

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

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ZIVO BIOSCIENCE, INC.

(Exact name of registrant as specified in its charter)

Nevada

(State or other jurisdiction of
incorporation or organization)

2836

(Primary Standard Industrial
Classification Code Number)

87-0699977

(I.R.S. Employer
Identification Number)

**21 East Long Lake Road, Suite 100,
Bloomfield Hills, Michigan 48304
(248) 452-9866**

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

**Keith R. Marchiando
Chief Financial Officer
Zivo Bioscience, Inc.**

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Approximate date of commencement of proposed sale to the public: As soon as practicable after this Registration Statement is declared effective.

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

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

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

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

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

Large accelerated filer
Non-accelerated filer

☐
☒

Accelerated filer
Smaller reporting company
Emerging Growth Company

☐
☒
☐

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

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

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

PRELIMINARY PROSPECTUS, SUBJECT TO COMPLETION, DATED MARCH 22, 2023

Zivo Bioscience, Inc.



**Up to 4,761,904 Units
Each Unit Consisting of
One Share of Common Stock or Pre-Funded Warrants to Purchase Common Stock and
One Warrant to Purchase One Share of Common Stock
Up to 4,761,904 Shares of Common Stock Issuable Upon Exercise of the Unit Warrants
Up to 4,761,904 Shares of Common Stock Issuable Upon Exercise of the Pre-Funded Warrants**

We are offering up to 4,761,904 units (the “Units” and each a “Unit”), with each Unit consisting of one share of common stock, \$0.001 par value per share (the “Common Stock”), and one warrant (the “Unit Warrant”) to purchase one share of Common Stock at an exercise price of \$ per share, or % of the price of each Unit sold in the offering of Zivo Bioscience, Inc., a Nevada corporation (the “Company”), on a best efforts basis (this “Offering”) at an assumed public offering price of \$3.15 per Unit (which is based on the last reported sale price of our Common Stock of \$3.15 on March 21, 2023). The Unit Warrants offered hereby may be exercised from time to time beginning on the date of issuance and expire five years from the date of issuance. Our Units have no stand-alone rights and will not be certificated or issued as stand-alone securities. The shares of our Common Stock and/or pre-funded warrants and the Unit Warrants comprising our Units are immediately separable and will be issued separately in this Offering.

We are also offering to each purchaser of Units that would otherwise result in the purchaser’s beneficial ownership exceeding 4.99% of our outstanding common stock immediately following the consummation of this offering, the opportunity to purchase Units consisting of one pre-funded warrant (in lieu of one share of Common Stock) and one Unit Warrant (collectively, the “Securities”). Subject to limited exceptions, a holder of pre-funded warrants will not have the right to exercise any portion of its pre-funded warrants if the holder, together with its affiliates, would beneficially own in excess of 4.99% (or, at the election of the holder, such limit may be increased to up to 9.99%) of the number of shares of common stock outstanding immediately after giving effect to such exercise. Each pre-funded warrant will be exercisable for one share of common stock. The purchase price of each Unit including a pre-funded warrant will be equal to the price per Unit including one share of common stock, minus \$0.001, and the remaining exercise price of each pre-funded warrant will equal \$0.001 per share. The pre-funded warrants will be immediately exercisable (subject to the beneficial ownership cap) and may be exercised at any time until all of the pre-funded warrants are exercised in full. For each Unit including a pre-funded warrant we sell (without regard to any limitation on exercise set forth therein), the number of Units including a share of Common Stock we are offering will be decreased on a one-for-one basis. The Common Stock and pre-funded warrants, if any, can each be purchased in this offering only with the accompanying Unit Warrant as part of a Unit, but the components of the Units will immediately separate upon issuance. See “*Description of the Securities*” in this prospectus for more information.

Our shares of Common Stock and certain of our outstanding warrants trade on The Nasdaq Capital Market LLC (“Nasdaq”) under the symbol “ZIVO” and “ZIVOW”, respectively. On March 21, 2023, the sale price of our Common Stock was \$3.15 per share, as reported by Nasdaq. The actual public offering price per share and accompanying Unit Warrant will be determined between us, the Placement Agent and the investors in the offering, and may be at a discount to the current market price of our Common Stock. Therefore, the assumed public offering price used throughout this prospectus may not be indicative of the final public offering price. We do not intend to apply for listing of the Unit Warrants on any national securities exchange or trading system. Without an active trading market, the liquidity of the Unit Warrants will be limited.

There is no minimum number of Units or minimum aggregate amount of proceeds for this offering to close. We expect this offering to be completed not later than two business days following the commencement of this offering and we will deliver all securities to be issued in connection with this offering delivery versus payment (“DVP”)/receipt versus payment (“RVP”) upon receipt of investor funds received by the Company. Accordingly, neither we nor the Placement Agent have made any arrangements to place investor funds in an escrow account or trust account since the Placement Agent will not receive investor funds in connection with the sale of the securities offered hereunder.

Investing in our securities involves significant risks. You should review carefully the “Risk Factors” beginning on page 12 of this prospectus for a discussion of information that should be considered in connection with an investment in our securities.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved of these securities, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

	Per Unit	Total
Public offering price	\$	\$
Placement Agent fees ⁽¹⁾	\$	\$
Proceeds, before expenses, to us	\$	

- (1) The Placement Agent fees shall equal 7% of the gross proceeds of the securities sold by us in this offering. The Placement Agent will receive compensation in addition to the placement agent fees described above, including reimbursement for out-of-pocket expenses incurred in connection with this offering, including the fees and expenses of the counsel for the Placement Agent, up to \$105,000. See “*Plan of Distribution*” for a description of compensation payable to the Placement Agent.
- (2) The amount of offering proceeds to us presented in this table assumes no pre-funded warrants are issued in lieu of shares of Common Stock and does not give effect to any exercise of the Unit Warrants.

We have engaged Maxim Group LLC as our exclusive placement agent (“Maxim” or the “Placement Agent”) to use its reasonable best efforts to solicit offers to purchase our Securities in this Offering. The Placement Agent has no obligation to purchase any of the Securities from us or to arrange for the purchase or sale of any specific number or dollar amount of the Securities. Because there is no minimum offering amount required as a condition to closing in this Offering the actual public amount, placement agent’s fee, and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering amounts set forth above and throughout this prospectus. We have agreed to pay the Placement Agent the placement agent fees set forth in the table above and to provide certain other compensation to the Placement Agent. See “*Plan of Distribution*” beginning on page 79 of this prospectus for more information regarding these arrangements.

We expect to deliver our Common Stock, Unit Warrants and/or pre-funded warrants, constituting the Units against payment to the investors in this Offering on or about , 2023.

Maxim Group LLC

The date of this prospectus is , 2023

TABLE OF CONTENTS

	<u>Page</u>
ABOUT THIS PROSPECTUS	5
PROSPECTUS SUMMARY	6
THE OFFERING	9
CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS	11
RISK FACTORS	12
USE OF PROCEEDS	26
CAPITALIZATION	27
MARKET FOR OUR COMMON STOCK	28
DILUTION	29
BUSINESS	30
MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	46
DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE	52
EXECUTIVE COMPENSATION	56
SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS	60
CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	62
DESCRIPTION OF THE SECURITIES	64
MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS	71
SHARES AVAILABLE FOR FUTURE SALES	78
PLAN OF DISTRIBUTION	79
LEGAL MATTERS	82
EXPERTS	82
WHERE YOU CAN FIND MORE INFORMATION	83
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS	84

ABOUT THIS PROSPECTUS

The registration statement of which this prospectus forms a part that we have filed with the Securities and Exchange Commission (the “SEC”), includes exhibits that provide more detail of the matters discussed in this prospectus (the “Registration Statement”). You should read this prospectus and the related exhibits filed with the SEC, together with the additional information described under the heading “*Where You Can Find More Information*.”

You should rely only on the information contained in this prospectus prepared by or on behalf of us. We have not, and the Placement Agent has not, authorized anyone to provide you with information different from, or in addition to, that contained in this prospectus. This prospectus is an offer to sell only the securities offered hereby but only under circumstances and in jurisdictions where it is lawful to do so. The information contained in this prospectus is current only as of its date. Our business, financial condition, results of operations and prospects may have changed since that date. You should also read and consider the information in the documents to which we have referred you under the captions “*Where You Can Find More Information*” in this prospectus.

We and the Placement Agent are not offering to sell or seeking offers to purchase these securities in any jurisdiction where the offer or sale is not permitted. We and the Placement Agent have not done anything that would permit this Offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. Persons outside the United States who come into possession of this prospectus related to this Offering in jurisdictions outside the United States are required to inform themselves about and to observe any restrictions relating to this Offering and the distribution of this prospectus.

Unless the context otherwise requires, the terms “ZIVO,” “Zivo Bioscience,” the “Company,” “we,” “us” and “our” refer to Zivo Bioscience, Inc. and its wholly-owned subsidiaries, Health Enhancement Corporation, HEPI Pharmaceuticals, Inc., Wellmetrix, LLC, Wellmetris, LLC, Zivo Bioscience, LLC, Zivo Biologic, Inc., ZIVOLife, LLC, and Zivo Zoologic, Inc. We also have allowed pending trademark applications in several countries for “KALGAE™,” “ZIVO”, and “ZIVO Bioscience” and “WELLMETRIX.” We may have other common law rights in other trademarks, trade names, service marks, and the like which will continue as long as we use those respective marks. We have registered the name “WellMetrix” to replace the current “WellMetris” corporate identification and secured an ICANN domain of the same spelling in late 2017. Other service marks, trademarks and trade names referred to in this prospectus are the property of their respective owners. Except as set forth above and solely for convenience, the trademarks and trade names in this prospectus are referred to without the ®, © and ™ symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.

PROSPECTUS SUMMARY

This summary highlights information contained in greater detail elsewhere in this prospectus. This summary does not contain all the information that you should consider before investing. You should read the entire prospectus carefully, including the sections titled “Risk Factors” and “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

Business Overview

We are a research and development company operating in both the biotech and agtech sectors, with an intellectual property portfolio comprised of proprietary algal and bacterial strains, biologically active molecules and complexes, production techniques, cultivation techniques and patented or patent-pending inventions for applications in human and animal health.

We believe that our proprietary algal culture and materials derived therefrom show promise in benefiting both animal and human health, primarily through inflammation-modulating and immune-boosting properties. Overall, our efforts have been centered around two potential value-creating initiatives; the first being the identification of bioactive extracts or novel bioactive molecules from our proprietary algal culture to treat various diseases, and second, the utilization of our proprietary algal culture in its whole form as a food product to leverage its nutritional value. In the first quarter of 2022, we reformulated our biotech and agtech businesses around these two concepts. We reviewed the market potential (scale and profit) and the technical and business risks associated with each of the opportunities we had been working on and developed a focused strategy for each business.

Biotech Business Strategy

We are seeking to partner with established animal health companies and create value through licensing or other commercial arrangements, while accelerating final product development and mitigating market introduction risk.

Review of isolated active materials derived from our proprietary algal culture and their potential treatment applications led us to identify a product candidate for treating coccidiosis in broiler chickens as the best option for most rapidly generating significant revenue because coccidiosis is a global poultry industry issue costing chicken farmers between \$8-13 billion annually, and because the clinical testing cycle for chickens is shorter than for other species. Most of the global animal health companies have products for the coccidiosis market; however, they are mostly antibiotic- or ionophore-based with essentially no new technology having been introduced in the last 60 years.

Coccidiosis Product Candidate

In numerous prior studies, ZIVO has demonstrated multiple benefits, including:

- Minimized or eliminated the negative effects of coccidiosis on the digestive health in broiler chickens by numerous measures of gut health and overall well-being;
- Reduced the incidence of *Campylobacter*, *Salmonella*, *E. coli*, and *Clostridium perfringens*, all significant sources of food-borne illness, in the digestive tract of broiler chickens in the absence of antibiotics or other antimicrobial compounds; and
- Reduced mortality.

The predominant treatment for coccidiosis in the poultry industry, in-feed anticoccidial drugs target the *Eimeria* parasite directly and require constant use over the lifespan of the animal for efficacy and can over time result in the development of resistant *Eimeria* strains. Other treatment strategies, such as vaccines, require several weeks for immunity to manifest, which can significantly impact growth potential. Often, several treatment products are used in combination, increasing costs in an industry already facing heavy inflationary pressures. As a result, the poultry industry is actively searching for a novel solution.

Our treatment alternative represents an innovative new product class that aims to strengthen the immune system through multiple complementary immune pathways to afford a rapid and robust response to the effects of disease-causing pathogens without the adverse effects associated with traditional antimicrobial drugs and chemicals.

Agtech Business Strategy

For the agtech side of our business, we have developed our proprietary algal culture to be commercially viable as a nutritional product. The powdered form contains approximately 45% protein, is an excellent source of other essential nutrients, and is nearly completely odorless and tasteless unlike other algal products. As we reviewed our agtech business early this year, we were very satisfied with the nature of the product; however, we identified gaps in customer acquisition and in scale-up technology allowing us to grow our proprietary algae in quantities to sufficiently meet the potential demand. We have, therefore, focused our agtech strategy on developing a cost effective, commercial-scale growing technology.

In 2021, we began funding a development agreement with Grupo Alimentaria, a well-established Peruvian agriculture company. Our focus is now on scaling up for commercial production. The Alimentaria-ZIVO team has been working toward building commercial-scale algae ponds using a ZIVO proprietary design, and we are in the middle of a project to grow our algae in a penultimate scale pond. Once we are successful at this scale, we plan, in the first half of 2023, to invest in full commercial-scale ponds and product processing equipment.

Given the Self Affirmed GRAS (Generally Recognized as Safe) status for our dried whole algal biomass product, we intend to work with partners and wholesale buyers with the goal to generate revenue in 2023.

Today's algae industry is artisanal and fragmented. There is no major source that can deliver to national brands and co-packers consistent quality and quantity of dried algae, and we aim to fill that market need with our proprietary algae.

Additional Indications

Pending additional funding, ZIVO may also pursue the following indications:

Biotech:

- **Bovine Mastitis:** ZIVO is developing a treatment for bovine mastitis derived from its proprietary algal culture and the bioactive agents contained within.
- **Canine Joint Health:** Studies have indicated the potential of a chondroprotective property when a compound fraction was introduced into *ex vivo* canine joint tissues.
- **Human Immune Modulation:** Early human immune cell *in vitro* and *in vivo* studies have indicated that one of the isolated and characterized biologically active molecules in the Company's portfolio may serve as an immune modulator with potential application in multiple disease situations.

Agtech:

- **Human Food Ingredient:** The self-affirmed GRAS process was completed for ZIVO algal biomass in late 2018 to validate its suitability for human consumption as an ingredient in foods and beverages.
- **Skin Health:** ZIVO is developing its algal biomass as a skin health ingredient, with topical skin product testing started in the third quarter of 2020, and clinical efficacy claim studies planned for ingestible and topical products.

Listing on the Nasdaq Capital Market

Our Common Stock and certain of our outstanding warrants are listed on Nasdaq since May 28, 2021 under the symbols “ZIVO” and “ZIVOW”, respectively.

Recent Developments

Nasdaq Deficiency

On November 22, 2022, the Company received written notice from Nasdaq stating that the Company no longer complied with the minimum stockholders’ equity requirement under Nasdaq Listing Rule 5550(b)(1) for continued listing on Nasdaq because the Company’s stockholders’ equity, as reported in the Company’s Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2022, had fallen below \$2.5 million. On January 6, 2023, the Company submitted its compliance plan to Nasdaq.

On January 11, 2023, Nasdaq notified the Company that it had determined to grant the Company an extension until May 22, 2023 to regain compliance. There can be no assurance that the Company will be successful in implementing its plan to regain compliance with the minimum stockholders’ equity requirement. See the section entitled “Risk Factors” and elsewhere in this prospectus.

Corporate Information

We were incorporated under the laws of the State of Nevada on March 28, 1983, under the name of “L. Peck Enterprises, Inc.” On May 27, 1999, we changed our name to “Western Glory Hole, Inc.” From 1990 until October 2003, we had no business operations; we were in the development stage and were seeking profitable business opportunities. On October 30, 2003, we acquired 100% of the outstanding shares of Health Enhancement Corporation (“HEC”) in exchange for 112,500 of our shares, making HEC our wholly-owned subsidiary. In connection with this transaction, we changed our name to Health Enhancement Products, Inc. On October 14, 2014, at the annual meeting of the stockholders of the Company, a proposal was passed to change the name of the Company from Health Enhancement Products, Inc. to Zivo Bioscience, Inc. On October 30, 2014, the Financial Industry Regulatory Authority approved the name Zivo Bioscience, Inc. for trading purposes and the symbol change to ZIVO effective November 10, 2014.

Our principal executive offices are located at 21 East Long Lake Road, Suite 100, Bloomfield Hills, Michigan 48304 and our phone number is (248) 452-9866.

THE OFFERING

Issuer	Zivo Bioscience, Inc.
Securities offered by us	<p>We are offering up to 4,761,904 Units on a best efforts basis. Each Unit consists of one share of our Common Stock and a Unit Warrant to purchase one share of our Common Stock (together with the shares of Common Stock underlying such warrants).</p> <p>We are also offering to each purchaser, with respect to the purchase of Units that would otherwise result in the purchaser's beneficial ownership exceeding 4.99% of our outstanding Common Stock immediately following the consummation of this offering, the opportunity to purchase one pre-funded warrant in lieu of one share of Common Stock. Subject to limited exceptions, a holder of pre-funded warrants will not have the right to exercise any portion of its pre-funded warrant if the holder, together with its affiliates, would beneficially own in excess of 4.99% (or, at the election of the holder, such limit may be increased to up to 9.99%) of the number of Common Stock outstanding immediately after giving effect to such exercise. Each pre-funded warrant will be exercisable for one Common Stock. The purchase price per pre-funded warrant will be equal to the price per Common Stock, minus \$0.001, and the exercise price of each pre-funded warrant will equal \$0.001 per share. The pre-funded warrants will be immediately exercisable (subject to the beneficial ownership cap) and may be exercised at any time in perpetuity until all of the pre-funded warrants are exercised in full. This offering also relates to the shares of Common Stock issuable upon exercise of any pre-funded warrants sold in this offering. For more information regarding the pre-funded warrants, you should carefully read the section titled "<i>Description of the Securities – Pre-Funded Warrants</i>" in this prospectus.</p> <p>Our Units have no stand-alone rights and will not be certificated or issued as stand-alone securities. The shares of our Common Stock and/or pre-funded warrants and the Unit Warrants comprising the Units are immediately separable upon issuance and will be issued separately in this Offering.</p>
Offering price per Unit	Assumed public offering price of \$3.15 per Unit. The final offering price per Common Stock will be determined by the Company, the Placement Agent and the investors in this offering and may be at a discount to the market price of the Common Stock.
Description of the Unit Warrant	<p>The exercise price of the Unit Warrants is \$ per share, (% of the public offering price per Unit.) Each Unit Warrant is exercisable for one share of Common Stock, subject to adjustment in the event of stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our Common Stock as described herein. A holder may not exercise any portion of a Unit Warrant to the extent that the holder, together with its affiliates and any other person or entity acting as a group, would own more than 4.99% of the outstanding Common Stock after exercise, as such percentage ownership is determined in accordance with the terms of the Unit Warrants, except that upon notice from the holder to us, the holder may waive such limitation up to a percentage, not in excess of 9.99%. Each Unit Warrant will be exercisable immediately upon issuance and will expire five years after the initial issuance date. The terms of the Unit Warrants will be governed by a Warrant Agreement, dated as of the effective date of this Offering, between us and Direct Transfer LLC, as the warrant agent (the "Warrant Agent"). This prospectus also relates to the offering of the shares of Common Stock issuable upon exercise of the Unit Warrants. This offering also relates to shares of Common Stock issuable upon exercise of any Unit Warrants sold in this offering. For more information regarding the Unit Warrants, you should carefully read the section titled "<i>Description of the Securities - Warrants for Common Stock</i>" in this prospectus.</p>
Common Stock to be outstanding immediately after this Offering	14,181,564 shares (based on 9,419,660 shares outstanding as of March 1, 2023).

