Filed Pursuant to Rule 424(b)(5)
Registration No. 333-281341

Prospectus Supplement
(to Prospectus dated August 21, 2024)

Bullfrog AI Holdings, Inc.

862,602 Shares of Common Stock
Pre-Funded Warrants to purchase 702,398 shares of Common Stock
(and the shares of Common Stock underlying the Pre-Funded Warrants)

Bullfrog AI Holdings, Inc. (the "Company" or "we" or "our" or "us") is offering ("Offering") 862,602 shares ("Shares") of common stock, par value $0.00001 per share ("Common Stock") pursuant to this prospectus supplement and the accompanying prospectus. The purchase price of each Share to the purchasers identified in the securities purchase agreement dated October 18, 2024, by and among us and the purchasers listed on the signature pages thereto (the "Securities Purchase Agreement") is $2.00 per Share.

We are also offering to each purchaser whose purchase of Shares in this offering would otherwise result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the holder, 9.99%) of our outstanding shares of Common Stock immediately following the consummation of this offering, the opportunity to purchase, if the purchaser so chooses, pre-funded warrants to purchase up to 702,398 shares of Common Stock (the "Pre-Funded Warrants"), in lieu of shares of Common Stock, pursuant to this prospectus supplement and accompanying prospectus. Each Pre-Funded Warrant will be exercisable for one Share.

The purchase price of each Pre-Funded Warrant is $1.9999, which is equal to the price per share at which the Shares are being sold, minus $0.0001, the exercise price of each Pre-Funded Warrant. The Pre-Funded Warrants will be immediately exercisable and may be exercised at any time until all of the Pre-Funded Warrants are exercised in full. This prospectus supplement also relates to the shares of Common Stock issuable upon exercise of any Pre-Funded Warrants.

In a concurrent private placement, we are issuing to such investors accompanying warrants (the "Common Warrants") to purchase an aggregate of up to 1,565,000 shares of our Common Stock, at an exercise price of $2.00 each. The Common Warrants and the Common Stock issuable upon the exercise of the Common Warrants (the "Common Warrant Shares") are not being registered under the Securities Act of 1933, as amended (the "Securities Act"), are not being offered pursuant to this prospectus supplement and the accompanying prospectus. The Common Warrants and Common Warrant Shares are being offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder. The Common Warrants are exercisable for five years from the date that is six (6) months from the date of issuance and have an exercise price of $2.00 per Common Warrant Share.

Our shares of Common Stock are listed on the Nasdaq Capital Market ("Nasdaq") under the symbol "BFRG." On October 18, 2024, the last reported sale price of our Common Stock on Nasdaq was $2.45 per share. We are an "emerging growth company" and "smaller reporting company" as defined under U.S. federal securities laws and are subject to reduced public company reporting requirements. See the section entitled "Prospectus Summary—Implications of Being a Smaller Reporting Company and Emerging Growth Company" on page 3 of the accompanying prospectus, for additional information.

As of October 18, 2024, the aggregate market value of our outstanding Common Stock held by non-affiliates was approximately $13.0 million, calculated at a price per share of $2.45, the last reported sale price of our Common Stock on October 18, 2024, and based on 7,850,550 shares of Common Stock outstanding, of which aggregate outstanding Common Stock, 5,291,370 shares are held by non-affiliates. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities in a public primary offering with a value exceeding one-third of the aggregate market value of our Common Stock held by non-affiliates in any 12-month period, so long as the aggregate market value of our outstanding Common Stock held by non-affiliates remains below $75 million. During the 12 calendar months prior to and including the date of this prospectus supplement (excluding this offering), we have not offered or sold any shares of Common Stock pursuant to General Instruction I.B.6 of Form S-3.

We have retained WallachBeth Capital, LLC ("Wallachbeth" or the "Placement Agent") as placement agent in connection with this offering. The Placement Agent has agreed to use its reasonable best efforts to place the securities offered by this prospectus supplement and the accompanying prospectus. The Placement Agent is not purchasing or selling any securities pursuant to this prospectus supplement or the accompanying prospectus, nor are we requiring any minimum purchase or sale of any specific number of shares. We have agreed to pay the Placement Agent the fees set forth in the table below. See "Plan of Distribution" beginning on page S-12 of this prospectus supplement for additional information with respect to the compensation we will pay the Placement Agent.

Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described under the heading "Risk Factors" beginning on page S-5 of this prospectus supplement and page 3 of the accompanying prospectus and under similar headings in the other documents that are incorporated by reference into this prospectus supplement and accompanying prospectus.

	Per Share	Per Pre-Funded Warrant	Total
Public offering price	$ 2.0000	$ 1.9999	$ 3,129,930
Placement Agent fees [(1)]	$ 0.1600	$ 0.1600	$ 250,400
Proceeds, before expenses, to the Company [(2)]	$ 1.8400	$ 1.8399	$ 2,879,530

(1) We have agreed to pay the Placement Agent a cash fee of 8.0% of the aggregate gross proceeds raised in connection with the offering. In addition, we have also agreed to reimburse the Placement Agent for $100,000 of its expenses. We have also agreed to issue to the Placement Agent warrants (the "Placement Agent Warrants") to purchase shares of our Common Stock equal to 4.0% of the aggregate number of the Shares and Pre-Funded Warrants sold in this offering. See "*Plan of Distribution*" beginning on page S-12 of this prospectus supplement for additional information with respect to the compensation we will pay the Placement Agent.
(2) The amount of the offering proceeds to us presented in this table does not give effect to the proceeds from the exercise of any of the Pre-Funded Warrants, Common Warrants, or any of the Placement Agent Warrants.

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

Delivery of the securities offered hereby is expected to be made on or about October 21, 2024, subject to satisfaction of certain customary closing conditions.

WallachBeth Capital LLC

The date of this prospectus supplement is October 18, 2024

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PROSPECTUS SUPPLEMENT

PROSPECTUS

ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement and the accompanying prospectus are part of a registration statement that we filed on Form S-3 (Registration No. 333- 281341) with the U.S. Securities and Exchange Commission, or the SEC, utilizing a "shelf" registration process.

Each time we conduct an offering to sell securities under the accompanying prospectus, we will provide a prospectus supplement that will contain specific information about the terms of that offering, including the price, the number of securities being offered and the plan of distribution. The shelf registration statement was filed with the SEC on August 7, 2024, as amended on August 15, 2024, and was declared effective by the SEC on August 21, 2024. The registration statement is effective as of the date of this prospectus supplement. This prospectus supplement describes the specific details regarding this offering and may add, update, or change information contained in the accompanying base prospectus. The accompanying prospectus provides general information about us and our securities, some of which, such as the section entitled "Plan of Distribution," may not apply to this offering.

This prospectus supplement and the accompanying prospectus are an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so. We are not making offers to sell or solicitations to buy our Common Stock in any jurisdiction in which an offer or solicitation is not authorized or in which the person making that offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make an offer or solicitation. This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this Common Stock offering and adds to, and updates information contained in the accompanying prospectus and the documents incorporated by reference herein. The second part, the accompanying prospectus, provides more general information. Generally, when we refer to this prospectus, we are referring to both parts of this document combined. To the extent there is a conflict between the information contained in this prospectus supplement and the information contained in the accompanying prospectus or any document incorporated by reference therein filed prior to the date of this prospectus supplement, you should rely on the information in this prospectus supplement; provided that if any statement in one of these documents is inconsistent with a statement in another document having a later date—for example, a document incorporated by reference in the accompanying prospectus—the statement in the document having the later date modifies or supersedes the earlier statement.

If information in this prospectus supplement is inconsistent with the accompanying base prospectus or the information incorporated by reference with an earlier date, you should rely on this prospectus supplement. This prospectus supplement, together with the accompanying prospectus, the documents incorporated by reference into this prospectus supplement and the accompanying prospectus and any free writing prospectus we have authorized for use in connection with this offering, include all material information relating to this offering. We have not, and the Placement Agent has not, authorized anyone to provide you with different or additional information and you must not rely on any unauthorized information or representations.

You should assume that the information appearing in this prospectus supplement, the accompanying prospectus, the documents incorporated by reference in this prospectus supplement and the accompanying prospectus and any free writing prospectus we have authorized for use in connection with this offering is accurate only as of the respective dates of those documents. Our business, financial condition, results of operations and prospects may have changed since those dates. You should carefully read this prospectus supplement, the accompanying prospectus and the information and documents incorporated herein by reference herein and therein, as well as any free writing prospectus we have authorized for use in connection with this offering, before making an investment decision. See "Incorporation of Certain Documents by Reference" and "Where You Can Find More Information" in this prospectus supplement and in the accompanying base prospectus.

This prospectus supplement and the accompanying prospectus contain summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the full text of the actual documents, some of which have been filed or will be filed and incorporated by reference herein. See "Where You Can Find More Information" in this prospectus supplement. We further note that the representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference into this prospectus supplement or the accompanying prospectus were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among

the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

This prospectus supplement and the accompanying prospectus contain and incorporate by reference certain market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, estimates as they relate to projections involve numerous assumptions, are subject to risks and uncertainties, and are subject to change based on various factors, including those discussed under "Risk Factors" in this prospectus supplement and the accompanying prospectus and under similar headings in the documents incorporated by reference herein and therein. Accordingly, investors should not place undue reliance on this information.

Unless otherwise stated or the context requires otherwise, all references in this prospectus supplement to the "Company," "we," "us," "our", "BFRG" refer to Bullfrog AI Holdings, Inc., a Nevada corporation. References to "you" refer to a prospective investor.

PROSPECTUS SUMMARY

This summary highlights information contained elsewhere in this prospectus supplement, the accompanying base prospectus and the documents incorporated by reference herein and therein. This summary does not contain all of the information that you should consider before deciding to invest in our securities. You should read this entire prospectus supplement and the accompanying base prospectus carefully, including the section entitled "Risk Factors" beginning on page S-5 and our consolidated financial statements and the related notes and the other information incorporated by reference into this prospectus supplement and the accompanying base prospectus, before making an investment decision.

Overview of our Company

Bullfrog AI Holdings, Inc. was incorporated in the State of Nevada in February 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 founding AI/ML platform (trade name: bfLEAP™) was created from technology originally developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL). Subsequently, we have developed new tools and capabilities composed of an ensemble of machine learning and artificial intelligence models.

In February 2018, Bullfrog AI Holdings secured the original exclusive, worldwide, royalty-bearing license from JHU-APL. 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. Our objective is to utilize our AI/ML platform with a precision medicine approach toward drug development with biopharmaceutical collaborators, as well as for 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 in-house development and divestiture; although, we also consider entering collaborations for earlier stage drugs.

In September 2020 and October 2021, the Company executed amendments to the original February 2018 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.

In July 2022, the Company entered into an exclusive, worldwide, royalty-bearing license from JHU-APL that 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. 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 three (3%) percent for internally developed drug projects in which the JHU license was utilized. The new license also contains tiered sub licensing fees that start at fifty (50%) percent and reduce to twenty-five (25%) percent based on revenues. The Company and JHU-APL entered into Amendment number 1 of the July 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 paid in July 2023 and the remaining payments of $75,000, $75,000 and $50,000 are due 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 a result of this Amendment, the minimum annual payments were $30,000 for 2022 and $60,000 for 2023, and the minimum annual payments will be $300,000 for 2024 and beyond, all of which are creditable by royalties. As of June 30, 2024, we have accrued $150,000 of the 2024 minimum annual royalty payments.

