pursuant to the exercise of the over-allotment. In the absence of significant revenues in 2024 the Company believes that its capital resources are sufficient to fund planned operations for more than 12 months from the date of this filing.

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 workflow or analysis of discrete data sets.

In the future, the second part of our strategy involves acquiring the rights to clinical stage drugs, using our bfLEAP technology to design a precision medicine trial, conduct the trial with a partner, 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, 2023 and 2022

Revenue and Costs of Goods Sold

We recognized $65,000 and $10,000 in revenue and $5,200 and $800 in costs of goods sold during the years ended December 31, 2023 and 2022, respectively.

	Year ended December 31,		Net Change
	2023	2022	
Operating expenses:			
Research and development	$ 1,432,614	$ 609,270	$ 823,344
General and administrative	3,994,710	1,855,731	2,138,979
Total operating expenses	$ 5,427,324	$ 2,465,001	$ 2,962,323

Research and Development

Our research and development expenses for the year ended December 31, 2023 increased by $823,344 compared to the same period ended December 31, 2022, primarily due to the inclusion of the cost of salaries and consulting fees in 2023 as we initiated our collaboration with J Craig Venter Institute and completion of a preclinical study for our Mebendazole prodrug program, as well as the cost of acquiring access to additional technology from JHU-APL related to bfLEAP™ pursuant to Amendment 1 of the July 2022 License Agreement. In 2022, the majority of the research and development expenses were directly related to the acquisition of two drug development product candidates including Mebendazole.

General and Administrative

Our general and administrative expenses for the year ended December 31, 2023 increased by $2,138,979, compared to the same period ended December 31, 2022, primarily due to higher salary and consulting costs reflecting an increased level of service as well the initiation of investor relations and marketing efforts and the transition of our accounting and financial reporting process to support a public company. The 2023 period also reflects approximately $120,000 in recruiting fees related to staff additions.

Other Income (Expense), Net

Interest expense decreased $268,056 for the year ended December 31, 2023, compared to the same period ended December 31, 2022 due to the majority of our debt converting or being paid off in the first quarter of 2023. The loss on the conversion of notes of $92,959 for the year ended December 31, 2023 was due to the conversion of the convertible notes. Other income increased by $183,244 due to interest earned on our IPO proceeds which we hold in an overnight sweep account.

Liquidity and Capital Resources

In 2022, the Company received net proceeds from the sale of Convertible Bridge Notes of approximately $1,016,000 and repaid the unsecured promissory notes sold in 2021 in the amount of $49,000. The Company sold one additional promissory note and received net proceeds of $100,000 in January 2023.

For the year ended December 31, 2022, the Company used approximately $911,000 on operating activities versus approximately $382,000 for the same period in 2021. The 2022 cash use included approximately $548,000 in salaries, approximately $634,000 in consulting and professional fees including legal, accounting and auditing fees, as well as consulting fees for operational activities and approximately $609,000 in technology license fees, patent cost reimbursements and minimum annual royalties which has been recorded as a research & development expense.

Through December 31, 2023, the Company has an accumulated deficit of approximately $9,755,000 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 well as acquired product candidates and the increased costs of operating as a public company. These increases could 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.

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.

On February 16, 2023, the Company completed its IPO of 1,297,318 units (each, a "Unit," collectively, the "Units") at a price of $6.50 per unit for a total of approximately $8.4 million of gross proceeds to the Company. Each Unit consists of one share of the Company's common stock, one tradeable warrant (each, a "Tradeable Warrant," collectively, the "Tradeable Warrants") to purchase one share of common stock at an exercise price of $7.80 per share, and one non-tradeable warrant (each, a "Non-tradeable Warrant," collectively, the "Non-tradeable Warrants"; together with the Tradeable Warrants, each, a "Warrant," collectively, the "Warrants") to purchase one share of the Company's common stock at an exercise price of $8.125. In connection with the IPO, the Company also completed a 1-for-7 reverse stock split of our common stock.

In connection with the IPO, a SAFE and convertible loan agreement held by a related party converted into 55,787 shares of post reverse split common stock. Additionally, all outstanding convertible bridge notes and accrued interest through November 30, 2022 were converted into 276,289 shares of common stock and 276,289 warrants to purchase common stock were issued to the Convertible Bridge Note holders at conversion. The convertible bridge note conversions and the warrant exercise pricing were determined using a $25 million dollar company valuation immediately before the IPO.

Between April 5 and April 13, 2023, the holders of warrants exercised 436,533 warrants for common stock at various exercise prices and the Company received proceeds of approximately $1,495,000.

In the absence of revenues in 2024 management believes the company's capital resources are sufficient to fund planned operations for substantially longer than 12 months from the date of this filing.

Consolidated Cash Flow Data

	Year ended December 31,		Net Change
	2023	2022	
Net cash (used in) provided by			
Research and development Operating activities	$ (6,001,299)	$ (910,890)	$ (5,090,409)
General and administrative Investing activities	-	(8,744)	8,744
Financing activities	8,568,359	967,290	7,601,069
Net increase in cash and cash equivalents	$ 2,567,060	$ 47,656	$ 2,519,404

Cash Flows Used in Operating Activities

Net cash used in operating activities for the year ended December 31, 2023 increased by $5,090,409 compared to the same period ended December 31, 2022 primarily due to paying down accrued expenses for technology access, consultants, and compensation in 2023, coupled with increased operating costs, including D&O insurance premiums.

Cash Flows Used in Investing Activities

There was no cash used in investing activities during the year ended December 31, 2023.

Cash Flows Provided by Financing Activities

Net cash provided by financing activities for the year ended December 31, 2023 increased by $7,601,069, compared to the same period ended December 31, 2022 primarily due to the completion of our Initial Public Offering in February 2023 and proceeds received pursuant to warrant exercises.

Critical Accounting Policies

In Footnote 2 of our Audited Financial Statements for the year ended December 31, 2023 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 2023 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

While we generated our first revenues in late 2022 from our services provided to a pharmaceutical customer, in the third quarter of 2023 we completed our first commercial service contract and recognized revenue in the amount of $65,000. We have service contracts with two organizations and currently have multiple discussions underway, although there can be no assurance of entering into additional service agreements and business relationships in 2024.

Operating Expenses

We classify our operating expenses into two categories: research and development and general and administrative. Prior to 2022, most of our activities were related to: technology evaluation, acquisition and validation, capital acquisition and business development activities 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. In 2022, we licensed two drug development programs from universities and also entered into a new license with JHU-APL for new IP and other enhancements used with our bfLEAP™ platform. In 2022, we expended appropriately $608,000 on license related payments for our bfLEAP™ AI/ML platform and our two drug development programs from universities. We expect that our research and development expenses will increase in 2024 as we initiate activities directed towards the development of service offering products, collaborations (JCVI) and preclinical studies aimed at generating the data to enable the filing of an Investigational New Drug (IND) application.

Research and Development Costs and Expenses

Research and development costs and expenses in 2022 consisted primarily of costs related to the acquisition of licensed technology. In 2023 we have initiated development activities on our licensed drug candidates and our discovery collaboration with JCVI. In addition to fees paid to external service providers, we are also allocating internal costs for personnel working on these efforts in addition to personnel costs related to our internal efforts to develop our product and service offerings using bfLEAP™. 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 securing development partners and filing an IND for our licensed drug development programs described 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 services through communications with the service providers to reflect the actual amount expended.

General and Administrative Expenses

In anticipation of the IPO, a management team with deep industry experience was identified and engaged as employees and consultants to assist the Company in preparing for the IPO and subsequently, to operate and function as a public company. Through 2022, 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. In February 2023, the Company achieved its objective of completing an IPO and listing on NASDAQ. Our 2023 general and administrative expenses are significantly higher than our 2022 general and administrative expenses due to several factors. The primary increases in 2023 relate to new costs associated with being a public company such as D&O insurance, professional services engaged to support SEC compliance as well as higher salary and consulting expenses as we have hired additional staff and consultants. We have also increased our business development, investor relations and marketing efforts. We anticipate that our general and administrative expenses may increase in the future to support our service offerings, clinical and pre-clinical research and development activities associated with strategic partnering and collaborations.

Emerging Growth Company and Smaller Reporting Company Status

The Company is an emerging growth company as defined in the Jumpstart Our Business Startups Act of 2012 ("JOBS Act") and may take advantage of reduced reporting requirements that are otherwise applicable to public companies. Section 107 of the JOBS Act exempts emerging growth companies from being required to comply with new or revised financial accounting standards until private companies are required to comply with those standards. We have elected to use the extended transition period to comply with new or revised accounting standards. This may make it difficult to compare our financial results with the financial results of another public company that is either not an emerging growth company or is an emerging growth company that has chosen not to take advantage of the extended transition period exemptions because of the potential differences in accounting standards used.

We are also a "smaller reporting company", meaning that the market value of our stock held by non-affiliates plus the aggregate amount of gross proceeds to us as a result of the IPO is less than $700 million and our annual revenue was less than $100 million during the most recently completed fiscal year. We may continue to be a smaller reporting company if either (i) the market value of our stock held by non-affiliates is less than $250 million or (ii) our annual revenue was less than $100 million during the most recently completed fiscal year and the market value of our stock held by non-affiliates is less than $700 million. If we are a smaller reporting company at the time we cease to be an emerging growth company, we may continue to rely on exemptions from certain disclosure requirements that are available to smaller reporting companies. Specifically, as a smaller reporting company we may choose to present only the two most recent fiscal years of audited financial statements in our Annual Report on Form 10-K and, similar to emerging growth companies, smaller reporting companies have reduced disclosure obligations regarding executive compensation.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a smaller reporting company, this disclosure is not required.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The financial statements required to be filed pursuant to this Item 8 are appended to this Annual Report on Form 10-K. See "Index to Consolidated Financial Statements" which appears on page F-1 of this Annual Report on Form 10-K, and is incorporated herein by reference.

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures

We are transitioning to and will maintain disclosure controls and procedures that are designed to ensure that information required to be disclosed by us in reports that we file or submit under the Exchange Act is recorded, processed, summarized, and timely reported as provided in SEC rules and forms and that such information is accumulated and communicated to our management, as appropriate, to allow for timely decisions regarding required disclosure. We will periodically review the design and effectiveness of our disclosure controls and procedures, including compliance with various laws and regulations that apply to our operations. We will make modifications to improve the design and effectiveness of our disclosure controls and procedures and may take other corrective action if our reviews identify a need for such modifications or actions. In designing and evaluating the disclosure controls and procedures, we recognize that any controls and procedures, no matter how well designed and operated, can provide only reasonable assurance of achieving the desired control objectives, and we will apply judgment in evaluating the cost-benefit relationship of possible controls and procedures. In addition, the design of any system of controls also is based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, controls may become inadequate because of changes in conditions, or the degree of compliance with policies or procedures may deteriorate. Because of the inherent limitations in a control system, misstatements due to error or fraud may occur and not be detected.

Changes in Internal Control Over Financial Reporting

There were no changes in our internal control over financial reporting (as defined in Rules 13a-15(f) and 15d-15(f) under the Exchange Act) that occurred during the fiscal year ended December 31, 2023 which have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting

This Annual Report does not include a report of management's assessment regarding internal control over financial reporting due to a transition period established by the rules of the SEC for newly public companies.

Attestation Report of Independent Registered Public Accounting Firm

This Annual Report does not include an attestation report of our registered independent public accounting firm regarding internal control over financial reporting due to an exemption established by the JOBS Act for "emerging growth companies."

ITEM 9B. OTHER INFORMATION

None.

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS, AND CORPORATE GOVERNANCE

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	55	Chief Executive Officer and Director
Dane Saglio	66	Chief Financial Officer
Non-Executive Directors:		
Don Elsey	70	Director and Chair Audit Committee
William Enright	60	Director and Chair of Compensation Committee
Jason Hanson	54	Director and Chair of Nominating and Corporate Governance Committee

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 is a licensed CPA in Maryland (inactive).

R. Don Elsey has been a director and chair of the Audit Committee of our board since February 14, 2023. Currently, Mr. Elsey is the Audit Chair of OpGen, Inc., a precision medicine company. 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. Esley 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 has been a director and chair of the Compensation Committee of our board since February 14, 2023. He is a seasoned biotech executive with more than thirty-four years of experience in building and financing both privately held and publicly held companies and He is currently the CEO and a Director of Barinthus Biotherapurtics plc (NASDAQ: BRNS), which he helped to take public in April 2021. Prior to Barinthus, 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 Precigen) 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. 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 has served as a director and chair of the Nominating and Corporate Governance Committee since February 14, 2023. Mr. Hanson has served as Chief Executive Officer and as a Director of enGene Inc. since July 2018. He also served as President of enGene Inc. from July 2018 to December 2022. Mr. Hanson effectively re-launched enGene from a small private company working in the GI discovery space into a clinical stage gene therapy oncology company trading on Nasdaq, implementing a new scientific, technical and strategic vision for the Company. From August 2016 to November, 2017, Mr. Hanson served as President and Chief Executive Officer of Ohana Biosciences, a biotechnology company based in Cambridge, MA, and as member of the Ohana Board of Directors and consultant to Ohana from November 2017 to June 2018. Mr. Hanson previously served as Executive Vice President and Chief Strategy Officer for NuVasive, Inc. from November 2015 to August 2016. Mr. Hanson served as Corporate Vice President of General Electric Company and member of the senior executive team of GE Healthcare, a global pharmaceutical, medical device and healthcare services business from May 2014 to October 2015. In January 2013, Mr. Hanson served as Company Group Chairman and Executive Vice President of Valeant Pharmaceuticals International, Inc. (now Bausch Health Companies Inc.). Previously, he served in various roles at Medicis Pharmaceutical Corporation, including as Executive Vice President and Chief Operating Officer between July 2006 and December 2012. Mr. Hanson also served in numerous roles at GE Healthcare, including General Counsel roles, from April 1999 to July 2006. Mr. Hanson holds a B.S. from Cornell University and a J.D. from Duke University School of Law.

Board Diversity

The table below provides certain information regarding the diversity of our board of directors as the date of this annual report.

Board Diversity Matrix				
Country of Principal Executive Offices:	United States			
Foreign Private Issuer	No			
Disclosure Prohibited under Home Country Law	N/A			
Total Number of Directors	4			
	Female	**Male**	**Non-Binary**	**Did Not Disclose Gender**
Part I: Gender Identity				
Directors	**0**	**4**	**0**	**0**
Part II: Demographic Background				
Underrepresented Individual in Home Country Jurisdiction	**N/A**			
LGBTQ+	**[*]**			
Did Not Disclose Demographic Background	**[*]**			

Our Board seeks members from diverse professional backgrounds who combine a solid professional reputation and knowledge of our business and industry with a reputation for integrity. Our Board does not have a formal policy concerning diversity and inclusion but is in the process of establishing a policy on diversity. Diversity of experience, expertise, and viewpoints is one of many factors the Nominating and Corporate Governance Committee considers when recommending director nominees to our Board. Further, our Board is committed to actively seeking highly qualified women and individuals from minority groups and the LGBTQ+ community to include in the pool from which new candidates are selected. Our Board also seeks members that have experience in positions with a high degree of responsibility or are, or have been, leaders in the companies or institutions with which they are, or were, affiliated, but may seek other members with different backgrounds, based upon the contributions they can make to our Company. While the Board has continued its efforts to identify candidates that have such experience, they have currently been unable to identify any such candidates which fulfill the diversity requirement with the requisite professional experience.

Role of Board of Directors in Risk Oversight Process

The board of directors has extensive involvement in the oversight of risk management related to us and our business and accomplishes this oversight through the regular reporting by the Audit Committee. The information set forth in Item 1C is incorporated herein by reference.

Director Independence

Messrs. Elsey, Enright and Hanson, three 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.

Committees of our Board

Audit Committee

Our audit committee consists of Don Elsey, William Enright and Jason Hanson, with Mr. Elsey serving as chair. Our board of directors has affirmatively determined that each meets the definition of "independent director" under the rules of The Nasdaq Capital Market, and that they meet the independence standards under Rule 10A-3. Each member of our audit committee meets the financial literacy requirements of Nasdaq rules, and qualify as a financial expert within the meaning of SEC regulations and meets the financial sophistication requirements of the pertinent listing standards of Nasdaq, as in effect from time to time. In making this determination, our board of directors has considered the members' formal education and previous and current experience in financial roles. Our board of directors has adopted a written charter for the audit committee, which can be found on our website at https://ir.bullfrogai.com/corporate-governance/governance-documents.

The audit committee is appointed by the board of directors to assist the board of directors in its duty to oversee the Company's accounting, financial reporting, and internal control functions and the audit of the Company's financial statements. The role of the audit committee is to oversee management in the performance of its responsibility for the integrity of the Company's accounting and financial reporting and its systems of internal controls, the performance and qualifications of the Company's independent auditor, including the independent auditor's independence, the performance of the Company's internal audit function; and the Company's compliance with legal and regulatory requirements. The Audit Committee met four times in 2023.

Compensation Committee

Our compensation committee consists of William Enright, Don Elsey and Jason Hanson, with Mr. Enright serving as chair. Our board of directors has adopted a written charter for the compensation committee, which can be found on our website at https://ir.bullfrogai.com/corporate-governance/governance-documents.

The compensation committee is responsible for reviewing and recommending, among other things:

- the adequacy and form of compensation of the board;
- the compensation of Chief Executive Officer, including base salary, incentive bonus, stock option and other grant, award and benefits upon hiring and on an annual basis;
- the compensation of other senior management upon hiring and on an annual basis; and
- the Company's incentive compensation and other equity-based plans and recommending changes to such plans to our board of directors, when necessary.

Nominating & Corporate Governance Committee

Our nominating and corporate governance committee consists of Jason Hanson, William Enright and Don Elsey, with Mr. Hanson serving as chair. Our board of directors has adopted a written charter for the nominating and corporate governance committee, which can be found on our website at https://ir.bullfrogai.com/corporategovernance/governance-documents.

The nominating committee is responsible for, among other things:

- developing criteria for membership on the board of directors and committees;
- identifying individuals qualified to become members of the board of directors;
- recommending persons to be nominated for election as directors and to each committee of the board of directors;
- annually reviewing our corporate governance guidelines; and
- monitoring and evaluating the performance of the board of directors and leading the board in an annual self-assessment of its practices and effectiveness.