Use of proceeds	We intend to use the net proceeds for general corporate purposes, which include, but are not limited to, the funding of research and development, expansion of production of algal biomass and working capital, after deducting Placement Agent fees and estimated offering expenses payable by us. Because this is a best efforts offering, we may not sell all or any of the securities offered hereby. As a result, we may receive significantly less in net proceeds than we currently estimate. See “ <i>Use of Proceeds</i> ” on page <input type="checkbox"/> for more information.
Current Market for the Common Stock	Our Common Stock and certain of our outstanding warrants trade on Nasdaq under the symbol “ZIVO” and “ZIVOW”, respectively. We do not intend to list the Unit Warrant or pre-funded warrants offered hereunder on any stock exchange.
Lock-up	Our directors, executive officers, and stockholders who own 5% or more of the outstanding shares of our Common Stock have agreed with the Placement Agent not to offer for sale, issue, sell, contract to sell, pledge or otherwise dispose of any of our Common Stock or securities convertible into Common Stock for a period of 90 days commencing on the date of this prospectus. See “ <i>Plan of Distribution</i> .”
Risk factors	You should read the “ <i>Risk Factors</i> ” section of this prospectus for a discussion of certain factors to consider carefully before deciding to purchase any of our securities.

Outstanding Common Stock

The number of shares of Common Stock to be outstanding immediately following this Offering assumes (i) no sale of pre-funded warrants in this offering, which, if sold, would reduce the number of Common Stock that we are offering on a one-for-one basis, (ii) no exercise of the Unit Warrants issued in this offering and (iii) excludes:

- 1,689,907 shares of our Common Stock issuable upon the exercise of outstanding stock options as of December 31, 2022, with an approximate weighted-average exercise price of \$6.14 per share;
- 1,602,198 shares of our Common Stock issuable upon the exercise of unregistered warrants outstanding as of December 31, 2022 with an approximate weighted-average exercise price of \$7.85 per share;
- 2,975,497 shares of our Common Stock issuable upon exercise of registered warrants outstanding as of December 31, 2022 with an approximate weighted-average exercise price of \$5.50 per share;
- 143,576 shares of our Common Stock reserved for future issuance under our 2021 Equity Incentive Plan (the “2021 Plan”) as of December 31, 2022; and
- 470,983 shares of Common Stock added to the share reserve of the 2021 Plan on January 1, 2023.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements. All statements other than statements of historical facts contained in this prospectus, including statements regarding our strategy, future operations, future financial position, future revenue, projected costs, prospects, plans, objectives of management and expected market growth are forward-looking statements. These statements involve known and unknown risks, uncertainties and other important factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements.

The words “anticipate,” “believe,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “potential,” “predict,” “project,” “should,” “target,” “will,” “would” and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. These forward-looking statements include, among other things, statements about:

- our ability to continue as a going concern and our history of losses;
- our ability to obtain additional financing;
- our use of the net proceeds from this Offering;
- our relatively new business model and lack of significant revenues;
- our ability to prosecute, maintain or enforce our intellectual property rights;
- disputes or other developments relating to proprietary rights and claims of infringement;
- the accuracy of our estimates regarding expenses, future revenues and capital requirements;
- the implementation of our business model and strategic plans for our business and technology;
- the successful development of our sales and marketing capabilities;
- the potential markets for our products and our ability to serve those markets;
- the rate and degree of market acceptance of our products and any future products;
- our ability to retain key management personnel;
- regulatory developments and our compliance with applicable laws; and
- our liquidity.

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 greater detail under the section entitled “*Risk Factors*” and elsewhere in this prospectus. 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, after the date of this prospectus, 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.

The forward-looking statements in this prospectus represent our views as of the date of this prospectus. We anticipate that subsequent events and developments will cause our views to change. However, while we may elect to update these forward-looking statements at some point in the future, we have no current intention of doing so except to the extent required by applicable law. You should, therefore, not rely on these forward-looking statements as representing our views as of any date subsequent to the date of this prospectus.

RISK FACTORS

An investment in our securities involves a high degree of risk. In addition to the other information included in this prospectus, including the section titled “Management’s Discussion and Analysis of Financial Condition and Results of Operations,” you should carefully consider the risks described below, before making an investment decision with respect to the securities. We expect to update these Risk Factors from time to time in the periodic and current reports that we file with the SEC after the date of this prospectus. Please refer to these subsequent reports for additional information relating to the risks associated with investing in our Common Stock or pre-funded warrants and the accompanying Unit Warrants. If any of such risks and uncertainties actually occurs, our business, financial condition, and results of operations could be severely harmed.

Risks Relating to Our Business

Worldwide economic and social instability could adversely affect our revenue, financial condition, or results of operations.

The health of the global economy, and the credit markets and the financial services industry in particular, as well as the stability of the social fabric of our society, affects our business and operating results. For example, the credit and financial markets may be adversely affected by the current conflict between Russia and Ukraine and measures taken in response thereto. If the credit markets are not favorable, we may be unable to raise additional financing when needed or on favorable terms. Our customers may experience financial difficulties or be unable to borrow money to fund their operations, which may adversely impact their ability to purchase our products or to pay for our products on a timely basis, if at all. In addition, adverse economic conditions, such as recent supply chain disruptions and labor shortages and persistent inflation may adversely impact our suppliers’ ability to provide our manufacturer with materials and components, which may negatively impact our business. These economic conditions make it more difficult for us to accurately forecast and plan our future business activities.

The Company is exposed to risks of political instability and changes in government policies, laws and regulations in Peru.

The Company’s algae ponds are located in the Republic of Peru, and may be adversely affected in varying degrees by political instability, government regulations relating to agriculture and foreign investment therein, and the policies of other nations in respect of Peru. Any changes in regulations or shifts in political conditions are beyond the Company’s control and may adversely affect the Company’s business. New laws, regulations and requirements may be retroactive in their effect and implementation. The Company’s operations may be affected in varying degrees by government regulations, including those with respect to restrictions on production, price controls, export controls, income taxes, expropriation of property, employment, land use, water use, and environmental legislation.

Since December 2022, Peru has experienced an increased level of civil unrest and political protests. Civil unrest has led to disruptions in the ability of foreign nationals to travel to and from Peru. The Company continues to closely monitor the situation and its potential impact on Company operations.

We are not in compliance with Nasdaq’s continued listing requirements. If we are unable to comply with Nasdaq’s continued listing requirements, our common stock could be delisted, which could affect our common stock’s market price and liquidity and reduce our ability to raise capital.

Our common stock is currently listed on the Nasdaq Capital Market. Nasdaq imposes, among other requirements, continued listing standards including minimum bid, public float and stockholders' equity requirements.

On November 22, 2022, we received written notice from Nasdaq stating that we no longer comply with the minimum stockholders' equity requirement under Nasdaq Listing Rule 5550(b)(1) for continued listing on the Nasdaq Capital Market because our stockholder's equity, as reported in our Quarterly Report on Form 10-Q for the quarterly period ended September 30, 2022, had fallen below \$2.5 million. The notice also indicated that we do not meet the alternative compliance standards.

On January 6, 2023, we submitted our compliance plan to Nasdaq. On January 11, 2023, Nasdaq notified us that it had determined to grant us an extension until May 22, 2023 to regain compliance. If we are unable to regain compliance, Nasdaq may make a determination to delist our common stock. Furthermore, if our common stock is delisted, it will trade, if at all, only on an over-the-counter market, and then only if one or more registered broker-dealer market makers comply with quotation requirements. Upon any such delisting, our common stock could become subject to the regulations of the SEC relating to the market for penny stocks. Generally, any equity security not traded on a national securities exchange that has a market price of less than \$5.00 per share may be deemed a penny stock. Any delisting of our common stock could adversely affect the market liquidity of our common stock and the market price of our common stock could decrease. Furthermore, if our common stock were delisted it could adversely affect our ability to obtain financing for the continuation of our operations and our ability to attract and retain employees by means of equity compensation and/or result in the loss of confidence by investors.

We have incurred, and may continue to incur increased costs and demands upon management as a result of being a public company.

As a public company in the United States, listed on the Nasdaq Capital Market, we incur significant legal, accounting and other costs. These additional costs could negatively affect our financial results. In addition, changing laws, regulations and standards relating to corporate governance and public disclosure, including regulations implemented by the SEC and Nasdaq, may increase legal and financial compliance costs and make some activities more time-consuming. These laws, regulations and standards are subject to varying interpretations and, as a result, their application in practice may evolve over time as new guidance is provided by regulatory and governing bodies. We intend to invest resources to comply with evolving laws, regulations and standards, and this investment may result in increased general and administrative expenses and a diversion of management's time and attention from revenue-generating activities to compliance activities. If, notwithstanding our efforts to comply with new laws, regulations and standards, we fail to comply, regulatory authorities may initiate legal proceedings against us and our business may be harmed.

Failure to comply with these rules might also make it more difficult for us to obtain some types of insurance, including director and officer liability insurance, and we might be forced to accept reduced policy limits and coverage or incur substantially higher costs to obtain the same or similar coverage. The impact of these events could also make it more difficult for us to attract and retain qualified persons to serve on our Board, on committees of our Board or as members of senior management.

We have a history of operating losses, and we may not be able to achieve or sustain profitability. In addition, we may be unable to continue as a going concern.

We have incurred net losses during each of our fiscal years since our inception. Our net loss for the year ended December 31, 2022 was approximately \$8.7 million and our accumulated deficit totaled approximately \$115.8 million as of December 31, 2022. We do not know whether or when we will become profitable, if ever. We currently expect operating losses and negative cash flows to continue for at least the next several years.

Our ability to generate sufficient revenue to achieve profitability depends on our ability, either alone or with strategic collaboration partners, to successfully complete the development of, and obtain the regulatory approvals necessary to commercialize our product candidates.

Our audited consolidated financial statements as of and for the years ended December 31, 2022 and 2021 have been prepared on the basis that we will continue as a going concern, which contemplates the realization of assets and satisfaction of liabilities in the normal course of business. Our auditor's report for the year ended December 31, 2022 contains an explanatory paragraph that we have incurred significant losses since our inception and we expect that we will continue to incur losses as we aim to successfully execute our business plan and will be dependent on additional public or private financings, collaborations or licensing arrangements with strategic partners, or additional credit lines or other debt financing sources to fund continuing operations. Based on our cash balances, recurring losses since inception and our existing capital resources to fund our planned operations for a twelve-month period, there is substantial doubt about our ability to continue as a going concern. As noted below, we will need to obtain additional funding from equity or debt financings, which may require us to agree to burdensome covenants, grant security interests in our assets, enter into collaboration and licensing arrangements that require us to relinquish commercial rights, or grant licenses on terms that are not favorable. No assurance can be given at this time as to whether we will be able to achieve our fundraising objectives, regardless of the terms. If adequate funds are not available, the Company may be required to reduce operating expenses, delay or reduce the scope of its product development programs, obtain funds through arrangements with others that may require the Company to relinquish rights to certain of its technologies or products that the Company would otherwise seek to develop or commercialize itself, or cease operations.

We will require substantial additional financing to achieve our goals, and our failure to obtain this necessary capital when needed could force us to delay, limit, reduce or terminate our product development efforts.

Our operations have consumed substantial amounts of cash since inception. We expect to continue to incur significant expenses and operating losses for the foreseeable future in connection with our planned research, development and product commercialization efforts. In addition, we will require additional financing to achieve our goals and our failure to do so could adversely affect our commercialization efforts. We anticipate that our expenses will increase substantially if and as we:

- continue our development process for our product candidates;
- seek to maintain, protect and expand our intellectual property portfolio; and
- seek to attract and retain skilled personnel.

If we were to experience any delays or encounter issues with any of the above, it could further increase the costs associated with the above. Further, the net operating losses we incur may fluctuate significantly from quarter to quarter and year to year, such that a period-to-period comparison of our results of operations may not be a good indication of our future performance.

Our production of algae involves an agricultural process, subject to such risks as weather, disease, contamination and water availability.

The production of our proprietary algae strain involves complex agricultural systems with inherent risks including weather, disease and contamination. These risks are unpredictable, and the efficient and effective cultivation of algae requires consistent light, warm temperatures, low rainfall and proper chemical balance in a very nutrient rich environment.

If the chemical composition of a pond changes from its required balance, unusually high levels of contamination due to the growth of unwanted organisms or other biological problems may occur and would result in a loss of harvestable output. These often arise without warning and sometimes there are few or no clear indicators as to appropriate remediation or corrective measures. However, environmental factors cannot be controlled in an open-air environment, therefore, we cannot, and do not attempt to, provide any form of assurance with regard to our systems, processes, location, or cost-effectiveness. In the event that our growers need to take steps to correct any chemical imbalance or contamination of their ponds, including by re-inoculating the ponds, such measures may not be effective and could interrupt production. To the extent that our production is negatively impacted by environmental factors, we may be unable to fill large orders for one or more months until such time that production improves.

We rely on third parties to grow our proprietary algae strains and conduct research, and preclinical and clinical testing, and these third parties may not perform satisfactorily.

We do not currently, and do not expect to in the future, independently conduct any aspects of the growth of our proprietary algae strains, research and monitoring and management of our ongoing preclinical and clinical programs. We currently rely, and expect to continue to rely, on third parties with respect to these items, and control only certain aspects of their activities.

Any of these third parties may terminate their engagements with us at any time unless otherwise stated in contractual agreements. If we need to enter into alternative arrangements, our commercialization activities or our therapeutic candidate development activities may be delayed or suspended. Our reliance on these third parties for research and development activities, reduces our control over these activities but does not relieve us of our responsibility to ensure compliance with all required legal, regulatory and scientific standards and any applicable trial protocols.

Any of these events could lead to delays in the development of our product candidates, including delays in our trials, or failure to obtain regulatory approval for our product candidates, or it could impact our ability to successfully commercialize our current product candidates.

Because our ZIVO algae is currently produced by only one grower, the loss of this grower would have a material adverse impact on our operating results and cash flows.

Currently only one facility grows our ZIVO algae. Any termination of a business relationship with, or a significant sustained reduction in business received from this grower could delay our production efforts and could have a material adverse effect on our operating results and cash flows. We must materially increase the number of our growers and if we cannot, it will adversely impact our financial condition and our business.

If we fail to attract and keep our Chief Executive Officer and Chief Financial Officer, senior management and key scientific personnel, we may be unable to successfully develop our therapeutic candidates, conduct our clinical trials and commercialize our therapeutic candidates.

We are highly dependent on the members of our executive team, including our Chief Executive Officer and Chief Financial Officer, the loss of whose services may adversely impact the achievement of our objectives. Any of our executive officers could leave our employment at any time, as all of our employees are “at will” employees. Recruiting and retaining other qualified employees, consultants and advisors for our business, including scientific and technical personnel, will also be critical to our success.

Recruiting and retaining qualified scientific, clinical, manufacturing, sales and marketing personnel will also be critical to our success. We may not be able to attract and retain these personnel on acceptable terms given the competition among numerous pharmaceutical and biotechnology companies for similar personnel. We also experience competition for the hiring of scientific and clinical personnel from universities and research institutions. In addition, we rely on consultants and advisors, including scientific and clinical advisors, to assist us in formulating our research and development and commercialization strategy. Our consultants and advisors may be employed by employers other than us and may have commitments under consulting or advisory contracts with other entities that may limit their availability to us.

If we are unable to enter into agreements with third parties to market and sell our product candidates, if approved, we may be unable to generate any revenues.

We currently do not have internal sales, marketing and distribution capability for our products and the cost of establishing and maintaining such an organization may exceed the cost-effectiveness of doing so. In order to market any products that may be eligible for commercialization, we must build our sales, distribution, marketing, managerial and other non-technical capabilities or make arrangements with third parties to perform these services. We have limited prior experience in the marketing, sale or distribution of approved products and there are significant risks involved in building and managing a sales organization, including our ability to hire, retain, and incentivize qualified individuals, generate sufficient sales leads, provide adequate training to sales and marketing personnel, and effectively manage a geographically dispersed sales and marketing team. Any failure or delay in the development of our internal sales, marketing and distribution capabilities would adversely impact the commercialization of our therapeutic candidates.

Because the results of preclinical studies and clinical trials are not necessarily predictive of future results, we can provide no assurances that our other product candidates will have favorable results in future studies or trials.

Positive results from preclinical studies or clinical trials should not be relied on as evidence that later or larger-scale studies or trials will succeed. Even if our product candidates achieve positive results in early-stage preclinical studies or clinical trials, there is no guarantee that the efficacy of any product candidate shown in early studies will be replicated or maintained in future studies and/or larger populations. Similarly, favorable safety and tolerability data seen in short-term studies might not be replicated in studies of longer duration and/or larger populations. If any product candidate demonstrates insufficient safety or efficacy in any preclinical study or clinical trial, we would experience potentially significant delays in, or be required to abandon, development of that product candidate.

Further, data obtained from clinical trials are susceptible to varying interpretations. If we delay or abandon our efforts to develop any of our product candidates, we may not be able to generate sufficient revenues to become profitable, and our reputation in the industry and in the investment community would likely be significantly damaged, each of which would cause our stock price to decrease significantly.

Development of certain of our products involves a lengthy and expensive process, with uncertain outcomes. We may, and our current or future licensees may, incur additional costs or experience delays in completing, or ultimately be unable to complete, the development and commercialization of any product.

We may, and our current or future licensees may, experience numerous unforeseen events during or as a result of clinical trials that could delay or prevent our ability to receive marketing approval or commercialize our products, including:

- regulators may not authorize us or our investigators to commence a clinical trial or conduct a clinical trial at a prospective trial site;
- the failure to successfully complete pre-clinical testing requirements required by the FDA and international organizations;
- delays may occur in reaching, or fail to reach, agreement on acceptable clinical trial contracts with third parties or clinical trial protocols with prospective trial sites, the terms of which can be subject to extensive negotiation and may vary significantly among different trial sites;
- the cost of clinical trials of our products may be greater than we anticipate;
- delays or difficulties in obtaining an FDA No Objection letter for human consumption of our algal biomass; and

If we are required to conduct additional clinical trials or other testing of our biotech product candidates under development or algal biomass beyond those that we contemplate, if we are unable to successfully complete clinical trials of our product candidates under development or algal biomass or other testing, if the results of these trials or tests are not favorable or if there are safety concerns, we may, or our existing or future licensees may:

- not obtain marketing approval at all;
- be delayed in obtaining marketing approvals in a jurisdiction; or
- be subject to additional post-marketing testing requirements.

Increased regulatory scrutiny of nutritional supplements as well as new regulations that are being adopted in some of our markets with respect to nutritional supplements could result in more restrictive regulations and harm our results if our supplements or advertising activities are found to violate existing or new regulations or if we are not able to effect necessary changes to our products in a timely and efficient manner to respond to new regulations.