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. In addition, we have signed three-year strategic data and commercialization agreements with the Lieber Institute for Brain Development ("LIBD") whom we believe has a repository of the largest collection of postmortem brains in the world including molecular, clinical, and other data. The objective of this partnership is for the Company to analyze these rich data sets using its proprietary AI/ML tools and models and then go to market with the discoveries with the ultimate goal of securing revenue generating strategic partnership deals with biopharmaceutical companies. We intend to secure the rights to other proprietary data sets and repeat this strategy. 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 Good Manufacturing Practices, 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 in February 2023, aided by the receipt of the IPO proceeds in addition to the proceeds from our February 2024 Offering, we have implemented 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 the J Craig Venter Institute and initiated preclinical studies with our in-licensed drug programs. The Company is actively engaged in developing and pursuing new intellectual property as it strives to continuously evolve its AI/ML platform.

Internally, the Company has added incremental staff to accelerate execution, and the development of processes and custom scripts for use in performing new drug target discovery and analytical services for customers, while also launching initiatives targeting large public health data sources and seeking access to proprietary health data sources, such as our agreement with the Lieber Institute for Brain Development. 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.

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 the first quarter of 2024, we received net proceeds of approximately $5.7 million from an underwritten secondary public offering of Common Stock and warrants. As of June 30, 2024, the Company had a cash balance of approximately $5.6 million. In the absence of significant revenues in 2024 or additional financings, the Company believes that its capital resources are sufficient to fund planned operations through the first quarter of 2025.

Accordingly, we will require additional capital to continue to execute our strategy. We anticipate raising this additional capital through various avenues including sales of equity securities, debt transactions, licensing agreements and collaborative arrangements. Although management believes that such funding sources will be available, there can be no assurance that any such arrangements will be consummated to provide sufficient capital when needed to allow us to continue our operations, or if available, on terms acceptable to us. If we do not raise sufficient funds in a timely manner, among other things, we may be forced to delay, scale back or eliminate some or all our research and product development programs and/or our capital expenditures or to enter into arrangements on unfavorable terms. We currently do not have commitments for future funding from any source.

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 drugs at various stages of development, using our proprietary AI/ML technology to advance the development and make discoveries, with the objective of creating near term value and then exiting and monetizing as quickly as possible, preferably within approximately 30 months.

Company Information

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

THE OFFERING

Shares Offered	862,602 shares of Common Stock.
Pre-Funded Warrants	We are also offering Pre-Funded Warrants to purchase 702,398 shares of Common Stock, at a purchase price of the per Share offering price minus $0.0001 per Pre-Funded Warrant. Each Pre-Funded has an exercise price of $0.0001 per share of Common Stock, and is exercisable immediately on issuance, and may be exercised at any time until exercised in full. For details see "Description of Securities we are Offering – Pre-Funded Warrants" This offering also relates to the shares of Common Stock issuable on the exercise of the Pre-Funded Warrants.
Offering Price	$2.00 per Share and $1.9999 per Pre-Funded Warrant
Concurrent Private Placement	In a concurrent private placement, we are selling to the purchasers of our Common Stock (or Common Stock equivalents) accompanying Common Warrants to purchase up to an aggregate of 1,565,000 shares of Common Stock, which Common Warrants are exercisable after six months from the date of issuance, at an exercise price of $2.00 per share of Common Stock and expire on the date that is five (5) years after the Initial Exercise Date (as defined in the Securities Purchase Agreement). We will receive proceeds from the concurrent private placement transaction of warrants to be purchased by any investor in the concurrent private placement solely to the extent such warrants are exercised for cash. The Common Warrants and the shares of Common Stock issuable upon the exercise of the Common Warrants are not being registered under the Securities Act, are not being offered pursuant to this prospectus supplement and the accompanying prospectus, and are being offered pursuant to the exemption provided in Section 4(a)(2) under the Securities Act and Regulation D promulgated thereunder. There is no established public trading market for the Common Warrants being issued in the concurrent private placement, and we do not expect a market to develop. We do not intend to apply for listing of the Common Warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Common Warrants will be limited. We intend to file a Resale Registration Statement by the 30th day from the date of closing of this transaction.
Common Stock Currently Outstanding	7,850,550 shares
Common Stock to Be Outstanding Immediately Following This Offering (1)	9,415,550 shares (assuming full exercise of the Pre-Funded Warrants and excluding shares of Common Stock issuable upon the exercise of the Common Warrants and Placement Agent Warrants).
Use of Proceeds	We estimate that our net proceeds from this offering will be approximately $2.7 million, after deducting the Placement Agent fees and the estimated offering expenses payable by us. We intend to use the net proceeds from this offering, for working capital and for general corporate purposes. See "Use of Proceeds" on page S-8 of the prospectus supplement for a more complete description of the intended use of proceeds from this offering.

Risk Factors	Investing in our securities involves a high degree of risk. See "Risk Factors" beginning on page S-5 of this prospectus supplement, the accompanying base prospectus and under similar headings in other documents incorporated by reference into this prospectus supplement and the accompanying base prospectus. These risk factors may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future.
Nasdaq Symbol	"BFRG". There is no established public trading market for the Pre-Funded Warrants and we do not expect a market to develop. In addition, we do not intend to apply for a listing of the Pre-Funded Warrants on any national securities exchange or other nationally recognized trading system.

(1) The number of shares of Common Stock expected to be outstanding after this offering is based on 7,850,550 shares outstanding as of October 18, 2024, and excludes:

- Up to 5,581,728 shares of Common Stock issuable upon the exercise of outstanding warrants with a weighted-average exercise price of $5.79 per share; and
- Up to 880,717 shares of Common Stock issuable upon the exercise of outstanding stock options, which options have a weighted average exercise price of $3.96 per share; and
- Up to an aggregate of 47,000 shares of Common Stock reserved for future issuance under our 2022 Equity Incentive Plan (the "2022 Plan"); and
- Up to 1,565,000 shares of Common Stock issuable upon exercise of the Common Warrants issued in the concurrent Private Placement at an exercise price of $2.00 per share; and
- Up to 62,600 shares of Common Stock issuable upon exercise of the Placement Agent Warrants.

Except as otherwise indicated, the information in this prospectus supplement assumes no exercise of any outstanding options or exercise of any outstanding warrants, or the Common Warrants issued pursuant to the concurrent private placement described in this prospectus supplement or the Placement Agent Warrants to be issued as compensation to the Placement Agent for this offering.

RISK FACTORS

An investment in our Common Stock involves a high degree of risk. Before making an investment decision, in addition to the risks set forth below, you should consider the "Risk Factors" included in the accompanying prospectus beginning on page 3, and other reports and documents that are incorporated by reference into this prospectus supplement and the accompanying base prospectus, before deciding whether to purchase any of our Common Stock in this offering. The market or trading price of our Common Stock could decline due to any of these risks. In addition, please read "Forward-Looking Statements" in this prospectus, where we describe additional uncertainties associated with our business and the forward-looking statements included or incorporated by reference in this prospectus. Please note that additional risks not currently known to us or that we currently deem immaterial may also impair our business and operations. If any of the risks or uncertainties described in our SEC filings or any additional risks and uncertainties actually occur, our business, financial condition, results of operations and cash flow could be materially and adversely affected. In that case, the market value and/or trading price, as applicable, of our securities could decline, and you might lose all or part of your investment.

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

Our management will have broad discretion in the application of the net proceeds from this offering, and our stockholders will not have the opportunity as part of their investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. The failure by our management to apply these funds effectively could harm our business. See "Use of Proceeds" on page S-8 of this prospectus supplement for a description of our proposed use of proceeds from this offering.

Our independent registered public accounting firm has included an explanatory paragraph relating to our ability to continue as a going concern in its report on our audited financial statements included in our Annual Report on Form 10-K for the Fiscal year ended December 31, 2023.

The report from our independent registered public accounting firm for the year ended December 31, 2023, includes an explanatory paragraph stating that we have incurred significant losses and need to raise additional funds to meet our obligations and sustain our operations. These conditions raise substantial doubt about our ability to continue as a going concern. As of June 30, 2024, we had approximately $5.6 million in cash and an accumulated deficit of approximately $13.3 million. We believe that our existing cash and cash equivalents as of June 30, 2024 will not enable us to fund our operating expenses and capital expenditure requirements for the twelve months from June 30, 2024. Our recurring losses from operations since inception and required additional funding to finance our operations raise substantial doubt about our ability to continue as a going concern. These conditions could materially limit our ability to raise additional funds through the issuance of new debt or equity securities or otherwise. There is no assurance that sufficient financing will be available when needed, or at all, to allow us to continue as a going concern. The perception that we may not be able to continue as a going concern may also make it more difficult to operate our business due to concerns about our ability to meet our contractual obligations. Our ability to continue as a going concern is contingent upon, among other factors, the sale of our securities. There is no assurance that sufficient financing will be available when needed, or at all, to allow us to continue as a going concern.

If we are unable to secure additional capital, we may be required to curtail our clinical and research and development initiatives and take additional measures to reduce costs in order to conserve our cash in amounts sufficient to sustain operations and meet our obligations. These measures could cause significant delays in our clinical and regulatory efforts, which is critical to the realization of our business plan. The consolidated financial statements do not include any adjustments that may be necessary should we be unable to continue as a going concern. It is not possible for us to predict at this time the potential success of our business. The revenue and income potential of our proposed business and operations are currently unknown. If we cannot continue as a viable entity, you may lose some or all of your investment.

If you purchase securities sold in this offering, you may experience immediate dilution as a result of this offering.

You may incur immediate and substantial dilution as a result of this offering after giving effect to the sale by us of up to 1,565,000 shares of Common Stock or Common Stock equivalents offered in this offering at a public offering price of $2.00 per share, and after deducting Placement Agent fees and offering expenses payable by us. We have a significant number of stock options and warrants outstanding, and, in order to raise additional capital, we may in the future offer additional shares of our Common Stock or other securities convertible into or exchangeable for our Common Stock at prices that may not be the same as the price per share in this offering. In the event that the outstanding options and/or warrants are exercised, or that we make additional issuances of Common Stock or other convertible or exchangeable securities, you could experience additional dilution. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders, including investors who purchase shares of Common Stock in this offering. The price per share at which we sell additional shares of our Common Stock or securities convertible into Common Stock in future transactions, may be higher or lower than the price per share in this offering. As a result, purchasers of the shares we sell, as well as our existing stockholders, will experience significant dilution if we sell at prices significantly below the price at which they invested. See the section entitled "Dilution" below for a more detailed illustration of the dilution you would incur if you participate in this offering.

Sales of a significant number of shares of our Common Stock in the public markets or significant short sales of our Common Stock, or the perception that such sales could occur, could depress the market price of our Common Stock and impair our ability to raise capital.

Sales of a substantial number of shares of our Common Stock or other equity-related securities in the public markets could depress the market price of our Common Stock. This offering may contribute to a depressed market price of our Common Stock. If there are significant short sales of our Common Stock, the price decline that could result from this activity may cause the share price to decline more so, which, in turn, may cause long holders of the Common Stock to sell their shares, thereby contributing to sales of Common Stock in the market. Such sales also may impair our ability to raise capital through the sale of additional equity securities in the future at a time and price that our management deems acceptable, if at all.