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.

Code of Business Conduct and Ethics

We have adopted a Code of Business Conduct and Ethics that applies to our principal executive officer, principal financial officer, principal accounting officer or controller, employees or persons performing similar functions. Our code of ethics can be found at https://ir.bullfrogai.com/corporate-governance/governance-documents.

Clawback Policy

On December 1, 2023, the Board adopted the BullFrog AI Clawback Policy (the "Clawback Policy"), effective December 1, 2023, providing for the recovery of certain incentive-based compensation from current and former executive officers of the Company in the event the Company is required to restate any of its financial statements filed with the SEC under the Exchange Act in order to correct an error that is material to the previously-issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period. Adoption of the Clawback Policy was mandated by new Nasdaq listing standards introduced pursuant to Exchange Act Rule 10D-1. The Clawback Policy is in addition to Section 304 of the Sarbanes-Oxley Act of 2002 which permits the SEC to order the disgorgement of bonuses and incentive-based compensation earned by a registrant issuer's chief executive officer and chief financial officer in the year following the filing of any financial statement that the issuer is required to restate because of misconduct, and the reimbursement of those funds to the issuer. A copy of the Clawback Policy has been filed herewith, and can also be found at www.bullfrogai.com.

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

Our directors and executive officers have not been involved in any of the following events during the past ten years:

1. any bankruptcy petition filed by or against such person or any business of which such person was a general partner or executive officer either at the time of the bankruptcy or within two years prior to that time;

2. any conviction in a criminal proceeding or being subject to a pending criminal proceeding (excluding traffic violations and other minor offenses);

3. being subject to any order, judgment, or decree, not subsequently reversed, suspended or vacated, of any court of competent jurisdiction, permanently or temporarily enjoining him from or otherwise limiting his involvement in any type of business, securities or banking activities or to be associated with any person practicing in banking or securities activities;

4. being found by a court of competent jurisdiction in a civil action, the SEC or the Commodity Futures Trading Commission to have violated a Federal or state securities or commodities law, and the judgment has not been reversed, suspended, or vacated;

5. being subject of, or a party to, any Federal or state judicial or administrative order, judgment decree, or finding, not subsequently reversed, suspended or vacated, relating to an alleged violation of any Federal or state securities or commodities law or regulation, any law or regulation respecting financial institutions or insurance companies, or any law or regulation prohibiting mail or wire fraud or fraud in connection with any business entity; or

6. being subject of or party to any sanction or order, not subsequently reversed, suspended, or vacated, of any self-regulatory organization, any registered entity or any equivalent exchange, association, entity or organization that has disciplinary authority over its members or persons associated with a member.

Section 16(a) Beneficial Ownership Compliance

Based solely upon a review of copies of such forms filed on Forms 3, 4 and 5, and amendments thereto furnished to us, we believe that as of the date of this Report, our executive officers, directors and greater than 10 percent beneficial owners have complied on a timely basis with all Section 16(a) filing requirements, except Messrs. Elsey, Enright and Hanson did not file Form 3s upon their appointment to the Board.

Nomination Process

As of December 31, 2023, we did not affect any material changes to the procedures by which stockholders may recommend nominees to the Board of Directors.

Insider Trading Policies

We have adopted an insider trading policy governing the purchase, sale, and other dispositions of our securities by directors, senior management, and employees. A copy of the insider trading policy is attached as an exhibit to this annual report.

ITEM 11. EXECUTIVE COMPENSATION

Summary Compensation Table

The following table sets forth all plan and non-plan compensation for the last two fiscal years paid to individuals who served as the Company's principal executive officers and the Company's two other most highly compensated executive officers serving as executive officers at the end of the last completed fiscal year, as required by Item 402(m)(2) of Regulation S-K of the Securities Act. We refer to these individuals collectively as our "named executive officers."

Name and Principal Position	Year	Salary	Bonus	Stock Awards	Option Awards	All Other Compensation	Nonequity Incentive Plan Compensation	Nonqualified Deferred Compensation Earnings	Total Compensation
Vininder Singh	2023	$ 707,666	$ -	$ -	$ -	$ -	$ -	$ -	$ 707,666
Chief Executive Officer and Director	2022	$ 179,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 179,000
Dane Saglio	2023	$ 310,000	$ 50,000	$ -	$ 147,000	$ -	$ -	$ -	$ 507,000
Chief Financial Officer	2022	$ 30,000	$ -	$ -	$ -	$ -	$ -	$ -	$ 30,000

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 2023, 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 mebendazole; (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.

Director Compensation

The following table summarizes the compensation paid to our executive and non-executive directors during the year ended December 31, 2023.

Name	Fees Earned or Paid in Cash (1)	Stock Awards	Option Awards (2)	All Other Compensation	Nonequity Incentive Plan Compensation	Nonqualified Deferred Compensation Earnings	Total Compensation
Vininder Singh(3)	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Don Elsey	$ 39,375	$ -	$ 197,200	$ -	$ -	$ -	$ 236,575
William Enright	$ 39,375	$ -	$ 197,200	$ -	$ -	$ -	$ 236,575
Jason Hanson	$ 39,375	$ -	$ 197,200	$ -	$ -	$ -	$ 236,575

(1) Represents cash compensation for service as a director and as chair of a board committee during the fiscal year 2023.
(2) Represents annual value of stock options issued during fiscal year 2023 under our 2022 Equity Incentive Plan.
(3) Mr. Singh did not receive additional compensation for his service as a director of our Company during the fiscal year 2023.

Pension, Retirement or Similar Benefit Plans

There are no arrangements or plans in which we provide pension, retirement or similar benefits for directors or executive officers. We have no material bonus or profit-sharing plans pursuant to which cash or non-cash compensation is or may be paid to our directors or executive officers, except that stock options may be granted at the discretion of the Board or a committee thereof.

Indebtedness of Directors, Senior Officers, Executive Officers and Other Management

None of our directors, executive officers or any associate or affiliate of our Company during the last two fiscal years is or has been indebted to our Company by way of guarantee, support agreement, letter of credit or other similar agreement or understanding currently outstanding.

Equity Compensation Plans

On November 30, 2022, our Board of Directors and shareholders adopted the 2022 Equity Incentive Plan (the "Plan"). Pursuant to the Plan, we are authorized to grant options and other equity awards to officers, directors, employees and consultants. The exercise price of each share of common stock purchasable under an award issued pursuant to the Plan, shall be determined by our compensation committee, in its sole discretion, at the time of grant, but shall not be less than 100% of the fair market of such share of common stock on the date the award is granted, subject to adjustment and conditions further described in the Plan. Our compensation committee shall also have sole authority to set the terms of all awards at the time of grant. As of December 31, 2023, there are 441,500 shares available under the Plan.

Outstanding Equity Awards at Fiscal Year-End

The following table summarizes the outstanding equity awards held by each named executive officer as of December 31, 2023. This table includes unexercised and unvested options and equity awards.

Outstanding Equity Awards as of December 31, 2023

		Option Awards				
Name	**Date of Grant**	**Number of securities underlying unexercised options (#) exercisable**	**Number of securities underlying unexercised options (#) unexerciseable**	**Equity incentive plan awards: Number of securities underlying unexercised unearned options (#)**	**Option exercise price ($)**	**Option expiration date**
Dane Saglio	March 17, 2023	43,750	31,250	-	$ 2.80	March 17, 2033

ITEM 12. 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 March 27, 2024 by:

- each of our named executive officers;
- each of our directors;
- all of our current directors and named executive officers as a group; and
- each stockholder known by us to own beneficially more than 5% 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 March 27, 2024, pursuant to the exercise of options or warrants, vesting of common stock or conversion of 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 7,850,550 shares of common stock issued and outstanding as of March 27, 2024.

Except as otherwise indicated, all shares are owned directly. Unless otherwise indicated, the address of each of the persons shown is c/o Bullfrog AI Holdings, Inc., 325 Ellington Blvd., Unit 317, Gaithersburg, MD 20878.

Name of Beneficial Owner	Common Stock Beneficially Owned	Percentage of Common Stock
Directors and Officers:		
Vininder Singh Chief Executive Officer and Director (1)	2,618,779	33.25%
Dane Saglio Chief Financial Officer(2)	112,818	1.43%
R. Don Elsey (3)	23,332	-
William Enright (3)	23,332	-
Jason Hanson (3)	23,332	-
All officers and directors as a group (5 persons)	2,801,593	34.97%
Beneficial owners of more than 5%		
Tivoli Trust (4)	904,391	10.40%

- Less than 1%

(1) Comprised of 2,592,446 shares of Common Stock and 26,333 Stock Options exercisable within 60 days.
(2) Comprised of 47,142 shares of Common Stock and 65,676 Stock Options exercisable within 60 days.
Comprised of 23,332 Stock Options exercisable within 60 days.
(4) Comprised of 73,449 shares of non-voting Series A Preferred Stock, 115,185 warrants exercisable at $2.50 per shares and 54,714 shares of Common Stock. Assumes the conversion of all Series A Preferred Stock into common stock in an amount equal to ten shares of common stock for each one share of Series A Preferred Stock.

Securities Authorized for Issuance under Equity Compensation Plans

General. In November 2022, our Board of Directors adopted our 2022 Equity Incentive Plan (the "2022 Plan") and the 2022 Plan was submitted to our stockholders for approval. Our 2022 Plan became effective immediately on adoption. Our 2022 Plan replaces our previous incentive plan. However, awards outstanding under our previous incentive plan will continue to be governed by their existing terms.

Share Reserve. The number of shares of our common stock available for issuance under our 2022 Plan is 900,000 shares. Notwithstanding the number of shares available for issuance, on the first day of each month commencing January 1, 2023, or the first business day of the calendar year if the first day of the calendar year falls on a Saturday or Sunday, the number of shares eligible for awards under the 2022 Plan will automatically increase in an amount equal to 15% of the total number of shares of common stock outstanding as of December 31st of the preceding fiscal year.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)
Equity compensation plans approved by security holders		$	
Equity compensation plans not approved by security holders	69,217	$ 3.06	$
Total	69,217	$ 3.06	$

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Other than as set forth below and compensation arrangements, including employment, and indemnification arrangements, discussed, there have been no transactions since January 1, 2021, in which the amount involved in the transaction exceeded or will exceed the lesser of $120,000 or one percent of the average of our total assets as at the year-end for the last two completed fiscal years, and to which any of our directors, executive officers or beneficial holders of more than 5% of our capital stock, or any immediate family member of, or person sharing the household with, any of these individuals, had or will have a direct or indirect material interest.

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. The SAFE was converted into 32,967 shares of common stock (post reverse stock split) upon the Company's IPO in February 2023.

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 December 31, 2022, the $99,900 principal and the $4,950 overpayment of the note remained outstanding and had accrued interest of $12,463. 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 noteholder elected to convert the loan into 21,747 shares of common stock (post reverse stock split) upon the Company's IPO in February 2023.

On June 15, 2021, the company entered into a 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, 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 of common stock (post reverse split shares), were exchanged into 73,449 shares of Series A Convertible Preferred Stock that converts to common at a rate of 10 common for one preferred. 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".

Other Transactions

None.

Director Independence

Messrs. Elsey, Enright and Hanson, three 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.

Policies and Procedures for Related Party 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.

Item 14. Principal Accounting Fees and Services

The following table summarizes the fees billed by M&K CPAs for the fiscal years ended December 31, 2023 and 2022, inclusive of out-of-pocket expenses.

Pre-Approval Policy

Our audit committee was formed upon the consummation of our initial public offering. As a result, the audit committee did not pre-approve all of the foregoing services, although any services rendered prior to the formation of our audit committee were approved by our board of directors. Since the formation of our audit committee, and on a going-forward basis, the audit committee has and will pre-approve all auditing services and permitted non-audit services to be performed for us by our auditors, including the fees and terms thereof (subject to the de minimis exceptions for non-audit services described in the Exchange Act which are approved by the audit committee prior to the completion of the audit).

	Year Ended December 31,	
Fee Category	**2023**	**2022**
Audit fees[1]	$ 35,200	$ 52,450
Audit-related fees[2]	36,550	12,150
Tax fees[3]	-	-
All other fees[4]	-	-
Total fees	$ 71,750	$ 64,600

(1) Audit fees consist of fees for professional services rendered in connection with the annual audit of our consolidated financial statements, the review of our quarterly condensed consolidated financial statements and consultations on accounting matters directly related to the audit.
(2) Audit-related fees consist of fees for professional services rendered in connection with the submission of our Registration Statement on Form S-1 in connection with our initial public offering.
(3) Tax fees consist of fees for professional services for tax compliance, tax advice and tax planning.
(4) All other fees consist of fees related to engagement administration.

PART IV

Item 15. Exhibits, Financial Statement Schedules

a) Financial Statements

For a list of the consolidated financial statements included herein, see Index to Consolidated Financial Statements on page F-1 of this Annual Report, which is incorporated into this Item by reference.

b) Exhibits

Exhibit No.	*Description*
1.1	Underwriting Agreement between the Company and WallachBeth Capital LLC dated February 14, 2023, incorporated by reference to Exhibit 1.1 of the Current Report on Form 8-K filed with the Securities and Exchange Commission on February 21, 2023.
3.1	Amended and Restated Articles of Incorporation of Bullfrog AI Holdings, Inc. incorporated by reference to Exhibit 3.1 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
3.2	Bylaws of Bullfrog AI Holdings, Inc. incorporated by reference to Exhibit 3.2 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.1	Acquisition Agreement with Bullfrog AI, Inc. incorporated by reference to Exhibit 10.1 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.2	Advisor Agreement between the Company and Greentree Financial Group, Inc. incorporated by reference to Exhibit 10.2 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.3	Consulting Agreement between the Company and Garrett Newman incorporated by reference to Exhibit 10.3 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.4	Employment Agreement with Vininder Singh incorporated by reference to Exhibit 10.4 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.5	Patent License Agreement between the Company and George Washington University, dated January 14, 2022 incorporated by reference to Exhibit 10.6 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.6	Exclusive License Agreement between the Company and Johns Hopkins University, dated February 22, 2022 incorporated by reference to Exhibit 10.7 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.7	License Agreement between the Company and Johns Hopkins Applied Physics Laboratory LLC, dated July 8, 2022 incorporated by reference to Exhibit 10.8 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.8	License Agreement between the Company and Johns Hopkins Applied Physics Laboratory LLC, dated February 7, 2018 incorporated by reference to Exhibit 10.5 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.9	License Agreement between the Company and Johns Hopkins University (JHU) and the Institute of Organic Chemistry and Biochemistry (IOCB) of the Czech Academy of Sciences, dated October 13, 2022 incorporated by reference to Exhibit 10.9 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
10.10	2022 Equity Compensation Plan, incorporated by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K filed with the Securities and Exchange Commission on April 25, 2023.
14 ●	Code of Ethics
19 ●	Insider Trading Policy
21.1	List of significant subsidiaries of Bullfrog AI Holdings, Inc., incorporated by reference to Exhibit 21.1 to the Company's Amendment to the Registration Statement on Form S-1 (No. 333-267951) filed with the Securities and Exchange Commission on February 13, 2023.
23.1	Consent of M&K CPAS PLLC, an independent registered public accounting firm
31.1	Certification of Principal Executive Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act, as amended.
31.2	Certification of Principal Financial Officer pursuant to Rules 13a-14(a) and 15d-14(a) of the Securities Exchange Act, as amended.
32.1	Certification of Principal Executive Officer and Principal Financial Officer pursuant to Rules 13a-14(b) or 15d-14(b) of the Securities Exchange Act, as amended, and 18 U.S.C. Section 1350.
97 ●	Clawback Policy
101.INS	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	Inline XBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104	Cover Page Interactive Data File (embedded within the Inline XBRL document)

● Filed herewith.

ITEM 16. FORM 10-K SUMMARY

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

March 29, 2024

Bullfrog AI Holdings, Inc.

By: */s/ Vininder Singh*
Vininder Singh
Chief Executive Officer and Director (Principal Executive Officer)

By: */s/ Dane Saglio*
Dane Saglio
Chief Financial Officer (Principal Financial and Accounting Officer)

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
By: */s/ Vininder Singh* Vininder Singh	Chief Executive Officer and Chairman (Principal Executive Officer)	March 29, 2024
By: */s/ Dane Saglio* Dane Saglio	Chief Financial Officer (Principal Financial and Accounting Officer)	March 29, 2024
By: */s/ Don Elsey* R. Don Elsey	Director	March 29, 2024
By: */s/ William Enright* William Enright	Director	March 29, 2024
By: */s/ Jason Hanson* Jason Hanson	Director	March 29, 2024

BULLFROG AI HOLDINGS, INC.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

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, 2023 and 2022, and the related consolidated statements of operations, changes in stockholders' deficit, and cash flows for the years ended December 31, 2023 and 2022, 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, 2023 and 2022 and the results of its operations and its cash flows for flows for the two-year period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

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 in the previous year 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 removal 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
March 29, 2024

BULLFROG AI HOLDINGS, INC.
CONSOLIDATED BALANCE SHEETS

	December 31,	
	2023	**2022**
Assets		
Current assets:		
Cash and cash equivalents	$ 2,624,730	$ 57,670
Prepaid expenses	145,882	15,000
Total current assets	2,770,612	72,670
Property and equipment, net	5,974	7,699
Total assets	$ 2,776,586	$ 80,369
Liabilities and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable	$ 103,656	$ 543,993
Accrued expenses	80,694	982,988
Deferred revenue	-	32,000
Convertible notes	-	1,323,890
Convertible notes - related party	-	254,850
Total current liabilities	184,350	3,137,721
Total liabilities	$ 184,350	$ 3,137,721
Stockholders' equity (deficit):		
Series A Convertible Preferred stock, $0.00001 par value, 5,500,000 shares authorized; 73,449 shares issued and outstanding, as of December 31, 2023 and 2022.	1	1
Common stock, $0.00001 par value, 100,000,000 shares authorized; 6,094,644 and 4,021,935 shares issued and outstanding as of December 31, 2023 and 2022, respectively.	61	40
Additional paid-in capital	12,347,098	1,341,662
Accumulated deficit	(9,754,924)	(4,399,055)
Total stockholders' equity (deficit)	2,592,236	(3,057,352)
Total liabilities and stockholders' equity (deficit)	$ 2,776,586	$ 80,369

The accompanying notes are an integral part of these consolidated financial statements.