There has been an increasing movement in the United States and other markets to increase the regulation of dietary supplements, which could impose additional restrictions or requirements on us and increase the cost of doing business. On February 11, 2019, the FDA issued a statement from FDA Commissioner, Dr. Scott Gottlieb, regarding the agency's efforts to strengthen the regulation of dietary supplements. The FDA will be prioritizing and focusing resources on misbranded products bearing unproven claims to treat, cure, or mitigate disease. Commissioner Gottlieb established a Dietary Supplement Working Group tasked with reviewing the agency's organizational structure, process, procedures, and practices to identify opportunities to modernize the oversight of dietary supplements. Additionally, on December 21, 2015, the FDA created the Office of Dietary Supplements ("ODSP"). The creation of this new office elevates the FDA's program from its previous status as a division under the Office of Nutrition and Dietary Supplements. ODSP will continue to monitor the safety of dietary supplements.

In August 2016, the FDA published its revised draft guidance on Dietary Supplements: New Dietary Ingredient Notifications and Related Issues. If a company sells a dietary supplement containing an ingredient that FDA considers either not a dietary ingredient or a new dietary ingredient ("NDI") that needs an NDI notification, the agency may threaten or initiate enforcement against such company. For example, it might send a warning letter that can trigger consumer lawsuits, demand a product recall, or even work with the Department of Justice to bring a criminal action. Our operations could be harmed if new guidance or regulations require us to reformulate products or effect new registrations, if regulatory authorities make determinations that any of our products do not comply with applicable regulatory requirements, if the cost of complying with regulatory requirements increases materially, or if we are not able to effect necessary changes to our products in a timely and efficient manner to respond to new regulations. In addition, our operations could be harmed if governmental laws or regulations are enacted that restrict the ability of companies to market or distribute nutritional supplements or impose additional burdens or requirements on nutritional supplement companies.

The growth of our agtech sector depends in part on market acceptance of products that contain our algae.

The success of our agtech business involves the use of our algal biomass in various animal and human products. There can be no assurance regarding the successful distribution and market acceptance of products containing our algae. The expenses or losses associated with lack of market acceptance of our products could harm our ability to find or maintain new licensees for these products.

If our computer systems are hacked, or we experience any other cybersecurity incident, we may face a disruption to our operations, a compromise or corruption of our confidential information and/or damage to our business relationships, all of which could negatively impact our business, results of operations or financial condition.

We rely on information technology networks and systems, including the Internet, to process, transmit and store electronic information, and to manage or support a variety of business processes and activities. Additionally, we collect and store certain data, including proprietary business information, and may have access to confidential or personal information in certain of our businesses that is subject to privacy and security laws and regulations. These technology networks and systems may be susceptible to damage, disruptions or shutdowns due to failures during the process of upgrading or replacing software, databases or components; power outages; telecommunications or system failures; terrorist attacks; natural disasters; employee error or malfeasance; server or cloud provider breaches; and computer viruses or cyberattacks. Cybersecurity threats and incidents can range from uncoordinated individual attempts to gain unauthorized access to information technology networks and systems to more sophisticated and targeted measures, known as advanced persistent threats, directed at us, our products, customers and/or our third-party service providers. It is possible a security breach could result in theft of trade secrets or other intellectual property or disclosure of confidential customer, supplier or employee information. Should we be unable to prevent security breaches or other damage to our information technology systems, disruptions could have an adverse effect on our operations, as well as expose us to costly litigation, liability or penalties under privacy laws, increased cybersecurity protection costs, reputational damage and product failure.

The animal health industry is highly competitive.

The animal health industry is highly competitive. Our competitors include standalone animal health businesses, the animal health businesses of large pharmaceutical companies, specialty animal health businesses and companies that mainly produce generic products. We believe many of our competitors are conducting R&D activities in areas served by our products and in areas in which we are developing products. Several new start-up companies also compete in the animal health industry. We also face competition from manufacturers of drugs globally, as well as producers of nutritional health products. These competitors may have access to greater financial, marketing, technical and other resources. As a result, they may be able to devote more resources to developing, manufacturing, marketing and selling their products, initiating or withstanding substantial price competition or more readily taking advantage of acquisitions or other opportunities.

Competitive pressure could arise from, among other things, more favorable safety and efficacy product profiles, limited demand growth or a significant number of additional competitive products being introduced into a particular market, price reductions by competitors, the ability of competitors to capitalize on their economies of scale, the ability of competitors to produce or otherwise procure animal health products at lower costs than us and the ability of competitors to access more or newer technology than us.

Our R&D relies on evaluations of animals, which may become subject to bans, additional restrictive regulations or increased attention from activism movements.

We are required to evaluate the effect of our product candidates in animals. Animal testing in certain industries has been the subject of controversy and adverse publicity. Some organizations and individuals have attempted to ban animal testing or encourage the adoption of new regulations applicable to animal testing. To the extent that the activities of such organizations and individuals are successful, our R&D, and by extension our business, financial condition and results of operations, could be materially adversely affected. In addition, negative publicity about us or our industry could harm our reputation. For example, farm animal producers may experience decreased demand for their products or reputational harm as a result of evolving consumer views of animal rights, nutrition, health-related or other concerns. Any reputational harm to the farm animal industry may also extend to companies in related industries, including our Company. Adverse consumer views related to the use of one or more of our product candidates in farm animals also may result in a decrease in the use of such products and could have a material adverse effect on our operating results and financial condition.

Use of social media could give rise to liability or reputational harm.

We and our employees use social media to communicate externally. There is risk that the use of social media by us or our employees to communicate about our product candidates or business may give rise to liability, lead to the loss of trade secrets or other intellectual property or result in public exposure of personal information of our employees, clinical trial patients, customers, and others. Furthermore, negative posts or comments about us or our product candidates in social media could seriously damage our reputation, brand image, and goodwill. Any of these events could have a material adverse effect on our business, prospects, operating results, and financial condition and could adversely affect the price of our common stock.

Risks Relating to Our Intellectual Property

We may not be able to protect our proprietary algae cultures and bioactive compounds in the marketplace.

Our success will depend, in part, on our ability to obtain patents, protect our trade secrets and operate without infringing on the proprietary rights of others. We rely upon a combination of patents, trade secret protection, and confidentiality agreements to protect the intellectual property of our products. Patents might not be issued or granted with respect to our patent applications that are currently pending, and issued or granted patents might later be found to be invalid or unenforceable, be interpreted in a manner that does not adequately protect our products or any future products, or fail to otherwise provide us with any competitive advantage. As such, we do not know the degree of future protection that we will have on our products, if any, and a failure to obtain adequate intellectual property protection with respect to our products could have a material adverse impact on our business.

Patent protection may not be available for some of the therapeutic candidates or products we are developing. If we must spend significant time and money protecting or enforcing our patents, designing around patents held by others or licensing, potentially for large fees, patents or other proprietary rights held by others, our business, results of operations and financial condition may be harmed.

Claims of intellectual property infringement by or against us could seriously harm our businesses.

From time to time, we may be forced to respond to or prosecute intellectual property infringement claims to defend or protect our rights. These claims, regardless of merit, may consume valuable management time, result in costly litigation or cause product shipment delays. Any of these factors could seriously harm our business and operating results. We may have to enter into royalty or licensing agreements with third parties who claim infringement. These royalty or licensing agreements, if available, may be costly to us. If we are unable to enter into royalty or licensing agreements with satisfactory terms, our business could suffer.

Risks Related to Our Common Stock

There can be no assurance that we will be able to comply with Nasdaq's continued listing standards, a failure of which could result in a de-listing of our common stock.

There is no assurance that we will continue to comply with the applicable Nasdaq listing standards. In order to maintain the listing of our common stock, par value \$0.001 per share (the "common stock") and warrants on Nasdaq, Nasdaq requires that the trading price of a company's listed stock on Nasdaq remain above one dollar in order for such stock to remain listed. If a listed stock trades below one dollar for more than 30 consecutive trading days, then it is subject to delisting from Nasdaq, together with any related warrants listed on Nasdaq. In addition, to maintain a listing on Nasdaq, we must satisfy minimum financial and other continued listing requirements and standards, including those regarding director independence and independent committee requirements, minimum stockholders' equity, and certain corporate governance requirements. If we are unable to satisfy these requirements or standards, we could be subject to delisting, which would have a negative effect on the price of our common stock and warrants and would impair your ability to sell or purchase our common stock and warrants when you wish to do so. In the event of a delisting, we would expect to take actions to restore our compliance with the listing requirements, but we can provide no assurance that any such action taken by us would allow our common stock and/or warrants to become listed again, stabilize the market price or improve the liquidity of our common stock, prevent our common stock from dropping below the minimum bid price requirement, or prevent future non-compliance with the listing requirements.

The market price and trading volume of our securities may be volatile and may be affected by economic conditions beyond our control.

The market price of our securities is likely to be volatile. Some specific factors that could negatively affect the price of our securities or result in fluctuations in its price and trading volume include:

- results of trials of our product candidates;
- results of trials of our competitors' products;
- regulatory actions with respect to our therapeutic candidates or products or our competitors' products;
- actual or anticipated fluctuations in our quarterly operating results or those of our competitors;
- our failure or the failure of our competitors to meet analysts' projections or guidance that we or our competitors may give to the market;
- issuances by us of debt or equity securities;

- litigation involving our Company, including stockholder litigation; investigations or audits by regulators into the operations of our company; or proceedings initiated by our competitors or clients;
- strategic decisions by us or our competitors, such as acquisitions, divestitures, spin-offs, joint ventures, strategic investments or changes in business strategy;
- trading volume of our common stock;
- announcement or expectation of additional financing efforts;
- terrorist acts, acts of war or periods of widespread civil unrest;
- natural disasters and other calamities;
- changes in market conditions for biotech or agtech stocks;
- influence of retail investors and/or social media on our common stock, such as a massive short squeeze rally; and
- conditions in the U.S. financial markets or changes in general economic conditions.

Our principal stockholders and management own a significant percentage of our stock and will be able to exert significant control over matters subject to stockholder approval.

As of December 31, 2022, our largest shareholder, HEP Investments, LLC (“HEP” or “HEP Investments”), beneficially owns approximately 18% of our common stock. Therefore, HEP Investments will have the ability to influence us through this ownership position. This stockholder may be able to determine all matters requiring stockholder approval, including elections of directors, amendments of our organizational documents, or approval of any merger, sale of assets, or other major corporate transaction. This may prevent or discourage unsolicited acquisition proposals or offers for our common stock that an individual may believe are in the stockholders’ best interest.

Our management has identified certain internal control deficiencies, which management believes constitute material weaknesses. Our failure to establish and maintain an effective system of internal controls could result in material misstatements of our financial statements or cause us to fail to meet our reporting obligations or fail to prevent fraud in which case, our stockholders could lose confidence in our financial reporting, which would harm our business and could negatively impact the price of our common stock.

We review and update our internal controls, disclosure controls and procedures, and corporate governance policies as our Company continues to evolve. In addition, we are required to comply with the internal control evaluation and certification requirements of Section 404 of the Sarbanes-Oxley Act of 2002 (“SOX”) and management is required to report annually on our internal control over financial reporting. Our independent registered public accounting firm will not be required to formally attest to the effectiveness of our internal control over financial reporting pursuant to Section 404 of SOX until the date we are no longer a “smaller reporting company” as defined by applicable SEC rules.

Our management’s evaluation of the effectiveness of our internal controls over financial reporting as of December 31, 2022 concluded that our controls were not effective, due to material weaknesses resulting from an ineffective overall control environment. The material weaknesses stem primarily from our small size and include the inability to (i) maintain appropriately designed information technology general controls in the areas of user access, vendor management controls, and segregation of duties, including controls over the recording of journal entries, related to certain information technology systems that support the Company’s financial reporting process; and (ii) design and maintain effective controls over complex accounting areas and related disclosures including income tax , stock-based compensation, and deferred research and development obligations - participation agreements. Specifically, management did not identify controls over the review of the tax provision, including the valuation analysis relating to deferred tax assets, considerations for uncertain tax positions, the preparation of income tax footnote and required disclosures and selecting and applying accounting policies, proper review of the financial statements and the application of GAAP relating to the accounting and classification of deferred research and development obligations - participation agreements. Management did not identify controls over the review of stock-based compensation, including the valuation of options granted under the Company’s equity-based compensation plans.

The effects of the accounting errors related to stock-based compensation and income taxes resulted in a revision of our annual report on Form 10-K for the period ending December 31, 2021. Please see “Note 2 - Revision of Previously Issued Financial Statements” for more information.

Such shortcomings could have an adverse effect on our business and financial results. Any system of internal controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the system are met. Any failure or circumvention of the controls and procedures or failure to comply with regulation concerning control and procedures could have a material effect on our business, results of operation and financial condition. Any of these events could result in an adverse reaction in the financial marketplace due to a loss of investor confidence in the reliability of our financial statements, which ultimately could negatively affect the market price of our shares, increase the volatility of our stock price and adversely affect our ability to raise additional funding. The effect of these events could also make it more difficult for us to attract and retain qualified persons to serve on our Board and as executive officers.

Subject to limitations on liquidity, the Company is planning to take steps to remediate these material weaknesses. However, we cannot assure you that any of the measures we implement to remedy any such deficiencies will effectively mitigate or remedy such deficiencies.

As a smaller reporting company, we are subject to scaled disclosure requirements that may make it more challenging for investors to analyze our results of operations and financial prospects.

Currently, we are a “smaller reporting company,” as defined by Rule 12b-2 of the Exchange Act. As a “smaller reporting company,” we are able to provide simplified executive compensation disclosures in our filings and have certain other decreased disclosure obligations in our filings with the SEC, including being required to provide only two years of audited financial statements in annual reports. Consequently, it may be more challenging for investors to analyze our results of operations and financial prospects.

Furthermore, we are a non-accelerated filer as defined by Rule 12b-2 of the Exchange Act, and, as such, are not required to provide an auditor attestation of management’s assessment of internal control over financial reporting, which is generally required for SEC reporting companies under Section 404(b) of the Sarbanes-Oxley Act. Because we are not required to, and have not, had our auditor’s provide an attestation of our management’s assessment of internal control over financial reporting, a material weakness in internal controls may remain undetected for a longer period.

Our annual and quarterly operating results may fluctuate significantly or may fall below the expectations of investors or securities analysts, each of which may cause our stock price to fluctuate or decline.

We expect our operating results to be subject to annual and quarterly fluctuations. Our net loss and other operating results will be affected by numerous factors, including:

- variations in the level of expenses related to our product candidates, products or future development programs;
- if any of our product candidates receives regulatory approval, the level of underlying demand for these product candidates and wholesalers’ buying patterns;
- addition or termination of trials or funding support;

- our execution of any collaborative, licensing or similar arrangements, and the timing of payments we may make or receive under these arrangements;
- any intellectual property infringement lawsuit in which we may become involved;
- regulatory developments affecting our products or those of our competitors;
- the timing and cost of, and level of investment in, research and development activities relating to our product candidates, which may change from time to time;
- our ability to attract, hire and retain qualified personnel;
- expenditures that we will or may incur to acquire or develop additional product candidates and technologies;
- future accounting pronouncements or changes in our accounting policies; and
- the timing and success or failure of clinical studies for our therapeutic candidates or competing product candidates, or any other change in the competitive landscape of our industry, including consolidation among our competitors or partners.

If our annual or quarterly operating results fall below the expectations of investors or securities analysts, the price of our securities could decline substantially. Furthermore, any annual or quarterly fluctuations in our operating results may, in turn, cause the price of our stock to fluctuate substantially. We believe that annual and quarterly comparisons of our financial results are not necessarily meaningful and should not be relied upon as an indication of our future performance.

Raising additional funds through debt or equity financing could be dilutive and may cause the market price of our common stock to decline.

To the extent that we raise additional capital through the sale of equity or convertible debt securities, your ownership interest may be diluted, and the terms of these securities may include liquidation or other preferences that adversely affect your rights as a stockholder. Debt financing, if available, may involve agreements that include covenants limiting or restricting our ability to take certain actions, such as incurring debt, making capital expenditures or declaring dividends. If we raise additional funds through collaborations, strategic collaborations or partnerships, or marketing, distribution or licensing arrangements with third parties, we may be required to limit valuable rights to our intellectual property, technologies, therapeutic candidates or future revenue streams, or grant licenses or other rights on terms that are not favorable to us. Furthermore, any additional fundraising efforts may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our therapeutic candidates.

Sales of a substantial number of shares of our common stock in the public market could cause our stock price to fall.

Sales of a substantial number of shares of our common stock in the public market or the perception that these sales might occur, could depress the market price of our common stock and could impair our ability to raise capital through the sale of additional equity securities. We are unable to predict the effect that sales may have on the prevailing market price of our common stock.

Future sales and issuances of our common stock or rights to purchase our common stock, including pursuant to our equity incentive plans, could result in additional dilution of the percentage ownership of our stockholders and could cause our stock price to fall.

We expect that significant additional capital will be needed in the future to continue our planned operations. To the extent we raise additional capital by issuing equity securities, our stockholders may experience substantial dilution. We may sell our common stock, convertible securities or other equity securities in one or more transactions at prices and in a manner we determine from time to time. If we sell our common stock, convertible securities or other equity securities in more than one transaction, investors may be materially diluted by subsequent sales. These sales may also result in material dilution to our existing stockholders, and new investors could gain rights superior to our existing stockholders.

We are at risk of litigation.

We are party to an arbitration dispute with AEGLE Partners, 2 LLC. Additionally, in the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities. This risk is especially relevant for us because biotechnology companies have experienced significant stock price volatility in recent years. If we face such litigation, it could result in substantial costs and a diversion of management's attention and resources, which could harm our business.

Additionally, on January 4, 2022 we terminated our former Chief Executive Officer for cause, and do not believe that we owe him any severance payments. However, we have not yet reached an agreement with him related to his departure.

Even if we successfully defend against these claims, litigation could result in substantial costs place a significant strain on our financial resources, divert the attention of management from our core business and harm our reputation.

We do not intend to pay dividends on our common stock so any returns will be limited to the value of our stock.

We have never declared or paid any cash dividends on our common stock. We currently anticipate that we will retain future earnings for the development, operation and expansion of our business and do not anticipate declaring or paying any cash dividends for the foreseeable future. Any return to stockholders will therefore be limited to the appreciation of their stock

Risks Related to this Offering

Resales of our Common Stock, including the Common Stock issuable upon exercise of the Unit Warrants being offered in this Offering, in the public market by our stockholders as a result of this Offering may cause the market price of our Common Stock to fall.

Sales of a substantial number of shares of our Common Stock, including the shares of Common Stock issuable upon exercise of the Unit Warrants being offered in this Offering, in the public market could occur at any time. The issuance of new shares of our Common Stock, including the shares of Common Stock issuable upon exercise of the Unit Warrants being offered in this Offering, could result in resales of our Common Stock by our current stockholders concerned about the potential ownership dilution of their holdings. In turn, these resales could have the effect of depressing the market price for our Common Stock and consequently our Unit Warrants.

There may be future sales or other dilution of our equity, which may adversely affect the market price of our Common Stock.

If our existing stockholders sell, or indicate an intention to sell, substantial amounts of our Common Stock in the public market after applicable legal restrictions on resale and the lock-up agreements, the trading price of our stock could decline. As of December 31, 2022, we had 9,419,660 shares of Common Stock outstanding, outstanding options that in aggregate would be exercisable for 1,689,907 shares (including unvested options), warrants exercisable for 4,577,695 shares and convertible debt. Substantially all of such shares of Common Stock may be sold in the public market. If outstanding options or warrants are exercised, if substantial additional shares are sold, or if it is perceived that they will be sold, in the public market, the trading price of our Common Stock, and consequently our Unit Warrants, could decline.