Trading of our Common Stock is limited, and trading restrictions imposed on us by applicable regulations may further reduce trading in our Common Stock, making it difficult for our stockholders to sell their shares; and future sales of Common Stock could reduce our stock price.

Trading of our Common Stock is currently conducted on the Nasdaq Capital Market. The liquidity of our Common Stock is limited, including in terms of the number of shares that can be bought and sold at a given price and reduction in security analysts' and the media's coverage of us, if any. These factors may result in different prices for our Common Stock than might otherwise be obtained in a more liquid market and could also result in a larger spread between the bid and asked prices for our Common Stock. In addition, in the absence of a large market capitalization, our Common Stock is less liquid than the stock of companies with broader public ownership, and, as a result, the trading prices of our Common Stock may be more volatile. In the absence of an active public trading market, an investor may be unable to liquidate his or her investment in our Common Stock. Trading of a relatively small volume of our Common Stock may have a greater impact on the trading price of our stock. We cannot predict the prices at which our Common Stock will trade in the future, if at all.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we may in the future offer additional shares of our Common Stock or other securities convertible into or exchangeable for our Common Stock at prices that may not be the same as the price per share paid by any investor in this offering. We may sell shares or other securities in any other offering at a price per share that is less than the price per share paid by any investor in this offering, and investors purchasing shares or other securities in the future could have rights superior to you. The price per share at which we sell additional shares of our Common Stock, or securities convertible or exchangeable into shares of Common Stock, in future transactions may be higher or lower than the price per share paid by any investor in this offering.

We do not intend to pay dividends on our Common Stock in the foreseeable future.

We have never paid cash dividends on our Common Stock. We currently intend to invest our future earnings, if any, to fund our growth and not to pay any cash dividends on our Common Stock. Because we do not intend to pay dividends, your ability to receive a return on your investment will depend on any future appreciation in the market price of our Common Stock. We cannot be certain that our Common Stock will appreciate in price.

There is no public market for the Common Warrants or the Pre-Funded Warrants being offered in this offering.

There is no established public trading market for the Common Warrants or the Pre-Funded Warrants in this offering, and we do not expect a market to develop. In addition, we do not intend to apply to list the Common Warrants or the Pre-Funded Warrants on any securities exchange or nationally recognized trading system, including Nasdaq. Without an active market, the liquidity of the Common Warrants or the Pre-Funded Warrants will be limited.

Holders of the Common Warrants or the Pre-Funded Warrants purchased in this offering will have no rights as holders of Common Stock until such holders exercise their Common Warrants or Pre-Funded Warrants and acquire our Common Stock.

Until holders of the Common Warrants or the Pre-Funded Warrants acquire our Common Stock upon exercise of such Common Warrants or Pre-Funded Warrants, holders of the Common Warrants or the Pre-Funded Warrants will have no rights with respect to our Common Stock underlying such Common Warrants or Pre-Funded Warrants. Upon exercise of the Common Warrants or the Pre-Funded Warrants, the holders will be entitled to exercise the rights of a holder of Common Stock only as to matters for which the record date occurs after the exercise date.

The Pre-Funded Warrants and Common Warrants are speculative in nature.

Except as otherwise provided in the Pre-Funded Warrants or the Common Warrants, until holders of Pre-Funded Warrants or Common Warrants acquire our Common Stock upon exercise of such warrants, holders of Pre-Funded Warrants or Common Warrants will have no rights with respect to our Common Stock underlying such warrants. Upon exercise of the Pre-Funded Warrants or the Common Warrants, the holders will be entitled to exercise the rights of a stockholder of our Common Stock only as to matters for which the record date occurs after the exercise date.

Moreover, following this offering, the market value of the Pre-Funded Warrants or the Common Warrants is uncertain. There can be no assurance that the market price of our Common Stock will ever equal or exceed the price of the Pre-Funded Warrants or the Common Warrants, and, consequently, whether it will ever be profitable for investors to exercise their respective warrants.

We will not receive any meaningful amount of additional funds upon the exercise of the Pre-Funded Warrants.

Each Pre-Funded Warrant will be exercisable until all are fully exercised. The investor can exercise the Pre-funded Warrants by paying the nominal cash purchase price upon exercise or through a "cashless exercise" procedure. Accordingly, we will not, in the case of the Pre-Funded Warrants, receive any meaningful additional funds upon the exercise of the Pre-Funded Warrants.

Significant holders or beneficial holders of shares of our Common Stock may not be permitted to exercise the Pre-Funded Warrants that they hold.

A holder of the Pre-Funded Warrants will not be entitled to exercise any portion of any Pre-Funded Warrant that, upon giving effect to such exercise, would cause: (i) the aggregate number of shares of our Common Stock beneficially owned by such holder (together with its affiliates) to exceed 4.99% (or 9.99% at the election of the holder) of the number of shares of our Common Stock immediately after giving effect to the exercise; or (ii) the combined voting power of our securities beneficially owned by such holder (together with its affiliates) to exceed 4.99% (or 9.99% at the election of the holder) of the combined voting power of all of our securities outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Pre-Funded Warrants. As a result, investors may not be able to exercise their Pre-Funded Warrants for shares of our Common Stock at a time when it would be financially beneficial for them to do so. In such a circumstance, investors could seek to sell their Pre-Funded Warrants to realize value, but they may be unable to do so in the absence of an established trading market and due to applicable transfer restrictions.

We may not receive any additional funds from the exercise of the Common Warrants sold in the concurrent private placement.

In certain circumstances, each Common Warrant sold in the concurrent private placement may be exercised by way of cashless exercise, meaning that the holder may

not pay a cash purchase price on exercise, but instead would receive on such exercise the net number of shares of Common Stock determined according to the formula set forth in the Common Warrant. Accordingly, we may not receive any additional funds upon the exercise of the Common Warrants or if the Common Warrants are not exercised at all.

We are currently listed on The Nasdaq Capital Market. If we are unable to maintain listing of our securities on Nasdaq or any stock exchange, our stock price could be adversely affected and the liquidity of our stock and our ability to obtain financing could be impaired and it may be more difficult for our shareholders to sell their securities.

Although our Common Stock is currently listed on The Nasdaq Capital Market, we may not be able to continue to meet the exchange's minimum listing requirements or those of any other national exchange. The Listing Rules of Nasdaq require listing issuers to comply with certain standards in order to remain listed on its exchange. If, for any reason, we should fail to maintain compliance with these listing standards and Nasdaq should delist our securities from trading on its exchange and we are unable to obtain listing on another national securities exchange, a reduction in some or all of the following may occur, each of which could have a material adverse effect on our shareholders:

- the liquidity of our Common Stock;
- the market price of our Common Stock;
- our ability to obtain financing for the continuation of our operations;
- the number of investors that will consider investing in our Common Stock;
- the number of market makers in our Common Stock;
- the availability of information concerning the trading prices and volume of our Common Stock; and
- the number of broker-dealers willing to execute trades in shares of our Common Stock.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying base prospectus, the documents that we incorporate by reference herein or therein and any free writing prospectuses that we may authorize for use in connection with this offering contain "forward-looking statements" within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. These forward-looking statements can generally be identified as such because the context of the statement will include words such as "may," "will," "intend," "plan," "believe," "anticipate," "expect," "estimate," "predict," "potential," "continue," "likely," or "opportunity," the negative of these words or words of similar import. Similarly, statements that describe our future plans, strategies, intentions, expectations, objectives, goals or prospects are also forward-looking statements. Discussions containing these forward-looking statements may be found, among other places, in the "Business" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" sections incorporated by reference from our most recent Annual Report on Form 10-K and our Quarterly Reports on Form 10-Q for the quarterly periods ended subsequent to our filing of such Annual Report on Form 10-K, as well as any amendments thereto reflected in subsequent filings with the SEC.

These forward-looking statements are based largely on our expectations and projections about future events and future trends affecting our business and are subject to risks and uncertainties that could cause actual results to differ materially from those anticipated in the forward-looking statements. The risks and uncertainties include, among others, those noted in "Risk Factors" above and in any applicable prospectus supplement or free writing prospectus, and those included in the documents that we incorporate by reference herein and therein.

In addition, past financial and/or operating performance is not necessarily a reliable indicator of future performance, and you should not use our historical performance to anticipate results or future period trends. We can give no assurances that any of the events anticipated by the forward-looking statements will occur or, if any of them do, what impact they will have on our results of operations and financial condition. Except as required by law, we undertake no obligation to publicly revise our forward-looking statements to reflect events or circumstances that arise after the filing of this prospectus supplement or any supplement or free writing prospectus, or documents incorporated by reference herein and therein, that include forward-looking statements.

USE OF PROCEEDS

Our net proceeds from this offering will be approximately $2.7 million, after deducting the Placement Agent and estimated offering expenses payable by us. The net proceed estimates exclude proceeds, if any, from the concurrent private placement.

Currently, we intend to use the net proceeds from this offering for working capital and for general corporate purposes. This represents our best estimate of the manner in which we will use the net proceeds we receive from this offering based upon the current status of our business, but we have not reserved or allocated amounts for specific purposes and we cannot specify with certainty how or when we will use any of the net proceeds. Amounts and timing of our actual expenditures will depend on numerous factors. We will retain broad discretion in the allocation and use of the net proceeds from this offering, and investors will be relying on the judgment of our management regarding the application of the proceeds of this offering.

Pending application of the net proceeds as described above, we intend to invest the proceeds to use in investment-grade, interest-bearing securities such as money market funds, certificates of deposit, or direct or guaranteed obligations of the U.S. government, or hold as cash. We cannot predict whether the proceeds invested will yield a favorable, or any, return.

DIVIDEND POLICY

We have never declared or paid any cash dividends on our capital stock, and we do not currently intend to pay any cash dividends on our Common Stock for the foreseeable future. We expect to retain future earnings, if any, to fund the development and growth of our business. Any future determination to pay dividends on our Common Stock will be at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements and any contractual restrictions.

CAPITALIZATION

The following table sets forth our cash and consolidated capitalization as of June 30, 2024:

- On an actual basis; and
- on an as adjusted basis to reflect our receipt of the net proceeds from our sale and issuance of 862,602 Shares and Pre-Funded Warrants to purchase 702,398 shares of Common Stock in this offering based on the offering price of $2.00 per Share and $1.9999 per Pre-Funded Warrant and after deducting estimated Placement Agent fees and expenses and estimated offering expenses payable by us (and assuming no exercise of the Common Warrants).

The as adjusted amounts shown below are unaudited and represent management's estimate. The information in this table should be read in conjunction with and is

qualified by reference to the financial statements and notes thereto and other financial information incorporated by reference into this prospectus supplement.

	As of June 30, 2024	
	Actual (Unaudited)	As Adjusted (Unaudited)
	(U.S. $ in thousands)	
Cash	$ 5,614	$ 8,300
Total Current Liabilities	$ 691	$ 691
Stockholders' Equity:		
Share capital and additional paid in capital	$ 18,672	$ 21,358
Accumulated deficit	(13,287)	(13,287)
Total stockholders' equity	$ 5,385	$ 8,071

The above discussion and table is based on 7,850,550 shares outstanding as of June 30, 2024, and excludes:

- Up to 5,581,728 shares of Common Stock issuable upon the exercise of outstanding warrants with a weighted-average exercise price of $5.79 per share; and
- Up to 880,717 shares of Common Stock issuable upon the exercise of outstanding stock options, which options have a weighted average exercise price of $3.96 per share; and
- Up to an aggregate of 47,000 shares of Common Stock reserved for future issuance under our 2022 Equity Incentive Plan (the "2022 Plan"); and
- Up to 1,565,000 shares of Common Stock issuable upon exercise of Common Warrants issued in the concurrent Private Placement at an exercise price of $2.00 per share; and
- Up to 62,600 shares of Common Stock issuable upon exercise of the Placement Agent warrants.