BULLFROG AI HOLDINGS, INC.
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31,	
	2023	**2022**
Revenue:		
Revenue, net Revenue	$ 65,000	$ 10,000
Total revenue	65,000	10,000
Cost of goods sold:		
Cost of goods sold	5,200	800
Total cost of goods sold	5,200	800
Gross profit	59,800	9,200
Operating expenses:		
Research and development	1,432,614	609,270
General and administrative	3,994,710	1,855,731
Total operating expenses	5,427,324	2,465,001
Loss from operations	(5,367,524)	(2,455,801)
Other income (expense), net		
Interest expense, net	(79,089)	(347,145)
Loss on conversion of notes	(92,959)	-
Interest income	183,703	459
Total other income (expense), net	11,655	(346,686)
Net loss	$ (5,355,869)	$ (2,802,487)
Net loss per common share attributable to common stockholders - basic and diluted	$ (0.89)	$ (0.70)
Weighted average number of shares outstanding - basic and diluted	6,049,819	4,009,852

The accompanying notes are an integral part of these consolidated financial statements.

BULLFROG AI HOLDINGS, INC.
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT)
FOR THE YEARS ENDED DECEMBER 31, 2023 AND 2022

	Series A Preferred Stock		Common Stock		Additional Paid-in	Accumulated	Total Stockholders' Equity
	Shares	Amount	Shares	Amount	Capital	Deficit	(Deficit)
Balance at December 31, 2021	**-**	**$ -**	4,622,789	$ 46	$ 587,415	$ (1,596,568)	(1,009,107)
Imputed interest	-	-	-	-	9,221	-	9,221
Stock-based compensation	-	-	-	-	340,152	-	340,152
Reclassification of warrant	-	-	-	-	(11,097)	-	(11,097)
Conversion of convertible notes	-	-	205,984	2	226,136	-	226,138
Shares cancellation			(112,225)	(1)	1	-	-
Shares issuance for license	-	-	39,879	-	189,828	-	189,828
Common stock converted to Series A Preferred Stock	73,449	1	(734,492)	(7)	6	-	-
Net loss	-	-	-	-	-	(2,802,487)	(2,802,487)
Balance at December 31, 2022	73,449	1	4,021,935	40	1,341,662	(4,399,055)	(3,057,352)
Stock-based compensation	-	-	-	-	631,533	-	631,533
Issuance of common stock (initial public offering), net of issuance costs	-	-	1,297,318	13	7,293,638	-	7,293,651
Issuance of common stock for services	-	-	7,692	1	49,999	-	50,000
Conversion of convertible debt to common stock	-	-	331,166	3	1,535,612	-	1,535,615
Issuance of common stock pursuant to warrant exercises	-	-	436,533	4	1,494,654	-	1,494,658
Net loss	-	-	-	-	-	(5,355,869)	(5,355,869)
Balance at December 31, 2023	73,449	$ 1	6,094,644	$ 61	$ 12,347,098	$ (9,754,924)	$ 2,592,236

The accompanying notes are an integral part of these consolidated financial statements.

BULLFROG AI HOLDINGS, INC.
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31,	
	2023	**2022**
Cash flows from operating activities:		
Net loss	$ (5,355,869)	$ (2,802,487)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation	1,725	1,045
Stock-based compensation	631,533	340,152
Shares issued for license	-	189,828
Shares issued for services	50,000	-
Loss on conversion of notes	92,959	-
Amortization of debt discount	20,000	214,429
Imputed interest	-	9,221
Changes in operating assets and liabilities:		
Prepaid expense	(130,882)	(15,000)
Accounts payable	(440,337)	475,399
Accrued expenses	(838,428)	373,273
Accrued expenses - related party	-	281,250
Deferred revenue	(32,000)	22,000
Net cash used in operating activities	(6,001,299)	(910,890)
Cash flows from investing activities:		
Purchases of property and equipment	-	(8,744)
Net cash used in investing activities	-	(8,744)
Cash flows from financing activities:		
Proceeds from issuance of common stock (initial public offering), net of issuance costs	7,293,651	-
Proceeds from exercise of warrants	1,494,658	-
Proceeds from convertible notes payable	-	1,016,290
Proceeds from notes payable	100,000	-
Payments of notes payable	(319,950)	-
Repayment of note payable and interest - related party	-	(49,000)
Proceeds from short term insurance financing	697,534	
Payments of short term insurance financing	(697,534)	-
Net cash provided by financing activities	8,568,359	967,290
Net increase in cash and cash equivalents	2,567,060	47,656
Cash and cash equivalents, beginning of period	57,670	10,014
Cash and cash equivalents, end of period	$ 2,624,730	$ 57,670
Supplemental cash flow information:		
Cash paid for interest	$ 93,916	$ 5,757
Cash paid for taxes	-	-
Supplemental non-cash activity		
Reclassification of warrant	$ -	$ 11,097
Issuance of common stock upon conversion of notes payable	$ 1,535,615	$ -
Conversion of convertible note payable	$ -	$ 226,138
Cancellation of common stock	$ -	$ 8

The accompanying notes are an integral part of these consolidated financial statements.

1. Organization and Nature of Business

Description of Business

Bullfrog AI Holdings, Inc. ("we", "our" or the "Company") 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 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.

Liquidity and Going Concern

The Company has had negative cash flows from operations and operated at a net loss since inception. In the first quarter of 2023, we completed our initial public offering ("IPO"). In February 2024 the Company received net proceeds of approximately $4.9 million dollars from an underwritten public offering of 1,507,139 shares of common stock (or pre-funded warrants in lieu thereof) and accompanying warrants to purchase 1,507,139 shares of common stock at an offering price of $3.782. The 5 year warrants have an exercise price of $4.16. On February 21, 2024, the underwriters elected to take an overallotment of 218,382 common shares and the Company received net proceeds of approximately $750,000. In the absence of significant revenues in 2024 the Company believes that its capital resources are sufficient to fund planned operations for more than 12 months from the date of this filing.

2. Summary of Significant Accounting Policies

Basis of Presentation

The accompanying consolidated financial statements include the accounts of Bullfrog AI Holdings, Inc. and our wholly owned subsidiaries and have been prepared in conformity with United States generally accepted accounting principles ("GAAP"). All intercompany accounts and transactions have been eliminated in consolidation.

On February 13, 2023, we completed a 1-for-7 reverse split of our common stock. Stockholders' equity and all references to shares and per share amounts in the accompanying consolidated financial statements have been adjusted to reflect the reverse stock split for all periods presented.

Use of Estimates

The preparation of consolidated financial statements in conformity with GAAP requires us to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. These 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 these estimates.

Revenue Recognition

The Company recognizes revenue 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. Once data analysis and the analysis report are complete, the Company delivers the analysis set to the customer and recognizes revenue at that point in time.

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.

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, 2023 and 2022, cash balances were $2,624,730 and $57,670, 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.

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 if it is more likely than not that the tax position will be sustained on examination by taxing authorities. Interest and penalties associated with such uncertain tax positions are classified as a component of income tax expense.

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 calculate basic net loss per share by dividing the net loss by the weighted-average number of shares of common stock outstanding during the period.

Diluted earnings per share is computed by giving effect to all potentially dilutive common stock equivalents in the period, including unvested stock options and warrants. As we have reported losses for all periods presented, all potentially dilutive securities have been excluded from the calculation of diluted net loss per share as their effect would be antidilutive.

Recent Accounting Pronouncements

In December 2023, the FASB issued ASU No. 2024-09: Income Taxes (Topic 740): Improvements to Income Tax Disclosures that requires entities to disclose additional information about federal, state, and foreign income taxes primarily related to the income tax rate reconciliation and income taxes paid. The new standard also eliminates certain existing disclosure requirements related to uncertain tax positions and unrecognized deferred tax liabilities. The guidance is effective for our fiscal year ending December 31, 2025. The guidance does not affect recognition or measurement in our consolidated 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.

3. Property and Equipment

Property and equipment consisted of $8,744 of equipment and has accumulated depreciation of $2,770 and $1,045, as of December 31, 2023 and 2022, respectively.

Depreciation expense totaled $1,725 and $1,045 in the years ended December 31, 2023 and 2022, respectively.

4. Convertible Notes

March 2020 Note

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 year ended December 31, 2022, the full amount of the loan and interest totaling $226,138 was converted into 205,984 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 being within the terms of the agreement.

August 2021 Note

In August 2021, the Company entered into a convertible loan agreement with an unrelated party for a commitment of up to $195,000 with a 5% original issue discount and a 9% interest rate. The loan provided for a maturity date of February 9, 2022. We borrowed $72,000 and $123,000 of principal in the years ended December 31, 2021 and 2022, respectively. The noteholder had the right to convert the principal and interest into common shares of the Company at the IPO at a 20% discount to the IPO price.

As of December 31, 2022, the loan was outstanding with a principal balance of $195,000 and accrued interest of $35,078. The loan was paid in its entirety in February 2023.

In connection with the convertible loan agreement, the Company also issued 195,000 Warrants with an exercise price of $1.00 exercisable for five years from issuance. In May 2022, the Company and the note holder agreed to cancel and void the warrants and enter into a new agreement for 225,000 warrants with an exercise price of $2.50. The Company assessed the differences in fair value and determined that they were de minimis and expensed the full value of the new warrants.

December 2021 Note

On December 20, 2021, the Company entered into a loan agreement with an unrelated party. The loan provided for a December 19, 2022 maturity, a 10% original issue discount and a 6% interest rate. The Company received $25,000 of proceeds from this note.

The note was automatically convertible into shares of common stock at a discount to the IPO price or based on the valuation of the Company, whichever was more favorable to the holder.

Initially, the loan was estimated to be issued with 355,114 warrants. Subsequent to the closing of 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 $1 million in face value of convertible bridge notes. Pursuant to the enhanced terms, the warrants were issued concurrently with the conversion of the note.

Concurrent with the closing of the Company's IPO, the note converted according to its terms into 6,939 shares of common stock. No gain or loss was recognized on the conversion.

Convertible Bridge Notes

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. On April 28, 2022, the Company received approximately $775,000 of proceeds, net of approximately $91,000 of fees and a 10% original issue discount from the sale of Convertible Bridge Notes and Warrants to several institutional investors and several individual accredited investors. In addition, the Company also received $100,000 from the sale of a Convertible Bridge Note and Warrants to a related party earlier in April. In September 2022, the Company received an additional $25,000 of proceeds, net of a 10% original issue discount from the sale of an additional Convertible Bridge Note and Warrant to an unrelated party.

The Convertible Bridge Notes were initially convertible at the IPO at a 20% discount to the IPO price. The Convertible Bridge Notes provided for an original maturity date of October 31, 2022.

In connection with the Convertible Bridge Notes, the purchasers were also entitled to conditional warrants to be issued upon completion of the Company's IPO. The agreement provided for the warrants to be exercisable for a period of five years from issuance at an exercise price equal to 110% of the IPO price or, if the Company failed to complete the IPO before October 22, 2022, 90% of the IPO price.

In the fourth quarter of 2022, the Company amended the Convertible Bridge Notes to (a) extend the maturity date until December 31, 2022, (b) provide that the conversion right would include interest through November 30, 2022, with interest accruing beyond that date being paid in cash and (c) revise the conversion price to be $4.27 based on a $25 million Company valuation.

Concurrent with the closing of the Company's IPO in February 2023, all of the Convertible Bridge Notes converted according to their terms into 269,513 shares of common stock. No gain or loss was recognized on the conversion.

5. Convertible Notes – Related Party

SAFE Agreement

On July 8, 2021, the Company entered into a Simple Agreement for Future Equity (SAFE), with a related party, at a purchase price of $150,000. The SAFE provided for no interest and terminated after conversion upon completion of the Company's IPO. The SAFE provided for automatic conversion into the number of shares of SAFE Preferred Stock equal to the Purchase Amount divided by the Conversion Price, defined as 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.

In February 2023, the SAFE terminated and converted into 32,967 shares of common stock according to its terms upon the Company's closing of its IPO. The conversion was considered a redemption for accounting purposes and consequently, the Company recognized a $63,626 loss on the conversion.

As of December 31, 2022, the $150,000 received from the SAFE was recorded at 6% imputed interest.

August 2021 Note

On August 19, 2021, the Company entered into a convertible loan agreement with a related party, with a principal balance of $99,900, an original issuance discount of 5% and a 9% interest rate. The loan provided for a maturity date of February 19, 2022. The noteholder had the right to convert the principal and interest into common shares of the Company at a conversion price based on a discount to the IPO price.

In February 2023, the related party elected to convert the convertible loan into 21,747 shares of common stock according to its terms upon the Company's closing of its IPO. The conversion was considered a redemption for accounting purposes and consequently, the Company recognized a $29,333 loss on the conversion.

In connection with the convertible loan agreement, the Company also issued 99,000 warrants with an exercise price of $1.00 exercisable for five years from issuance. In May 2022, the Company and the note holder agreed to cancel and void previous warrants and enter into a new agreement for 115,185 warrants with an exercise price of $2.50. The Company assessed the differences in fair value and determined that they were de minimis and expensed the full value of the new warrants.

6. Related Party

During the year ended December 31, 2023, the Company issued 75,000 stock options to its Chief Financial Officer for services rendered.

During the year ended December 31, 2021, the Company issued 29,286 common stock options to related parties for services rendered. The options have an original life of 10 years and vest over different periods for up to 24 months. During the years ended December 31, 2023 and 2022, the Company recognized $1,707 and $1,803, respectively of stock-based compensation related to these options.

At various times in 2021, the Company entered into unsecured short term loan agreements with a related party for an aggregate principal balance of $49,000, each with a one-year maturity date, accruing interest at 5% and imputing an additional 1% interest. The full amount of the loans and interest was repaid in 2022.

7. Notes Payable

In January 2023 the Company entered into a short-term note payable with a principal balance of $100,000, an original discount of 20% and a 9% interest rate. The note was paid in its entirety in February 2023.

In February 2023, the Company entered into an agreement to finance a portion of the premium for its Directors and Officers Insurance. The agreement provides for financing of $697,534 of the premium, repayments in 10 equal monthly installments of $71,485 each through December 2023 and accrued interest at 6.5%. The financing was repaid during 2023.

8. Stockholders' Equity

Preferred Stock

The Company has 10,000,000 shares of preferred stock authorized at a par value of $0.00001 with 5,500,000 being designated as Series A Convertible Preferred Stock. On October 5, 2022, the Company entered into an exchange agreement with an Investor providing for the exchange of 734,492 shares of commons stock into 73,449 shares of Series A Convertible Preferred Stock. Each share of Series A Convertible Preferred Stock is convertible at any time into 10 shares of the Company's common 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. The Company evaluated the terms of the exchange and determined there was no significant change in fair value and therefore the Series A Preferred Stock was valued at $315,000 which is the Investor's basis in the common stock that was exchanged.

Common Stock

The Company has 100,000,000 shares of common stock authorized at a par value of $0.00001. During the year ended December 31, 2022, the Company:

- Exchanged 734,429 shares of common stock for shares of Series A Convertible Preferred stock as noted above,
- Issued 205,984 shares of common stock pursuant to a conversion of $226,138 worth of convertible notes principal and interest,
- Cancelled 112,225 shares of common stock as the change in number of shares issued as part of the cancellation of the prior agreements and new agreements with advisors, and
- Issued 39,879 shares of common stock pursuant to a license agreement valued at $189,828.

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.

In February 2023, the Company completed its IPO for the sale of 1,297,318 units (each, a "Unit," collectively, the "Units") at a price of $6.50 per Unit for a total of approximately $8.4 million of gross proceeds. Each Unit consisted of one share of the Company's common stock, one tradeable warrant (each, a "Tradeable Warrant," collectively, the "Tradeable Warrants") to purchase one share of common stock at an exercise price of $7.80 per share, and one non-tradeable warrant (each, a "Non-tradeable Warrant," collectively, the "Non-tradeable Warrants"; together with the Tradeable Warrants, each, a "Warrant," collectively, the "Warrants") to purchase one share of the Company's common stock at an exercise price of $8.125.

In connection with the completion of its IPO, the Company issued an aggregate of 331,166 shares of common stock upon the conversion of certain outstanding convertible debt.

In connection with the IPO, in February 2023, the Company completed a 1-for-7 reverse split of our common stock. Stockholders' equity and all references to shares and per share amounts in the accompanying consolidated financial statements have been retroactively adjusted to reflect the reverse stock split for all periods presented.

In February 2023, the Company issued 7,692 shares of common stock for consulting services and recognized $50,000 of compensation expense related to these shares.

In the second quarter of 2023, we issued 436,533 shares of common stock following the exercise of 436,533 warrants for proceeds of $1,494,658.

Dilutive securities are excluded from the diluted earnings per share calculation because their effect is anti-dilutive. As of December 31, 2023 and December 31, 2022, 3,521,880 and 927,373 warrants were not included in the calculation of net loss per share, respectively. In addition, 527,717 and 69,217 options for common shares were not included in the calculation of net loss per share, respectively.

2022 Equity Incentive Plan

In November 2022, the Company's Board of Directors adopted, and its shareholders approved the 2022 Equity Incentive Plan (the "Plan"). The Plan provides for the granting of equity-based awards to employees, directors, and consultants. The Plan provides for equity-based awards including incentive stock options, non-qualified stock options, stock appreciation rights, performance share awards, cash awards and other equity-based awards. Awards are limited to a maximum term of 10 years and any exercise prices shall not be less than 100% of the fair market value of one share of common stock on the grant date. The Plan authorizes an initial maximum number of shares underlying awards of 900,000 with an automatic annual 15% increase beginning in 2024. As of December 31, 2023, there were 441,500 awards authorized but unissued available under the Plan.