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

You may experience immediate and substantial dilution in the book value per share of the Common Stock you purchase.

The public offering price per Unit is substantially higher than the net tangible book value per share of our Common Stock. Therefore, if you purchase securities in this Offering, you will pay an effective price per share of Common Stock you acquire that substantially exceeds our net tangible book value per share after this Offering. Assuming no exercise of the Unit Warrants being offered in this Offering, no value is attributed to such Unit Warrants and such Unit Warrants are classified as and accounted for as equity, you will experience immediate dilution of \$2.19 per share, representing the difference between our as adjusted net tangible book value per share after giving effect to this Offering and the public offering price per Unit. In addition, if previously issued options and warrants to acquire Common Stock are exercised at prices below the offering price or the accompanying Unit Warrants being offered in this Offering are accounted for as liabilities, you will experience further dilution. See “*Dilution*” for a more detailed discussion of the dilution you may incur in connection with this Offering.

This Offering may cause the trading price of our Common Stock to decrease.

The Unit price, together with the number of shares of Common Stock we propose to issue and ultimately will issue if this Offering is completed, may result in an immediate decrease in the market price of our Common Stock. This decrease may continue after the completion of this Offering. We cannot predict the effect, if any, that the availability of shares for future sale represented by the Unit Warrants issued in connection with this Offering will have on the market price of our Common Stock from time to time. Further, if a substantial number of Units are purchased and the holders of the shares received upon exercise of the related Unit Warrants choose to sell some or all of the shares underlying the Unit Warrants, the resulting sales could depress the market price of our Common Stock.

The Unit price determined for this Offering is not an indication of the fair value of our Common Stock.

In determining the Unit price, our board of directors (the “Board of Directors”) considered a number of factors, including, but not limited to, our need to raise capital in the near term to continue our operations, the current and historical trading prices of our Common Stock, a price that would increase the likelihood of participation in this Offering, the cost of capital from other sources, the value of the Unit Warrants being issued as components of the Unit and comparable precedent transactions. The Unit price does not necessarily bear any relationship to any established criteria for value. No valuation consultant or investment banker has opined upon the fairness or adequacy of the Unit price. You should not consider the Unit price as an indication of the value of our Company or our Common Stock.

This is a best efforts offering, no minimum amount of securities is required to be sold, and we may not raise the amount of capital we believe is required for our business plans.

The Placement Agent has agreed to use its reasonable best efforts to solicit offers to purchase the securities being offered in this Offering. 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 the securities. There is no required minimum number of securities or amount of proceeds that must be sold as a condition to completion of this offering. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual offering amount, Placement Agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth above. We may sell fewer than all of the securities offered hereby, which may significantly reduce the amount of proceeds received by us, and investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to fund for our operations as described in the “*Use of Proceeds*” section herein. Thus, we may not raise the amount of capital we believe is required for our operations in the short-term and may need to raise additional funds, which may not be available or available on terms acceptable to us.

Our ability to utilize loss carry forwards may be limited.

Generally a change of more than fifty percent (50%) in the ownership of a company's stock, by value, over a three-year period constitutes an ownership change for U.S. federal income tax purposes. An ownership change may limit our ability to use our net operating loss carryforwards attributable to the period prior to the change. As a result, if we earn net taxable income, our ability to use our pre-change net operating loss carryforwards to offset U.S. federal taxable income may become subject to limitations.

Risks Related to the Unit Warrants and Pre-Funded Warrants

There is no public market for the Unit Warrants or pre-funded warrants being offered in this Offering and we do not expect one to develop.

There is presently no established public trading market for the Unit Warrants or pre-funded warrants being offered in this Offering and we do not expect a market to develop. In addition, we do not intend to apply to list the Unit Warrants or pre-funded warrants on any securities exchange or nationally recognized trading system, including Nasdaq. Without an active market, the liquidity of the Unit Warrants or pre-funded warrants will be limited.

The United States federal income taxation of the pre-funded warrants is uncertain.

We and holders of our pre-funded warrants may have to take positions that are not yet settled under current U.S. federal income tax law with respect to the pre-funded warrants. The IRS may disagree with the positions taken by the Company, which could result in adverse U.S. federal income tax consequences for us and our shareholders, including holders of the pre-funded warrants. Prospective investors are urged to consult their personal income tax advisers in this regard.

The Unit Warrants and pre-funded warrants are speculative in nature.

The Unit Warrants and pre-funded warrants offered hereby do not confer any rights of Common Stock ownership on their holders, such as voting rights or the right to receive dividends, but rather merely represent the right to acquire Common Stock at a fixed price. Specifically, commencing on the date of issuance, holders of the pre-funded warrants may acquire the Common Stock issuable upon exercise of such warrants at an exercise price of \$ per Common Stock and holders of the Unit Warrants may acquire the Common Stock issuable upon the exercise of such warrants at an exercise price of \$ per Common Stock. Moreover, following this offering, the market value of the Unit Warrants and pre-funded warrants is uncertain and there can be no assurance that the market value of the Unit Warrants and pre-funded warrants will equal or exceed their public offering price.

Purchasers of our Unit Warrants or pre-funded warrants will not have any rights of common stockholders until such Unit Warrants or pre-funded warrants are exercised.

The Unit Warrants and pre-funded warrants being offered do not confer any rights of Common Stock ownership on their holders, such as voting rights or the right to receive dividends, but rather merely represent the right to acquire Common Stock at a fixed price.

Holders of our Unit Warrants and pre-funded warrants will have no rights as a common stockholder until they acquire our Common Stock.

Until investors acquire shares of our Common Stock upon exercise of the Unit Warrants or pre-funded warrants being offered in this Offering, they will have no rights with respect to our Common Stock such as voting rights or the right to receive dividends. Upon exercise of such Unit Warrants or pre-funded warrants, holders will be entitled to exercise the rights of a Common Stockholder only as to matters for which the record date occurs after the exercise date.

Our outstanding warrants may have an adverse effect on the market price of our Common Stock and make it more difficult to effect a business combination.

We will be issuing Unit Warrants to purchase shares of Common Stock as part of this Offering. To the extent we issue shares of Common Stock to effect a future business combination, the potential for the issuance of a substantial number of additional shares upon exercise of these Unit Warrants could make us a less attractive acquisition vehicle in the eyes of a target business. Such securities, when exercised, will increase the number of issued and outstanding ordinary shares and reduce the value of the shares issued to complete the business combination. Accordingly, our Unit Warrants may make it more difficult to effectuate a business combination or increase the cost of acquiring a target business. Additionally, the sale, or even the possibility of sale, of the shares of Common Stock underlying the Unit Warrants could have an adverse effect on the market price for our securities or on our ability to obtain future financing. If and to the extent these Unit Warrants are exercised, you may experience dilution to your holdings.

USE OF PROCEEDS

Assuming we sell all Units offered pursuant to this prospectus, we estimate that our net proceeds from the sale of Units, consisting of shares of our Common Stock or pre-funded warrants and Unit Warrants by us in this Offering will be approximately \$13.6 million, based on an assumed offering price of \$3.15, after deducting Placement Agent fees and estimated offering expenses payable by us. However, because this is a best efforts offering and there is no minimum offering amount required as a condition to the closing of this Offering, the actual offering amount, Placement Agent's fees and net proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth on the cover page of this prospectus.

We expect to use the proceeds that we receive from this offering as follows:

Use of Proceeds	
Proceeds:	
Gross Proceeds	\$ 15,000,000
Fees and Expenses	(1,370,000)
Net Proceeds	<u>\$ 13,630,000</u>
Uses:	
Agtech - Research and Development	\$ 2,054,000
Biotech - Research and Development	\$ 2,367,000
Production scale up of algal biomass	2,100,000
Working Capital	7,109,000
Total Uses	<u>\$ 13,630,000</u>

Accordingly, our management will have discretion and flexibility in applying the net proceeds of this Offering.

CAPITALIZATION

The following table presents a summary of our cash and cash equivalents and capitalization as of December 31, 2022:

- on an actual basis;
- on an as adjusted basis giving effect to the sale and the issuance of 4,761,904 shares of Common Stock and 4,761,904 Unit Warrants to purchase Common Stock in this offering at an assumed public offering price of \$3.15 per Unit, after deducting Placement Agent fees and other estimated offering expenses payable by us. The as adjusted basis assumes no pre-funded warrants are sold in this offering and excludes the proceeds, if any, from the exercise of any Unit Warrants issued in this Offering.

As of December 31, 2022

	<u>Actual</u>	<u>As Adjusted</u>
Assets		
Cash	\$ 1,799,263	\$ 15,429,261
Liabilities		
Convertible debentures payable	\$ 240,000	\$ 240,000
Stockholders' Equity (Deficit)		
Common Stock, \$0.001 par value, 150,000,000 shares authorized; actual: 9,419,660 shares issued and outstanding as of December 31, 2022; pro forma as adjusted: 14,181,564 shares issued and outstanding	9,420	14,182
Additional paid-in capital	115,784,488	129,409,724
Accumulated deficit	(115,804,530)	(115,804,530)
Total Stockholders' Equity (Deficit)	(10,622)	13,619,376
Capitalization	229,378	13,859,376

The foregoing as adjusted information is illustrative only, and our capitalization following the completion of this Offering will be adjusted based on the actual public offering price and other terms of this Offering determined at pricing.

The table and discussion set forth in the table above excludes:

- 1,689,907 shares of our Common Stock issuable upon the exercise of outstanding stock options as of December 31, 2022, with an approximate weighted-average exercise price of \$6.14 per share;
- 1,602,198 shares of our Common Stock issuable upon the exercise of unregistered warrants outstanding as of December 31, 2022 with an approximate weighted-average exercise price of \$7.85 per share;
- 2,975,497 shares of our Common Stock issuable upon exercise of registered warrants outstanding as of December 31, 2022 with an approximate weighted-average exercise price of \$5.50 per share;
- 143,576 shares of our Common Stock reserved for future issuance under our 2021 Plan as of December 31, 2022; and
- 470,983 shares of Common Stock added to the share reserve of the 2021 Plan on January 1, 2023.

The capitalization as further adjusted does not assume proceeds from the exercise of the Unit Warrants issued in this offering. Furthermore, the accounting treatment of Unit Warrants has not been finalized as of the date hereof. The accounting treatment of the Unit Warrant is being evaluated to assess if the arrangement qualifies as an equity classified instrument or a liability classified instrument. If the arrangement is required to be accounted for as a liability, then the Unit Warrant will be recognized as a liability at fair value upon the closing and remeasured to fair value at each balance sheet date in the future reporting periods with changes in fair value recorded in the consolidated statement of operations.

The capitalization assumes no sale of pre-funded warrants in this offering, which, if sold, would reduce the number of Common Stock that we are offering on a one-for-one basis.

MARKET FOR OUR COMMON STOCK

Our Common Stock and certain of our outstanding warrants trade on Nasdaq under the symbol “ZIVO” and “ZIVOW”, respectively.

Holders

As of March 1, 2023, there were approximately 224 holders of record of our Common Stock. The number of holders of record is based on the actual number of holders registered on the books of our transfer agent and does not reflect holders of shares in “street name” or persons, partnerships, associations, corporations, or other entities identified in security position listings maintained by depository trust companies.

Dividend Policy

We have never declared or paid cash dividends on our Common Stock. We currently intend to retain all available funds and any future earnings for use in the operation of our business and do not anticipate paying any dividends on our Common Stock in the foreseeable future. Any future determination to declare dividends will be made at the discretion of our board of directors and will depend on our financial condition, operating results, capital requirements, general business conditions and other factors that our board of directors may deem relevant.

DILUTION

If you invest in the Securities being offered by this prospectus, your interest will be diluted immediately to the extent of the difference between the public offering price per Unit and the adjusted net tangible book value per share of our Common Stock after this Offering.

The historical net tangible book deficit of our Common Stock as of December 31, 2022, was approximately (\$10,622), or approximately \$0.00 per share. Net tangible book deficit per share represents the amount of our total tangible assets, excluding goodwill and intangible assets, less total liabilities, divided by the total number of shares of our Common Stock outstanding. Dilution per share to new investors represents the difference between the effective amount per share paid by purchasers for each share of Common Stock in this Offering and the net tangible book value per share of our Common Stock immediately following the completion of this Offering.

Our pro forma net tangible book value of our Common Stock as of December 31, 2022, was approximately \$13.6 million, or approximately \$0.96 per share. Pro forma net tangible book value gives effect to the issuance in this Offering of 4,761,904 Units, at an assumed public offering price of \$3.15 per Unit, after deducting Placement Agent fees and other estimated offering expenses payable by us.

Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers in this Offering and the net tangible book value per share of our Common Stock immediately after this Offering. After giving effect to the sale of 4,761,904 Units in this Offering at an assumed public offering price of \$3.15 per Unit, and after deducting the Placement Agent fees and the estimated offering expenses payable by us, our as adjusted net tangible book value as of December 31, 2022 would have been approximately \$0.96 per share of Common Stock. This represents an immediate increase in net tangible book value of \$0.96 per share to our existing stockholders and an immediate dilution of \$(2.19) per share to investors purchasing shares of Common Stock in this Offering. Amounts do not include exercise of Unit Warrants in this Offering and no sale of pre-funded warrants in this Offering, which, if sold, would reduce the number of shares of Common Stock that we are offering on a one-for-one basis.

Assumed public offering price per Unit		\$	3.15
Historical Net tangible book value per share at December 31, 2022	\$	0.00	
Increase to pro forma net tangible book value per share attributable to investors purchasing our Common Stock in this Offering	\$	0.96	
Pro forma net tangible book value per share as of December 31, 2022, after giving effect to this Offering		\$	0.96
Dilution per share to investors purchasing our Common Stock in this Offering		\$	2.19

The table and discussion set forth in the table above excludes:

- 1,689,907 shares of our Common Stock issuable upon the exercise of outstanding stock options as of December 31, 2022, with an approximate weighted-average exercise price of \$6.14 per share;
- 1,602,198 shares of our Common Stock issuable upon the exercise of unregistered warrants outstanding as of December 31, 2022 with an approximate weighted-average exercise price of \$7.85 per share;
- 2,975,497 shares of our Common Stock issuable upon exercise of registered warrants outstanding as of December 31, 2022 with an approximate weighted-average exercise price of \$5.50 per share;
- 143,576 shares of our Common Stock reserved for future issuance under our 2021 Plan as of December 31, 2022; and
- 470,983 shares of Common Stock added to the share reserve of the 2021 Plan on January 1, 2023.

Each \$1.00 increase (decrease) in the assumed public offering price of \$3.15 per Unit would increase (decrease) our pro forma as adjusted net tangible book value per share after this Offering by approximately \$0.31, and the dilution per share to new investors purchasing shares in this Offering by \$0.69, assuming the number of Units offered by us, as set forth on the cover page of this prospectus, remains the same and after deducting Placement Agent fees and estimated offering expenses payable by us. Similarly, each increase (decrease) of 500,000 in the number of Units offered by us would increase (decrease) the pro forma net tangible book value, as adjusted to give effect to this Offering, by \$0.07 per share, and the dilution to new investors by \$0.07 per share. The information discussed above is illustrative only and will be adjusted based on the actual public offering price and other terms of this Offering as determined between us and the Placement Agent at pricing.

To the extent that any of these outstanding options are exercised or warrants are exercised or we issue additional shares under our equity incentive plans, there may be further dilution to new investors. 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.

BUSINESS

Overview

We are a research and development company operating in both the biotech and agtech sectors, with an intellectual property portfolio comprised of proprietary algal and bacterial strains, biologically active molecules and complexes, production techniques, cultivation techniques and patented or patent-pending inventions for applications in human and animal health.

We believe that our proprietary algal culture and materials derived therefrom show promise in benefiting both animal and human health, primarily through inflammation-modulating and immune-boosting properties. Overall, our efforts have been centered around two potential value-creating initiatives; the first being the identification of bioactive extracts or novel bioactive molecules from our proprietary algal culture to treat various diseases, and second, the utilization of our proprietary algal culture in its whole form as a food product to leverage its nutritional value. In the first quarter of 2022, we reformulated our biotech and agtech businesses around these two concepts. We reviewed the market potential (scale and profit) and the technical and business risks associated with each of the opportunities we had been working on and developed a focused strategy for each business.

Biotech Business Strategy

We are seeking to partner with established animal health companies and create value through licensing or other commercial arrangements, while accelerating final product development and mitigating market introduction risk.

Review of isolated active materials derived from our proprietary algal culture and their potential treatment applications led us to identify a product candidate for treating coccidiosis in broiler chickens as the best option for most rapidly generating significant revenue because coccidiosis is a global poultry industry issue costing chicken farmers between \$8-13 billion annually, and because the clinical testing cycle for chickens is shorter than for other species. Most of the global animal health companies have products for the coccidiosis market; however, they are mostly antibiotic- or ionophore-based with essentially no new technology having been introduced in the last 60 years.

Coccidiosis Product Candidate

In numerous prior studies, ZIVO has demonstrated multiple benefits, including:

- Minimized or eliminated the negative effects of coccidiosis on the digestive health in broiler chickens by numerous measures of gut health and overall well-being;
- Reduced the incidence of *Campylobacter*, *Salmonella*, *E. coli*, and *Clostridium perfringens*, all significant sources of food-borne illness, in the digestive tract of broiler chickens in the absence of antibiotics or other antimicrobial compounds; and
- Reduced mortality.

The predominant treatment for coccidiosis in the poultry industry, in-feed anticoccidial drugs, target the *Eimeria* parasite directly and require constant use over the lifespan of the animal for efficacy and can over time result in the development of resistant *Eimeria* strains. Other treatment strategies, such as vaccines, require several weeks for immunity to manifest, which can significantly impact growth potential. Often, several treatment products are used in combination, increasing costs in an industry already facing heavy inflationary pressures. As a result, the poultry industry is actively searching for a novel solution.

Our treatment alternative represents an innovative new product class that aims to strengthen the immune system of chickens through multiple complementary immune pathways to afford a rapid, robust, and effective response to disease-causing pathogens without the adverse effects associated with traditional antimicrobial drugs and chemicals.

Agtech Business Strategy

For the agtech side of our business, we have developed our proprietary algal culture to be commercially viable as a nutritional product. The powdered form contains approximately 45% protein, is an excellent source of other essential nutrients, and is nearly completely odorless and tasteless unlike other algal products. As we reviewed our agtech business early this year, we were very satisfied with the nature of the product; however, we identified gaps in customer acquisition and in scale-up technology preventing us from growing our proprietary algae in quantities to sufficiently meet the potential demand. We have, therefore, focused our agtech strategy on developing a cost effective, commercial-scale growing technology.

In 2021, we began funding a development agreement with Grupo Alimenta, a well-established Peruvian agriculture company. Our focus is now on scaling up for commercial production. The Alimenta-ZIVO team has been working toward building commercial-scale algae ponds using a ZIVO proprietary design, and we are in the middle of a project to grow our algae in a penultimate scale pond.

Given the Self Affirmed GRAS (Generally Recognized as Safe) status for our dried whole algal biomass product, we intend to work with partners and wholesale buyers with the goal to generate revenue in 2023.

Today's algae industry is artisanal and fragmented. There is no major source that can deliver to national brands and co-packers consistent quality and quantity of dried algae, and we aim to fill that market need with our proprietary algae.