Except as otherwise indicated, the information in this prospectus supplement assumes no exercise of any outstanding options or exercise of any outstanding warrants, or the Common Warrants issued pursuant to the concurrent private placement described in this prospectus supplement, or the Placement Agent Warrants to be issued as compensation to the Placement Agent for this offering.

DILUTION

If you invest in the Shares in this offering, you will experience dilution to the extent of the difference between the price per Share you pay in this offering and the net tangible book value per share of our shares of Common Stock immediately after this offering. As of June 30, 2024, we had a net tangible book value of approximately $5.4 million or $0.6859 per common share, based upon 7,850,550 shares of Common Stock outstanding on such date. Net tangible book value per share represents the amount of our total tangible assets reduced by the amount of our total liabilities and divided by the total number of shares of Common Stock outstanding.

After giving effect to the sale by us in this offering of 862,602 shares of Common Stock at a public offering price of $2.00 per share and Pre-Funded Warrants to purchase 702,398 shares of Common Stock at a public offering price of $1.9999 per Pre-Funded Warrant (assuming full exercise of the Pre-Funded Warrants at an exercise price of $0.0001, no exercise of the Common Warrants issued in the concurrent private placement), and after deducting estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2024 would have been approximately $8.1 million, or approximately $0.8572 per share of Common Stock. This represents an immediate increase in net tangible book value of approximately $0.1713 per share of Common Stock to existing shareholders and an immediate dilution of approximately $1.1428 per share of Common Stock to new investors. The following table illustrates this calculation on a per share basis:

Offering price per share of Common Stock		$ 2.0000
Net tangible book value per share as of June 30, 2024	$ 0.6859	
Increase in net tangible book value per share attributable to this offering	$ 0.1713	
As adjusted net tangible book value per share as of June 30, 2024, after giving effect to this offering		$ 0.8572
Dilution in as adjusted net tangible book value per share to investors participating in this offering		$ 1.1428

The number of shares of Common Stock expected to be outstanding after this offering is based on 7,850,550 shares outstanding as of June 30, 2024, and excludes:

- Up to 5,581,728 shares of Common Stock issuable upon the exercise of outstanding warrants with a weighted-average exercise price of $5.79 per share; and
- Up to 880,717 shares of Common Stock issuable upon the exercise of outstanding stock options, which options have a weighted average exercise price of $3.96 per share; and
- Up to an aggregate of 47,000 shares of Common Stock reserved for future issuance under our 2022 Equity Incentive Plan (the "2022 Plan"); and
- Up to 1,565,000 shares of Common Stock issuable upon exercise of the Common Warrants issued in the concurrent Private Placement at an exercise price of $2.00 per share; and
- Up to 62,600 shares of Common Stock issuable upon exercise of the Placement Agent Warrants to be issued as compensation to the Placement Agent in connection with the offering.

Except as otherwise indicated, the information in this prospectus supplement assumes no exercise of any outstanding options or exercise of any outstanding warrants, or the Common Warrants issued pursuant to the concurrent private placement described in this prospectus supplement, or the Placement Agent Warrants to be issued as compensation to the Placement Agent for this offering.

To the extent that options or warrants are exercised, you may experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of these securities could result in further dilution to our stockholders.

DESCRIPTION OF SECURITIES WE ARE OFFERING

As of the date of this prospectus supplement, there was a total of 7,850,550 shares of Common Stock issued and outstanding. In addition, we have 880,717 shares of

Common Stock issuable pursuant to outstanding stock options, and 5,581,728 shares of Common Stock issuable upon the exercise of outstanding shares of Common Stock purchase warrants. Immediately following the closing of this offering, we expect to have 8,713,152 issued and outstanding shares of Common Stock, 880,717 shares of Common Stock issuable pursuant to outstanding stock options, 47,000 options available for grant under our 2022 Plan to acquire shares of Common Stock and 7,209,328 outstanding warrants to acquire shares of Common Stock.

We are offering shares of Common Stock and Pre-Funded Warrants to purchase shares of our Common Stock. The following description of our shares of Common Stock and Pre-Funded Warrants to purchase shares of our Common Stock summarizes the material terms and provisions thereof, including the material terms of the shares of Common Stock and Pre-Funded Warrants to purchase shares of our Common Stock we are offering under this prospectus supplement and the accompanying prospectus.

Common Stock

The shares of our Common Stock are registered under Section 12 of the Exchange Act and are traded on Nasdaq under the symbol "BFRG". The material terms and provisions of our Common Stock and each other class of our securities that qualifies or limits our Common Stock are described in the section entitled "*Description of Capital Stock*", beginning on page 16 of the accompanying base prospectus.

Pre-Funded Warrants

The following description is subject to the detailed provisions of the form of certificate for the Pre-Funded Warrants (the "Pre-Funded Warrant"), the form of which will be filed as an exhibit to our Current Report on Form 8-K. Reference should be made to the Pre-Funded Warrant for the full text of attributes of the Pre-Funded Warrants.

Each Pre-Funded Warrant will be sold in this offering at a purchase price equal to $1.9999 (equal to the purchase price per share of Common Stock, minus $0.0001).

Each whole Pre-Funded Warrant will entitle the holder to acquire, subject to adjustment as summarized below, one share of Common Stock at any time until the Pre-Funded Warrants are exercised in full. The exercise price will be pre-funded except for a nominal exercise price of US$0.0001 per Pre-Funded Warrant. The Pre-Funded Warrants will be exercisable, at the option of the holder, in whole or in part, by delivering to the Company a duly executed notice of exercise, thereby canceling all or a portion of such holder's Pre-Funded Warrants. The Pre-Funded Warrants may be exercised on a "cashless" basis, in which the holder receives the net value of the Pre-Funded Warrants in shares of Common Stock determined according to the formula set forth in the Pre-Funded Warrant.

The Pre-Funded Warrant will provide that the number of underlying shares of Common Stock and exercise price of the Pre-Funded Warrants will be subject to adjustment in the event of certain share dividends or distributions or of a subdivision or consolidation of the shares of Common Stock or similar events.

In connection with certain specified mergers, sales, business combinations, recapitalizations or similar events (a "Fundamental Transaction"), holders of the Pre-Funded Warrants will have the right to receive, upon exercise, the same consideration as holders of shares of Common Stock in respect of the shares of Common Stock that would be issuable upon exercise of the Pre-Funded Warrants immediately prior to such Fundamental Transaction, in addition to any additional consideration receivable by holders of shares of Common Stock in connection with such Fundamental Transaction.

There is currently no market through which the Pre-Funded Warrants may be sold, and the holder may not be able to resell the Pre-Funded Warrants purchased under this prospectus supplement. The Pre-Funded Warrant will also contain restrictions on the number of Pre-Funded Warrant Shares that may be acquired by the holder of Pre-Funded Warrants upon any exercise of the Pre-Funded Warrants that would result in the holder and its affiliates holding in excess of 4.99% of the number of shares of Common Stock outstanding immediately after giving effect to the issuance of Pre-Funded Warrant Shares upon exercise of such Pre-Funded Warrants, which beneficial ownership limitation may be increased up to 9.99% upon notice to us. No fractional Pre-Funded Warrant Shares will be issuable upon the exercise of any Pre-Funded Warrants. Holders of Pre-Funded Warrants will not have any voting, dividend or any other rights which a holder of shares of Common Stock would have, except as set forth in the Pre-Funded Warrants.

CONCURRENT PRIVATE PLACEMENT OF COMMON WARRANTS

Concurrently with this offering, we are also selling to the purchaser in this offering Common Warrants to purchase up to 1,565,000 shares of Common Stock ("Common Warrant Shares"), with an exercise price of $2.00 per Common Warrant Share, subject to certain adjustments, and exercisable on the date that is six (6) months from the date of issuance for a term of five years from the initial exercise date.

A holder of Common Warrants will have the right to exercise the Common Warrants on a "cashless" basis if there is no effective registration statement registering the resale of the Common Warrant Shares underlying the Common Warrants. Subject to limited exceptions, a holder of Common Warrants will not have the right to exercise any portion of its Common Warrants if the holder, together with its affiliates, would beneficially own in excess of 4.99% of the number of shares of Common Stock outstanding immediately after giving effect to such exercise, provided that the holder may increase the beneficial ownership limitation up to 9.99%.

We have agreed to prepare and file with the SEC a registration statement to register for resale all of the Common Warrant Shares underlying the Common Warrants.

Except as otherwise provided in the Common Warrants or by virtue of such holder's ownership of Common Warrant Shares, the holders of the Common Warrants do not have the rights or privileges of holders of our shares of Common Stock, including any voting rights, until they exercise their Common Warrants.

The Common Warrants and the Common Warrant Shares issuable upon the exercise of the Common Warrants are being offered pursuant to the exemptions provided in Section 4(a)(2) of the Securities Act and Rule 506(b) of Regulation D promulgated thereunder, and they are not being offered pursuant to this prospectus supplement and the accompanying prospectus.

In the event of any fundamental transaction, as described in the Common Warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our shares of Common Stock, subject to certain exceptions, then upon any subsequent exercise of a Common Warrant, the holder will have the right to receive as alternative consideration, for each Common Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of Common Stock of the successor or acquiring corporation of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of Common Warrant Shares for which the Common Warrant is exercisable immediately prior to such event. Notwithstanding the foregoing, in the event of a fundamental transaction, the holders of the Common Warrants have the right to require us or a successor entity to redeem the Common Warrants for cash in the amount of the Black Scholes Value (as defined in each Common Warrant) of the unexercised portion of the Common Warrants concurrently with or within 30 days following the consummation of a fundamental transaction. However, in the event of a fundamental transaction which is not in our control, including a fundamental transaction not approved by our board of directors, the holders of the Common Warrants will only be entitled to receive from us or our successor entity, as of the date of consummation of such fundamental transaction the same type or form of consideration (and in the same proportion), at the Black Scholes Value of the unexercised portion of the Common Warrants, that is being offered and paid to the holders of our shares of Common Stock in connection with the fundamental transaction, whether that consideration is in the form of cash, shares or any combination of cash and shares, or whether the holders of our shares of Common Stock are given the choice to receive alternative forms of consideration in connection with the fundamental transaction.

There is no established public trading market for the Common Warrants, and we do not expect a market to develop. In addition, we do not intend to list the Common Warrants on Nasdaq, any other national securities exchange or any other nationally recognized trading system.

PLAN OF DISTRIBUTION

WallachBeth Capital LLC ("WallachBeth") has agreed to act as our placement agent in connection with this offering subject to the terms and conditions of the placement agency agreement dated October 18, 2024. The Placement Agent is not purchasing or selling any of the securities offered by this prospectus supplement, nor is it required to arrange the purchase or sale of any specific number or dollar amount of securities, but has agreed to use its reasonable best efforts to arrange for the sale of all of the securities offered hereby. Therefore, we have entered into a securities purchase agreement directly with the investor in connection with this offering, and we will only sell to the investor who has entered into the securities purchase agreement.