Stock Options

The following tables summarizes the stock option activity for the years ended December 31, 2023 and 2022:

	Number of Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2021	468,571	$ 3.32	7.4	$ -
Granted	-	$ -		
Exercised	-	$ -		
Forfeited / canceled	(399,354)	$ -		
Outstanding at December 31, 2022	69,217	$ 3.06	7.1	$ -
Granted	458,500	$ 4.34		
Exercised	-	$ -		
Forfeited / canceled	-	$ -		
Outstanding at December 31, 2023	527,717	$ 4.17	9.0	$ 112,141
Vested at December 31, 2023	255,826	$ 4.01	8.5	$ 62,193

The fair value of options granted in the year ended December 31, 2023 was estimated using the Black-Scholes option pricing model based on the assumptions in the table below:

	2023
Expected dividend yield	0%
Expected volatility	87% - 92%
Risk-free interest rate	3.4% - 4.4%
Expected life (in years)	5.0 - 6.0

- *Volatility* - The trading volatility was determined by calculating the volatility of the Company's peer group.
- *Expected life of options* – The expected life of options granted to employees was determined using the simplified method.
- *Risk-free interest rate* – This is the U.S. Treasury rate, having a term comparable to the expected life of the stock option.
- *Dividend yield* – The Company does not expect to pay a dividend in the foreseeable future.

The weighted-average grant-date fair value of options granted during the year ended December 31, 2023 was $3.15. The total grant-date fair value of options granted and vested during the year ended December 31, 2023 was approximately $1,445,200 and $585,500, respectively.

No options were exercised in any of the periods presented.

During the years ended December 31, 2023 and 2022, the Company recognized $592,268 and $2,010, respectively of compensation expense related to stock options.

As of December 31, 2023, the total unrecognized compensation expense related to unvested stock options, was approximately $861,000, which the Company expects to recognize over a weighted-average period of approximately 1.9 years.

Warrants

During the years ended December 31, 2023 and 2022, the Company granted a total of 3,195,906 and 415,247 warrants, respectively. The warrants have an original life of ten years and vest over varying periods up to 24 months from the grant date. During the year ended December 31, 2023, warrants to purchase 27,867 shares vested and had a fair value of $39,265. During the year ended December 31, 2022, 350,908 shares of warrants vested and amended with a fair value of $337,269, 51,941 shares of warrants were reclassified with a fair value of $11,097, and 42,057 shares of warrants with a fair value of $1,883 were forfeited.

During the year ended December 31, 2021, the Company granted a total of 431,659 warrants. Of this amount, 200,000 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 December31, 2021, 0 shares of these warrants were vested. As of June 30, 2022, the warrants for 200,000 shares were cancelled and voided per agreement of the warrant holder and the Company. There was no gain or loss recognized due to this cancellation.

During the year ended December 31, 2021, the Company issued 92,859 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 50,735 warrants, with a fair value of $11,097, should not have been issued. The fair value was reclassified to additional paid in capital. In May 2022, the Company and the noteholders agreed to cancel and void the previous 99,000 warrants and entered into a new agreement for 115,185 warrants and the exercise price increased to $2.50 from $1.00, with a fair value of $15,412. 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 92,859 warrants discussed above were initially discounted against the notes, subsequent to the year ended December 31, 2021, they were deemed voided and these individuals were 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.

During the year ended December 31, 2023, the Company issued the following warrants:

- In February 2023, in connection with the completion of the initial public offering, the Company issued 276,452 contingent warrants to certain debt holders with an exercise price of $4.27 and an expiration date 5 years from issuance.

- In February 2023, in connection with the completion of the initial public offering, the Company issued 18,000 contingent warrants as fees to the Company's underwriters with an exercise price of $8.125 and an expiration date 4 years from issuance.

- As part of the sale of units in the Company's initial public offering the Company issued 1,297,318 tradable warrants with an exercise price of $7.80 and an expiration date 5 years from issuance. Also, as part of the sale of units in the Company's initial public offering, the Company issued 1,297,318 non-tradable warrants with an exercise price of $8.125 and an expiration date 5 years from issuance.

- In February 2023, as part of the Company's initial public offering, the Company issued 153,409 tradeable warrants to our underwriters pursuant to the overallotment options with an exercise price of $7.80 and an expiration date 5 years from issuance. Also in February 2023, as part of the Company's initial public offering the Company issued 153,409 non-tradeable warrants to our underwriters pursuant to the overallotment options with an exercise price of $8.125 and an expiration date 5 years from issuance.

The following table provides details over the Company's outstanding warrants including those issued as consideration for services and those issued in conjunction with transactions as of December 31, 2023:

Exercise Price	Expiration	Number of Warrants
$0.0007	2030	274,286
$2.10 - $2.66	2026 - 2032	460,445
$3.36 - $4.27	2028 - 2029	115,277
$6.51 - $7.80	2026 - 2032	1,484,929
$8.125	2027 - 2028	1,461,227
		3,796,164

During the years ended December 31, 2023 and 2022, the Company recognized $39,265 and $338,142, respectively of compensation expense related to certain warrants.

Warrants Issued as Consideration for Services

The following table summarizes the activity for warrants issued as consideration for services for the years ended December 31, 2023 and 2022:

	Number of Warrants	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)	Aggregate Intrinsic Value
Outstanding at December 31, 2021	885,373	$ 2.59	7.4	$ 2,147
Granted	56,629	$ 3.87		
Exercised	-	$ -		
Forfeited / canceled	(263,826)	$ 5.50		
Outstanding at December 31, 2022	678,176	$ 1.57	7.6	$ 2,131,123
Granted	-	$ -		
Exercised	-	$ -		
Forfeited / canceled	-	$ -		
Outstanding at December 31, 2023	678,176	$ 1.57	6.6	$ 1,209,136
Vested at December 31, 2023	671,789	$ 1.56	6.6	$ 1,205,305

The fair value of options granted in the years ended 2022 were estimated using the Black-Scholes option pricing model based on the assumptions in the table below:

	2022
Expected dividend yield	0%
Expected volatility	89%
Risk-free interest rate	1.86% - 1.97%
Expected life (in years)	10

- *Volatility* - The trading volatility was determined by calculating the volatility of the Company's peer group.
- *Expected life of options* – The expected life of options granted to employees was determined using the simplified method.
- *Risk-free interest rate* – This is the U.S. Treasury rate, having a term comparable to the expected life of the stock option.
- *Dividend yield* – The Company does not expect to pay a dividend in the foreseeable future.

No warrants were issued in the year ended December 31, 2023.

As of December 31, 2023, the total unrecognized compensation expense related to unvested warrants was approximately $3,000, which the Company expects to recognize over a weighted-average period of approximately 0.2 years.

The total grant-date fair value of warrants vested during the year ended December 31, 2023 was approximately $39,300.

9. Income Taxes

Deferred income taxes reflect the net tax effects of loss and credit carryforwards and temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of our deferred tax assets for federal and state income taxes are as follows:

	December 31,	
	2023	2022
Deferred tax assets:		
Net operating losses	$ 1,432,634	$ 924,000
Capitalized research and development	283,353	-
Stock-based compensation	175,213	-
Intangibles	173,273	-
Other	9,438	-
Total deferred tax assets	2,073,911	924,000
Valuation allowance	(2,073,459)	(924,000)
Net deferred tax asset	452	-
Deferred tax liabilities:		
Property and equipment	(452)	-
Total deferred tax liabilities	(452)	-
Net deferred tax asset / (liability)	$ -	$ -

Realization of our deferred tax assets is dependent upon future earnings, if any, the timing, and amount of which are uncertain. Because of our lack of U.S. earnings history, the net U.S. deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by $1,151,827 and $585,000 during the years ended December 31, 2023 and 2022, respectively.

As of December 31, 2023, the Company has available for federal income tax purposes a net operating loss carry forward of approximately $6.1 million and a total state net operation loss carryforward of approximately $2 million. The net operating loss carryforwards do not expire and may be used to offset future taxable income. Utilization of some of the federal and state net operating loss carryforwards are subject to annual limitations due to the “change in ownership” provisions of the Internal Revenue Code of 1986 and similar state provisions. The annual limitations may result in the expiration of net operating losses and credits before utilization.

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. 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 incurred net operating losses since inception and we do not have any significant unrecognized tax benefits. Our policy is to include interest and penalties related to unrecognized tax benefits, if any, within the provision for taxes in the consolidated statements of operations. If we are eventually able to recognize our uncertain positions, our effective tax rate would be reduced. We currently have a full valuation allowance against out net deferred tax asset which would impact the timing of the effective tax rate benefit should any of these uncertain tax positions be favorably settled in the future. Any adjustments to our uncertain tax positions would result in an adjustment of our net operating loss or tax credit carry forwards rather than resulting in a cash outlay.

We file income tax returns in the U.S. and certain state jurisdictions. We are not currently under examination in these jurisdictions for any tax year. The Company’s tax years beginning with 2020 are open tax years. Because of net operating losses and research credit carryovers, substantially all of our tax years remain open to examination.

The Company did not have unrecognized tax benefits as of December 31, 2023 and 2022, and does not anticipate this to change significantly over the next 12 months. The Company will recognize interest and penalties accrued on any unrecognized tax benefits as a component of income tax expense. Reconciliations between the statutory federal income tax rate and the effective income tax rate of income tax expense is as follows:

	December 31, 2023
U.S. Federal statutory tax rate	21.0%
Stock-based compensation	(1.1)
Other	(3.3)
Change in valuation allowance	(16.6)
	-%

10. 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, one (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 percent (5%) of the then fully diluted equity base of the Company, which shall be diluted following the closing of the IPO. Under the terms of the License Agreement, JHU will be entitled to eight percent (8%) royalty on net sales for the services provided by the Company in which the JHU licensed technology was utilized, as well as fifty percent (50%) 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. On July 8, 2022, the company entered into an exclusive, world-wide, royalty-bearing license from JHU-APL for the additional technology developed to enhance the bfLEAP™ platform. 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. In consideration of the new license, the Company issued 39,879 shares of common stock. Under the terms of the new License Agreement, JHU will be entitled to eight percent (8%) of net sales for the services provided by the Company to other parties and three percent (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, under the new license agreement, the minimum annual royalty payments are $30,000 for 2022, $60,000 for 2023, and $300,000 for 2024 and beyond.

On May 31, 2023, the Company and JHU-APL entered into Amendment number 1 of the July 8, 2022 License Agreement whereby the Company gained access to certain improvements including additional patents and knowhow in exchange for a series of payments totaling $275,000. The first of these payments for $75,000 was due in July 2023 followed by payments of $75,000, $75,000, and $50,000 in years 2025, 2026 and 2027, respectively. The amendment also reduced the 2023 minimum annual royalty payment to $60,000, all other financial terms remain the same. As of December 31, 2023, we have accrued $60,000 of the 2023 minimum annual royalty payments.

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 the Company paid GWU 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 December 31, 2023 and 2022, there has been no accrual for royalties since we have not begun to generate applicable revenue. The Company assessed whether the license should be capitalized and determined that the licensed program is in the early stage and therefore may not be recoverable; 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 initial payment for $50,000 was paid and the remaining balance of $200,000 was paid after the Company completed its IPO. 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. As of December 31, 2023 and 2022, the balance of accrued expense related to this license agreement was $10,000 and $242,671, respectively. The Company assessed whether the license should be capitalized and determined that the licensed program is in the early stage and therefore may not be recoverable; the Company expensed the license fee and will expense development costs until commercial viability is likely.

Johns Hopkins University – Prodrug License

On October 13, 2022, the Company entered into an exclusive, world-wide, royalty-bearing license from JHU and the Institute of Organic Chemistry and Biochemistry (IOCB) of the Czech Academy of Sciences for rights to commercialize N-substituted prodrugs of Mebendazole that demonstrate improved solubility and bioavailability. The license covers prodrug compositions and use for treating disease as claimed in multiple US and worldwide patent applications. In consideration for the rights granted to the Company under the License Agreement JHU and IOCB will receive a staggered upfront license fee of $100,000. The Company will also reimburse JHU and IOCB for previously incurred patent costs. Under the terms of the License Agreement, JHU and IOCB will be entitled to four percent (4.0%) royalty on net sales by the Company. In addition, the Company is required to pay JHU and IOCB minimum annual royalty payments of $5,000 for 2027, $10,000 for 2028, $20,000 for 2029, $30,000 for 2030 and $50,000 for 2031 and each year after until the first commercial sale after which the annual minimum royalty shall be $150,000. The license agreement also contains milestone payments for patent grants, clinical development steps through the approval of an NDA and commercialization. As of December 31, 2023 and 2022, the balance of accrued expense related to this license agreement was $0 and $133,238, respectively. The Company assessed whether the license should be capitalized and determined that the licensed program is in the early stage and therefore may not be recoverable; the Company expensed the license fee and will expense development costs until commercial viability is likely.

11. Commitments and Contingencies

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

12. Subsequent Events

On February 5, 2024 the Company received net proceeds of approximately $4.9 million dollars from an underwritten public offering of 1,507,139 shares of common stock (or pre-funded warrants in lieu thereof) and accompanying warrants to purchase 1,507,139 shares of common stock at an offering price of $3.782. The 5 year warrants have an exercise price of $4.16. On February 21, 2024, the underwriters elected to take an overallotment of 218,382 common shares and the Company received net proceeds of approximately $750,000.

Exhibit 14

BULLFROG AI HOLDINGS, INC.

CODE OF BUSINESS CONDUCT AND ETHICS

I. INTRODUCTION

A. Purpose

This Code of Business Conduct and Ethics (the "***Code***") contains general guidelines for conducting the business of Bullfrog AI Holdings, Inc. (the "***Company***" or "***we***") consistent with the highest standards of business ethics. To the extent this Code requires a higher standard than required by commercial practice or applicable laws, rules or regulations, the Company adheres to these higher standards.

This Code applies to all of our directors, officers and other employees. We refer to all officers and other employees covered by this Code as "Company employees" or simply "employees," unless the context otherwise requires. In this Code, we refer to our principal executive officer, principal financial officer, principal accounting officer and controller, or persons performing similar functions, as our "principal financial officers."

B. Seeking Help and Information

This Code is not intended to be a comprehensive rulebook and cannot address every situation that you may face. If you feel uncomfortable about a situation or have any doubts about whether it is consistent with the Company's ethical standards, seek help. We encourage you to contact your supervisor for help first. If your supervisor cannot answer your question or if you do not feel comfortable contacting your supervisor, contact the Company's Chief Financial Officer or such person performing duties similar to those performed by a Chief Financial Officer (the "***Chief Financial Officer***"). The Company has also established an Ethics Hotline that is available 24 hours a day, 7 days a week, by telephone at 240-690-9040 or on the Internet at https://ir.bullfrogai.com/corporate-governance/governance-documents. You may remain anonymous and will not be required to reveal your identity in a telephone call to the Ethics Hotline, although providing your identity may assist the Company in addressing your questions or concerns.

C. Reporting Violations of the Code

All employees and directors have a duty to report any known or suspected violation of this Code, including violations of the laws, rules, regulations or policies that apply to the Company. If you know of or suspect a violation of this Code, immediately report the conduct to your supervisor or the Company's Chief Financial Officer. The Company's Chief Financial Officer will work with you and your supervisor or other appropriate persons to investigate your concern. If you do not feel comfortable reporting the conduct to your supervisor or you do not get a satisfactory response, you may contact the Company's Chief Financial Officer directly. You may also report known or suspected violations of the Code on the Ethics Hotline that is available 24 hours a day, 7 days a week, by telephone at 240-690-9040 or on the Internet at https://ir.bullfrogai.com/corporate-governance/governance-documents. You may remain anonymous and will not be required to reveal your identity in a telephone call to the Ethics Hotline, although providing your identity may assist the Company in investigating your concern. All reports of known or suspected violations of the law or this Code will be handled sensitively and with discretion. Your supervisor, the Company's Chief Financial Officer and the Company will protect your confidentiality to the extent possible, consistent with applicable laws and the Company's need to investigate your concern.

It is Company policy that any employee or director who violates this Code will be subject to appropriate discipline, which may include, for an employee, termination of employment or, for a director, a request that such director resign from the Board of Directors of the Company (the "***Board of Directors***"). This determination will be based upon the facts and circumstances of each particular situation. If you are accused of violating this Code, you will be given an opportunity to present your version of the events at issue prior to any determination of appropriate discipline. Employees and directors who violate the law or this Code may expose themselves to substantial civil damages, criminal fines and prison terms. The Company may also face substantial fines and penalties and may incur damage to its reputation and standing in the community. Your conduct as a representative of the Company, if it does not comply with the law or with this Code, can result in serious consequences for both you and the Company.

D. Policy Against Retaliation

The Company prohibits retaliation against an employee or director who, in good faith, seeks help or reports known or suspected violations. Any reprisal or retaliation against an employee or director because the employee or director, in good faith, sought help or filed a report will be subject to disciplinary action, including potential termination of employment.

E. Waivers of the Code

Any waiver of this Code for our directors, executive officers or other principal financial officers may be made only by our Board of Directors and will be disclosed to the public as required by law or the rules of The Nasdaq Stock Market, when applicable. Waivers of this Code for other employees may be made only by our Chief Executive Officer or Chief Financial Officer and will be reported to our Audit Committee.

II. Conflicts of Interest

A. Identifying Potential Conflicts of Interest

Employees, officers and directors must act in the best interests of the Company. You must refrain from engaging in any activity or having a personal interest that presents a "conflict of interest" and should seek to avoid even the appearance of a conflict of interest. A conflict of interest occurs when your personal interest interferes with the interests of the Company. A conflict of interest can arise whenever you, as an employee, officer or director, take action or have an interest that prevents you from performing your Company duties and responsibilities honestly, objectively and effectively.

Identifying potential conflicts of interest may not always be clear-cut. The following situations might reasonably be expected to give rise to a conflict of interest and should be identified to, and addressed by, the Chief Financial Officer or the Board of Directors:

- Outside Employment. An employee being employed by, serving as a director of, or providing any services to a company that the individual knows or suspects is a material customer, supplier or competitor of the Company (other than services to be provided as part of an employee's job responsibilities for the Company).

- Improper Personal Benefits. An employee or director obtaining any material (as to him or her) personal benefits or favors because of his or her position with the Company. Please see "Gifts and Entertainment" below for additional guidelines in this area.