Additional Indications

Pending additional funding, ZIVO may also pursue the following indications:

Biotech:

- **Bovine Mastitis:** ZIVO is developing a treatment, for bovine mastitis based on previous successful proof of concept studies and derived from its proprietary algal culture and the bioactive agents contained within.
- **Canine Joint Health:** Studies have indicated the potential of a chondroprotective property when a compound fraction from ZIVO's algal culture was introduced into ex vivo canine joint tissues.
- **Human Immune Modulation:** Early human immune cell in vitro and in vivo studies have indicated that one of the isolated and characterized biologically active molecules in the Company's portfolio may serve as an immune modulator with potential application in multiple disease situations.

Agtech:

- **Human Food Ingredient:** The self-affirmed GRAS process was completed for ZIVO algal biomass in late 2018 to validate its suitability for human consumption as an ingredient in foods and beverages.
- **Skin Health:** ZIVO is developing its algal biomass as a skin health ingredient, with topical skin product testing started in the third quarter of 2020, and clinical efficacy claim studies planned for ingestible and topical products.

Our Market Opportunity

Biotech

Livestock and Companion Animal Health

The annual market sizes for vaccines, phylogenics and eubiotics in the animal health market as a whole were approximately \$9.2 billion in 2020, \$753.0 million in 2020, and \$3.9 billion in 2019, respectively. During the same time period, the annual market sizes for drugs, vaccines & feed additives and supplements in the companion animal market were approximately \$11.8 billion in 2020 and \$637.6 million in 2019, respectively.

Poultry Gut Health

Coccidiosis, or the inflammation of the intestinal tract, is one of the largest health and animal welfare problems facing poultry flocks. Consumer and regulatory pressure have created what we believe to be an opportunity to develop and market an alternative to various additives routinely mixed into chicken feed. The Company is developing a product candidate designed to boost immune response, thereby combatting a broad range of infective pathogens, with the goal of simultaneously improving feed conversion and productivity.

Bovine Mastitis

Bovine mastitis, or inflammation of the udder, can halt milk production and may result in unsaleable milk. The U.S. cow herd averaged 9.4 million cows in 2018 and U.S. milk production hit 217.6 billion pounds in 2018. Bovine mastitis affects approximately 1.5 million out of the 9 million dairy cows in the U.S. on an annual basis, and the average loss per cow per year in milk output is 846 pounds. Current treatments are primarily antibiotic, which requires a holding period and disposal of milk during that holding period.

Canine Joint Health

Osteoarthritis (OA) is one of the most common ailments among pet dogs, with prevalence believed to be greater than 20%. The U.S. is expected to hold the largest share of the global market for veterinary pain management due to the vast pet population in the region, increasing animal healthcare expenditure, large number of hospitals and clinics, growing pool of veterinarians, and high prevalence of diseases causing pain. According to IBISWorld, the U.S. veterinary services market showed a solid, steady increase in consumer spending over the past few years.

Human Immune Modification

Immune-related and infectious diseases represent a vast range of health issues affecting millions of humans. New applications in pharma, food and nutraceuticals are continually introduced into this growing market. The annual market sizes for the antibiotics, eubiotics, autoimmune, and the antidiabetic markets were approximately \$40.0 billion in 2020, \$37.9 billion in 2019, \$110.0 billion in 2017 and \$48.8 billion in 2018, respectively. Beyond arthritis, there are more than 80 types of clinically different autoimmune diseases. Many major pharmaceutical and biopharmaceutical companies have extensive licensing and development programs focused on autoimmune/anti-inflammatory R&D. The rise in strategic alliances by discovery stage R&D companies like ZIVO is one of the latest trends that may gain traction in the autoimmune and anti-inflammatory therapeutics market in the coming years.

Agtech

Human Functional Food Ingredients

The market for healthy foods, health foods, vegan and vegetarian food products continues to gain traction in the US and worldwide, especially as consumers look for healthful and nutritional ingredients to improve overall health and immune response. The drive toward plant-based proteins and microbiome-enhancing natural foods and food/beverage ingredients and dietary supplements continues to expand.

Clinical Development and Regulatory Pathway

Clinical Experience, Future Development and Clinical Trial Plans

Our product candidates are at different stages of development for different applications. Accordingly, the various regulatory processes required for the various applications are at different stages of completion. With respect to human food and beverage applications, we have completed the FDA's self-affirmed GRAS process for our dried algal biomass which allows for product commercialization with a consumption limit of up to nine grams per day.

Beyond use of the dried algal biomass in human food and beverage in the U.S. with nutritional claims, ZIVO has not yet received the required approvals for commercialization for any product form or application. To date, however, we have performed a number of studies required by regulatory bodies including bench top and pre-clinical tests (which include animal testing, performance, and other tests) for various product forms and applications pertinent to qualified health claims and structure/function claims. As described below, the Company intends to perform additional testing of its products in connection with obtaining the requisite regulatory approvals.

Poultry Gut Health

We are actively developing a product candidate targeting poultry gut health. We have conducted 21 clinical trials to date, most recently in the first half of 2022. The early studies focused on determining the general effects of various product candidates, while the more recent studies have been focused on optimizing a single lead product candidate including study of dosage levels, interactions with vaccines and various product formulations.

In late 2022, a third party performed a four-month study on behalf of a potential partner company, which included a 42-day coccidiosis trial in broiler chickens. That study evaluating the Company's novel immune-modulating biologic for treating coccidiosis in broiler chickens produced questionable results due to a high disease burden among tested chickens. The Company has already begun the process to conduct a new study that it expects to be completed by mid-2023.

ZIVO's approach for developing our coccidiosis product candidate as feed additives enables us to generate products that boost the immune response and reduce the effects of disease, while maintaining a single regulatory relationship, which is with the U.S. Department of Agriculture (USDA).

We recently announced receipt of a letter from the USDA's Center for Veterinary Biologics (CVB) affirming that the agency has claimed jurisdiction for reviewing our immune-modulating biologic for treating coccidiosis in broiler chickens. This important jurisdictional announcement de-risks our regulatory path and opens the door to further discussions with the CVB on the final product development plan, regulatory strategy, and data requirements for licensure. This was a significant milestone as USDA approval is likely to provide a favorable timeline to approval relative to the alternative involving the FDA.

Potential Additional Indications

Following development of our initial product candidate for poultry gut health, the Company intends to continue to pursue the below indications:

Product	Stage of Development and/or Regulatory Status to Date	Next Steps
Bovine Mastitis	The Company has conducted multiple in vitro and ex vivo experiments as well as four clinical trials to determine general effects and to evaluate product modalities and methods of administration. These studies include two (2) multianalyte in vivo studies of mastitis-inducing pathogens, most recently staph aureus. <i>Discovery Stage, pre-GMP, pre-GLP</i>	The Company expects to conduct three or more small studies to validate a product candidate previously validated in poultry, among other similar candidates and to make refinements to same before offering to potential licensees.
Canine Joint Health	The Company has conducted multiple in vitro inflammatory experiments, followed by two in vivo trials with mice, and two ex vivo experiments using canine hip joint tissue. <i>Discovery Stage, pre-GMP, pre-GLP</i>	Additional ex vivo experiments are necessary to gauge effectiveness of product candidate, to be followed by two in vivo studies to determine dosage and tolerance, likely followed by one or more validation studies on behalf of prospective licensees.
Human Immune Modulation	The Company has conducted six in vitro experiments using human immune cells attenuated by proprietary TLR4 inhibitor.	The Company has additional testing planned, beginning with repeated in vitro testing of different dosages and purities.
Agtech:		
Algal biomass for human consumption	The Company has completed the self-affirmed GRAS status process (November 2018). No clinical testing is required for commercialization.	Commercial launch is in process. Product can be marketed immediately. Additional studies are contemplated to expand the allowable daily intake (ADI) and obtain an FDA No Questions letter.
Biomass for supporting skin health / anti-aging	The Company is planning several investigations to establish definitive support for the mechanism of action associated with skin health / anti-aging. Support for the indication is a prerequisite to the human new dietary ingredient (NDI) application. Topical skin product testing began in 2020.	The Company is planning additional studies to support skin health/anti-aging. Pending the outcome of these tests, we expect to notify the Food and Drug Administration about these ingredients and our intent to market according to Section 413(d) of the FD&C Act, 21 U.S.C. 350b(d).

Competition and Functional Equivalents

Biotech

Our industries are all very competitive and subject to rapid and significant innovation and change. In addition to companies cultivating and creating homeopathic and natural remedies, our potential competitors and functional equivalents include large pharmaceutical and biopharmaceutical companies, specialty pharmaceutical and generic drug companies, academic institutions, government agencies and research institutions. Key competitive factors affecting our products' commercial success will include efficacy, safety, tolerability, reliability and price.

Poultry Gut Health. Conventional poultry production typically involves the use of ionophores and other anticoccidial compounds, some of which are produced by HuvePharma, Elanco, Zoetis, and Phibro, among others. No Antibiotics Ever (NAE) poultry production, relies on effective and economically sound alternatives, such as vaccines and antimicrobial chemicals, as well as product candidates offered by ZIVO.

Bovine Mastitis: Branded antibiotic solutions include ToDay™ and Masti-Clear; homeopathic solutions include Amoxi-Mast™; topical and salve solutions include Gericidal teat dips, Fight Bac™ teat disinfectant spray, and Sterosol™ Pre/Post Teat Dip. Vaccine and antimicrobial solutions include Lysigin and Spectramast LC™.

Canine Joint Health: The global veterinary pain management drugs market is segmented into opioids, agonists, local anesthetics, NSAIDs (Non-steroidal Anti-Inflammatory Drugs), Disease-modifying Osteoarthritis Drugs (DMOAD) and others. The key players of the global veterinary pain management drugs market are Boehringer Ingelheim, Zoetis, Inc., Merck Animal Health, Elanco, Bayer AG, Vetoquinol S.A., Ceva Sante Animale, Virbac Group, Norbrook Laboratories Ltd, and Dechra Pharmaceuticals.

Human Immune Modulation: Several companies have TLR4 inhibitors currently in development. Eritoran (Eisai Research Institute of Boston, Andover, MA) and Resatorvid (TAK-242; Takeda Pharmaceutical Company) appear to be the lead candidates. Their mechanism of action (MOA) is cited as inhibition of the production of lipopolysaccharide (LPS)-induced inflammatory mediators by binding to the intracellular domain of TLR4. Eritoran has reached the clinical trial stage.

Agtech:

Human Food Ingredient. We believe that our primary competition will come from innovators in food technology such as DSM, Cognis, ConAgra, Cargill and Nestle, each of which has active M&A efforts, a large scientific staff and a generous R&D budget to develop supplements and ingredients for a wide range of applications.

Skin Health & Anti-Aging: There are a multitude of topical treatments and dietary supplements marketed for skin health and/or anti-aging applications, including premium multi-collagen peptides capsules such as, Well Roots Biotin Rich Plus Collagen, Heliocare Skin Care Dietary Supplement, CoQ10 Supplement, Vitamin C, Peptan®, Verisol®, and Pure Gold Collagen®.

Material Agreements

Zoetis Collaboration/Option Agreement

On December 20, 2013, the Company entered into a collaboration, confidentiality and option agreement with Zoetis (as amended from time to time, the “Zoetis Agreement”), formerly Pfizer Animal Health, and the world’s largest animal health company, pursuant to which the Company is conducting bovine mastitis research.

Under the Zoetis Agreement, the Company granted Zoetis an exclusive option to negotiate an exclusive license with the Company for Company proprietary technology for bovine mastitis, including its identified and characterized natural molecule and its synthetic fatty acid/polysaccharide complex, and derivatives/homologs/isomers thereof, and production of the same (the “Technology”). The Company is required to execute a study under the supervision of Zoetis, the results of which will be used by Zoetis to evaluate whether or not to exercise its option. Within 90 days of its receipt of results, Zoetis must notify the Company whether or not it wishes to secure an exclusive license, and the negotiation of such license and payment terms will be made at that time.

The Zoetis Agreement has been extended through seven amendments, with the current term set to expire on January 30, 2023.

NutriQuest Collaborative Marketing Agreement

In April 2017, the Company entered into a limited license agreement with animal nutrition innovator NutriQuest (the “NutriQuest Agreement”), which holds feed formulation contracts with Tyson, Purdue, Smithfield and other large poultry and pork processors around the world. Poultry feed testing has shown that the Company’s proprietary algal strain may be a natural immune modulator that may enter the market as a natural products of phytogetic feed ingredient, providing the No Antibiotics Ever (“NAE”) producers with a non-medicated feed alternative.

Under the NutriQuest Agreement, ZIVO granted to NutriQuest a limited, exclusive license to market, distribute sell and collect the sales proceeds in all ZIVO's nutrition, feed additive and supplementation applications naturally-derived algal biomass and extraction products (collectively the "Products") for oral administration in poultry and swine. The Products were to be sold under the NutriQuest brand, with logos and packaging chosen by NutriQuest, with NutriQuest marketing, distributing and collecting revenues from sales of the Products. The parties were to equally share the gross profit.

Additionally, if ZIVO had licensed its intellectual property to another party in the animal nutrition market (a "Competitive Product"), NutriQuest had the right to exercise either of the following two options: Market Adjustment Option: ZIVO would pay NutriQuest a market adjustment that is equal to 15% of the gross profit earned by ZIVO on the Competitive Product; and Put Option: NutriQuest had an option to terminate the NutriQuest Agreement and require ZIVO to pay NutriQuest a termination fee equal to three times NutriQuest's 50% portion of the highest annualized gross profit achieved by NutriQuest in any 12 consecutive month period from inception of sales pursuant to the NutriQuest Agreement.

On May 1, 2022, the Company acknowledged that the NutriQuest Agreement was terminated pursuant to its terms.

NutriChipz Supply Agreement

In June 2018, ZIVO entered into an exclusive U.S.-only supply agreement with NutriChipz (the "NutriChipz Agreement"), which provided an exclusive license to NutriChipz to supply our algae as an ingredient in chips and crisps. Under the NutriChipz Agreement, NutriChipz was to pay ZIVO an amount equal to 130% of the direct cost of ZIVO algal biomass at a US port of entry; provided, however, that such cost were not to exceed \$15,000 per metric ton. The NutriChipz Agreement had a term of five years, subject to up to two additional two-year terms at the election of NutriChipz. However, if at any point after the date that was 12 months following the first delivery by ZIVO of two tons of its product to NutriChipz at an average price per ton of no more than \$8,000, NutriChipz failed to purchase at monthly cumulative average of at least 10 tons of product, then ZIVO would be released from the exclusivity obligations. Additionally, either party was able to terminate the NutriChipz Agreement if the other party breached the NutriChipz Agreement, and did not cure such breach within 90 days, or upon certain insolvency, bankruptcy events of the other party.

On September 28, 2022, the NutriChipz Agreement was terminated by the parties. Upon termination of the NutriChipz Agreement, ZIVO granted NutriChipz a four (4) year right of first refusal ("NutriChipzROFR") (commencing on September 28, 2022) should ZIVO (or its affiliate or subsidiary) intend to sell its algae biomass to an unrelated party in an arm's length transaction as an ingredient for human consumption in any of the following:

- (i) A savory snack food in the form of a crisp, flat, or slightly bowl shaped, bite-sized unit that has been either deep fried, baked, or air fried until crunchy; or
- (ii) A fresh, perishable flexible, non-leavened flatbread marketed for use as a sandwich wrap.

NutriChipz must exercise the NutriChipz ROFR within thirty (30) days of receipt of notice of the above. If NutriChipz timely exercises the NutriChipz ROFR, then ZIVO and NutriChipz must, in good faith, negotiate and enter into a licensing agreement for the described use, in the form provided by ZIVO at that time for similar uses of food for human consumption and on terms, quantity, and pricing similar to those provided to the unrelated party.

Intellectual Property

Protection of our intellectual property is a strategic priority for our business. We rely on a combination of patents, trademarks, copyrights, trade secrets as well as nondisclosure and assignment of invention agreements, material transfer agreements, confidentiality agreements and other measures to protect our intellectual property and other proprietary rights.

Patents and Proprietary Rights

ZIVO Algal Products & Derivatives

We have rights in certain granted patents, patent application publications and trademarks. With respect to patents and trademarks, we have secured patent and federal trademark registrations in the USPTO, including the below:

- U.S. Patent No. 7,807,622 issued October 5, 2010, relates to our proprietary complex algal culture. The title of the patent is: “Composition and use of phyto-percolate for treatment of disease.” This invention relates generally to a method of preparation of a phyto-percolate that is derived from freshwater mixture including algae. The invention further relates to the potential use of the phyto-percolate in a variety of disease states. This patent was filed on November 30, 2006 and has a term of 20 years from the earliest claimed filing date.
- U. S. Patent No. 8,586,053 issued November 19, 2013, relates to our proprietary algal culture. The title of the patent is: “Composition and Use of Phytopercolate for Treatment of Disease.” This invention relates generally to a method of preparation of a phyto-percolate that is derived from fresh water mixture including algae. The invention further relates to the use of the phyto-percolate in a variety of disease states. The phyto-percolate is believed to contain an activity that induces the reduction of soluble and insoluble fibrin. Further, the phyto-percolate is believed to reduce oxidative stress in the body. The patent was filed on April 20, 2006 and has a term of 20 years from the earliest claimed filing date.
- U.S. Patent No. 8,791,060 issued July 29, 2014, relates to our proprietary culture. Title of the patent is the same: “Composition and Use of Phytopercolate for Treatment of disease.” This invention relates generally to a method of preparation of a phyto- percolate that is derived from fresh water mixture including algae. The invention further describes proteolytic activity. The patent was filed on October 4, 2010 and has a term of 20 years from the earliest claimed filing date.
- U.S. Patent No. 9,486,005 issued November 8, 2016, relates to our proprietary culture. Title of the patent is: “Agents and Mechanisms for Treating Hypercholesterolemia.” This invention relates generally to a method of treating hypercholesterolemia in mammals, by administering an effective amount of microbial fermentation product and regulating genes involved in lipoprotein metabolism.
- U.S. Patent No. 10,161,928, issued December 25, 2018, relates to a panel for monitoring levels of biomarkers. Title of the patent is: “Wellness Panel.” This invention relates generally to an assay having at least one inflammation monitoring test, at least one oxidative stress monitoring test, and at least one antioxidant activity monitoring test. A method of monitoring an individual’s health, by collecting a sample from the individual applying the sample to an assay panel performing at least one inflammation monitoring test, at least one oxidative stress monitoring test, and at least one antioxidant activity monitoring test in the panel, and determining levels of biomarkers related to inflammation, oxidative stress, and antioxidant activity and therefore providing information regarding the individual’s relative health and/or risk of developing one or more disease.
- U.S. Patent No. 10,166,270, issued January 1, 2019, relates to disclosing a composition and method for effecting various cytokines and NF-KB. Title of the patent is: Composition and Method for Affecting Cytokines and NF-KB.” This invention relates generally to administering an effective amount of a phyto-percolate composition to an individual. In various exemplary embodiments, the composition is claimed to be useful for the effective treatment of inflammation, cancer, and/or various infections including HIV by regulation of various interleukins, such as IL-10 and IL-2, and of transcription factors including NF-KB.
- U.S. Patent No. 10,232,028, issued March 19, 2019, relates to isolates and fractions from a phyto-percolate and methods for affecting various cytokines by administering an effective amount of one or more of said isolates or fractions to an animal. In various exemplary embodiments, the isolates are useful for the treatment of bovine, canine and swine infection or inflammation, including bovine mastitis, by regulation of TNF-a, lactoferrin, INF-y, IL-B, serum amyloid-A (SAA), IL-6 and/or B-de-fensin associated with infection or an immune response generally.