We expect to deliver the securities being offered pursuant to this prospectus supplement on or about October 21, 2024, subject to the satisfaction of customary closing conditions.

We have agreed to indemnify the Placement Agent and specified other persons against certain liabilities relating to or arising out of the Placement Agent's activities under the engagement letter and to contribute to payments that the Placement Agent may be required to make in respect of such liabilities.

Fees and Expenses

We have engaged WallachBeth as our sole placement agent in connection with this offering. This offering is being conducted on a "reasonable best efforts" basis and the Placement Agent has no obligation to buy any of the securities from us or to arrange for the purchase or sale of any specific number or dollar amount of securities. We have agreed to pay the Placement Agent a fee based on the aggregate proceeds as set forth in the table below.

	Per Share	Per Pre-Funded Warrant	Total
Public offering price	$ 2.0000	$ 1.9999	$ 3,129,930
Placement Agent fees (1)	$ 0.1600	$ 0.1600	$ 250,400
Proceeds, before expenses, to the Company (2)	$ 1.8400	$ 1.8399	$ 2,879,530

(1) Consists of a cash fee of 8.0% of the aggregate gross proceeds raised in connection with the offering. In addition, we have agreed to reimburse the Placement Agent for $100,000 of its expenses. We have also agreed to issue the Placement Agent warrants (the "Placement Agent Warrants") to purchase shares of our Common Stock equal to 4.0% of the aggregate number of the shares and Pre-Funded Warrants sold in this offering.

(2) The amount of the offering proceeds to us presented in this table does not give effect to the proceeds from the exercise of any of the Pre-Funded Warrants, Common Warrants, or any of the Placement Agent Warrants.

We estimate the total expenses payable by us for this offering, excluding the Placement Agents fee and expenses, will be approximately $0.1 million.

The Placement Agent may be deemed to be underwriters within the meaning of Section 2(a)(11) of the Securities Act, and any commissions received by it and any profit realized on the resale of the shares sold by it while acting as principal might be deemed to be underwriting discounts or commissions under the Securities Act. As an underwriter, the Placement Agent would be required to comply with the requirements of the Securities Act and the Exchange Act, including, without limitation, Rule 415(a)(4) under the Securities Act and Rule 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of shares by the Placement Agent acting as principal. Under these rules and regulations, the Placement Agent:

- may not engage in any stabilization activity in connection with our securities; and
- may not bid for or purchase any of our securities or attempt to induce any person to purchase any of our securities, other than as permitted under the Exchange Act, until it has completed its participation in the distribution.

Placement Agent Warrants

Upon closing of this offering, we have agreed to issue the Placement Agent Warrants to purchase up to 62,600 shares of Common Stock (equal to four percent (4.0%) of the aggregate number of shares of Common Stock and/or Pre-Funded Warrants sold in this offering). The Placement Agent Warrants will be exercisable at a price of $2.00 per share (equal to 100% of the price per Share in this offering). The placement agent warrants are exercisable at any time and from time to time, in whole or in part, during a period commencing six (6) months from the date of issuance and expiring on the five-year anniversary of the initial exercise date. We have not registered the Placement Agent Warrants and the shares of Common Stock underlying the Placement Agent Warrants in this offering.

Lock-up Agreements

Pursuant to "lock-up" agreements, our directors and executive officers have agreed, for a period of sixty (60) days, after the closing date, have agreed, in part, not to:

- offer, sell, hypothecate, pledge or otherwise dispose of or enter into any transaction which is designed to, or might reasonably be expected to, result in the disposition (whether by actual disposition or effective economic disposition due to cash) directly or indirectly, of any shares of Common Stock or any securities convertible into, or exercisable or exchangeable for, shares of Common Stock;
- enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of our securities, whether any such transaction is to be settled by delivery of our shares of Common Stock, in cash or otherwise;
- make any demand for or exercise any right with respect to the registration of any of our securities;
- publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap, hedge; or
- other arrangement relating to any of our securities.

Notwithstanding these limitations, these shares of Common Stock may be transferred under limited circumstances, including, without limitation, by gift, will or intestate succession.

Tail rights and other restrictions

According to the terms of the Placement Agency Agreement, we may not for ninety (90) days after the closing of the offering, effect a sale of any securities or register

for sale any securities. Additionally, we may not for six (6) months after the closing of the offering, effect or enter into an agreement to effect any issuance of our Common Stock or Common Stock Equivalents (or a combination of thereof) involving a Variable Rate Transaction (as defined in the Placement Agency Agreement.

Discretionary Accounts

The Placement Agent does not intend to confirm sales of the securities offered hereby to any accounts over which it has discretionary authority.

Other Activities and Relationships

The Placement Agent and certain of its affiliates are full service financial institutions engaged in various activities, which may include securities trading, commercial and investment banking, financial advisory, investment management, investment research, principal investment, hedging, financing and brokerage activities. The Placement Agent and certain of its affiliates have, from time to time, performed, and may in the future perform, various commercial and investment banking and financial advisory services for us and our affiliates, for which they received or will receive customary fees and expenses.

In the ordinary course of their various business activities, the Placement Agent and certain of its affiliates may make or hold a broad array of investments and actively trade debt and equity securities (or related derivative securities) and financial instruments (including bank loans) for their own account and for the accounts of their customers, and such investment and securities activities may involve securities and/or instruments issued by us and our affiliates. If the Placement Agent or its affiliates have a lending relationship with us, they routinely hedge their credit exposure to us consistent with their customary risk management policies. The Placement Agent and its affiliates may hedge such exposure by entering into transactions that consist of either the purchase of credit default swaps or the creation of short positions in our securities or the securities of our affiliates, including potentially the Common Stock offered hereby. Any such short positions could adversely affect future trading prices of the Common Stock offered hereby. The Placement Agent and certain of its affiliates may also communicate independent investment recommendations, market color or trading ideas and/or publish or express independent research views in respect of such securities or instruments and may at any time hold, or recommend to clients that they acquire, long and/or short positions in such securities and instruments.

Except for services provided in connection with this offering, the Placement Agent has not provided any other investment banking or other financial services to us during the 180-day period preceding the date of this prospectus supplement.

Relationships

The placement agent and their respective affiliates may provide from time to time in the future certain commercial banking, financial advisory, investment banking and other services for us in the ordinary course of their business, for which they may receive customary fees and commissions. In addition, from time to time, the placement agent and their affiliates may effect transactions for their own accounts or the accounts of customers, and hold on behalf of themselves or their customers, long or short positions in our debt or equity securities or loans, and may do so in the future. Except as disclosed in this prospectus supplement, we have no present arrangements with the placement agent for any further services.

The placement agent and their affiliates may in the future provide various investment banking and other financial services for us and our affiliates for which they may in the future receive customary fees.

The Placement Agent acted as the sole underwriter for our secondary public offering that closed in February 2024. For its services as the underwriter, the Placement Agent was paid a cash fee equal to eight percent (8.0%) of the aggregate sales price of securities sold in such offering, certain out of pocket expenses not exceeding $115,000, a non-accountable expense allowance in the amount of 1% of the gross offering amount, and warrants to purchase 90,428 shares of our Common Stock, equal to six percent (6%) of the number of securities issued in the offering, at an exercise price of $4.16 per share, equal to 110% of the public offering price in such offering.

The Placement Agent acted as the representative of underwriters for our initial public offering that closed in February 2023. For its services as the underwriter, the Placement Agent was paid a cash fee equal to eight percent (8.0%) of the aggregate sales price of securities sold in such offering, certain out of pocket expenses not exceeding $140,000, a non-accountable expense allowance in the amount of 1% of the gross offering amount, and warrants to purchase 18,000 shares of our Common Stock, for services rendered as a placement agent for our private placement of convertible bridge notes.

Transfer Agent and Registrar

The transfer agent and registrar for the Company's Common Stock is VStock Transfer, LLC. The transfer agent and registrar's address is 18 Lafayette Place, Woodmere, New York 11598.

Listing on the Nasdaq Capital Market

Our Common Stock and the Tradeable Warrants trade on The Nasdaq Capital Market under the symbols "BFRG" and "BFRGW," respectively.

LEGAL MATTERS

The validity of the issuance of the securities offered by this prospectus supplement will be passed upon for us by Sichenzia Ross Ference Carmel LLP, New York, New York. Sheppard, Mullin, Richter & Hampton LLP, New York, New York is counsel to the placement agent in connection with the offering.

EXPERTS

The consolidated financial statements of Bullfrog AI Holdings, Inc. as of and for the years ended December 31, 2023 and 2022 appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2023 have been audited by M&K CPAs, PLLC, as set forth in its report thereon. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

As permitted by SEC rules, this prospectus supplement omits certain information that is included in the registration statement of which this prospectus supplement forms a part and its exhibits. Since this prospectus supplement may not contain all of the information that you may find important, we urge you to review the full text of these documents. If we have filed a contract, agreement or other document as an exhibit to the registration statement of which this prospectus supplement forms a part, please read the exhibit for a more complete understanding of the document or matter involved. Each statement in this prospectus supplement, including statements incorporated by reference as discussed above, regarding a contract, agreement or other document is qualified in its entirety by reference to the actual document.

We are subject to the information reporting requirements of the Exchange Act and, in accordance with these requirements, we file annual, quarterly and current reports, proxy statements, information statements, and other information with the SEC. Our SEC filings are available to the public over the Internet at the SEC's website at *www.sec.gov*. These documents may also be accessed on our web site at *www.bullfrogai.com*. Information contained on our web site is not incorporated by reference into this prospectus supplement and you should not consider information contained on our web site to be part of this prospectus supplement.

INCORPORATION BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement. We incorporate by reference in this prospectus the following information (other than, in each case, documents or information deemed to have been furnished and not filed in accordance with SEC rules):

- our Annual Report on Form 10-K for the year ended December 31, 2023 which was filed with the SEC on March 29, 2024;
- our Quarterly Report on Form 10-Q for the quarters ended March 31, 2024 and June 30, 2024 which were filed with the SEC on May 10, 2024 and August 7, 2024, respectively;
- our Current Reports on Form 8-K filed with the SEC on April 9, 2024, May 16, 2024, July 25, 2024, September 25, 2024, October 9, 2024 and October 15, 2024.
- the description of our Common Stock contained in our Registration Statement on Form 8-A filed with the SEC on January 23, 2023 (File No. 001-41600); and
- all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus and prior to the termination of this offering.

In addition, all documents that the Company files pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, subsequent to the filing of this Registration Statement and prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference into this Registration Statement and to be a part hereof from the date of filing of such documents, except as to any document or portion of any document that is deemed furnished and not filed. Notwithstanding the foregoing, information furnished under Items 2.02 and 7.01 of any Current Report on Form 8-K, including the related exhibits, is not incorporated by reference in this prospectus supplement.

Pursuant to Rule 412 under the Securities Act, any statement contained in the documents incorporated or deemed to be incorporated by reference in this Registration Statement shall be deemed to be modified, superseded or replaced for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is incorporated or deemed to be incorporated by reference in this Registration Statement modifies, supersedes or replaces such statement. Any such statement so modified, superseded or replaced shall not be deemed, except as so modified, superseded or replaced, to constitute a part of this Registration Statement.