- Financial Interests. An employee having a "material interest" (ownership or otherwise) in any company that the individual knows or suspects is a material customer, supplier or competitor of the Company and using his or her position to influence a transaction with such company. Whether an employee has a "material interest" will be determined by the Chief Financial Officer or the Board of Directors, as applicable, in light of all of the circumstances, including consideration of the relationship of the employee to the customer, supplier or competitor, the relationship of the employee to the specific transaction and the importance of the interest to the employee having the interest.

- Loans or Other Financial Transactions. An employee or director obtaining loans or guarantees of personal obligations from, or entering into any other personal financial transaction with, any company that the individual knows or suspects is a material customer, supplier or competitor of the Company. This guideline does not prohibit arms-length transactions with banks, brokerage firms or other financial institutions.

- Service on Boards and Committees. An employee or director serving on a board of directors or trustees or on a committee of any entity (whether profit or not-for-profit) whose interests reasonably would be expected to conflict with those of the Company.

- Actions of Family Members. The actions of family members outside the workplace may also give rise to the conflicts of interest described above because they may influence an employee's or director's objectivity in making decisions on behalf of the Company. For purposes of this Code, "family members" include your spouse or life-partner, brothers, sisters, parents, in-laws and children whether such relationships are by blood or adoption.

For purposes of this Code, a company is a "material" customer if the customer has made payments to the Company in the past year in excess of $200,000 or 5% of the Company's gross revenues, whichever is greater. A company is a "material" supplier if the supplier has received payments from the Company in the past year in excess of $200,000 or 5% of the supplier's gross revenues, whichever is greater. If you are uncertain whether a particular company is a material customer or supplier, please contact the Company's Chief Financial Officer for assistance.

B. Disclosure of Conflicts of Interest

The Company requires that employees and directors disclose any situation that reasonably would be expected to give rise to a conflict of interest. If you suspect that you have a situation that could give rise to a conflict of interest, or something that others could reasonably perceive as a conflict of interest, you must report it in writing to your supervisor or the Company's Chief Financial Officer, or if you are a director or executive officer, to the Board of Directors. The Company's Chief Financial Officer or the Board of Directors, as applicable, will work with you to determine whether you have a conflict of interest and, if so, how best to address it. All transactions that would give rise to a conflict of interest involving a director, executive officer or principal financial officer must be approved by the Board of Directors, and any such approval will not be considered a waiver of this Code.

III. Corporate Opportunities

As an employee or director of the Company, you have an obligation to advance the Company's interests when the opportunity to do so arises. If you discover or are presented with a business opportunity through the use of corporate property or information or because of your position with the Company, you should first present the business opportunity to the Company before pursuing the opportunity in your individual capacity. No employee or director may use corporate property, information or his or her position with the Company for personal gain while employed by us or, for a director, while serving on our Board of Directors.

You should disclose to your supervisor the terms and conditions of each business opportunity covered by this Code that you wish to pursue. Your supervisor will contact the Company's Chief Financial Officer and the appropriate management personnel to determine whether the Company wishes to pursue the business opportunity. If the Company waives its right to pursue the business opportunity, you may pursue the business opportunity on the same terms and conditions as originally proposed and consistent with the other ethical guidelines set forth in this Code.

IV. Confidential Information

Employees and directors have access to a variety of confidential information regarding the Company. Confidential information includes all non-public information that might be of use to competitors, or, if disclosed, harmful to the Company or its collaborators, customers or suppliers. Employees and directors have a duty to safeguard all confidential information of the Company or third parties with which the Company conducts business, except when disclosure is authorized or legally mandated. Unauthorized disclosure of any confidential information is prohibited. Additionally, employees and directors should take appropriate precautions to ensure that confidential or sensitive business information, whether it is proprietary to the Company or another company, is not communicated within the Company except to employees and directors who have a need to know such information to perform their responsibilities for the Company. An employee's and director's obligation to protect confidential information continues after he or she leaves the Company. Unauthorized disclosure of confidential information could cause competitive harm to the Company or its collaborators, customers or suppliers and could result in legal liability to you and the Company.

Any questions or concerns regarding whether disclosure of Company information is legally mandated should be promptly referred to the Company's Chief Financial Officer.

V. Competition and Fair Dealing

All employees should endeavor to deal fairly with fellow employees and with the Company's collaborators, licensors, customers, suppliers and competitors. Employees should not take unfair advantage of anyone through manipulation, concealment, abuse of privileged information, misrepresentation of material facts or any other unfair-dealing practice. Employees should maintain and protect any intellectual property licensed from licensors with the same care as they employ with regard to Company-developed intellectual property. Employees should also handle the nonpublic information of our collaborators, licensors, suppliers and customers responsibly and in accordance with our agreements with them, including information regarding their technology and product pipelines.

VI. Gifts and Entertainment

The giving and receiving of gifts is a common business practice. Appropriate business gifts and entertainment are welcome courtesies designed to build relationships and understanding among business partners. Gifts and entertainment, however, should not compromise, or appear to compromise, your ability to make objective and fair business decisions. In addition, it is important to note that the giving and receiving of gifts are subject to a variety of laws, rules and regulations applicable to the Company's operations. These include, without limitation, laws covering the marketing of products, bribery and kickbacks. You are expected to understand and comply with all laws, rules and regulations that apply to your job position.

It is your responsibility to use good judgment in this area. As a general rule, you may give or receive gifts or entertainment to or from collaborators, customers or suppliers only if the gift or entertainment is infrequent, modest, intended to further legitimate business goals, in compliance with applicable law, and provided the gift or entertainment would not be viewed as an inducement to or reward for any particular business decision. All gifts and entertainment expenses should be properly accounted for on expense reports.

If you conduct business in other countries, you must be particularly careful that gifts and entertainment are not construed as bribes, kickbacks or other improper payments. See "The Foreign Corrupt Practices Act" section of this Code for a more detailed discussion of our policies regarding giving or receiving gifts related to business transactions in other countries.

You should make every effort to refuse or return a gift that is beyond these permissible guidelines. If it would be inappropriate to refuse a gift or you are unable to return a gift, you should promptly report the gift to your supervisor. Your supervisor will bring the gift to the attention of the Chief Financial Officer, who may require you to donate the gift to an appropriate community organization. If you have any questions about whether it is permissible to accept a gift or something else of value, contact your supervisor or a principal financial officer for additional guidance.

Note: Gifts and entertainment may not be offered or exchanged under any circumstances to or with any employees of the U.S. government or state or local governments. If you have any questions about this policy, contact your supervisor or the Company's Chief Financial Officer for additional guidance. For a more detailed discussion of special considerations applicable to dealing with the U.S., state and local governments, see "Interactions with Governments."

VII. Company Records

Accurate and reliable records are crucial to our business. Our records are the basis of our earnings statements, financial reports, regulatory submissions and many other aspects of our business and guide our business decision-making and strategic planning. Company records include financial records, personnel records, records relating to our technology and product development, clinical development, customer collaborations, manufacturing and regulatory submissions and all other records maintained in the ordinary course of our business.

All Company records must be complete, accurate and reliable in all material respects. Each employee and director must follow any formal document retention policy of the Company with respect to Company records within such employee's or director's control. Please contact your supervisor or the Company's Chief Financial Officer to obtain a copy of any such policy or with any questions concerning any such policy.

VIII. Protection and Use of Company Assets

Employees should protect the Company's assets and ensure their efficient use for legitimate business purposes only and not for any personal benefit or the personal benefit of anyone else. Theft, carelessness and waste have a direct impact on the Company's financial performance. The use of Company funds or assets, whether or not for personal gain, for any unlawful or improper purpose is prohibited.

Employees should be aware that Company property includes all data and communications transmitted or received to or by, or contained in, the Company's electronic or telephonic systems. Company property also includes all written communications. Employees and other users of this property should have no expectation of privacy with respect to these communications and data. To the extent permitted by law, the Company has the ability, and reserves the right, to monitor all electronic and telephonic communication. These communications may also be subject to disclosure to law enforcement or government officials.

IX. Accuracy of Financial Reports and Other Public Communications

As a public company we are subject to various securities laws, regulations and reporting obligations. Both federal law and our policies require the disclosure of accurate and complete information regarding the Company's business, financial condition and results of operations. Inaccurate, incomplete or untimely reporting will not be tolerated and can severely damage the Company and result in legal liability.

The Company's principal financial officers and other employees working in the finance department have a special responsibility to ensure that all of our financial disclosures are full, fair, accurate, timely and understandable. These employees must understand and strictly comply with generally accepted accounting principles and all standards, laws and regulations for accounting and financial reporting of transactions, estimates and forecasts.

X. Compliance with Laws and Regulations

Each employee and director has an obligation to comply with all laws, rules and regulations applicable to the Company's operations. These include, without limitation, laws covering bribery and kickbacks, the development, testing, approval, manufacture, marketing and sale of our products and product candidates, copyrights, trademarks and trade secrets, information privacy, insider trading, illegal political contributions, antitrust prohibitions, foreign corrupt practices, offering or receiving gratuities, environmental hazards, employment discrimination or harassment, occupational health and safety, false or misleading financial information or misuse of corporate assets. You are expected to understand and comply with all laws, rules and regulations that apply to your job position. If any doubt exists about whether a course of action is lawful, you should seek advice from your supervisor or the Company's Chief Financial Officer.

A. The Food, Drug and Cosmetic Act and Interactions with the Food And Drug Administration

The Company's products, product candidates and operations are subject to extensive and rigorous regulation by the U.S. Food and Drug Administration (the "***FDA***") under the Federal Food, Drug, and Cosmetic Act (the "***FFDCA***") and its implementing regulations. The FDA regulates many areas of the Company's operations, including, but not limited to, the development, design, non-clinical and clinical research, manufacturing, safety, efficacy, labeling, packaging, storage, recordkeeping, premarket clearance or approval, adverse event reporting, advertising, promotion, marketing, sale and distribution of our products. The FDA also regulates the export of products manufactured in the United States to international markets. Violation of these laws and regulations can have significant impacts on the Company and its products, including, among other things, severe civil and criminal penalties, adverse publicity for the Company, total or partial suspension of production of a Company product, withdrawal of a Company product from the market or restrictions on our ability to continue selling a Company product, and disciplinary action by the Company against the responsible individuals, up to and including termination of employment.

Company employees with responsibilities in the areas governed by the FFDCA and FDA regulations are required to review, understand and comply with applicable laws and regulations. These employees are expected to have a thorough understanding of the laws, regulations and other relevant standards applicable to their job positions, and to comply with those requirements. If any doubt exists regarding whether your job position or a particular course of action is governed by these laws and regulations, you should seek advice immediately from your supervisor and the Company's Chief Financial Officer.

B. Interactions with the Government

The Company may conduct business with the U.S. government, state and local governments and the governments of other countries. The Company is committed to conducting its business with all governments and their representatives with the highest standards of business ethics and in compliance with all applicable laws and regulations, including the special requirements that apply to communications with governmental bodies that may have regulatory authority over our products and operations, such as government contracts and government transactions.

If your job responsibilities include interacting with the government, you are expected to understand and comply with the special laws, rules and regulations that apply to your job position as well as with any applicable standard operating procedures that the Company has implemented. If any doubt exists about whether a course of action is lawful, you should seek advice immediately from your supervisor and the Company's Chief Financial Officer.

In addition to the above, you must obtain approval from the Company's Chief Executive Officer or Chief Financial Officer for any work activity that requires communication with any member or employee of a legislative body or with any government official or employee. Work activities covered by this policy include meetings with legislators or members of their staffs or with senior executive branch officials on behalf of the Company. Preparation, research and other background activities that are done in support of lobbying communication are also covered by this policy even if the communication ultimately is not made. If any doubt exists about whether a given work activity would be considered covered by this provision, you should seek advice immediately from your supervisor and the Company's Chief Financial Officer.

C. Political Contributions and Volunteer Activities

The Company encourages its employees and directors to participate in the political process as individuals and on their own time. However, federal and state contribution and lobbying laws severely limit the contributions the Company can make to political parties or candidates. It is Company policy that Company funds or assets not be used to make a political contribution to any political party or candidate, unless prior approval has been given by our Chief Executive Officer or Chief Financial Officer. The Company will not reimburse you for personal political contributions. When you participate in non-Company political affairs, you should be careful to make it clear that your views and actions are your own, and not made on behalf of the Company. Please contact the Company's Chief Financial Officer if you have any questions about this policy.

D. Compliance with Antitrust Laws

Antitrust laws of the United States and other countries are designed to protect consumers and competitors against unfair business practices and to promote and preserve competition. Our policy is to compete vigorously and ethically while complying with all antitrust, monopoly, competition or cartel laws in all countries, states or localities in which the Company conducts business. Violations of antitrust laws may result in severe penalties against the Company and its employees, including potentially substantial fines and criminal sanctions. You are expected to maintain basic familiarity with the antitrust principles applicable to your activities, and you should consult the Company's Chief Financial Officer with any questions you may have concerning compliance with these laws.

1. Meetings with Competitors

Employees should exercise caution in meetings with competitors. Any meeting with a competitor may give rise to the appearance of impropriety. As a result, if you are required to meet with a competitor for any reason, you should obtain the prior approval of an executive officer of the Company. You should try to meet with competitors in a closely monitored, controlled environment for a limited period of time. You should create and circulate agendas in advance of any such meetings, and the contents of your meeting should be fully documented.

2. Professional Organizations and Trade Associations

Employees should be cautious when attending meetings of professional organizations and trade associations at which competitors are present. Attending meetings of professional organizations and trade associations is both legal and proper, if such meetings have a legitimate business purpose and are conducted in an open fashion, adhering to a proper agenda. At such meetings, you should not discuss the Company's pricing policies or other competitive terms or any other proprietary, competitively sensitive information. You are required to notify your supervisor or the Company's Chief Financial Officer prior to attending any meeting of a professional organization or trade association.

E. Compliance with Insider Trading Laws

Consistent with the Company's Insider Trading Compliance Policy, the Company's employees and directors are prohibited from trading in the stock or other securities of the Company while in possession of material nonpublic information about the Company. In addition, Company employees and directors are prohibited from recommending, "tipping" or suggesting that anyone else buy or sell the Company's stock or other securities on the basis of material non-public information. Employees and directors who obtain material non-public information about another company in the course of their duties are prohibited from trading in the stock or securities of the other company while in possession of such information or "tipping" others to trade on the basis of such information. Violation of insider trading laws can result in severe fines and criminal penalties, as well as disciplinary action by the Company, up to and including, for an employee, termination of employment or, for a director, a request that such director resign from the Board of Directors. You are required to read carefully and observe our Insider Trading Compliance Policy, as amended from time to time. Please contact the Company's Chief Financial Officer for a copy of the Insider Trading Compliance Policy or with any questions you may have about insider trading laws.

XI. Public Communications and Regulation FD

A. Public Communications Generally

The Company places a high value on its credibility and reputation in the community. What is written or said about the Company in the news media and investment community directly impacts our reputation, positively or negatively. Our policy is to provide timely, accurate and complete information in response to public requests (from media, analysts, etc.), consistent with our obligations to maintain the confidentiality of competitive and proprietary information and to prevent selective disclosure of market-sensitive financial data. The Company has adopted a separate Policy Statement – Guidelines for Corporate Disclosure to maintain the Company's credibility and reputation in the community, to maintain the confidentiality of competitive and proprietary information and to prevent selective disclosure of market-sensitive financial data.

B. Compliance with Regulation FD

In connection with its public communications, the Company is required to comply with a rule under the federal securities laws referred to as Regulation FD (which stands for "fair disclosure"). Regulation FD provides that, when we disclose material non-public information about the Company to securities market professionals or stockholders (where it is reasonably foreseeable that the stockholders will trade on the information), we must also disclose the information to the public. "Securities market professionals" generally include analysts, institutional investors and other investment advisors.

The Company has designated certain individuals as "spokespersons" who are responsible for communicating with analysts, institutional investors and representatives of the media. Any employee or director who is not a designated spokesperson of the Company should not communicate any information about the Company to analysts, institutional investors or representatives of the media, except at the request of the Company's designated spokespersons.

For more information on the Company's policies and procedures regarding public communications and Regulation FD, please contact the Company's Chief Financial Officer for a copy of the Company's Policy Statement – Guidelines for Corporate Disclosure or with any questions you may have about disclosure matters.

XII. Anti-corruption Compliance and The U.S. Foreign Corrupt Practices Act

The Company is committed to complying with the U.S. Foreign Corrupt Practices Act (the "***FCPA***") and other applicable anti-corruption laws. The FCPA prohibits the Company and its employees, directors, officers, and agents from offering, giving, or promising money or any other item of value, directly or indirectly, to win or retain business or to influence any act or decision of any government official, political party, candidate for political office, or official of a public international organization. The Company prohibits employees, directors, and officers from giving or receiving bribes, kickbacks, or other inducements to foreign officials. This prohibition also extends to payments to agents acting on the Company's behalf if there is reason to believe that the payment will be used indirectly for a prohibited payment to foreign officials. Indirect payments include any transfer of money or other item of value to another individual or organization where the person making the transfer knows or has reason to know that some or all of that transfer is for the benefit of an individual to whom direct payments are prohibited. The use of agents for the payment of bribes, kickbacks or other inducements is expressly prohibited. Violation of the FCPA and other applicable anti-corruption laws is a crime that can result in severe fines and criminal penalties, as well as disciplinary action by the Company, up to and including, for an employee, termination of employment or, for a director, a request that such director resign from the Board of Directors. For further guidance, please contact the Company's Chief Financial Officer.

XIII. International Trade Laws

Company employees and agents must know and comply with U.S. laws and regulations that govern international operations, as well the local laws of countries where the Company operates. The United States and many countries have laws that restrict or otherwise require licensing for the export or import of certain goods and services to other countries or to certain parties. If you are involved with importing, you need to be aware of the applicable governmental regulations and requirements, including those required by the Customs-Trade Partnership Against Terrorism (C-TPAT). A failure to comply can result in fines, penalties, imprisonment and/or a loss of import privileges. U.S. laws and regulations also impose various trade sanctions or embargoes against other countries or persons, and prohibit cooperation with certain boycotts imposed by some countries against others. The Company does not participate in prohibited boycotts.