- U.S. Patent 10,765,732 issued September 8, 2020, title: Compounds and Methods for Affecting Cytokines. relates isolates and fractions from a phyto-percolate and methods for affecting various cytokines by administering an effective amount of one or more of said isolates or fractions to an animal. In various exemplary embodiments, the isolates are useful for the treatment of bovine, canine and swine infection or inflammation, including bovine mastitis.
- U.S. Patent 10,842,179 issued on November 24, 2020, titled: Agents and Mechanisms for Treating Hypercholesterolemia relates to methods of treating hypercholesterolemia in mammals using a microbial fermentation and the regulation of genes involved in lipoprotein metabolism. A related European family member, EP2538951, was also granted on April 22, 2020.
- U.S. Patent 11,065,287 issued on July 20, 2021, titled: Methods of Modulating Immune and Inflammatory Responses Via Administration of an Algal Biomass relates to algal biomass and supernatant derived from at least one species of algae exhibits anti-inflammatory and immune response modulating properties. Methods of reducing the symptoms of or treating a condition or disease in an animal, including bovine mastitis and Bovine Respiratory Disease Complex, and the pain and discomfort caused by osteoarthritis, injury or overexertion or muscle and connective tissue strains, A related Brazilian family member, BR112017017599, was also granted on November 16th, 2021.
- Canadian Patent CA3014897 issued on December 29, 2020, titled: Nutritional Support for Animals Via Administration of an Algal Derived Supplement relates to an algal biomass and supernatant derived from at least one species of algae exhibits the ability to maintain general health in humans and non-human animals and promote a healthy immune system in them. Food, feed and nutritional supplements comprising an algal biomass or supernatant derived from at least one species of algae are described. Methods of maintaining general health or promoting a healthy immune system in humans and non-human animals comprises administering to the animal in need thereof an algal biomass or supernatant derived from at least one species of algae, or an extract, derivative or homeopathic compound derived from the algae species, biomass or supernatant, or a composition thereof.
- Canadian Patent CA2631773 issued on April 26, 2022, titled Composition and Use of Phyto-Percolate for Treatment of Disease relates to generally to a method of preparation of phyto-percolate that is derived from fresh water mixture including algae. The phyto-percolate is believed to contain an enzyme having proteolytic activity. The invention further relates to the use of the phyto-percolate in a variety of disease states.
- European Patent 2538951 issued on April 22, 2020, titled Agents and Mechanisms for Preventing Hypercholesterolemia relates to the extractions from algae. In particular, the present inventor relates to cholesterol-lowering extractions from algae and extractions that have the ability to favorably shift HDL.LDL profile in mammals.

We also have allowed pending trademark applications for “KALGAE,” “ZIVO”, and “ZIVO Bioscience” in several countries. We may have other common law rights in other trademarks, trade names, service marks, and the like which will continue as long as we use those respective marks.

Patents

The term of individual patents and patent applications will depend upon the legal term of the patents in the countries in which they are obtained. In most countries, the patent term is 20 years from the date of filing of the patent application (or parent application, if applicable). For example, if an international Patent Cooperation Treaty (“PCT”) application is filed, any patent issuing from the PCT application in a specific country expires 20 years from the filing date of the PCT application. In the United States, using the Paris Convention route, if a patent was in force on June 8, 1995, or issued on an application that was filed before June 8, 1995, that patent will have a term that is the greater of 20 years from the filing date, or 17 years from the date of issue.

Under the Hatch-Waxman Act, the term of a patent that covers an FDA-approved drug or biological product may also be eligible for patent term extension (“PTE”). PTE permits restoration of a portion of the patent term of a U.S. patent as compensation for the patent term lost during product development and the FDA regulatory review process if approval of the application for the product is the first permitted commercial marketing of a drug or biological product containing the active ingredient. The patent term restoration period is generally one-half the time between the effective date of an investigational new drug (IND) and the submission date of a biological license application (“BLA”) plus the time between the submission date of a BLA and the approval of that application. The Hatch-Waxman Act permits a PTE for only one patent applicable to an approved drug, and the maximum period of restoration is five years beyond the expiration of the patent. A PTE cannot extend the remaining term of a patent beyond a total of 14 years from the date of product approval, and a patent can only be extended once, and thus, even if a single patent is applicable to multiple products, it can only be extended based on one product. Similar provisions may be available in Europe and certain other foreign jurisdictions to extend the term of a patent that covers an approved drug. When possible, depending upon the length of clinical trials and other factors involved in the filing of a BLA, we expect to apply for PTEs for patents covering our therapeutic candidates and products and their methods of use.

The following patent filings are pertinent to the operation of the ZIVO business:

Application Name	Country	Application No.	Status
Agents and Method for improving Gut Health	US	17/465,457	Under Prosecution; Published April 28, 2022
Algal Feed Ingredient for Controlling Coccidiosis and Necrotic Enteritis in Poultry	US	17/415,221	Under Prosecution; Notice of Publication March 10, 2022
Algal Feed Ingredient for Controlling Coccidiosis and Necrotic Enteritis in Poultry	Brazil	12021012229	Under Prosecution
Algal Feed Ingredient for Controlling Coccidiosis and Necrotic Enteritis in Poultry	Canada	3124190	Under Prosecution
Algal Feed Ingredient for Controlling Coccidiosis and Necrotic Enteritis in Poultry	Europe	901280.08	Under Prosecution
Algal Feed Ingredient for Controlling Coccidiosis and Necrotic Enteritis in Poultry	Hong Kong	62022046143	Under Prosecution
Algal Feed Ingredient for Controlling Coccidiosis and Necrotic Enteritis in Poultry	Mexico	MX/a/a2021/007359	Under Prosecution
Algal Feed Ingredient for Controlling Coccidiosis and Necrotic Enteritis in Poultry	Peru	1048-2021	Under Prosecution
Algal Feed Ingredient for Controlling Coccidiosis and Necrotic Enteritis in Poultry	Thailand	2101003721	Under Prosecution
Algal Feed Ingredient for Controlling Coccidiosis and Necrotic Enteritis in Poultry	US	PCT/US19/67600	Under Prosecution; Published June 25, 2022; National Stage Deadline June 21, 2021
Algoriphagus SP, Bosea SP, Brevundimonas SP, Desulfovibrio SP, Microbacterium SP, Sphingomonas SP, and Variovorax SP for Use in Disease Prevention and Treatment (Complete)	US	17/576,237	Under Prosecution; published July 21, 2022

Algoriphagus SP, Bosea SP, Brevundimonas SP, Desulfovibrio SP, Microbacterium SP, Sphingomonas SP, and Variovorax SP for Use in Disease Prevention and Treatment (Complete)	US	PCT/US2022/012499	Under Prosecution; Published July 28, 2023; National Stage Deadline July 15, 2023;
Algoriphagus SP, Bosea SP, Brevundimonas SP, Desulfovibrio SP, Microbacterium SP, Sphingomonas SP, and Variovorax SP for Use in Disease Prevention and Treatment (Simplified)	US	17/576,444	Under Prosecution; Published July 21, 2022
Composition and Method For Affecting Cytokines and NF-κB	Brazil	BR 11 2012 011678 9	Under Prosecution
Dietary Supplements, Food Ingredients and Foods Comprising High-Protein Algal Biomass	Brazil	BR112019018600	Under Prosecution
Dietary Supplements, Food Ingredients and Foods Comprising High-Protein Algal Biomass	Mexico	MX/a/2019/010670	Under Prosecution
Dietary Supplements, Food Ingredients and Foods Comprising High-Protein Algal Biomass	Peru	1820-2019	Under Prosecution
Dietary Supplements, Food Ingredients and Foods Comprising High-Protein Algal Biomass	Thailand	190105502	Under Prosecution
Dietary Supplements, Food Ingredients and Foods Comprising High-Protein Algal Biomass	China	2.0188E+11	Under Prosecution
Dietary Supplements, Food Ingredients and Foods Comprising High-Protein Algal Biomass	Hong Kong	62020009617	Under Prosecution
Dietary Supplements, Food Ingredients and Foods Comprising High-Protein Algal Biomass	US	PCT/US18/21215	Under Prosecution; Published September 13, 2018; National Stage Deadline March 6, 2018
Dietary Supplements, Food, Ingredients and Foods Comprising High-Protein Algal Biomass	Europe	18763110.5	Under Prosecution
Enhancement of Vaccine Efficacy Via Biomass and/or Related Material in Animal Feed	US	17/367,193	Under Prosecution; Published March 3, 2022; National Stage Deadline December 26, 2022
Enhancement of Vaccine Efficacy Via Biomass and/or Related Material in Animal Feed	Europe	22182898.1	Under Prosecution
Enhancement of Vaccine Efficacy Via Biomass and/or Related Material in Animal Feed	Brazil	BR 102022013331-0	Under Prosecution
Enhancement of Vaccine Efficacy Via Biomass and/or Related Material in Animal Feed	China	2.02211E+11	Under Prosecution
Enhancement of Vaccine Efficacy Via Biomass and/or Related Material in Animal Feed	India	2.02244E+11	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	US	PCT/US21/139180	Under Prosecution; Published December 30, 2021; National Stage Deadline December 26, 2022
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	US	17/358,878	Under Prosecution; Published January 20, 2022
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	Austria	2021296916	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	Brazil	112022026479-8	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	Canada	3182630	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	China	TBD	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	Europe	218288421	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	Japan	TBD	Under Prosecution

Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	Mexico	Mx/a/2023/000158	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	New Zealand	795393	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	Peru	00344-2022-DIN	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	Russia	2022133478	Under Prosecution
Immune Priming To Accelerate/Enhance Immune Response Through Administration of Natural Immune Modulator	South Africa	2022-13483	Under Prosecution
Maturation of Immune and Metabolic Processes via Algal Biomass and/or Related Material Administered to Animals	US	PCT/US22/14347	Under Prosecution; Published August 4, 2022; National Stage Deadline July 29, 2023
Maturation of Immune and Metabolic Processes via Algal Biomass and/or Related Material Administered to Animals	US	17/587,582	Under Prosecution; Published August 4, 2022
Method of Modulating Immune Response and Inflammatory Response Via Administration of Algal Biomass	Brazil	BR 1120170175991	Under Prosecution
Methods of Modulating Immune Response and Inflammatory Response Via Administration of Algal Biomass	Europe	16752918.9	Under Prosecution
Methods of Modulating Immune Response and Inflammatory Response Via Administration of Algal Biomass	Hong Kong	18108238.5	Under Prosecution
Methods of Modulating Immune Response and Inflammatory Response Via Administration of Algal Biomass	Canada	3,011,687	Under Prosecution
Methods of Modulating Immune Response and Inflammatory Response Via Administration of Algal Biomass	US	PCT/US16/18105	Under Prosecution; Published August 25, 2016; National Stage Deadline August 16, 2017
Natural Feed Composition Derived from Fresh Water Algal Cultures for the Promotion of Animal Growth	US	17/410,016	Under Prosecution; Published July 28, 2022
Natural Feed Composition Derived from Fresh Water Algal Cultures for the Promotion of Animal Growth	US	PCT /US21/50847	Under Prosecution; Published February 3, 2022; National Stage Deadline January 27, 2023
Nutritional Support for Animals Via Administration of an Algal Derived Supplement	Europe	17753729.7	Under Prosecution
Nutritional Support for Animals Via Administration of an Algal Derived Supplement	Mexico	MX/a/2018/009818	Under Prosecution
Nutritional Support for Animals Via Administration of an Algal Derived Supplement	China	201780023561.5	Under Prosecution
Nutritional Support for Animals Via Administration of an Algal Derived Supplement	Hong Kong	19,125,173	Under Prosecution
Nutritional Support for Animals Via Administration of an Algal Derived Supplement	US	PCT/US17/17906	Under Prosecution; Published August 24, 2017; National Stage Deadline August 15, 2018
Nutritional Support for Animals Via Administration of an Algal Derived Supplement	US	15/998,619	Under Prosecution; Published October 22, 2020
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	US	PCT/US21/139178	Under Prosecution; Published December 30, 2021; National Stage Deadline December 26, 2022

Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	US	17/358,953	Under Prosecution; Published February 24, 2022
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	Australia	202129453	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	Brazil	112022026461-5	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	Canada	TBD	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	China	417764600	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	Europe	2182917.9	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	Japan	TBD	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	Mexico	Mx/a/2023/000166	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	New Zealand	795328	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	Peru	003043-2022-DIN	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	Russia	2022133470	Under Prosecution
Positive Latency Effects on Coccidiosis Prevention and Treatment via Animal Feed	South Africa	2022/13479	Under Prosecution
The Use of Variovorax Microbes as a Coccidiostat	US	17/400,790	Under Prosecution; Published February 17, 2022
The Use of Variovorax Microbes as a Coccidiostat	US	PCT/US21/45744	Under Prosecution; Published February 17, 2022; National Stage Deadline February 12, 2023
Use of TLR4 Modulator in the Treatment of Coccidiosis	US	17/320,706	Under Prosecution; Published November 18, 2021
Use of TLR4 Modulator in the Treatment of Coccidiosis	US	PCT/US21/32457	Under Prosecution; Published November 18, 2021; National Stage Deadline November 14, 2022
Use of TLR4 Modulator in the Treatment of Coccidiosis	Australia	2021271805	Under Prosecution
Use of TLR4 Modulator in the Treatment of Coccidiosis	Brazil	BR 11 2022 022083 9	Under Prosecution
Use of TLR4 Modulator in the Treatment of Coccidiosis	Canada	3177327	Under Prosecution
Use of TLR4 Modulator in the Treatment of Coccidiosis	China	202180034578.7	Under Prosecution
Use of TLR4 Modulator in the Treatment of Coccidiosis	Europe	21805132.4	Under Prosecution
Use of TLR4 Modulator in the Treatment of Coccidiosis	Japan	2022-560562	Under Prosecution
Use of TLR4 Modulator in the Treatment of Coccidiosis	Mexico	MX/a/2022/04213	Under Prosecution
Use of TLR4 Modulator in the Treatment of Coccidiosis	New Zealand	793737	Under Prosecution
Use of TLR4 Modulator in the Treatment of Coccidiosis	Russia	2022128942	Under Prosecution
Use of TLR4 Modulator in the Treatment of Coccidiosis	South Africa	2022/11691	Under Prosecution

The following trademark filings are pertinent to the operation of ZIVO's business:

Trademark	Filing Date	Application No.	Country	Status
Kalgae	6/13/2018	87/961,009	US	Under Prosecution
ZIVO	7/22/2022	97/516,573	US	Under Prosecution
ZIVO	12/20/2020	48512762 (Class 29)	CN	Issued
ZIVO	12/20/2020	48512762 (Class 5)	CN	Issued
ZIVO	12/20/2020	48512744 (Class 31)	CN	Issued
ZIVO	7/30/2020	TMZC48512763ZCSL01	CN	Issued
ZIVO Bioscience	2/4/2019	88/288,453	US	Under Prosecution
Zivo Bioscience	2/4/2019	88/288,453	US	Notice of Design Search Code issued
ZIVO Bioscience and Device	7/30/2020	48512743 (Class 5)	CN	Issued
ZIVO Bioscience and Device	12/20/2020	48512742 (Class 29)	CN	Issued
ZIVO Bioscience and Device	12/20/2020	48512741 (Class 31)	CN	Issued

Trade Secrets

We also rely on trade secrets, technical know-how and continuing innovation to develop and maintain our competitive position. We seek to protect such intellectual property and proprietary information by generally requiring our employees, consultants, contractors, scientific collaborators and other advisors to execute non-disclosure and assignment of invention agreements upon the commencement of their employment or engagement as the case may be. Our agreements with our employees prohibit them from providing us with any intellectual property or proprietary information of third parties. We also generally require confidentiality agreements or material transfer agreements with third parties that receive or have access to our confidential information, data or other materials. Notwithstanding the foregoing, there can be no assurance that our employees and third parties that have access to our confidential proprietary information will abide by the terms of their agreements. Despite the measures that we take to protect our intellectual property and confidential information, unauthorized third parties may copy aspects of our products or obtain and use our proprietary information.

Government Regulation

Overview

Biotech

As a discovery-stage licensor, we do not intend to fund and oversee the final regulatory approvals and commercialization processes of our product candidates, as we expect these to be borne by the licensee in all cases.

Agtech

As the licensor of food technology, and producer of culture inoculum for cultivation, ZIVO and its licensed growers must furnish to customers algal biomass that is compliant with all food standards and FDA regulations. In all cases, the compliance efforts involve GRAS affirmation and potentially an FDA “No Objection” or “No Questions” letter for each target specie. ZIVO has already obtained self-affirmed GRAS status for human use.

Feed Ingredients & Supplements - Companion Animals

Although state and AAFCO officials regulate companion animal feeds, treats and supplements, the supervision and standards are largely handled by the FDA and the CVM on a national level. We currently do not have approval to sell companion animal feed ingredients since we must first develop the specie-specific safety and health data required to do so. Companion animal products are aimed primarily at dogs and horses. We believe that a single safety/tox study and a separate dose/benefit study per animal applications will be sufficient. As with humans, we would seek to obtain a GRAS affirmation.

To clarify, an “application” is a single ingredient in a single formulation and a single claim for a single animal species. Therefore, a dietary supplement derived from the Company’s algal biomass, intended as a joint health supplement for adult dogs, constitutes a single application. That single application requires its own studies before any dog treat manufacturer would consider licensing or purchasing the Company’s material. Any change to the claims (more energy, shinier coat, etc.) or the target specie requires a new study. This is the current state of regulation, and it holds true for all human and animal applications.

Food Ingredient - Human

The food ingredient industry is regulated by several federal agencies. Anything that is introduced into food or beverages, whether to prevent spoilage, optimize processing or to enhance its nutritive value, must meet standards set and enforced rigorously by the FDA and USDA.

GRAS (Generally Regarded as Safe)

The FDA requires that ingredients introduced into human foods and beverages are safe and are manufactured in a consistent manner that guarantees consumer safety. The standard that the Company must meet for food ingredient safety is GRAS. The Company opted to self-affirm GRAS status for its algal biomass, and upon completion in November 2018 of the self-affirmation process, the biomass may be used as a food ingredient. The Company may submit the self-affirmed GRAS report to the FDA in expectation the agency will respond to the Company noting “no questions” concerning our data.

In 2016, ZIVO contracted the Burdock Group to assist the Company in the compliance process, and to help with the process with the FDA. Further, the Company retained the New York law firm of Ullman Shapiro Ullman LLP, now part of Rivkin-Radler LLP, to advise in the compliance process.

Current Good Manufacturing Process

The other set of standards that must be met before any ingredient can be introduced into foods and beverages are the current Good Manufacturing Practices (“cGMPs”). The Company is required to register as a producer of food and/or dietary supplement ingredients with FDA and will thus be subject to inspection by the agency for compliance with applicable cGMP regulations.

In addition, there are numerous state and local licensing and inspection requirements should the product be produced in the U.S. If produced overseas, the FDA, USDA and U.S. Customs require that each grower is enrolled in the Foreign Supplier Verification Program, a cost to be borne by the grower and ZIVO.

Dietary Supplements

Dietary supplements, which include vitamins, minerals, nutritive substances, and natural products that are standalone products (“nutraceuticals”) fall under the jurisdiction of the FDA and must comply with the Dietary Supplement Health Education Act (“DSHEA”) legislation passed in 1994 and updated several times since, along with the Food Safety Modernization Act of 2011.