The information about us contained in this prospectus should be read together with the information in the documents incorporated by reference. You may request a copy of any or all of these filings, at no cost, by writing or telephoning us at: Vininder Singh, Bullfrog AI Holdings, Inc., 325 Ellington Blvd., Unit 317, Gaithersburg, MD 20878, telephone number (240) 658-6710.

PROSPECTUS

$100,000,000

Bullfrog AI Holdings, Inc.

Common Stock
Preferred Stock
Warrants
Units

We may from time to time, in one or more offerings at prices and on terms that we will determine at the time of each offering, sell common stock, preferred stock, warrants, or a combination of these securities, or units, up to a total offering price of $100,000,000.

This prospectus describes the general manner in which our securities may be offered using this prospectus. Each time we offer and sell securities, we will provide you with a prospectus supplement that will contain specific information about the terms of that offering. Any prospectus supplement may also add, update, or change information contained in this prospectus. You should carefully read this prospectus and the applicable prospectus supplement as well as the documents incorporated or deemed to be incorporated by reference in this prospectus before you purchase any of the securities offered hereby.

We are an "emerging growth company" under applicable Securities and Exchange Commission, rules and, as such, have elected to comply with certain reduced public company reporting requirements for this prospectus and future filings.

This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement.

Our common stock and certain warrants are currently traded on The Nasdaq Capital Market ("Nasdaq") under the symbols "BFRG" and "BFRGW," respectively. On August 2, 2024, the last reported sales price for our common stock was $3.05 per share. The applicable prospectus supplement will contain information, where applicable, as to any other listing of the securities on Nasdaq or any other securities market or exchange covered by the prospectus supplement. Prospective purchasers of our securities are urged to obtain current information as to the market prices of our securities, where applicable.

We may offer the securities directly or through agents or to or through underwriters or dealers. If any agents or underwriters are involved in the sale of the securities their names, and any applicable purchase price, fee, commission or discount arrangement between or among them, will be set forth, or will be calculable from the information set forth, in an accompanying prospectus supplement. We can sell the securities through agents, underwriters or dealers only with delivery of a prospectus supplement describing the method and terms of the offering of such securities. See "Plan of Distribution."

The aggregate market value of our outstanding common stock held by non-affiliates was approximately $15,986,179 which was calculated based on 5,241,370 shares of outstanding common stock held by non-affiliates as of August 2, 2024, and a price per share of $3.05, the closing price of our common stock on August 2, 2024. Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities in a public offering with a value of more than one-third of our public float in any 12-month period, so long as our public float is less than $75,000,000. As of the date of this prospectus, we have not offered and sold any shares of our common stock pursuant to General Instruction I.B.6 to Form S-3 during the prior 12 calendar month period that ends on and includes the date hereof.

Investing in our securities involves significant risks. We strongly recommend that you read carefully the risks we describe in this prospectus and in any accompanying prospectus supplement, as well as the risk factors that are incorporated by reference into this prospectus from our filings made with the Securities and Exchange Commission. See "Risk Factors" beginning on page 3 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

This prospectus is dated August 21, 2024

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You should rely only on the information contained or incorporated by reference in this prospectus or any prospectus supplement. We have not authorized anyone to provide you with information different from that contained or incorporated by reference into this prospectus. If any person does provide you with information that differs from what is contained or incorporated by reference in this prospectus, you should not rely on it. No dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus. You should assume that the information contained in this prospectus or any prospectus supplement is accurate only as of the date on the front of the document and that any information contained in any document we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus or any prospectus supplement or any sale of a security. These documents are not an offer to sell or a solicitation of an offer to buy these securities in any circumstances under which the offer or solicitation is unlawful.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration process. Under this shelf registration process, we may sell any combination of the securities described in this prospectus in one of more offerings up to a total dollar amount of proceeds of $100,000,000. This prospectus describes the general manner in which our securities may be offered by this prospectus. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the terms of that offering. The prospectus supplement may also add, update or change information contained in this prospectus or in documents incorporated by reference in this prospectus. The prospectus supplement that contains specific information about the terms of the securities being offered may also include a discussion of certain U.S. Federal income tax consequences and any risk factors or other special considerations applicable to those securities. To the extent that any statement that we make in a prospectus supplement is inconsistent with statements made in this prospectus or in documents incorporated by reference in this prospectus, you should rely on the information in the prospectus supplement.

You should not assume that the information contained in this prospectus, any applicable prospectus supplement or any related free writing prospectus is accurate on any date subsequent to the date set forth on the front of the document or that any information we have incorporated by reference is correct on any date subsequent to the date of the document incorporated by reference, even though this prospectus, any applicable prospectus supplement or any related free writing prospectus is delivered, or securities are sold, on a later date. You should carefully read both this prospectus and any prospectus supplement together with the additional information described under "Where You Can Find More Information" before buying any securities in this offering.

The terms "Bullfrog", the "Company," "we," "our," or "us," in this prospectus refer to Bullfrog AI Holdings, Inc. and its wholly-owned subsidiaries, unless the context suggests otherwise.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Some of the statements made under "Prospectus Summary," "Use of Proceeds," and elsewhere in this prospectus, as well as the documents incorporated by reference herein, including in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, constitute forward-looking statements within the meaning of The Private Securities Litigation Reform Act of 1995. In some cases, you can identify forward-looking statements by terminology such as "may," "will," "should," "expects," "plans," "anticipates," "believes," "estimates," "predicts," "potential," "intends," or "continue," or the negative of these terms or other comparable terminology.

These forward-looking statements may include, but are not limited to, statements related to our expected business, new product introductions, results of clinical studies, expectations regarding regulatory clearance and the timing of FDA or non-US filings or approvals including meetings with FDA or non-U.S. regulatory bodies, our ability to raise funds for general corporate purposes and operations, including our research activities and clinical trials, procedures and procedure adoption, future results of operations, future financial position, our ability to generate revenues, our financing plans and future capital requirements, anticipated costs of revenue, anticipated expenses, the effect of recent accounting pronouncements, our anticipated cash flows, our ability to finance operations from cash flows or otherwise, and statements based on current expectations, estimates, forecasts, and projections about the economies and markets in which we operate and intend to operate and our beliefs and assumptions regarding these economies and markets.

Forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties. We have based these forward-looking statements on assumptions and assessments made by our management in light of their experience and their perception of historical trends, current conditions, expected future developments, and other factors they believe to be appropriate.

Important factors that could cause actual results, developments and business decisions to differ materially from those anticipated in these forward-looking statements include, among others, those factors referred to in our Annual Report on Form 10-K for the fiscal year ended December 31, 2023, which is incorporated by reference herein.

These statements are only current predictions and are subject to known and unknown risks, uncertainties, and other factors that may cause our or our industry's actual results, levels of activity, performance, or achievements to be materially different from those anticipated by the forward-looking statements. We discuss many of these risks in the documents incorporated by reference herein. You should not rely upon forward-looking statements as predictions of future events.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements. Except as required by law, we are under no duty to update or revise any of the forward-looking statements, whether as a result of new information, future events or otherwise, after the date of this prospectus.

PROSPECTUS SUMMARY

This summary highlights certain information about us and selected information contained in the prospectus. This summary is not complete and does not contain all of the information that may be important to you. For a more complete understanding of the Company, we encourage you to read and consider the more detailed information included or incorporated by reference in this prospectus and our most recent consolidated financial statements and related notes.

Business Overview

Bullfrog AI Holdings, Inc. was incorporated in the State of Nevada in February 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 founding AI/ML platform (trade name: bfLEAP™) was created from technology originally developed at The Johns Hopkins University Applied Physics Laboratory (JHU-APL). Subsequently, we have developed new tools and capabilities composed of an ensemble of machine learning and artificial intelligence models.

In February 2018, Bullfrog AI Holdings secured the original exclusive, worldwide, royalty-bearing license from JHU-APL. 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 AI/ML platform with a precision medicine approach toward drug development with biopharmaceutical collaborators, as well as for 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 in-house development and divestiture; although, we also consider collaborations for earlier stage drugs.

In July 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 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 three (3%) percent for internally developed drug projects in which the JHU license was utilized. The new license also contains tiered sub licensing fees that start at fifty (50%) percent and reduce to twenty-five (25%) percent based on revenues. In May 2023, the Company and JHU-APL entered into Amendment number 1 of the July 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 paid in July 2022 and the remaining payments of $75,000, $75,000 and $50,000 are due 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 a result of this Amendment, the minimum annual payments were $30,000 for 2022 and $60,000 for 2023, and the minimum annual payments will be $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. In addition, we have signed three-year strategic data and commercialization agreements with the Lieber Institute for Brain Development ("LIBD") whom we believe has a repository of the largest collection of postmortem brains in the world including molecular, clinical, and other data. The objective of this partnership is for the Company to analyze these rich data sets using its proprietary AI/ML tools and models and then go to market with the discoveries with the ultimate goal of securing multiple revenue generating strategic partnership deals with biopharmaceutical companies. We intend on securing the rights to other proprietary data sets and repeating this strategy. 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 Good Manufacturing Practices, 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 in February 2023, aided by the receipt of the IPO proceeds, as well as the proceeds from our February 2024 Offering, 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 the J Craig Venter Institute and, in the quarter ended September 30, 2023, we completed a preclinical study for our Mebendazole prodrug program. The Company is actively engaged in developing and pursuing new intellectual property as it strives to continuously evolve its AI/ML platform.

Internally, the Company has added incremental staff to accelerate execution, and the development of processes and custom scripts for use in performing new drug target discovery and analytical services for customers, while also launching initiatives targeting large public health data sources and seeking access to proprietary health data sources, such as our agreement with the Lieber Institute for Brain Development. 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.

Implications of Being an Emerging Growth Company and a Smaller Reporting Company

We qualify as an "emerging growth company" as defined in Section 2(a)(19) of the Securities Act of 1933, as modified by the Jumpstart Our Business Startups Act of 2012, or the "JOBS Act." As such, we take advantage of certain exemptions from various reporting requirements applicable to other public companies that are not emerging growth companies for as long as we continue to be an emerging growth company, including (i) the exemption from the auditor attestation requirements with respect to internal control over financial reporting under Section 404 of the Sarbanes-Oxley Act of 2002 (the "Sarbanes-Oxley Act"), (ii) the exemptions from say-on-pay, say-on-frequency and say-on-golden parachute voting requirements and (iii) reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements. As a result, our stockholders may not have access to certain information they deem important. We will remain an emerging growth company until the earliest of (i) the last day of the fiscal year (a) following the fifth anniversary of the date of the first sale of the Company's common stock, (b) in which we have total annual gross revenue of at least $1.235 billion or (c) in which Bullfrog is deemed to be a large accelerated filer, which means the market value of our common stock that are held by non-affiliates exceeds $700 million as of the last business day of our prior second fiscal quarter, and (ii) the date on which we have issued more than $1.0 billion in non-convertible debt during the prior three-year period.