The scope of these licensing requirements, trade sanctions, and trade embargoes may vary from country to country. They may range from specific prohibitions on trade of a given item to a total prohibition of all commercial transactions. It is important to note that the Company may not facilitate or encourage a non-domestic company to perform a transaction that it could not perform itself pursuant to sanctions laws.

Employees involved in export transactions or international operations must familiarize themselves with the list of countries against which the United States maintains comprehensive sanctions and the rules relating to exporting to or transacting with such countries, either directly or indirectly through foreign subsidiaries or other third parties. In addition, the Company must comply with counter-terrorism requirements when engaging in international trade. Due to the complexities of these international trade laws, contact the Chief Financial Officer before exporting or importing goods or services, or engaging in transactions with countries or persons that may be affected by economic or trade sanctions. If requested to participate in or cooperate with an international boycott that the United States does not support (*e.g.*, the boycott of Israel sponsored by the Arab League), you may not agree to or comply with such request. Immediately report this request to the Chief Financial Officer.

XIV. Environment, Health and Safety

The Company is committed to providing a safe and healthy working environment for its employees and to avoiding adverse impact and injury to the environment and the communities in which it does business. Company employees must comply with all applicable environmental, health and safety laws, regulations and Company standards. It is your responsibility to understand and comply with the laws, regulations and policies that are relevant to your job. Failure to comply with environmental, health and safety laws and regulations can result in civil and criminal liability against you and the Company, as well as disciplinary action by the Company, up to and including termination of employment. You should contact the Company's Chief Financial Officer if you have any questions about the laws, regulations and policies that apply to you.

A. Environment

All Company employees should strive to conserve resources and reduce waste and emissions through recycling and other energy conservation measures. You have a responsibility to promptly report any known or suspected violations of environmental laws or any events that may result in a discharge or emission of hazardous materials.

B. Health and Safety

The Company is committed not only to comply with all relevant health and safety laws, but also to conduct business in a manner that protects the safety of its employees. All employees are required to comply with all applicable health and safety laws, regulations and policies relevant to their positions. If you have a concern about unsafe conditions or tasks that present a risk of injury to you, please report these concerns immediately to your supervisor or the Company's Chief Financial Officer.

C. Employment Practices

The Company pursues fair employment practices in every aspect of its business. The following is only intended to be a summary of certain of our employment policies and procedures. Copies of the Company's detailed policies are available upon request. Company employees must comply with all applicable labor and employment laws, including anti-discrimination laws and laws related to freedom of association and privacy. It is your responsibility to understand and comply with the laws, regulations and policies that are relevant to your job. Failure to comply with labor and employment laws can result in civil and criminal liability against you and the Company, as well as disciplinary action by the Company, up to and including termination of employment. You should contact the Company's Chief Financial Officer if you have any questions about the laws, regulations and policies that apply to you.

D. Harassment and Discrimination

The Company is committed to providing equal opportunity and fair treatment to all individuals on the basis of merit, without discrimination because of race, color, religion, national origin, sex (including pregnancy), sexual orientation, age, disability, veteran status or other characteristic protected by law. The Company also prohibits harassment based on these characteristics in any form, whether physical or verbal and whether committed by supervisors, non-supervisory personnel or non-employees. Harassment may include, but is not limited to, offensive sexual flirtations, unwanted sexual advances or propositions, verbal abuse, sexually or racially degrading words, or the display in the workplace of sexually suggestive or racially degrading objects or pictures.

If you have any complaints about discrimination or harassment, report such conduct to your supervisor. All complaints will be treated with sensitivity and discretion. Your supervisor and the Company will protect your confidentiality to the extent possible, consistent with law and the Company's need to investigate your concern. Where our investigation uncovers harassment or discrimination, we will take prompt corrective action, which may include disciplinary action by the Company, up to and including, termination of employment. The Company strictly prohibits retaliation against an employee who, in good faith, files a complaint.

Any member of management who has reason to believe that an employee has been the victim of harassment or discrimination or who receives a report of alleged harassment or discrimination is required to report it to the relevant human resources personnel immediately.

E. Alcohol and Drugs

The Company is committed to maintaining a drug-free work place. All Company employees must comply strictly with Company policies regarding the abuse of alcohol and the possession, sale and use of illegal drugs (for the purpose of this Code, "illegal drugs" includes marijuana). Drinking alcoholic beverages is prohibited while on duty or on the premises of the Company, except at specified Company-sanctioned events or as otherwise authorized by management. Possessing, using, selling or offering illegal drugs and other controlled substances is prohibited under all circumstances while on duty or on the premises of the Company. Likewise, you are prohibited from reporting for work, or driving a Company vehicle or any vehicle on Company business, while under the influence of alcohol or any illegal drug or controlled substance.

F. Violence Prevention and Weapons

The safety and security of Company employees is vitally important. The Company will not tolerate violence or threats of violence in, or related to, the workplace. If you experience, witness or otherwise become aware of a violent or potentially violent situation that occurs on the Company's property or affects the Company's business you must immediately report the situation to your supervisor or the relevant human resources personnel.

The Company does not permit any individual to have weapons of any kind on Company property or in vehicles, while on the job or off-site while on Company business. This is true even if you have obtained legal permits to carry weapons. The only exception to this policy applies to security personnel who are specifically authorized by Company management to carry weapons.

XV. Conclusion

This Code contains general guidelines for conducting the business of the Company consistent with the highest standards of business ethics. If you have any questions about these guidelines, please contact your supervisor or the Company's Chief Financial Officer. The Company expects all of its employees and directors to adhere to these standards.

This Code, as applied to the Company's principal financial officers, shall be our "code of ethics" within the meaning of Section 406 of the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder.

This Code and the matters contained herein are neither a contract of employment nor a guarantee of continuing Company policy. The Company reserves the right to amend, supplement or discontinue this Code and the matters addressed herein, without prior notice, at any time.

* * * * *

Exhibit 19

BULLFROG AI HOLDINGS, INC.

INSIDER TRADING COMPLIANCE POLICY

This Insider Trading Compliance Policy (this "***Policy***") consists of seven sections:

- Section I provides an overview;
- Section II sets forth the policies of the Company prohibiting insider trading;
- Section III explains insider trading;
- Section IV consists of procedures that have been put in place by the Company to prevent insider trading;
- Section V sets forth additional transactions that are prohibited by this Policy;
- Section VI explains Rule 10b5-1 trading plans and provides information about Section 16 and Rule 144; and
- Section VII refers to the execution and return of a certificate of compliance.

I. SUMMARY

Preventing insider trading is necessary to comply with securities laws and to preserve the reputation and integrity of Bullfrog AI Holdings, Inc. (the "***Company***") as well as that of all persons affiliated with the Company. "Insider trading" occurs when any person purchases or sells a security while in possession of inside information relating to the security. As explained in Section III below, "inside information" is information that is both "material" and "non-public." Insider trading is a crime. The penalties for violating insider trading laws include imprisonment, disgorgement of profits, civil fines, and significant criminal fines. Insider trading is also prohibited by this Policy, and violation of this Policy may result in Company-imposed sanctions, including termination of employment for cause.

This Policy applies to all officers, directors and employees of the Company. Individuals subject to this Policy are responsible for ensuring that members of their households also comply with this Policy. This Policy also applies to any entities controlled by individuals subject to the Policy, including any corporations, partnerships or trusts (such entities, together with all officers, directors and employees of the Company, are referred to as the "***Covered Persons***"), and transactions by these entities should be treated for the purposes of this Policy and applicable securities laws as if they were for the individual's own account. This Policy extends to all activities within and outside an individual's Company duties. Every officer, director and employee must review this Policy. Questions regarding the Policy should be directed to the Company's Chief Financial Officer, or such person performing duties similar to those performed by a Chief Financial Officer (the "***Chief Financial Officer***").

II. Statement of Policies Prohibiting Insider Trading

No officer, director or employee shall purchase or sell any type of security while in possession of material, non-public information relating to the security, whether the issuer of such security is the Company or any other company.

Additionally, no officer, director or other employee designated from time to time by the Board of Directors, the Chief Executive Officer or the Chief Financial Officer as being subject to quarterly blackout periods shall purchase or sell any security of the Company during the period beginning at 11:59 p.m., Eastern time, on the seventh calendar day before the end of any fiscal quarter of the Company and ending upon the completion of the second full trading day after the public release of earnings data for such fiscal quarter or during any other trading suspension period declared by the Company. For example, if the Company's fourth fiscal quarter ends at 11:59 p.m., Eastern time, on December 31, the corresponding blackout period would begin at 11:59 p.m., Eastern time, on December 24. For the purposes of this Policy, a "trading day" is a day on which national stock exchanges are open for trading. For the avoidance of doubt, any designation by the Board of Directors of the employees who are subject to quarterly blackout periods may be updated from time to time by the Chief Executive Officer or Chief Financial Officer.

These prohibitions do not apply to:

- purchases of the Company's securities by a Covered Person from the Company or sales of the Company's securities by a Covered Person to the Company;
- exercises of stock options or other equity awards or the surrender of shares to the Company in payment of the exercise price or in satisfaction of any tax withholding obligations in a manner permitted by the applicable equity award agreement, or vesting of equity-based awards, that in each case do not involve a market sale of the Company's securities (the "cashless exercise" of a Company stock option through a broker does involve a market sale of the Company's securities, and therefore would not qualify under this exception);
- *bona fide* gifts of the Company's securities; or
- purchases or sales of the Company's securities made pursuant to any binding contract, specific instruction or written plan entered into outside of a black-out period and while the purchaser or seller, as applicable, was unaware of any material, non-public information and which contract, instruction or plan (i) meets all of the requirements of the affirmative defense provided by Rule 10b5-1 ("***Rule 10b5-1***") promulgated under the Securities Exchange Act of 1934, as amended (the "***1934 Act***"), (ii) was pre-cleared in advance pursuant to this Policy and (iii) has not been amended or modified in any respect after such initial pre-clearance without such amendment or modification being pre-cleared in advance pursuant to this Policy. For more information about Rule 10b5-1 trading plans, see Section VI below.

No officer, director or employee shall directly or indirectly communicate (or "***tip***") material, non-public information to anyone outside of the Company (except in accordance with the Company's policies regarding the protection or authorized external disclosure of Company information) or to anyone within the Company other than on a need-to-know basis.

III. Explanation of Insider Trading

*"**Insider trading**"* refers to the purchase or sale of a security while in possession of "material," "non-public" information relating to the security or its issuer.

*"**Securities**"* includes stocks, bonds, notes, debentures, options, warrants and other convertible securities, as well as derivative instruments.

*"**Purchase**"* and *"**sale**"* are defined broadly under the federal securities law. *"Purchase"* includes not only the actual purchase of a security, but any contract to purchase or otherwise acquire a security. *"Sale"* includes not only the actual sale of a security, but any contract to sell or otherwise dispose of a security. These definitions extend to a broad range of transactions, including conventional cash-for-stock transactions, conversions, the exercise of stock options, and acquisitions and exercises of warrants or puts, calls or other derivative securities.

It is generally understood that insider trading includes the following:

- trading by insiders while in possession of material, non-public information;
- trading by persons other than insiders while in possession of material, non-public information, if the information either was given in breach of an insider's fiduciary duty to keep it confidential or was misappropriated; and
- communicating or tipping material, non-public information to others, including recommending the purchase or sale of a security while in possession of such information.

A. What Facts are Material?

The materiality of a fact depends upon the circumstances. A fact is considered "material" if there is a substantial likelihood that a reasonable investor would consider it important in making a decision to buy, sell or hold a security, or if the fact is likely to have a significant effect on the market price of the security. Material information can be positive or negative and can relate to virtually any aspect of a company's business or to any type of security, debt or equity.

Examples of material information include (but are not limited to) information about:

- corporate earnings or earnings forecasts;
- possible mergers, acquisitions, tender offers or dispositions;
- major new products or product developments;
- important business developments such as trial results, developments regarding strategic collaborators or the status of regulatory submissions;
- management or control changes;
- significant financing developments including pending public sales or offerings of debt or equity securities;
- defaults on borrowings;
- bankruptcies; and
- significant litigation or regulatory actions.

Moreover, material information does not have to be related to a company's business. For example, the contents of a forthcoming newspaper column that is expected to affect the market price of a security can be material.

A good general rule of thumb: **When in doubt, do not trade.**

B. What is Non-Public?

Information is "non-public" if it is not available to the general public. In order for information to be considered public, it must be widely disseminated in a manner making it generally available to investors through such media as Dow Jones, Business Wire, Reuters, The Wall Street Journal, Associated Press, or United Press International, a broadcast on widely available radio or television programs, publication in a widely available newspaper, magazine or news web site, a Regulation FD-compliant conference call, or public disclosure documents filed with the Securities and Exchange Commission ("***SEC***") that are available on the SEC's web site.

The circulation of rumors, even if accurate and reported in the media, does not constitute effective public dissemination. In addition, even after a public announcement, a reasonable period of time must lapse in order for the market to react to the information. Generally, one should allow two full trading days following publication as a reasonable waiting period before such information is deemed to be public. If, for example, the Company were to make an announcement on a Monday prior to 9:30 a.m. Eastern time, the information would be deemed public after the close of trading on Tuesday. If an announcement were made on a Monday after 9:30 a.m. Eastern time, the information would be deemed public after the close of trading on Wednesday. If you have any question as to whether information is publicly available, please direct an inquiry to the Chief Financial Officer.

C. Who is an Insider?

"Insiders" include officers, directors and employees of a company and anyone else who has material inside information about a company. Insiders have independent fiduciary duties to their company and its stockholders not to trade on material, non-public information relating to the company's securities. All officers, directors and employees of the Company should consider themselves insiders with respect to material, non-public information about the Company's business, activities and securities. Officers, directors and employees may not trade in the Company's securities while in possession of material, non-public information relating to the Company, nor may they tip such information to anyone outside the Company (except in accordance with the Company's policies regarding the protection or authorized external disclosure of Company information) or to anyone within the Company other than on a need-to-know basis.

Individuals subject to this Policy are responsible for ensuring that members of their households also comply with this Policy. This Policy also applies to any entities controlled by individuals subject to the Policy, including any corporations, partnerships or trusts, and transactions by these entities should be treated for the purposes of this Policy and applicable securities laws as if they were for the individual's own account.

D. Trading by Persons Other than Insiders

Insiders may be liable for communicating or tipping material, non-public information to a third party ("***tippee***"), and insider trading violations are not limited to trading or tipping by insiders. Persons other than insiders also can be liable for insider trading, including tippees who trade on material, non-public information tipped to them or individuals who trade on material, non-public information that has been misappropriated.

Tippees inherit an insider's duties and are liable for trading on material, non-public information illegally tipped to them by an insider. Similarly, just as insiders are liable for the insider trading of their tippees, so are tippees who pass the information along to others who trade. In other words, a tippee's liability for insider trading is no different from that of an insider. Tippees can obtain material, non-public information by receiving overt tips from others or through, among other things, conversations at social, business, or other gatherings.

E. Penalties for Engaging in Insider Trading

Penalties for trading on or tipping material, non-public information can extend significantly beyond any profits made or losses avoided, both for individuals engaging in such unlawful conduct and their employers. The SEC and Department of Justice have made the civil and criminal prosecution of insider trading violations a top priority. Enforcement remedies available to the government or private plaintiffs under the federal securities laws include:

- SEC administrative sanctions;
- securities industry self-regulatory organization sanctions;
- civil injunctions;
- damage awards to private plaintiffs;
- disgorgement of all profits;
- civil fines for the violator of up to three times the amount of profit gained or loss avoided;
- civil fines for the employer or other controlling person of a violator (i.e., where the violator is an employee or other controlled person) of up to the greater of $1,525,000 (subject to adjustment for inflation) or three times the amount of profit gained or loss avoided by the violator;
- criminal fines for individual violators of up to $5,000,000 ($25,000,000 for an entity); and
- jail sentences of up to 20 years.

In addition, insider trading could result in serious sanctions by the Company, including dismissal. Insider trading violations are not limited to violations of the federal securities laws. Other federal and state civil or criminal laws, such as the laws prohibiting mail and wire fraud and the Racketeer Influenced and Corrupt Organizations Act (RICO), also may be violated in connection with insider trading.

F. Size of Transaction and Reason for Transaction Do Not Matter

The size of the transaction or the amount of profit received does not have to be significant to result in prosecution. The SEC has the ability to monitor even the smallest trades, and the SEC performs routine market surveillance. Brokers and dealers are required by law to inform the SEC of any possible violations by people who may have material, non-public information. The SEC aggressively investigates even small insider trading violations.

G. Examples of Insider Trading

Examples of insider trading cases include:

- actions brought against corporate officers, directors, and employees who traded in a company's securities after learning of significant confidential corporate developments;
- friends, business associates, family members and other tippees of such officers, directors, and employees who traded in the securities after receiving such information;
- government employees who learned of such information in the course of their employment; and
- other persons who misappropriated, and took advantage of, confidential information from their employers.

The following are illustrations of insider trading violations. These illustrations are hypothetical and, consequently, not intended to reflect on the actual activities or business of the Company or any other entity.

Trading by Insider

An officer of X Corporation learns that earnings to be reported by X Corporation will increase dramatically. Prior to the public announcement of such earnings, the officer purchases X Corporation's stock. The officer, an insider, is liable for all profits as well as penalties of up to three times the amount of all profits. The officer also is subject to, among other things, criminal prosecution, including up to $5,000,000 in additional fines and 20 years in jail. Depending upon the circumstances, X Corporation and the individual to whom the officer reports also could be liable as controlling persons.

Trading by Tippee

An officer of X Corporation tells a friend that X Corporation is about to publicly announce that it has signed an agreement for a major acquisition. This tip causes the friend to purchase X Corporation's stock in advance of the announcement. The officer is jointly liable with his friend for all of the friend's profits, and each is liable for all civil penalties of up to three times the amount of the friend's profits. The officer and his friend are also subject to criminal prosecution and other remedies and sanctions, as described above.

H. Prohibition of Records Falsification and False Statements

Section 13(b)(2) of the 1934 Act requires companies subject to the Act to maintain proper internal books and records and to devise and maintain an adequate system of internal accounting controls. The SEC has supplemented the statutory requirements by adopting rules that prohibit (1) any person from falsifying records or accounts subject to the above requirements and (2) officers or directors from making any materially false, misleading, or incomplete statement to any accountant in connection with any audit or filing with the SEC. These provisions reflect the SEC's intent to discourage officers, directors and other persons with access to the Company's books and records from taking action that might result in the communication of materially misleading financial information to the investing public.