NDI Application

As human dietary supplement applications are being readied for market launch, the Company is required to file a New Dietary Ingredient (NDI) Notification. The standard applied to NDI Notifications is “reasonable expectation of safety” for intended use as a supplement. As part of the notification process, ZIVO must conduct at least one human study, and possibly two. These studies can run concurrently but should not be conducted by the same clinical research organization. To date, ZIVO has not run these studies. One such study may be the same dose tolerance study planned to increase the maximum allowable consumption limit as discussed above.

Skin Care and Topical Uses

The US Congress is contemplating implementation of a statute requiring all skin care and cosmetics production to follow cGMP. If this legislation is passed the Company will need to ensure that it and any contract manufacturers are certified to be cGMP compliant.

Structure/Function Claims

The Company can go to market (once a single study has been completed and GMP protocols are in evidence) with simple structure/function claims regarding the ability to maintain, for example, a healthy immune response or a beneficial anti-inflammatory response. This is the most basic of FDA standards and essentially means that as long as cGMP standards are met, a study has been conducted and that in-process toxicology reports are available, the Company is able to market its product.

The market reality is that nutraceutical and supplement makers won't take on the product unless its chemical makeup is generally described, the plant or animal is properly classified (in this case, algae) and the manufacturing process is free of health hazards and that cGMP protocols are observed, all of which the Company intends to meet or exceed.

USP Certification

The DSHEA regulations also require that a safe dosage is established for any vitamin, mineral or dietary supplement, whether it is natural or synthetic in composition. The United States Pharmacopeia ("USP") is the official pharmacopeia of the United States. USP establishes written (documentary) and physical (reference) standards for medicines, food ingredients, dietary supplement products and ingredients.

These standards are used by regulatory agencies and manufacturers to help to ensure that these products are of the appropriate identity, as well as strength, quality, purity, and consistency. The Company will endeavor to adhere to the most basic USP standard in order to maintain speed to market. It or its licensees will then consider the USP Verified products designation.

Employees

As of December 31, 2022 we had 8 full-time employees, consisting of clinical development, product development, regulatory, manufacturing, quality, finance, administration and managers. We also regularly use independent contractors across the organization. None of our employees are represented by a labor union or covered by a collective bargaining agreement. We consider our relationship with our employees to be good.

Corporate Information

We were incorporated under the laws of the State of Nevada on March 28, 1983, under the name of "L. Peck Enterprises, Inc." On May 27, 1999, we changed our name to "Western Glory Hole, Inc." From 1990 until October 2003, we had no business operations; we were in the development stage and were seeking profitable business opportunities. On October 30, 2003, we acquired 100% of the outstanding shares of Health Enhancement Corporation ("HEC") in exchange for 112,500 of our shares, making HEC our wholly-owned subsidiary. In connection with this transaction, we changed our name to Health Enhancement Products, Inc. On October 14, 2014, at the annual meeting of the stockholders of the Company, a proposal was passed to change the name of the Company from Health Enhancement Products, Inc. to Zivo Bioscience, Inc. On October 30, 2014, the Financial Industry Regulatory Authority approved the name Zivo Bioscience, Inc. for trading purposes and the symbol change to ZIVO effective November 10, 2014.

Property

The Company's principal executive office is located at 21 East Long Lake Road, Suite 100, Bloomfield Hills, MI 48304 to a facility where we lease roughly 4,800 square feet. We believe that our existing facilities are adequate for our current needs. If we determine that additional or new facilities are needed in the future, we believe that sufficient options would be available to us on commercially reasonable terms. We also lease a laboratory and office (roughly 2,700 square feet) at 608 Danley Drive, Unit #1, Fort Myers, FL 33907.

Legal Proceedings

On April 13, 2022, AEGLE Partners, 2 LLC ("AEGLE") initiated an arbitration in Michigan against the Company with the American Arbitration Association. AEGLE asserted claims related to a certain Supply Chain Consulting Agreement entered into between AEGLE and the Company in 2019 (as amended from time to time, the "Agreement"), and a disagreement between AEGLE and the Company regarding whether AEGLE is entitled to payment of certain fees and warrants pursuant to the Agreement. AEGLE's complaint seeks, among other things, three times the payment of such alleged fees and warrants and recovery of AEGLE's costs and expenses. We believe that the claims made by AEGLE in its complaint are without merit and we intend to vigorously defend ourselves against them. Arbitration is presently scheduled to begin in April 2023.

Additionally, the Company may be subject to various claims, complaints, and legal actions that arise from time to time in the normal course of business. There can be no assurance that existing or future legal proceedings arising in the ordinary course of business or otherwise will not have a material adverse effect on the Company's business, financial position, results of operations, or cash flows.

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

The following discussion of our financial condition and results of operations should be read in conjunction with our financial statements and related notes included elsewhere in this prospectus. This discussion contains certain forward-looking statements that involve risk and uncertainties. Our actual results may differ materially from those discussed below. Factors that could cause or contribute to such differences include, but are not limited to, those identified below and those set forth under the section titled "Risk Factors," and other documents we file with the SEC. Historical results are not necessarily indicative of future results.

Overview

We have put in place a business model in which we may derive future income from licensing and selling natural bioactive ingredients including algal biomass and products that may be derived from or are initially based on the algal biomass. We expect that these planned new products will likely be sold or licensed to much larger, better-financed human and animal pharma companies, and to food, dietary supplement, and skin care manufacturers. The anticipated income streams are to be generated from a) sales of algal biomass or extracts thereof, and b) license payments in the form of royalties and / or other contractual payments for licensed natural bioactive ingredients. Our manufacturing strategy is to create contract manufacturers for our non-licensed products which products will be sold by us to animal food, dietary supplement, and medical food processors and/or name-brand marketers. Further, we expect to license our bioactive molecules as lead compounds or templates for synthetic variants intended for therapeutic applications.

For our Wellmetrix, subsidiary, the Company's board of directors (the "Board") and management agreed to halt active product development and instead focus on prospective out-licensing of the existing IP, consisting of a patent and several patents pending. An ongoing commitment to patent prosecution and maintenance of the existing patent portfolio has been approved by the Board.

Financial Overview

General and Administrative Expenses

General and administrative expenses consist primarily of personnel-related costs for personnel in functions not directly associated with research and development activities, professional fees and consultant expenses, and other overhead spending. Personnel related costs include cash compensation, benefits, and stock-based compensation expenses. Professional fees and consultant expenses consist primarily of legal fees relating to corporate matters, intellectual property costs, professional fees for consultants assisting with regulatory, and financial matters. Other overhead spending includes cost to support information technology, rent, insurances, public company listing, and supplies.

We anticipate that our general and administrative expenses will significantly increase in the future to support our continued research and development activities, potential commercialization of our product candidates, hiring of additional personnel, legal and professional services, and other public company related costs.

Research and Development

Research and development expenses are incurred in developing our product candidates, compensation and benefits for research and development employees, including stock-based compensation, research related overhead expenses, cost of laboratory supplies, clinical trial and related clinical manufacturing expenses, costs related to regulatory operations, fees paid to research consultants and other outside expenses. Research and development costs are expensed as incurred and costs incurred by third parties are expensed as the contracted work is performed.

We expect our research and development expenses to significantly increase over the next several years as we continue to develop product candidates targeting additional pharma and algal biomass applications. These additional activities will increase the need to conduct preclinical testing and clinical trials and will depend on the duration, costs and timing to complete our preclinical programs and clinical trials.

Interest Expense

Interest expense primarily consists of interest costs related to our convertible notes and for interest on short term debt, as discussed in detail below.

Other Income

Other income consists of proceeds derived from activity outside of normal operating activity, including the forgiveness of the paycheck protection program loan in 2021.

Results of Operations*Comparison of Year Ended December 31, 2022 and 2021*

The following table summarizes our results of operations for the year ended December 31, 2022 and 2021:

	Year ended December 31,	
	2022	2021
Revenue:	\$ -	\$ -
Total revenue	\$ -	\$ -
Costs and expenses:		
General and administrative	6,491,704	6,694,619
Research and development	2,240,270	1,950,500
Total costs and expenses	\$ 8,731,974	\$ 8,645,119
Loss from operations	\$ (8,731,974)	\$ (8,645,119)
Other income (expense):		
Interest (expense)	(13,319)	(233,282)
Gain on forgiveness of debt and accrued interest	-	122,520
Total other (expense), net	\$ (13,319)	\$ (110,762)
Net loss	\$ (8,745,293)	\$ (8,755,881)

General and Administrative Expenses

General and administrative expenses were \$6.5 million for the 12 months ended December 31, 2022, which is about \$200,000 lower than the approximately \$6.7 million for the comparable prior period, explained by the following changes: a decrease of \$1.4 million in salary expense (\$900,000 non-cash decrease due to stock options issued to employees and roughly \$500,000 decrease in cash compensation), and an increase in overhead expense of \$1.2 million (including \$460,000 increase in insurance, \$660,000 increase in legal and accounting fees, and \$450,000 increase in board of directors fees; these increases were partially offset by a reduction in travel and other expenses of \$120,000).

Research and Development Expenses

For the 12 months ended December 31, 2022, we incurred \$2.2 million in net R&D expenses, as compared to \$2.0 million for the comparable period in 2021.

Of these expenses, all \$2.2 million for 2022 and \$2.0 million for 2021 are costs associated with research relating to our biotech and agtech businesses. Of these costs in 2022, \$1.5 million is for salary and other internal costs, an increase of approximately \$700,000 from the prior year. The increase is fully explained by higher stock related compensation costs. Third party research and development spending of \$1.4 million was \$250,000 lower than the prior year due to fewer third-party research studies. For the year ending December 31, 2022, the Company recognized a reduction in gross research and development spending of roughly \$775,000 to account for the amortization of the spending obligation created through the complete funding of the Participation Agreements, roughly \$220,000 higher than the amount research and development was reduced in 2021. (See Note 9: Deferred R&D Obligations - Participation Agreements)

	December 31, 2022	December 31, 2021
Labor and other internal expenses	\$ 1,582,628	\$ 832,221
External research expenses	1,431,667	1,674,025
Total gross R&D expenses	\$ 3,014,295	\$ 2,506,246
Less contra-expense for amortization of deferred R&D obligation - Participation Agreements	(774,025)	(555,746)
Net R&D expenses	\$ 2,240,270	\$ 1,950,500

Subject to the availability of funding, we expect our R&D costs to grow as we work to complete the research in the development of natural bioactive compounds for use as dietary supplements and food ingredients, as well as biologics for medicinal and pharmaceutical applications in humans and animals. The Company's scientific efforts presently are focused on the licensing products for healthy immune response in livestock and growing of our proprietary algal culture in commercial scale facilities.

Liquidity and Capital Resources**Historical Capital Resources**

As of December 31, 2022, our principal source of liquidity consisted of cash deposits of \$1.8 million. We expect to continue to incur significant expenses and increasing operating and net losses for the foreseeable future until and unless we generate an adequate level of revenue from potential commercial sales to cover expenses.

We anticipate that our expenses will increase substantially as we develop and seek to commercialize our product candidates and continue to pursue pre-clinical and clinical trials, seek regulatory approvals, manufacture product candidates, hire additional staff, add operational, financial and management systems and continue to operate as a public company.

Our source of cash to date has been proceeds from the issuances of notes, common stock with and without warrants and unsecured loans, and the entry into Participation Agreements, the terms of which are further described below. See also "Funding Requirements and Outlook" below.

June 2021 Underwritten Public Offering

On May 27, 2021, we entered into an Underwriting Agreement relating to the issuance and sale of 2,760,000 Units, at a price to the public of \$5.00 per Unit. In addition, under the terms of the Underwriting Agreement, we granted the Underwriter an option, exercisable for 45 days, to purchase up to an additional 414,000 shares of common stock and/or 414,000 2021 Warrants, in any combination thereof, on the same terms. The base offering closed on June 2, 2021, and the sale of 150,000 shares of common stock subject to the Underwriter's overallocation option closed on July 2, 2021. The gross proceeds from this offering were approximately \$14.5 million prior to deducting underwriting discounts and other offering expenses payable by us.

Convertible Notes

On June 2, 2021, pursuant to the terms of several Debt Extension and Conversion Agreements with holders of our 11% convertible debt, a total of \$7,538,556 comprised of outstanding principal of \$4,940,342 and interest of \$2,598,214 of our convertible notes were automatically converted into 942,322 shares of common stock at \$8.00 per share.

Deferred R&D Obligations - Participation Agreements

From April 13, 2020, through May 14, 2021, the Company entered into twenty-one License Co-Development - Participation Agreements (the “Participation Agreements”) with certain accredited investors (“Participants”) for an aggregate of \$2,985,000. The Participation Agreements provide for the issuance of warrants to such Participants and allows the Participants to participate in the fees (the “Fees”) from licensing or selling bioactive ingredients or molecules derived from ZIVO’s algae cultures. Specifically, ZIVO has agreed to provide to the Participants a 44.775% “Revenue Share” of all license fees generated by ZIVO from any licensee.

The Participation Agreements allow the Company the option to buy back the right, title and interest in the Revenue Share for an amount equal to the amount funded plus a forty percent (40%) premium, if the option is exercised less than 18 months following execution, and for either forty (40%) or fifty percent (50%) if the option is exercised more than 18 months following execution. Pursuant to the terms of twelve of the Participation Agreements, the Company may not exercise its option until it has paid the Participants a revenue share equal to a minimum of thirty percent (30%) of the amount such Participant’s total payment amount. Pursuant to the terms of the one of the Participation Agreements, the Company may not exercise its option until it has paid the Participant a revenue share equal to a minimum of one hundred forty percent (140%) of the amount such Participant’s total payment amount. Five of the Participation Agreements have no minimum threshold payment. Once this minimum threshold is met, the Company may exercise its option by delivering written notice to a Participant of its intent to exercise the option, along with repayment terms of the amount funded, which may be paid, in the Company’s sole discretion, in one lump sum or in four (4) equal quarterly payments. If the Company does not make such quarterly payments timely for any quarter, then the Company shall pay the prorated Revenue Share amount, retroactive on the entire remaining balance owed, that would have been earned during such quarter until the default payments have been made and the payment schedule is no longer in default.

Unsecured Loans

From January 1, 2021 to December 31, 2022, the Company received gross proceeds of \$819,100 in unsecured loans. As of December 31, 2022, no principal and accrued interest remained outstanding under such loans.

Private Placements

Between January 1, 2021 and December 31, 2022, we entered into Subscription Agreements with accredited investors pursuant to which we, in private placements, issued and sold an aggregate of 144,128 shares of common stock for gross proceeds in the amount of \$1,564,969.

Paycheck Protection Program Loan

In connection with the 2020 Coronavirus Aid, Relief, and Economic Security (“CARES Act”), the Company received loan funding of approximately \$121,700 under the Paycheck Protection Program (“PPP”), which was forgiven by the U.S. Small Business Administration on September 9, 2021.

Funding Requirements and Outlook

At December 31, 2022, we had approximately \$1.8 million in cash deposits.

Management has noted the existence of substantial doubt about our ability to continue as a going concern. Additionally, our independent registered public accounting firm included explanatory paragraphs in the reports on our financial statements as of and for the years ended December 31, 2022 and 2021, respectively, noting the existence of substantial doubt about our ability to continue as a going concern. Our existing cash may not be sufficient to fund our operating expenses through at least twelve months from the date of this filing. To continue to fund operations, we will need to secure additional funding through public or private equity or debt financings, through collaborations or partnerships with other companies or other sources. We may not be able to raise additional capital on terms acceptable to us, or at all. Any failure to raise capital when needed could compromise our ability to execute on our business plan. If we are unable to raise additional funds, or if our anticipated operating results are not achieved, we believe planned expenditures may need to be reduced in order to extend the time period that existing resources can fund our operations. If we are unable to obtain the necessary capital, it may have a material adverse effect on our operations and the development of our technology, or we may have to cease operations altogether.

Our material cash requirements relate to the funding of our ongoing product development. See “*Business-Clinical Development and Regulatory Pathway-Clinical Experience, Future Development and Clinical Trial Plans*” in this Report for a discussion of design, development, pre-clinical and clinical activities that we may conduct in the future, including expected cash expenditures required for some of those activities, to the extent we are able to estimate such costs.

The development of our product candidates is subject to numerous uncertainties, and we could use our cash resources sooner than we expect. Additionally, the process of development is costly, and the timing of progress in pre-clinical tests and clinical trials is uncertain. Our ability to successfully transition to profitability will be dependent upon achieving further regulatory approvals and achieving a level of product sales adequate to support our cost structure. We cannot assure you that we will ever be profitable or generate positive cash flow from operating activities.

Cash Flows

Cash Flows from Operating Activities. During the 12 months ended December 31, 2022, our operating activities used \$7.1 million in cash, an increase of cash used of roughly \$300,000 from the comparable prior period. The approximate \$300,000 increase in cash used by operating activities was primarily attributable to the following (all of which are approximated): a \$10,000 decrease in net loss, a decrease in non-cash expenses of \$350,000 (a decrease of stock issued for services of \$310,000, an increase in of gain on forgiveness of debt of \$123,000, and an increase in amortization of lease liability of \$60,000), and \$100,000 lower use of cash for changes in assets and liabilities (\$85,000 less cash from issuance of deferred R&D obligations, \$220,000 of amortization of deferred R&D obligations, a net increase in accounts payable and accrued liabilities of \$190,000, and lower lease related liabilities and prepaid expenses of \$70,000).

Cash Flows from Investing Activities. During the 12 months ended December 31, 2022 and 2021, there were no investing activities.

Cash Flows from Financing Activities. During the 12 months ended December 31, 2022, we generated no cash from financing activities, compared to \$15.6 million provided in the prior year.

We estimate that we would require approximately \$5 million in cash over the next 12 months in order to fund our basic operations, excluding our R&D initiatives. Based on this cash requirement, we have a near term need for additional funding to continue to develop our products and intellectual property. Historically, we have had substantial difficulty raising funds from external sources. If we are unable to raise the required capital, we will be forced to curtail our business operations, including our R&D activities. The following table shows a summary of our cash flows for the periods indicated:

	Twelve months ended December 31,	
	2022	2021
Net cash provided by (used in):		
Operating activities	\$ (7,102,612)	\$ (6,803,333)
Investing activities	-	-
Financing activities	-	15,567,346
Net increase (decrease) in cash and cash equivalents	\$ (7,102,612)	\$ 8,764,013

Critical Accounting Estimates

Our management's discussion and analysis of our financial condition and results of operations is based on our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America, or GAAP. The preparation of these financial statements requires us to make estimates, judgments and assumptions that affect the reported amounts of assets and liabilities, disclosure of contingent assets and liabilities as of the dates of the balance sheets and the reported amounts of revenue and expenses during the reporting periods. In accordance with GAAP, we base our estimates on historical experience and on various other assumptions that we believe are reasonable under the circumstances at the time such estimates are made. Actual results may differ materially from our estimates and judgments under different assumptions or conditions. We periodically review our estimates in light of changes in circumstances, facts and experience. The effects of material revisions in estimates are reflected in our financial statements prospectively from the date of the change in estimate.

While our significant accounting policies are more fully described in the notes to our financial statements appearing elsewhere in this prospectus, we believe the following are the critical accounting policies used in the preparation of our financial statements that require significant estimates and judgments.

Fair Value of Financial Instruments

We account for fair value measurements of assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring or nonrecurring basis adhering to the Financial Accounting Standards Board ("FASB") fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to measurements involving significant unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1 Inputs: Unadjusted quoted prices in active markets for identical assets or liabilities accessible to the Company at the measurement date.
- Level 2 Inputs: Other than quoted prices included in Level 1 inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.
- Level 3 Inputs: Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at measurement date.