In addition, Section 107 of the JOBS Act also provides that an emerging growth company can take advantage of the exemption from complying with new or revised accounting standards provided in Section 7(a)(2)(B) of the Securities Act of 1933, as long as it is an emerging growth company. An emerging growth company can therefore delay the adoption of certain accounting standards until those standards would otherwise apply to private companies. The JOBS Act provides that a company can elect to opt out of the extended transition period and comply with the requirements that apply to non-emerging growth companies, but any such election to opt out is irrevocable. The Company has elected not to opt out of such extended transition period, which means that when a standard is issued or revised and it has different application dates for public or private companies, we, as an emerging growth company, can adopt the new or revised standard at the time private companies adopt the new or revised standard. This may make comparison of our financial statements with another public company which is neither an emerging growth company nor an emerging growth company which has opted out of using the extended transition period difficult or impossible because of the potential differences in accounting standards used.

Corporate Information

Our principal executive offices are located at 325 Ellington Blvd, Unit 317, Gaithersburg, MD 20878. Our telephone number is (240) 658-6710. Our website address is www.bullfrogai.com. The references to our website in this prospectus are inactive textual references only. The information on our website is neither incorporated by reference into this prospectus nor intended to be used in connection with this offering. All of our operations are currently conducted through Bullfrog AI, Inc. We have included our website address in this prospectus as an inactive textual reference only and not as an active hyperlink.

RISK FACTORS

Investing in our securities involves a high degree of risk. You should carefully review the risks and uncertainties described below before deciding whether to purchase any of the securities being registered pursuant to the registration statement of which this prospectus is a part. Each of the risk factors described below could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our securities. The occurrence of any of these risks might cause you to lose all or part of your investment. Moreover, the risks described below are not the only risks we face. Additional risks and uncertainties not currently known to us or that we currently deem to be immaterial may also materially and adversely affect our business, financial condition, and results of operations. If any of these risks actually occurs, our business, financial condition and results of operations could suffer. In that case, the trading price of our common stock could decline, and you may lose all or part of your investment. Our business, affairs, prospects, assets, financial condition, results of operations and cash flows could be materially and adversely affected by these risks. For more information about our SEC filings, please see "Where You Can Find More Information".

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

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

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

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

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

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

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

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

Any dispute or litigation regarding patents or other intellectual property could be costly and time consuming due to the uncertainty of intellectual property litigation and could divert our management and key personnel from our business operations. A claim of intellectual property infringement could force us to enter into a costly or restrictive license agreement, which might not be available under acceptable terms or at all, could require us to redesign our products, which would be costly and time-consuming, and/or could

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

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

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

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

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

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

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

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

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

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

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

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

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

We face significant competition from other biotechnology and pharmaceutical companies.

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

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

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

- identify drugs that have suffered set backs in the clinical development and regulatory process which we believe can be assisted by our platform's ability to design a better study group;
- attract qualified scientific, product development and commercial personnel;

- obtain patent or other proprietary protection for our drugs and technologies;
- obtain required regulatory approvals; successfully collaborate with pharmaceutical companies in the discovery, development and commercialization of new drugs; and
- negotiate competitive pricing and reimbursement with third party payors

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

- delay, reduce the scope of or eliminate one or more of our drug development programs;
- limit the amount of new products that we acquire or relinquish, license or otherwise dispose of rights on terms that are less favorable than if we were able to further the regulatory approval process; or
- liquidate and dissolve the Company.

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

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

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

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

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

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

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

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

- demonstrating sufficient safety and efficacy in past clinical trials to obtain regulatory approval to commence a further clinical trial;
- convincing the FDA that we have selected valid endpoints for use in proposed clinical trials; and
- obtaining institutional review board approval to conduct a clinical trial at a prospective site.

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

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

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

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

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

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

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

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

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

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

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

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

Risks Related to Intellectual Property Rights

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Risks Related to Ownership of Our Securities and this Offering

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

Mr. Vininder Singh, our Chief Executive Officer and a director, beneficially owns approximately 32% of the Company's common stock. As a result, Mr. Singh possesses significant influence on the outcome of matters submitted to our stockholders for approval, including the election of directors and any merger, consolidation or sale of all or substantially all of our assets. Accordingly, any investors who purchase shares will be minority stockholders and as such will have little to no say in the direction of us and the election of directors. Additionally, this concentration of ownership might harm the market price of our common stock by:

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

The price of our common stock may fluctuate substantially.

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

- sales of our common stock by our stockholders, executives, and directors;
- volatility and limitations in trading volumes of our shares of common stock;
- our ability to obtain financing to conduct and complete research and development activities;
- our ability to attract new customers;
- changes in the development status of the drugs we acquire;
- failures to meet external expectations or management guidance;
- changes in our capital structure or dividend policy or future issuances of securities;
- our cash position;

- announcements and events surrounding financing efforts, including debt and equity securities;
- reputational issues;
- announcements of acquisitions, partnerships, collaborations, joint ventures, new products, capital commitments, or other events by us or our competitors;
- changes in general economic, political and market conditions in or any of the regions in which we conduct our business;
- changes in industry conditions or perceptions;
- changes in valuations of similar companies or groups of companies;
- analyst research reports, recommendation and changes in recommendations, price targets, and withdrawals of coverage;
- departures and additions of key personnel;
- disputes and litigations related to intellectual property rights, proprietary rights, and contractual obligations;
- changes in applicable laws, rules, regulations, or accounting practices and other dynamics; and
- other events or factors, many of which may be out of our control.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Our common stock may be delisted from The Nasdaq Capital Market if we cannot maintain compliance with Nasdaq Capital Market's continued listing requirements.

Our common stock is listed on the Nasdaq Capital Market. There are a number of continued listing requirements that we must satisfy in order to maintain our listing on the Nasdaq Capital Market.

We cannot assure you our securities will meet the continued listing requirements to be listed on Nasdaq Capital Market in the future. If the Nasdaq Capital Market delists our common stock from trading on its exchange, we could face significant material adverse consequences including:

- a limited availability of market quotations for our securities;
- a determination that our common stock is a "penny stock" which will require brokers trading in our common stock to adhere to more stringent rules and possibly resulting in a reduced level of trading activity in the secondary trading market for our common stock;
- a limited amount of news and analyst coverage for our company; and
- a decreased ability to issue additional securities or obtain additional financing in the future.

If we fail to maintain compliance with all applicable continued listing requirements for the Nasdaq Capital Market and Nasdaq Capital Market determines to delist our common stock, the delisting could adversely affect the market liquidity of our common stock, our ability to obtain financing to repay debt and fund our operations.

FINRA sales practice requirements may also limit a stockholder's ability to buy and sell our stock.

In addition to the "penny stock" rules described above, FINRA has adopted Rule 2111 that requires a broker-dealer to have reasonable grounds for believing that an investment is suitable for a customer before recommending the investment. Before recommending speculative low-priced securities to their non-institutional customers, broker-dealers must make reasonable efforts to obtain information about the customer's financial status, tax status, investment objectives and other information. Under interpretations of these rules, FINRA believes that there is a high probability that speculative low priced securities will not be suitable for at least some customers. The FINRA requirements make it more difficult for broker-dealers to recommend that their customers buy our common stock, which may limit your ability to buy and sell shares of common stock and may have an adverse effect on the market for our securities.

We will continue to incur significant costs to ensure compliance with United States corporate governance and accounting requirements.

We will continue to incur significant costs associated with our public company reporting requirements, including costs associated with applicable corporate governance requirements such as those required by the Sarbanes-Oxley Act of 2002, and with other rules issued or implemented by the SEC. We expect all of these applicable rules and regulations will result in significant legal and financial compliance costs and to make some activities more time consuming and costly. We are currently evaluating and monitoring developments with respect to these rules, and we cannot predict or estimate the amount of additional costs we may incur or the timing of such costs.

If we fail to successfully maintain an effective internal control over financial reporting, the integrity of our financial reporting could be compromised, which could result in a material adverse effect on our reported financial results.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud. As a result, stockholders could lose confidence in our financial and other public reporting, which would harm our business and the trading price of our common stock. Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. Any failure to implement the required new or improved controls, or difficulties encountered in their implementation could cause us to fail to meet our reporting obligations. Inferior internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

USE OF PROCEEDS

Unless otherwise indicated in a prospectus supplement, we intend to use the net proceeds from the sale of the securities under this prospectus for general corporate purposes, including to support research and development, including clinical trials, and general corporate purposes.

DESCRIPTION OF CAPITAL STOCK

General

The following description of our capital stock, together with any additional information we include in any applicable prospectus supplement or any related free writing prospectus, summarizes the material terms and provisions of our common stock and the preferred stock that we may offer under this prospectus. While the terms we have summarized below will apply generally to any future common stock or preferred stock that we may offer, we will describe the particular terms of any class or series of these securities in more detail in the applicable prospectus supplement. For the complete terms of our common stock and preferred stock, please refer to our articles of incorporation and our bylaws that are incorporated by reference into the registration statement of which this prospectus is a part. The summary below and that contained in any applicable prospectus supplement or any related free writing prospectus are qualified in their entirety by reference to our articles of incorporation and our bylaws.

Common Stock

We are authorized to issue 100,000,000 shares of common stock, $0.00001 par value per share. As of the date of this prospectus, there are 7,850,550 shares of common stock issued and outstanding. The outstanding shares of common stock are validly issued, fully paid and nonassessable.

Voting rights

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

Dividend rights

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

Rights upon liquidation

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

Other rights

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

Preferred Stock

We are authorized to issue up to 5,500,000 shares of our Series A Preferred Stock, par value $0.00001 per share, from time to time in one or more series. As of the date of this prospectus, there were 73,449 shares of our Series A Preferred Stock issued and outstanding.

Conversion rights

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

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

Voting rights

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

Rights upon liquidation

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

Issuance of Preferred Stock

A prospectus supplement relating to the issuance of preferred stock being offered will include specific terms relating to the offering. Such prospectus supplement will include:

- the title and stated or par value of the preferred stock;
- the number of shares of the preferred stock offered, the liquidation preference per share and the offering price of the preferred stock;
- the dividend rate(s), period(s) and/or payment date(s) or method(s) of calculation thereof applicable to the preferred stock;
- whether dividends shall be cumulative or non-cumulative and, if cumulative, the date from which dividends on the preferred stock shall accumulate;
- the provisions for a sinking fund, if any, for the preferred stock;
- any voting rights of the preferred stock;
- the provisions for redemption, if applicable, of the preferred stock;
- any listing of the preferred stock on any securities exchange;
- the terms and conditions, if applicable, upon which the preferred stock will be convertible into our common stock, including the conversion price or the manner of calculating the conversion price and conversion period;
- if appropriate, a discussion of Federal income tax consequences applicable to the preferred stock; and
- any other specific terms, preferences, rights, limitations or restrictions of the preferred stock.

The terms, if any, on which the preferred stock may be convertible into or exchangeable for our common stock will also be stated in the preferred stock prospectus supplement. The terms will include provisions as to whether conversion or exchange is mandatory, at the option of the holder or at our option, and may include provisions pursuant to which the number of shares of our common stock to be received by the holders of preferred stock would be subject to adjustment.

Transfer Agent and Registrar

The transfer agent for our common stock is VStock Transfer, LLC. The transfer agent's address is 18 Lafayette Place, Woodmere, New York 11598.

Listing

Our common stock is currently traded on The Nasdaq Capital Market under the symbol "BFRG".