IV. Statement of Procedures Preventing Insider Trading

The following procedures have been established, and will be maintained and enforced, by the Company to prevent insider trading. Every officer, director and employee is required to follow these procedures.

A. Pre-Clearance of All Trades by All Officers, Directors and Certain Employees

To provide assistance in preventing inadvertent violations of applicable securities laws and to avoid the appearance of impropriety in connection with the purchase and sale of the Company's securities, **all transactions in the Company's securities (including without limitation, acquisitions and dispositions of Company stock, the exercise of stock options and the sale of Company stock issued upon exercise of stock options) by officers, directors and such other employees as are designated from time to time by the Board of Directors, the Chief Executive Officer or the Chief Financial Officer as being subject to this pre-clearance process (each, a "*Pre-Clearance Person*") must be pre-cleared** by the Company's Chief Financial Officer. Pre-clearance does not relieve anyone of his or her responsibility under SEC rules. For the avoidance of doubt, any designation by the Board of Directors of the employees who are subject to pre-clearance may be updated from time to time by the Chief Executive Officer or Chief Financial Officer.

A request for pre-clearance may be oral or in writing (including without limitation by e-mail), should be made at least two business days in advance of the proposed transaction and should include the identity of the Pre-Clearance Person, the type of proposed transaction (for example, an open market purchase, a privately negotiated sale, an option exercise, etc.), the proposed date of the transaction and the number of shares or options to be involved. In addition, unless otherwise determined by the Chief Financial Officer, the Pre-Clearance Person must execute a certification (in the form approved by the Chief Financial Officer) that he, she or it is not aware of material, nonpublic information about the Company. The Chief Financial Officer shall have sole discretion to decide whether to clear any contemplated transaction, provided that the Chief Executive Officer shall have sole discretion to decide whether to clear transactions by the Chief Financial Officer or persons or entities subject to this policy as a result of their relationship with the Chief Financial Officer. All trades that are pre-cleared must be effected within five business days of receipt of the pre-clearance unless a specific exception has been granted by the Chief Financial Officer (or the Chief Executive Officer, in the case of the Chief Financial Officer or persons or entities subject to this policy as a result of their relationship with the Chief Financial Officer). A pre-cleared trade (or any portion of a pre-cleared trade) that has not been effected during the five business day period must be pre-cleared again prior to execution. Notwithstanding receipt of pre-clearance, if the Pre-Clearance Person becomes aware of material, non-public information or becomes subject to a black-out period before the transaction is effected, the transaction may not be completed.

B. Black-Out Periods

Additionally, no officer, director or other employee designated from time to time by the Board of Directors, the Chief Executive Officer or the Chief Financial Officer as being subject to quarterly blackout periods shall purchase or sell any security of the Company during the period beginning at 11:59 p.m., Eastern time, on the seventh calendar day before the end of any fiscal quarter of the Company and ending upon the completion of the second full trading day after the public release of earnings data for such fiscal quarter or during any other trading suspension period declared by the Company, except for purchases and sales made pursuant to the permitted transactions described in Section II. For example, if the Company's fourth fiscal quarter ends at 11:59 p.m., Eastern time, on December 31, the corresponding blackout period would begin at 11:59 p.m., Eastern time, on December 24.

Exceptions to the black-out period policy may be approved only by the Company's Chief Financial Officer (or, in the case of an exception for the Chief Financial Officer or persons or entities subject to this policy as a result of their relationship with the Chief Financial Officer, the Chief Executive Officer or, in the case of exceptions for directors or persons or entities subject to this policy as a result of their relationship with a director, the Board of Directors).

From time to time, the Company, through the Board of Directors, the Company's disclosure committee or the Chief Financial Officer, may recommend that officers, directors, employees or others suspend trading in the Company's securities because of developments that have not yet been disclosed to the public. Subject to the exceptions noted above, all of those affected should not trade in the Company's securities while the suspension is in effect, and should not disclose to others that the Company has suspended trading.

If the Company is required to impose a "pension fund black-out period" under Regulation BTR, each director and executive officer shall not, directly or indirectly sell, purchase or otherwise transfer during such black-out period any equity securities of the Company acquired in connection with his or her service as a director or officer of the Company, except as permitted by Regulation BTR.

C. Post-Termination Transactions

If an individual is in possession of material, non-public information when his or her service terminates, that individual may not trade in the Company's securities until that information has become public or is no longer material.

D. Information Relating to the Company

1. *Access to Information*

Access to material, non-public information about the Company, including the Company's business, earnings or prospects, should be limited to officers, directors and employees of the Company on a need-to-know basis. In addition, such information should not be communicated to anyone outside the Company under any circumstances (except in accordance with the Company's policies regarding the protection or authorized external disclosure of Company information) or to anyone within the Company on an other than need-to-know basis.

In communicating material, non-public information to employees of the Company, all officers, directors and employees must take care to emphasize the need for confidential treatment of such information and adherence to the Company's policies with regard to confidential information.

2. *Inquiries From Third Parties*

Inquiries from third parties, such as industry analysts or members of the media, about the Company should be directed to the Chief Financial Officer.

E. Limitations on Access to Company Information

The following procedures are designed to maintain confidentiality with respect to the Company's business operations and activities.

All officers, directors and employees should take all steps and precautions necessary to restrict access to, and secure, material, non-public information by, among other things:

- maintaining the confidentiality of Company-related transactions;
- conducting their business and social activities so as not to risk inadvertent disclosure of confidential information. Review of confidential documents in public places should be conducted so as to prevent access by unauthorized persons;
- restricting access to documents and files (including computer files) containing material, non-public information to individuals on a need-to-know basis (including maintaining control over the distribution of documents and drafts of documents);
- promptly removing and cleaning up all confidential documents and other materials from conference rooms following the conclusion of any meetings;
- disposing of all confidential documents and other papers, after there is no longer any business or other legally required need, through shredders when appropriate;
- restricting access to areas likely to contain confidential documents or material, non-public information;
- safeguarding laptop computers, mobile devices, tablets, memory sticks, CDs and other items that contain confidential information; and
- avoiding the discussion of material, non-public information in places where the information could be overheard by others such as in elevators, restrooms, hallways, restaurants, airplanes or taxicabs.

Personnel involved with material, non-public information, to the extent feasible, should conduct their business and activities in areas separate from other Company activities.

V. Additional Prohibited Transactions

The Company has determined that there is a heightened legal risk and/or the appearance of improper or inappropriate conduct if the persons subject to this Policy engage in certain types of transactions. Therefore, officers, directors and employees shall comply with the following policies with respect to certain transactions in the Company securities:

A. Short Sales

Short sales of the Company's securities evidence an expectation on the part of the seller that the securities will decline in value, and therefore signal to the market that the seller has no confidence in the Company or its short-term prospects. In addition, short sales may reduce the seller's incentive to improve the Company's performance. For these reasons, short sales of the Company's securities are prohibited by this Policy. In addition, as noted below, Section 16(c) of the 1934 Act absolutely prohibits Section 16 reporting persons from making short sales of the Company's equity securities, *i.e.*, sales of shares that the insider does not own at the time of sale, or sales of shares against which the insider does not deliver the shares within 20 days after the sale.

B. Options

A transaction in options is, in effect, a bet on the short-term movement of the Company's stock and therefore creates the appearance that an officer, director or employee is trading based on inside information. Transactions in options, whether traded on an exchange, on any other organized market or on an over-the-counter market, also may focus an officer's, director's or employee's attention on short-term performance at the expense of the Company's long-term objectives. Accordingly, transactions in puts, calls or other derivative securities involving the Company's equity securities, on an exchange, on or in any other organized market or on an over-the-counter market, are prohibited by this Policy.

C. Hedging Transactions

Purchasing financial instruments, such as prepaid variable forward contracts, equity swaps, collars, and exchange funds, or otherwise engaging in transactions that hedge or offset, or are designed to hedge or offset, any decrease in the market value of the Company's equity securities, may cause an officer, director, or employee to no longer have the same objectives as the Company's other stockholders. Therefore, all such transactions involving the Company's equity securities, whether such securities were granted as compensation or are otherwise held, directly or indirectly, are prohibited by this Policy.

D. Purchases of the Company's Securities on Margin; Pledging the Company's Securities to Secure Margin or Other Loans

Purchasing on margin means borrowing from a brokerage firm, bank or other entity in order to purchase the Company's securities (other than in connection with a cashless exercise of stock options through a broker under the Company's equity plans). Margin purchases of the Company's securities are prohibited by this Policy. Pledging the Company's securities as collateral to secure loans is prohibited. This prohibition means, among other things, that you cannot hold the Company's securities in a "margin account" (which would allow you to borrow against your holdings to buy securities).

E. Director and Executive Officer Cashless Exercises

The Company will not arrange with brokers to administer cashless exercises on behalf of directors and executive officers of the Company. Directors and executive officers of the Company may use the cashless exercise feature of their equity awards only if (i) the director or officer retains a broker independently of the Company, (ii) the Company's involvement is limited to confirming that it will deliver the stock promptly upon payment of the exercise price, (iii) the director or officer uses a "T+2" cashless exercise arrangement, in which the Company agrees to deliver stock against the payment of the purchase price on the same day the sale of the stock underlying the equity award settles and (iv) the director or officer otherwise complies with this Policy. Under a T+2 cashless exercise, a broker, the issuer, and the issuer's transfer agent work together to make all transactions settle simultaneously. This approach is to avoid any inference that the Company has "extended credit" in the form of a personal loan to the director or executive officer. Questions about cashless exercises should be directed to the Chief Financial Officer.

F. Partnership Distributions

Nothing in this Policy is intended to limit the ability of a venture capital partnership or other similar entity with which a director is affiliated to distribute Company securities to its partners, members or other similar persons. It is the responsibility of each affected director and the affiliated entity, in consultation with their own counsel (as appropriate), to determine the timing of any distributions, based on all relevant facts and circumstances and applicable securities laws.

VI. Rule 10b5-1 Trading Plans, Section 16 and Rule 144

A. Rule 10b5-1 Trading Plans

1. *Overview*

Rule 10b5-1 will protect directors, officers and employees from insider trading liability under Rule 10b5-1 for transactions under a previously established contract, plan or instruction to trade in the Company's stock (a "***Trading Plan***") entered into in good faith and in accordance with the terms of Rule 10b5-1 and all applicable state laws and will be exempt from the trading restrictions set forth in this Policy. The initiation of, and any modification to, any such Trading Plan will be deemed to be a transaction in the Company's securities, and such initiation or modification is subject to all limitations and prohibitions relating to transactions in the Company's securities. Each such Trading Plan, and any modification thereof, must be submitted to and pre-approved by the Company's Chief Financial Officer, or such other person as the Board of Directors may designate from time to time (the "***Authorizing Officer***"), who may impose such conditions on the implementation and operation of the Trading Plan as the Authorizing Officer deems necessary or advisable. However, compliance of the Trading Plan to the terms of Rule 10b5-1 and the execution of transactions pursuant to the Trading Plan are the sole responsibility of the person initiating the Trading Plan, not the Company or the Authorizing Officer.

Trading Plans do not exempt individuals from complying with Section 16 short-swing profit rules or liability.

Rule 10b5-1 presents an opportunity for insiders to establish arrangements to sell (or purchase) Company stock without the restrictions of trading windows and black-out periods, even when there is undisclosed material information. A Trading Plan may also help reduce negative publicity that may result when key executives sell the Company's stock. Rule 10b5-1 only provides an "affirmative defense" in the event there is an insider trading lawsuit. It does not prevent someone from bringing a lawsuit.

A director, officer or employee may enter into a Trading Plan only when he or she is not in possession of material, non-public information, and only during a trading window period outside of the trading black-out period. Although transactions effected under a Trading Plan will not require further pre-clearance at the time of the trade, any transaction (including the quantity and price) made pursuant to a Trading Plan of a Section 16 reporting person must be reported to the Company promptly on the day of each trade to permit the Company's filing coordinator to assist in the preparation and filing of a required Form 4. Such reporting may be oral or in writing (including by e-mail) and should include the identity of the reporting person, the type of transaction, the date of the transaction, the number of shares involved and the purchase or sale price. However, the ultimate responsibility, and liability, for timely filing remains with the Section 16 reporting person.

The Company reserves the right from time to time to suspend, discontinue or otherwise prohibit any transaction in the Company's securities, even pursuant to a previously approved Trading Plan, if the Authorizing Officer or the Board of Directors, in its discretion, determines that such suspension, discontinuation or other prohibition is in the best interests of the Company. Any Trading Plan submitted for approval hereunder should explicitly acknowledge the Company's right to prohibit transactions in the Company's securities. Failure to discontinue purchases and sales as directed shall constitute a violation of the terms of this Section VI and result in a loss of the exemption set forth herein.

Officers, directors and employees may adopt Trading Plans with brokers that outline a pre-set plan for trading of the Company's stock, including the exercise of options. Trades pursuant to a Trading Plan generally may occur at any time. However, the Company requires a cooling-off period of 30 days between the establishment of a Trading Plan and commencement of any transactions under such plan. An individual may adopt more than one Trading Plan. Please review the following description of how a Trading Plan works.

Pursuant to Rule 10b5-1, an individual's purchase or sale of securities will not be "on the basis of" material, non-public information if:

- First, before becoming aware of the information, the individual enters into a binding contract to purchase or sell the securities, provides instructions to another person to sell the securities or adopts a written plan for trading the securities (i.e., the Trading Plan).

- Second, the Trading Plan must either:

    - specify the amount of securities to be purchased or sold, the price at which the securities are to be purchased or sold and the date on which the securities are to be purchased or sold;

    - include a written formula or computer program for determining the amount, price and date of the transactions; or

- prohibit the individual from exercising any subsequent influence over the purchase or sale of the Company's stock under the Trading Plan in question.

- Third, the purchase or sale must occur pursuant to the Trading Plan and the individual must not enter into a corresponding hedging transaction or alter or deviate from the Trading Plan.

For clarity, the requirements of this Section VI.A do not apply to any Trading Plan entered into by a venture capital partnership or other similar entity with which a director is affiliated. It is the responsibility of each such venture capital partnership or other entity, in consultation with their own counsel (as appropriate), to comply with applicable securities laws in connection with any Trading Plan.

2. *Revocation of and Amendments to Trading Plans*

Revocation of Trading Plans should occur only in unusual circumstances. Effectiveness of any revocation or amendment of a Trading Plan will be subject to the prior review and approval of the Authorizing Officer. Revocation is effected upon written notice to the broker. Once a Trading Plan has been revoked, the participant should wait at least 30 days before trading outside of a Trading Plan and 180 days before establishing a new Trading Plan.

A person acting in good faith may amend a prior Trading Plan so long as such amendments are made outside of a quarterly trading black-out period and at a time when the Trading Plan participant does not possess material, non-public information. Plan amendments must not take effect for at least 30 days after the plan amendments are made.

Under certain circumstances, a Trading Plan *must* be revoked. This may include circumstances such as the announcement of a merger or the occurrence of an event that would cause the transaction either to violate the law or to have an adverse effect on the Company. The Authorizing Officer or administrator of the Company's stock plans is authorized to notify the broker in such circumstances, thereby insulating the insider in the event of revocation.

3. *Discretionary Plans*

Although non-discretionary Trading Plans are preferred, discretionary Trading Plans, where the discretion or control over trading is transferred to a broker, are permitted if pre-approved by the Authorizing Officer.

The Authorizing Officer of the Company must pre-approve any Trading Plan, arrangement or trading instructions, etc., involving potential sales or purchases of the Company's stock or option exercises, including but not limited to, blind trusts, discretionary accounts with banks or brokers, or limit orders. The actual transactions effected pursuant to a pre-approved Trading Plan will not be subject to further pre-clearance for transactions in the Company's stock once the Trading Plan or other arrangement has been pre-approved.

4. *Reporting (if Required)*

If required, an SEC Form 144 will be filled out and filed by the individual/brokerage firm in accordance with the existing rules regarding Form 144 filings. A footnote at the bottom of the Form 144 should indicate that the trades "are in accordance with a Trading Plan that complies with Rule 10b5-1 and expires ____." For Section 16 reporting persons, Form 4s should be filed before the end of the second business day following the date that the broker, dealer or plan administrator informs the individual that a transaction was executed, provided that the date of such notification is not later than the third business day following the trade date. A similar footnote should be placed at the bottom of the Form 4 as outlined above.

5. *Options*

Exercises of options for cash may be executed at any time. "Cashless exercise" option exercises through a broker are subject to trading windows. However, the Company will permit same day sales under Trading Plans. If a broker is required to execute a cashless exercise in accordance with a Trading Plan, then the Company must have exercise forms attached to the Trading Plan that are signed, undated and with the number of shares to be exercised left blank. Once a broker determines that the time is right to exercise the option and dispose of the shares in accordance with the Trading Plan, the broker will notify the Company in writing and the administrator of the Company's stock plans will fill in the number of shares and the date of exercise on the previously signed exercise form. The insider should not be involved with this part of the exercise.

6. *Trades Outside of a Trading Plan*

During an open trading window, trades differing from Trading Plan instructions that are already in place are allowed as long as the Trading Plan continues to be followed.

7. *Public Announcements*

The Company may make a public announcement that Trading Plans are being implemented in accordance with Rule 10b5-1. It will consider in each case whether a public announcement of a particular Trading Plan should be made. It may also make public announcements or respond to inquiries from the media as transactions are made under a Trading Plan.

8. *Prohibited Transactions*

The transactions prohibited under Section V of this Policy, including among others short sales and hedging transactions, may not be carried out through a Trading Plan or other arrangement or trading instruction involving potential sales or purchases of the Company's securities.

9. *Limitation on Liability*

None of the Company, the Chief Executive Officer, the Chief Financial Officer, the Authorizing Officer, the Company's other employees or any other person will have any liability for any delay in reviewing, or refusal of, a Trading Plan submitted pursuant to this Section VI or a request for pre-clearance submitted pursuant to Section IV of this Policy. Notwithstanding any review of a Trading Plan pursuant to this Section VI or pre-clearance of a transaction pursuant to Section IV of this Policy, none of the Company, the Chief Financial Officer, the Authorizing Officer, the Company's other employees or any other person assumes any liability for the legality or consequences of such Trading Plan or transaction to the person engaging in or adopting such Trading Plan or transaction.

B. Section 16: Insider Reporting Requirements, Short-Swing Profits and Short Sales

1. *Reporting Obligations Under Section 16(a): SEC Forms 3, 4 and 5*

Section 16(a) of the 1934 Act generally requires all officers, directors and 10% stockholders ("***insiders***"), within 10 days after the insider becomes an officer, director or 10% stockholder, to file with the SEC an "Initial Statement of Beneficial Ownership of Securities" on SEC Form 3 listing the amount of the Company's stock, options and warrants which the insider beneficially owns. Following the initial filing on SEC Form 3, changes in beneficial ownership of the Company's stock, options and warrants must be reported on SEC Form 4, generally within two business days after the date on which such change occurs, or in certain cases on Form 5, within 45 days after fiscal year end. A Form 4 must be filed even if, as a result of balancing transactions, there has been no net change in holdings. In certain situations, purchases or sales of Company stock made within six months *prior* to the filing of a Form 3 must be reported on Form 4. Similarly, certain purchases or sales of Company stock made within six months *after* an officer or director ceases to be an insider must be reported on Form 4.

2. *Recovery of Profits Under Section 16(b)*

For the purpose of preventing the unfair use of information which may have been obtained by an insider, any profits realized by any officer, director or 10% stockholder from any "purchase" and "sale" of Company stock during a six-month period, so called "short-swing profits," may be recovered by the Company. When such a purchase and sale occurs, good faith is no defense. The insider is liable even if compelled to sell for personal reasons, and even if the sale takes place after full disclosure and without the use of any inside information.

The liability of an insider under Section 16(b) of the 1934 Act is only to the Company itself. The Company, however, cannot waive its right to short swing profits, and any Company stockholder can bring suit in the name of the Company. Reports of ownership filed with the SEC on Form 3, Form 4 or Form 5 pursuant to Section 16(a) (discussed above) are readily available to the public, and certain attorneys carefully monitor these reports for potential Section 16(b) violations. In addition, liabilities under Section 16(b) may require separate disclosure in the Company's annual report to the SEC on Form 10-K or its proxy statement for its annual meeting of stockholders. No suit may be brought more than two years after the date the profit was realized. However, if the insider fails to file a report of the transaction under Section 16(a), as required, the two-year limitation period does not begin to run until after the transactions giving rise to the profit have been disclosed. Failure to report transactions and late filing of reports require separate disclosure in the Company's proxy statement.

Officers and directors should consult the attached "Short-Swing Profit Rule Section 16(b) Checklist" attached hereto as "Attachment A" in addition to consulting the Chief Financial Officer prior to engaging in any transactions involving the Company's securities, including without limitation, the Company's stock, options or warrants. The Company's employees who are not officers, directors or insiders may disregard Attachment A.

3. *Short Sales Prohibited Under Section 16(c)*

Section 16(c) of the 1934 Act prohibits insiders absolutely from making short sales of the Company's equity securities. Short sales include sales of stock which the insider does not own at the time of sale, or sales of stock against which the insider does not deliver the shares within 20 days after the sale. Under certain circumstances, the purchase or sale of put or call options, or the writing of such options, can result in a violation of Section 16(c). Insiders violating Section 16(c) face criminal liability.

The Chief Financial Officer should be consulted if you have any questions regarding reporting obligations, short-swing profits or short sales under Section 16.

C. Rule 144

Rule 144 provides a safe harbor exemption to the registration requirements of the Securities Act of 1933, as amended, for certain resales of "restricted securities" and "control securities." "Restricted securities" are securities acquired from an issuer, or an affiliate of an issuer, in a transaction or chain of transactions not involving a public offering. "Control securities" are *any* securities owned by directors, executive officers or other "affiliates" of the issuer, including stock purchased in the open market and stock received upon exercise of stock options. Sales of Company restricted and control securities must comply with the requirements of Rule 144, which are summarized below:

- ***Holding Period***. Restricted securities must be held for at least six months before they may be sold in the market.

- ***Current Public Information.*** The Company must have filed all SEC-required reports during the last 12 months or such shorter period that the Company was required to file such reports.

- ***Volume Limitations.*** For affiliates, total sales of Company common stock for any three-month period may not exceed the *greater* of: (i) 1% of the total number of outstanding shares of Company common stock, as reflected in the most recent report or statement published by the Company, or (ii) the average weekly reported volume of such shares traded during the four calendar weeks preceding the filing of the requisite Form 144.

- ***Method of Sale.*** For affiliates, the shares must be sold either in a "broker's transaction" or in a transaction directly with a "market maker." A "broker's transaction" is one in which the broker does no more than execute the sale order and receive the usual and customary commission. Neither the broker nor the selling person can solicit or arrange for the sale order. In addition, the selling person or Board member must not pay any fee or commission other than to the broker. A "market maker" includes a specialist permitted to act as a dealer, a dealer acting in the position of a block positioner, and a dealer who holds himself out as being willing to buy and sell Company common stock for his own account on a regular and continuous basis.

- ***Notice of Proposed Sale.*** For affiliates, a notice of the sale (a Form 144) may be required to be filed with the SEC at the time of the sale. Brokers generally have internal procedures for executing sales under Rule 144 and will assist you in completing the Form 144 and in complying with the other requirements of Rule 144.

If you are subject to Rule 144, you must instruct your broker who handles trades in Company securities to follow the brokerage firm's Rule 144 compliance procedures in connection with all trades.

VII. Execution and Return of Certification of Compliance

After reading this Policy, all officers, directors and employees should execute and return to the Company's Chief Financial Officer the Certification of Compliance form attached hereto as "Attachment B."

ATTACHMENT A

SHORT-SWING PROFIT RULE SECTION 16(B) CHECKLIST

Note: ANY combination of PURCHASE AND SALE or SALE AND PURCHASE within six months of each other by an officer, director or 10% stockholder (or any family member living in the same household or certain affiliated entities) results in a violation of Section 16(b), and the "profit" must be recovered by Bullfrog AI Holdings, Inc. (the "***Company***"). It makes no difference how long the shares being sold have been held or, for officers and directors, that you were an insider for only one of the two matching transactions. The highest priced sale will be matched with the lowest priced purchase within the six-month period.

Sales

If a sale is to be made by an officer, director or 10% stockholder (or any family member living in the same household or certain affiliated entities):

1. Have there been any purchases by the insider (or family members living in the same household or certain affiliated entities) within the past six months?

2. Have there been any option grants or exercises not exempt under Rule 16b-3 within the past six months?

3. Are any purchases (or non-exempt option exercises) anticipated or required within the next six months?

4. Has a Form 4 been prepared?

Note: If a sale is to be made by an affiliate of the Company, has a Form 144 been prepared and has the broker been reminded to sell pursuant to Rule 144?

Purchases And Option Exercises

If a purchase or option exercise for Company stock is to be made:

1. Have there been any sales by the insider (or family members living in the same household or certain affiliated entities) within the past six months?

2. Are any sales anticipated or required within the next six months (such as tax-related or year-end transactions)?

3. Has a Form 4 been prepared?

Before proceeding with a purchase or sale, consider whether you are aware of material, non-public information which could affect the price of the Company stock. All transactions in the Company's securities by officers and directors must be pre-cleared by contacting the Company's Chief Financial Officer, or such person performing duties similar to those performed by a Chief Financial Officer.

ATTACHMENT B

CERTIFICATION OF COMPLIANCE

RETURN BY WEDNESDAY, 31 JANUARY

TO: Dane Saglio, Chief Financial Officer

FROM: _____

RE: INSIDER TRADING COMPLIANCE POLICY OF BULLFROG AI HOLDINGS, INC.

I have received, reviewed and understand the above-referenced Insider Trading Compliance Policy and undertake, as a condition to my present and continued employment with (or, if I am not an employee, affiliation with) Bullfrog AI Holdings, Inc., to comply fully with the policies and procedures contained therein.

I hereby certify, to the best of my knowledge, that during the calendar year ending December 31, 2023, I have complied fully with all policies and procedures set forth in the above-referenced Insider Trading Compliance Policy.

_____ _____

SIGNATURE DATE

_____

TITLE

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation in Registration Statement on Form S-1 No. 333-267951 of our report dated March 29, 2024, of BullFrog AI Holdings, Inc. relating to the audit of the consolidated financial statements as of December 31, 2023 and 2022, and for the periods then ended, and the reference to our firm under the caption "Experts" in the Registration Statement.

/s/ M&K CPA's, PLLC

Houston, TX
March 29, 2024

Exhibit 31.1

Certification of
Principal Executive Officer
of BULLFROG AI HOLDINGS, INC.
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Vininder Singh, certify that:

1. I have reviewed this annual report on Form 10-K of Bullfrog AI Holdings, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f) for the registrant and we have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 29, 2024

By: */s/ Vininder Singh*
Vininder Singh
Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

Certification of
Principal Financial Officer
of BULLFROG AI HOLDINGS, INC.
Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Dane Saglio, certify that:

1. I have reviewed this annual report on Form 10-K of Bullfrog AI Holdings, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this annual report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f) for the registrant and we have:

   a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this annual report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d) Disclosed in this annual report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent function):

   a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Dated: March 29, 2024

By: */s/ Dane Saglio*
Dane Saglio
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 32.1

CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350,
AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the annual report of Bullfrog AI Holdings, Inc. (the "Company") on Form 10-K for the fiscal year ended December 31, 2023, as filed with the Securities and Exchange Commission on the date hereof (the "Report"), each of the undersigned officers of the Company certifies, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

(1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Dated: March 29, 2024

By: */s/ Vininder Singh*
Vininder Singh
Chief Executive Officer
(Principal Executive Officer)

Dated: March 29, 2024

By: */s/ Dane Saglio*
Dane Saglio
Chief Financial Officer
(Principal Financial and Accounting Officer)

Exhibit 97

BULLFROG AI HOLDINGS, INC.
COMPENSATION RECOUPMENT POLICY

1. Restatement. In the event of any required accounting restatement of the financial statements of Bullfrog AI Holdings, Inc. (the "Company") due to the material noncompliance of the Company with any financial reporting requirement under the applicable U.S. federal securities laws, including any required accounting restatement to correct an error in previously issued financial statements that is material to the previously issued financial statements, or that would result in a material misstatement if the error were corrected in the current period or left uncorrected in the current period (a "Restatement"), the Company will recover reasonably promptly from any person who is or was an "Executive Officer," as such term is defined in Rule 10D-1 adopted under the Securities Exchange Act of 1934, as amended (the "Exchange Act") and Rule 5608 of the Nasdaq listing rules, of the Company (each, a "Covered Person") the amount of any "Erroneously Awarded Incentive-Based Compensation" (as defined below). This Policy is effective as of October 2, 2023, the effective date of Rule 5608 of the Nasdaq listing rules (the "Effective Date").

2. Amount. The amount of Incentive-Based Compensation (as defined below) that must be recovered from a Covered Person pursuant to the immediately preceding paragraph is the amount of "Recoverable Incentive-Based Compensation" (as defined below) received by a Covered Person that exceeds the amount of Recoverable Incentive-Based Compensation that otherwise would have been received had it been determined based on the restated amounts, computed without regard to any taxes paid (referred to as the "Erroneously Awarded Incentive-Based Compensation"). For Recoverable Incentive-Based Compensation based on stock price or total shareholder return, where the amount of Erroneously Awarded Incentive-Based Compensation is not subject to mathematical recalculation directly from the information in a Restatement, the amount must be based on a reasonable estimate of the effect of the Restatement on the stock price or total shareholder return, as applicable, upon which the Recoverable Incentive-Based Compensation was received, and the Company must maintain documentation of that reasonable estimate and provide such documentation to the Nasdaq Stock Market LLC ("Nasdaq"). For the purposes of this Policy, Recoverable Incentive-Based Compensation will be deemed to be received in the fiscal period during which the financial reporting measure specified in the applicable Incentive-Based Compensation award is attained, even if the payment or grant occurs after the end of that period.

3. Definitions:

(a) "Incentive-Based Compensation" means any compensation that is granted, earned or vested based wholly or in part upon the attainment of a "financial reporting measure," which means a measure that is determined and presented in accordance with Generally Accepted Accounting Principles which are used in preparing the Company's financial statements, and any measure that is derived wholly or in part from such measures. Stock price and total shareholder return are also financial reporting measures for this purpose. For avoidance of doubt, a financial reporting measure need not be presented within the Company's financial statements or included in a filing with the Securities and Exchange Commission.

(b) "Recoverable Incentive-Based Compensation" means all Incentive-Based Compensation received on or after the Effective Date of this Policy set forth above by a Covered Person: (i) after beginning service as an executive officer; (ii) who served as an Executive Officer at any time during the performance period for the Incentive-Based Compensation; (iii) while the Company has a class of securities listed on a national securities exchange or a national securities association; and (iv) during the three completed fiscal years immediately preceding the date that the Company is required to prepare a Restatement, including any applicable transition period that results from a change in the Company's fiscal year within or immediately following those three completed fiscal years. For this purpose, the Company is deemed to be required to prepare a Restatement on the earlier of: (i) the date the Board of Directors of the Company (the "Board"), or the Company's officers authorized to take such action if Board action is not required, concludes, or reasonably should have concluded, that the Company is required to prepare a Restatement; and (ii) the date a court, regulator or other legally authorized body directs the Company to prepare a Restatement. The Company's obligation to recover Erroneously Awarded Incentive-Based Compensation is not dependent on if or when the restated financial statements are filed with the Securities and Exchange Commission.

4. Recovery. The Company must recover the Erroneously Awarded Incentive-Based Compensation from Covered Persons unless the Board determines that recovery is impracticable because: (i) the direct expense to a third party to assist in enforcing this Policy would exceed the amount of Erroneously Awarded Incentive-Based Compensation; provided that, the Company must make a reasonable attempt to recover the Erroneously Awarded Incentive-Based Compensation before concluding that recovery is impracticable, document such reasonable attempt to recover the Erroneously Awarded Incentive-Based Compensation and provide such documentation to Nasdaq; or (ii) recovery would likely cause an otherwise tax-qualified retirement plan, under which benefits are broadly available to employees of the Company, to fail to meet the applicable requirements of 26 U.S.C. 401(a)(13) or 26 U.S.C. 411(a) and regulations thereunder.

5. No Indemnification. In no event will the Company indemnify any Covered Person for any amounts that are recovered under this Policy. This Policy is in addition to (and not in lieu of) any right of repayment, forfeiture or right of offset against any employees that is required pursuant to any statutory repayment requirement (regardless of whether implemented at any time prior to or following the adoption or amendment of this Policy), including Section 304 of the Sarbanes-Oxley Act of 2002. Any amounts paid to the Company pursuant to Section 304 of the Sarbanes-Oxley Act of 2002 will be considered in determining any amounts recovered under this Policy.

6. Other Company Rights. The application and enforcement of this Policy does not preclude the Company from taking any other action to enforce a Covered Person's obligations to the Company, including termination of employment or institution of legal proceedings. Nothing in this Policy restricts the Company from seeking recoupment under any other compensation recoupment Policy or any applicable provisions in plans, agreements, awards or other arrangements that contemplate the recoupment of compensation from a Covered Person. If a Covered Person fails to repay Erroneously Awarded Incentive-Based Compensation that is owed to the Company under this Policy, the Company must take all appropriate action to recover any Erroneously Awarded Incentive-Based Compensation from the Covered Person, and the Covered Person will be required to reimburse the Company for all expenses (including legal expenses) incurred by the Company in recovering the Erroneously Awarded Incentive-Based Compensation.

7. Binding Effect. The terms of this Policy will be binding and enforceable against all Covered Persons subject to this Policy and their beneficiaries, heirs, executors, administrators or other legal representatives. If any provision of this Policy or the application of such provision to any Covered Person is adjudicated to be invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability will not affect any other provisions of this Policy, and the invalid, illegal or unenforceable provisions will be deemed amended to the minimum extent necessary to render any such provision (or the application of such provision) valid, legal or enforceable.

8. Acknowledgement by Employee. Each Covered Person must sign and return to the Company, within 30 calendar days following the later of (i) the Effective Date of this Policy first set forth above or (ii) the date the individual becomes a Covered Person, the Acknowledgement Form attached hereto as Exhibit A, pursuant to which the Covered Person agrees to be bound by, and to comply with, the terms and conditions of this Policy.

9. Interpretation. This Policy will be interpreted in a manner that is consistent with Rule 10D-1 under the Exchange Act, Rule 5608 of the Nasdaq listing rules and any related rules or regulations adopted by the Securities and Exchange Commission or Nasdaq (the "Applicable Rules") as well as any other applicable law. To the extent the Applicable Rules require recovery of incentive-based compensation in additional circumstances beyond those specified above, nothing in this Policy will be deemed to limit or restrict the right or obligation of the Company to recover incentive-based compensation to the fullest extent required by the Applicable Rules.

Adopted as of December 1, 2023

EXHIBIT A
BULLFROG AI HOLDINGS, INC.
COMPENSATION RECOUPMENT POLICY
ACKNOWLEDGEMENT FORM

By signing below, the undersigned acknowledges and confirms that the undersigned has received and reviewed a copy of the Bullfrog AI Holdings, Inc. (the "Company") Compensation Recoupment Policy (the "Policy").

By signing this Acknowledgement Form, the undersigned acknowledges and agrees that the undersigned is and will continue to be subject to the Policy and that the Policy will apply both during and after the undersigned's employment with the Company. Further, by signing below, the undersigned agrees to abide by the terms of the Policy, including, without limitation, by returning any Erroneously Awarded Incentive-Based Compensation (as defined in the Policy) to the Company to the extent required by, and in a manner consistent with, the Policy.

The undersigned expressly agrees that the Company may deduct from the undersigned's paycheck or other compensation otherwise to the undersigned any Erroneously Awarded Incentive-Based Compensation

COVERED PERSON

Signature

Print Name

Date