DESCRIPTION OF WARRANTS

We may issue warrants for the purchase of preferred stock or common stock. Warrants may be issued independently or together with any preferred stock or common stock, and may be attached to or separate from any offered securities. Each series of warrants will be issued under a separate warrant agreement to be entered into between a warrant agent specified in the agreement and us. The warrant agent will act solely as our agent in connection with the warrants of that series and will not assume any obligation or relationship of agency or trust for or with any holders or beneficial owners of warrants. This summary of some provisions of the securities warrants is not complete. You

should refer to the securities warrant agreement, including the forms of securities warrant certificate representing the securities warrants, relating to the specific securities warrants being offered for the complete terms of the securities warrant agreement and the securities warrants. The securities warrant agreement, together with the terms of the securities warrant certificate and securities warrants, will be filed with the SEC in connection with the offering of the specific warrants.

The applicable prospectus supplement will describe the following terms, where applicable, of the warrants in respect of which this prospectus is being delivered:

- the title of the warrants;
- the aggregate number of the warrants;
- the price or prices at which the warrants will be issued;
- the designation, amount and terms of the offered securities purchasable upon exercise of the warrants;
- if applicable, the date on and after which the warrants and the offered securities purchasable upon exercise of the warrants will be separately transferable;
- the terms of the securities purchasable upon exercise of such warrants and the procedures and conditions relating to the exercise of such warrants;
- any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants or the exercise price of the warrants;
- the price or prices at which and currency or currencies in which the offered securities purchasable upon exercise of the warrants may be purchased;
- the date on which the right to exercise the warrants shall commence and the date on which the right shall expire;
- the minimum or maximum amount of the warrants that may be exercised at any one time;
- information with respect to book-entry procedures, if any;
- if appropriate, a discussion of Federal income tax consequences; and
- any other material terms of the warrants, including terms, procedures and limitations relating to the exchange and exercise of the warrants.

Warrants for the purchase of common stock or preferred stock will be offered and exercisable for U.S. dollars only. Warrants will be issued in registered form only.

Upon receipt of payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will, as soon as practicable, forward the purchased securities. If less than all of the warrants represented by the warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

Prior to the exercise of any securities warrants to purchase preferred stock or common stock, holders of the warrants will not have any of the rights of holders of the common stock or preferred stock purchasable upon exercise, including in the case of securities warrants for the purchase of common stock or preferred stock, the right to vote or to receive any payments of dividends on the preferred stock or common stock purchasable upon exercise.

DESCRIPTION OF UNITS

As specified in the applicable prospectus supplement, we may issue units consisting of shares of common stock, shares of preferred stock or warrants or any combination of such securities.

The applicable prospectus supplement will specify the following terms of any units in respect of which this prospectus is being delivered:

- the terms of the units and of any of the common stock, preferred stock and warrants comprising the units, including whether and under what circumstances the securities comprising the units may be traded separately;
- a description of the terms of any unit agreement governing the units; and
- a description of the provisions for the payment, settlement, transfer or exchange of the units.

PLAN OF DISTRIBUTION

We may sell the securities offered through this prospectus (i) to or through underwriters or dealers, (ii) directly to purchasers, including our affiliates, (iii) through agents, or (iv) through a combination of any these methods. The securities may be distributed at a fixed price or prices, which may be changed, market prices prevailing at the time of sale, prices related to the prevailing market prices, or negotiated prices. The prospectus supplement will include the following information:

- the terms of the offering;
- the names of any underwriters or agents;
- the name or names of any managing underwriter or underwriters;
- the purchase price of the securities;
- any over-allotment options under which underwriters may purchase additional securities from us;
- the net proceeds from the sale of the securities;
- any delayed delivery arrangements;
- any underwriting discounts, commissions and other items constituting underwriters' compensation;

- any initial public offering price;
- any discounts or concessions allowed or reallowed or paid to dealers;
- any commissions paid to agents; and
- any securities exchange or market on which the securities may be listed.

Sale Through Underwriters or Dealers

Only underwriters named in the prospectus supplement are underwriters of the securities offered by the prospectus supplement.

If underwriters are used in the sale, the underwriters will acquire the securities for their own account, including through underwriting, purchase, security lending or repurchase agreements with us. The underwriters may resell the securities from time to time in one or more transactions, including negotiated transactions. Underwriters may sell the securities in order to facilitate transactions in any of our other securities (described in this prospectus or otherwise), including other public or private transactions and short sales. Underwriters may offer securities to the public either through underwriting syndicates represented by one or more managing underwriters or directly by one or more firms acting as underwriters. Unless otherwise indicated in the prospectus supplement, the obligations of the underwriters to purchase the securities will be subject to certain conditions, and the underwriters will be obligated to purchase all the offered securities if they purchase any of them. The underwriters may change from time to time any initial public offering price and any discounts or concessions allowed or reallowed or paid to dealers.

If dealers are used in the sale of securities offered through this prospectus, we will sell the securities to them as principals. They may then resell those securities to the public at varying prices determined by the dealers at the time of resale. The prospectus supplement will include the names of the dealers and the terms of the transaction.

Direct Sales and Sales Through Agents

We may sell the securities offered through this prospectus directly. In this case, no underwriters or agents would be involved. Such securities may also be sold through agents designated from time to time. The prospectus supplement will name any agent involved in the offer or sale of the offered securities and will describe any commissions payable to the agent. Unless otherwise indicated in the prospectus supplement, any agent will agree to use its reasonable best efforts to solicit purchases for the period of its appointment.

We may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act of 1933 with respect to any sale of those securities. The terms of any such sales will be described in the prospectus supplement.

Delayed Delivery Contracts

If the prospectus supplement indicates, we may authorize agents, underwriters or dealers to solicit offers from certain types of institutions to purchase securities at the public offering price under delayed delivery contracts. These contracts would provide for payment and delivery on a specified date in the future. The contracts would be subject only to those conditions described in the prospectus supplement. The applicable prospectus supplement will describe the commission payable for solicitation of those contracts.

Continuous Offering Program

Without limiting the generality of the foregoing, we may enter into a continuous offering program equity distribution agreement with a broker-dealer, under which we may offer and sell shares of our common stock from time to time through a broker-dealer as our sales agent. If we enter into such a program, sales of the shares of common stock, if any, will be made by means of ordinary brokers' transactions on Nasdaq at market prices, block transactions and such other transactions as agreed upon by us and the broker-dealer. Under the terms of such a program, we also may sell shares of common stock to the broker-dealer, as principal for its own account at a price agreed upon at the time of sale. If we sell shares of common stock to such broker-dealer as principal, we will enter into a separate terms agreement with such broker-dealer, and we will describe this agreement in a separate prospectus supplement or pricing supplement.

Market Making, Stabilization and Other Transactions

Unless the applicable prospectus supplement states otherwise, other than our common stock all securities we offer under this prospectus will be a new issue and will have no established trading market. We may elect to list offered securities on an exchange or in the over-the-counter market. Any underwriters that we use in the sale of offered securities may make a market in such securities, but may discontinue such market making at any time without notice. Therefore, we cannot assure you that the securities will have a liquid trading market.

Any underwriter may also engage in stabilizing transactions, syndicate covering transactions and penalty bids in accordance with Rule 104 under the Securities Exchange Act of 1934 (the "Exchange Act"). Stabilizing transactions involve bids to purchase the underlying security in the open market for the purpose of pegging, fixing or maintaining the price of the securities. Syndicate covering transactions involve purchases of the securities in the open market after the distribution has been completed in order to cover syndicate short positions.

Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

General Information

Agents, underwriters, and dealers may be entitled, under agreements entered into with us, to indemnification by us against certain liabilities, including liabilities under the Securities Act of 1933. Our agents, underwriters, and dealers, or their affiliates, may be customers of, engage in transactions with or perform services for us, in the ordinary course of business.

Pursuant to General Instruction I.B.6 of Form S-3, in no event will we sell securities in a public offering with a value exceeding more than one-third of our public float in any 12-calendar month period so long as our public float remains below $75,000,000.

LEGAL MATTERS

The validity of the issuance of the securities offered by this prospectus will be passed upon for us by Sichenzia Ross Ference Carmel LLP, New York, New York.

EXPERTS

The consolidated financial statements of Bullfrog AI Holdings, Inc. as of and for the years ended December 31, 2023 and 2022 appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2023 have been audited by M&K CPAs, PLLC, as set forth in its report thereon. Such consolidated financial statements are incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We have filed our registration statement on Form S-3 with the SEC under the Securities Act of 1933, as may be amended. We also file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any document that we file with the SEC, including the registration statement and the exhibits to the registration statement, at the SEC's Public Reference Room located at 100 F Street, N.E., Washington D.C. 20549. You may obtain further information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. Our SEC filings are also available to the public at the SEC's web site at www.sec.gov. These documents may also be accessed on our web site at www.bullfrogai.com. Information contained on our web site is not incorporated by reference into this prospectus and you should not consider information contained on our web site to be part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us as indicated above. Other documents establishing the terms of the offered securities are filed as exhibits to the registration statement or will be filed through an amendment to our registration statement on Form S-3 or under cover of a Current Report on Form 8-K and incorporated into this prospectus by reference.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Any statement contained herein or in a document incorporated or deemed to be incorporated by reference into this document will be deemed to be modified or superseded for purposes of the document to the extent that a statement contained in this document or any other subsequently filed document that is deemed to be incorporated by reference into this document modifies or supersedes the statement. We incorporate by reference in this prospectus the following information (other than, in each case, documents or information deemed to have been furnished and not filed in accordance with SEC rules):

- our Annual Report on Form 10-K for the years ended December 31, 2023 and December 31, 2022 which were filed with the SEC on March 29, 2024 and April 25, 2023, respectively;
- our Quarterly Report on Form 10-Q for the quarters ended March 31, 2024 and June 30, 2024 which were filed with the SEC on May 10, 2024 and August 7, 2024, respectively;
- our Current Reports on Form 8-K filed with the SEC on April 9, 2024, May 16, 2024 and July 25, 2024;
- the description of our common stock contained in our Registration Statement on Form 8-A filed with the SEC on January 23, 2023 (File No. 001-41600); and
- all reports and other documents subsequently filed by us pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this prospectus and prior to the termination of this offering.

We also incorporate by reference any future filings (other than information furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that are related to such items unless such Form 8-K expressly provides to the contrary) made with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act, including those made after the date of the initial filing of the registration statement of which this prospectus is a part and prior to effectiveness of such registration statement, until we file a post-effective amendment that indicates the termination of the offering of the common stock made by this prospectus and will become a part of this prospectus from the date that such documents are filed with the SEC. Information in such future filings updates and supplements the information provided in this prospectus. Any statements in any such future filings will automatically be deemed to modify and supersede any information in any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

Notwithstanding the foregoing, information furnished under Items 2.02 and 7.01 of any Current Report on Form 8-K, including the related exhibits, is not incorporated by reference in this prospectus.

The information about us contained in this prospectus should be read together with the information in the documents incorporated by reference. You may request a copy of any or all of these filings, at no cost, by writing or telephoning us at: Vininder Singh, Bullfrog AI Holdings, Inc., 325 Ellington Blvd., Unit 317, Gaithersburg, MD 20878 telephone number (240) 658-6710.

PROSPECTUS

Bullfrog AI Holdings, Inc.

862,602 Shares of Common Stock

Pre-Funded Warrants to purchase 702,398 shares of Common Stock
(and the shares of Common Stock underlying the Pre-Funded Warrants)

PROSPECTUS SUPPLEMENT

WallachBeth Capital, LLC

October 18, 2024