As of December 31, 2022 and December 31, 2021, fair values of cash, prepaid, other assets, accounts payable and accrued expenses approximated their carrying values because of the short-term nature of these assets or liabilities. We elected to account for the convertible notes while they were outstanding on a fair value basis under ASC 825 to comprehensively value and streamline the accounting for the embedded conversion options. The fair value of these convertible notes were based on both the fair value of our common stock, discount associated with the embedded redemption features, and cash flow models discounted at current implied market rates evidenced in recent arms-length transactions representing expected returns by market participants for similar instruments and are based on Level 3 inputs.

Premium Conversion Derivatives

We evaluate all conversion and redemption features contained in a debt instrument to determine if there are any embedded derivatives that require separation from the host debt instrument. An embedded derivative that requires separation is bifurcated from its host debt instrument and a corresponding discount to the host debt instrument is recorded. The discount is amortized and recorded to interest expense over the term of the host debt instrument using the straight-line method which approximates the effective interest method. The separated embedded derivative is accounted for separately on a fair market value basis. We record the fair value changes of a separated embedded derivative at each reporting period in the consolidated statements of comprehensive loss as a fair value change in derivative and warrant liabilities.

Stock-Based Compensation

We account for share based compensation in accordance with the provisions of the Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC 718), Compensation - Stock Compensation. Accordingly, compensation costs related to equity instruments granted are recognized at the grant date fair value. The Company records forfeitures when they occur. Share based compensation arrangements to non employees are accounted for in accordance with the applicable provisions of ASC 718.

Recent Accounting Pronouncements

See "Note 4 - Summary of Significant Accounting Policies" in this prospectus regarding the impact of certain recent accounting pronouncements on our financial statements.

DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**Directors and Executive Officers**

The following table sets forth the name, age and position of each of our executive officers and directors as of March 1, 2023:

Name	Age	Positions	Since
John B. Payne	75	President and Chief Executive Officer / Class III Director	2022/2013
Keith R. Marchiando	60	Chief Financial Officer	2021
Christopher D. Maggiore	57	Class I Director	2013
Nola E. Masterson	76	Class II Director	2014
Alison A. Cornell	60	Class III Director	2021

The term of our Class I director expires in 2023, the term of our Class II director expires in 2024, and the term of our Class III directors expires in 2025.

Biographical information with respect to each of our directors and executive officers is set forth below.

Nola E. Masterson

Ms. Masterson was appointed in September 2014 to serve as a director of the Company. She serves on the Nominating and Corporate Governance Committee as Chair and on the Audit Committee. Since 1982, she has been the chief executive officer of Science Futures, Inc., an investment and advisory firm. Ms. Masterson is currently managing member and general partner of Science Futures LLC, I and II, which are venture capital funds invested in life science funds and companies. Ms. Masterson was a Venture Partner in TVM Capital, a large global venture firm. She was a member of the board of directors of Repros Therapeutics Inc. (sold to Allergan plc (NYSE: AGN) in January 2018) and served on the audit committee, nominating committee and the compensation committee at that company. She is an Adjunct Professor in the Management School of the University of San Francisco. Ms. Masterson was a biotechnology analyst on Wall Street, working with Drexel Burnham Lambert and Merrill Lynch, and is co-founder and CEO of Sequenom, Inc., a genetic analysis company located in San Diego, California, which has been sold to LabCorp. Ms. Masterson is the Chair Emeritus of the California Life Science Association Institute, a 501(c)(3) organization, which promotes science education, workforce development and best practices as well as entrepreneurs in the bioeconomy. Ms. Masterson began her business career at Ames Company, a division of Bayer, and spent eight years at Millipore Corporation in sales and sales management and as Vice President of the Biotechnology Division. She received her Master's degree in Biological Sciences from George Washington University, and continued Ph.D. work at the University of Florida.

John B. Payne

Mr. Payne was appointed to serve as President and Chief Executive Officer of the Company in January 2022, and as a director of the Company in July 2013. Mr. Payne is the Vice Chairman of the Board of National Veterinary Associates, and formerly President and CEO of Compassion-First Pet Hospitals, from 2014 through 2020. Compassion-First Pet Hospitals is a family of specialty and emergency veterinary hospitals throughout the United States and is dedicated to changing the veterinary landscape and elevating patient outcomes. With 100+ hospitals across 22 states, Compassion-First has more than 3,000 employees and more than 230 board-certified veterinary specialists across a wide range of medical disciplines. Mr. Payne currently serves as the Chairman of the Board for American Humane and is Chairman of the Board for ZIVO Bioscience. He is the Vice Chairman of the Board of Regents at Ross University School of Medicine and School of Veterinary Medicine. He also served on the board of directors of Nexvet, a bio science company located in Dublin, Ireland until the company was sold to Zoetis in 2018. Prior to creating Compassion-First, Mr. Payne served as a member of the Global Leadership Team for Mars Pet Care. He also served as the President and CEO of Banfield Pet Hospitals and served as the President and General Manager of Bayer Healthcare's North American Animal Health Division.

Alison A. Cornell

Ms. Cornell was appointed in February 2021 to serve as a director of the Company. She serves on the Audit Committee and Compensation Committee as Chair, and on the Nominating and Corporate Governance Committee. Ms. Cornell served as the Executive Vice President & Chief Financial Officer of Compassion-First Pet Hospitals from July 2017 through 2021. Previously, she served as Executive Vice President & Chief Financial Officer of International Flavors & Fragrances Inc. (NYSE: IFF, Euronext Paris: IFF) from July 2015 through October 2016, and before that, she served multiple roles at Covance, Inc. (NYSE: CVD) from 2004 through July 2015, including Corporate Senior Vice President & Chief Financial Officer. Ms. Cornell provides the Board of Directors with significant accounting, financial and global business leadership experience.

Christopher D. Maggiore

Mr. Maggiore was appointed in August 2013 to serve as a director of the Company. He serves on the Audit Committee and Compensation Committee. Mr. Maggiore is a successful private investor and has been involved in real estate development, building and management of businesses for over 25 years. He currently owns and manages a portfolio of businesses and investments. Mr. Maggiore provides the Board of Directors with experiences as a successful entrepreneur and builder of business organizations.

Keith R. Marchiando

Mr. Marchiando was appointed Chief Financial Officer in January 2021. He joined the Company from New US Nonwovens, LLC (“Nonwovens”), a contract manufacturer of personal care and home care products, where he was Chief Financial Officer since August 2019. At Nonwovens, he was responsible for all aspects of the company’s financial activities, including strengthening corporate controls, implementing financial planning and developing the Company’s IT strategy. Prior to Nonwovens, he served as a consultant to Plante & Moran PLLC from January 2017 to August 2019, where he engaged in interim chief financial officer roles which included restructuring and transitioning companies in ownership changes, supporting M&A activities and enhancing financial functions and processes. Prior to this position, he served as CFO of Perceptron, Inc. beginning in February 2014, and then CFO of AP Exhaust LLC beginning in May 2015. Mr. Marchiando earned a Master’s Degree in Business Administration (MBA) in corporate finance from Carnegie Mellon University’s Tepper School of Management and an undergraduate degree in finance and economics at Lehigh University.

Family Relationships

There are no familial relationships between any of our officers and directors.

Procedures for Shareholders to Nominate Directors

Our bylaws provide a procedure for shareholders to nominate directors. Nominations for the election of directors may be made by the Company’s Board of Directors or by any shareholder entitled to vote for the election of directors. Subject to compliance with applicable United States securities laws and the rules and regulations of the SEC, nominations by shareholders may be made by notice in writing to the Secretary of the Company not less than 14 days nor more than 60 days prior to any meeting of the shareholders called for the election of directors; provided, however, that if less than 21 written days’ notice of the meeting is given to shareholders, such notice of nomination by a shareholder shall be given to the Secretary of the Company not later than the close of the fifth day following the day on which notice of the meeting was mailed to shareholders.

Director Independence

The Board of Directors currently consists of four directors, one of whom is an employee director. During 2022, our Board of Directors determined that Mr. Maggiore, Ms. Cornell, Ms. Masterson were all independent within the meaning of the listing standards of Nasdaq. Mr. Payne was considered independent until his appointment as Chief Executive Officer on January 7, 2022. Under the rules of Nasdaq, a director will only qualify as an “independent director” if, in the opinion of that board of directors, that person does not have a relationship that would interfere with the exercise of independent judgment in carrying out the responsibilities of a director. Each director was nominated based on his or her knowledge of the Company, his or her skills, expertise and willingness to serve as a director.

Structure and Operation of the Board of Directors

Mr. Payne acts as the Chairman of our Board of Directors and Chief Executive Officer. The Board of Directors has standing Audit, Compensation and Nominating and Corporate Governance committees. The following is a brief description of each of these committees.

Compensation Committee

The Compensation Committee, which is currently comprised of Ms. Cornell, as Chair, and Mr. Maggiore, may approve, depending on the availability of the full Board of Directors, grants of awards to employees, may determine the terms and conditions provided for in each option grant, and may, as requested by our President and Chief Executive Officer, review and recommend to the Board of Directors the amount of compensation to be paid to our officers. The Compensation Committee generally convenes on an as needed basis. The Compensation Committee met 2 times during 2022. The Board of Directors has determined that each member of the Compensation Committee is independent, as independence is defined under the rules of Nasdaq. Our Compensation Committee charter is available on our website, www.zivobioscience.com, under the “Investors - Corporate Governance” tab.

Nominating and Corporate Governance Committee

The Nominating and Corporate Governance Committee is currently comprised of Ms. Masterson, as Chair, and Ms. Cornell. The Nominating and Corporate Governance Committee is responsible for, among other things, considering potential members of the Board of Directors, making recommendations to the full Board of Directors as to nominees for election to the Board of Directors and assessing the effectiveness of the Board of Directors. The Nominating and Corporate Governance Committee will consider director candidates recommended by shareholders. Any such candidates will be evaluated on the same basis as other candidates being evaluated by the Nominating and Corporate Governance Committee. Information with respect to such candidates should be sent to Zivo Bioscience, Inc., 21 East Long Lake Road, Ste 100, Bloomfield Hills, MI 48304, Attention: Secretary. The Nominating and Corporate Governance Committee considers the needs for the Board of Directors as a whole when identifying and evaluating nominees and, among other things, considers diversity in background, age, experience, qualifications, attributes and skills in identifying nominees, although it does not have a formal policy regarding the consideration of diversity. The current director nominee was recommended by the Nominating and Corporate Governance Committee. The Nominating & Corporate Governance Committee did not meet in 2022. The Board of Directors has determined that each member of the Nominating and Corporate Governance Committee is independent, as independence is defined under the rules of Nasdaq. Our Nominating and Corporate Governance Committee charter is available on our website, www.zivobioscience.com, under the “Investors - Corporate Governance” tab.

Audit Committee

The Audit Committee reviews with management and the Company’s independent public accountants the Company’s financial statements, the accounting principles applied in their preparation, the scope of the audit, any comments made by the independent accountants upon the financial condition of the Company and its accounting controls and procedures and such other matters as the Audit Committee deems appropriate.

The functions of the Audit Committee include:

- Selecting our independent auditors;
- Reviewing the results and scope of the audit and other services provided by our independent auditors; and
- Reviewing and evaluating our audit and control functions.

The Audit Committee is currently comprised of Ms. Cornell, as Chair, and Ms. Masterson and Mr. Maggiore. The Board of Directors has determined that each of Ms. Cornell, Ms. Masterson, and Mr. Maggiore is “independent” under Nasdaq independence standards. Additionally, the Board of Directors has determined that Ms. Cornell qualifies as an “audit committee financial expert” as that term is defined in rules promulgated by the SEC. The designation of an “audit committee financial expert” does not impose upon such persons any duties, obligations or liabilities that are greater than those generally imposed on each of them as a member of the Audit Committee and the Board of Directors, and such designation does not affect the duties, obligations or liabilities of any other member of the Audit Committee or the Board of Directors.

The Audit Committee met 5 times in 2022. Our Audit Committee charter is available on our website, www.zivobioscience.com, under the “*Investors - Corporate Governance*” tab.

Risk Oversight

The Board of Directors oversees the Company’s risk management primarily through the following:

- review and approval of an annual business plan;
- review of a summary of risks and opportunities at meetings of the Board of Directors;
- review of business developments, business plan implementation and financial results;
- oversight of internal controls over financial reporting; and
- review of employee compensation and its relationship to our business plans.

Code of Ethics

We have adopted a code of ethics that applies to the Principal Executive Officer and Principal Financial Officer, or those performing similar functions. A copy of the code of ethics is available on our website, www.zivobioscience.com, under the “*Investors - Corporate Governance*” tab and will be sent to any shareholder, without charge, upon written request sent to 21 East Long Lake Road, Ste 100, Bloomfield Hills, MI 48304, Attention: Secretary. Any amendments to the code of ethics will be posted on our website.

Hedging Policy

The Company, pursuant to the terms of its Insider Trading Policy, prohibits all directors, officers, employees, and certain contractors from engaging in hedging transactions including prepaid variable forwards, equity swaps, collars and exchange funds with respect to the Company’s securities.

EXECUTIVE COMPENSATION

Summary Compensation Table for Fiscal Years 2022 and 2021

The following table summarizes the compensation paid to our named executive officers during or with respect to fiscal 2022 and 2021 for services rendered to us in all capacities.

Name and Principal Position	Year	Salary (\$)	Bonus (\$)	Option Awards (\$) ⁽¹⁾	Non-Equity Incentive Plan Compensation (\$)	Total (\$)
John B. Payne	2022	\$ 397,754	-	449,999	175,000	\$ 1,022,753
Chief Executive Officer ⁽²⁾	2021	\$ 12,055	-	677,252	-	689,307
Keith Marchiando	2022	\$ 312,000	-	211,768	50,505	\$ 574,273
Chief Financial Officer ⁽³⁾	2021	\$ 291,667	72,916	2,795,959	50,000	\$ 3,210,542
Andrew A. Dahl	2022	\$ 4,368	-	-	-	\$ 4,368
Former Chief Executive Officer and Director ⁽⁴⁾	2021	\$ 454,000	-	1,301,598	-	\$ 1,882,636

- (1) The amounts reported reflect the grant date fair value (excluding the effect of estimated forfeitures). The grant date fair value of each warrant is calculated using the Black Scholes option-pricing model computed in accordance with FASB ASC Topic 718 and does not correspond to the actual amount that will be realized upon exercise by the named executive officers. For valuation assumptions used in determining the grant date fair value of stock options using the Black Scholes pricing model, see Note 4 to our audited financial statements included in the Company's Annual Report on Form 10-K for the year ended December 31, 2022 filed with the SEC on March 14, 2023.
- (2) Prior to his appointment as Chief Executive Officer, Mr. Payne was a non-employee director. The amounts included in 2021 reflect an equity grant and cash compensation Mr. Payne received while serving as a non-employee director. Since he was appointed as Chief Executive Officer, Mr. Payne has received an annual base salary as more fully described in the narrative below.
- (3) Includes payments made to Mr. Marchiando pursuant to a consulting arrangement, prior to his appointment as Chief Financial Officer of the Company.
- (4) Mr. Dahl's employment with the Company ended on January 1, 2023.

Executive Compensation Programs

In 2022, the Compensation Committee reviewed financial information and other performance metrics relative to the historical compensation of executive management and comparative information prepared internally. The Compensation Committee also reviewed management's recommendations for compensation levels of all of the Company's senior executive officers and considered these recommendations with reference to relative compensation levels of like-size institutions. The totality of the information reviewed by the Compensation Committee was considered when establishing current executive salary levels, and similar analysis is expected to be considered when reviewing and establishing future salaries and long term incentives. The Company's compensation policies and practices are designed to ensure that they do not foster risk taking above the level of risk associated with the Company's business model. For this purpose, the Compensation Committee generally considers the Company's financial performance, comparing that performance to the performance metrics included in the Company's strategic plan. The Compensation Committee also generally evaluates management's compensation in light of other specific risk parameters. Based on this assessment, the Compensation Committee believes that the Company has a balanced pay and performance program that does not promote excessive risk taking.

The Company's compensation programs are aimed at enabling it to attract and retain the best possible executive talent and rewarding those executives commensurate with their ability and performance. The Company's compensation programs consist primarily of base salary and bonus.

Base Salary. Base salaries for executive officers are determined in the same manner as those other salaried employees. Salary guidelines are established by comparing the responsibilities of the individual's position in relation to similar positions in other nutraceutical companies of similar size. Individual salaries were determined this year by considering respective levels of responsibility, position and industry information.

Bonuses. In 2022, the Board established weighted performance targets for fiscal 2022 that it would consider in approving bonus payments for fiscal 2022. These targets included various corporate objectives related to regulatory milestones. In March 2023, the Compensation Committee determined that based on Company and individual performance targets, Mr. Payne should be awarded \$175,000 and Mr. Marchiando should be awarded \$50,505.

Equity Grants. On August 29, 2022, the Compensation Committee awarded Mr. Marchiando a grant of stock options under the 2021 Plan exercisable for 62,000 shares of Common Stock, at \$3.94 per share. 15,500 shares underlying the stock option vested immediately, with 15,500 vesting on the first, second and third anniversaries of the date above. On December 16, 2022, the Compensation Committee awarded Mr. Payne 191,016 shares of Common Stock (the equivalent of approximately \$450,000 worth; \$400,000 owed to Mr. Payne pursuant to the Payne Contract (as described below) and \$50,000 awarded to Mr. Payne in recognition of his forgoing any cost of living adjustment for 2023) of fully vested stock options under 2021 Plan, at an exercise price of \$2.86 per share.

Employment Agreements

As of December 31, 2022, we had an employment agreement in place with our President & Chief Executive Officer and our Chief Financial Officer.

Mr. Payne's Employment Agreement:

On February 15, 2022, the Company entered into a written agreement concerning Mr. Payne's employment (the "Payne Contract"). Under the terms of the Payne Contract, Mr. Payne will serve as the Company's President and Chief Executive Officer on an at will basis. Mr. Payne will receive an annual base salary, commencing on February 15, 2022, of \$400,000. Mr. Payne is eligible for an annual performance bonus of no less than fifty percent (50%) but no more than one hundred twenty-five percent (125%) of Mr. Payne's effective salary for the applicable bonus year.

If Mr. Payne's employment is terminated for any reason by either the Company or Mr. Payne, Mr. Payne shall be entitled to receive the following: any accrued but unpaid base salary through the date of termination; reimbursement for unreimbursed expenses properly incurred by Mr. Payne prior to the date of termination; and such employee benefits, if any, to which Mr. Payne may be entitled under the Company's employee benefit plans as of the date of termination.

On December 22, 2022, the Board of Directors approved the Company and Mr. Payne's amendment to the Payne Contract (the "Payne Amendment") modifying the terms of Mr. Payne's Long Term Incentive Compensation (as defined therein). Under the Payne Amendment, the Company shall award Mr. Payne that number of stock options pursuant to the 2021 Plan with an approximate value of \$400,000.00 on the date of the grant, determined in accordance with, and subject to the terms and conditions of, the 2021 Plan and the applicable award agreement.

Mr. Marchiando's Employment Agreement:

On January 1, 2021, the Company entered into an employment letter with Mr. Marchiando (the "Marchiando Agreement"). Under the terms of the Marchiando Agreement, Mr. Marchiando will serve as Chief Financial Officer of the Company for one year, with successive automatic renewals for one year terms, unless either party terminates the Marchiando Agreement on at least sixty days' notice prior to the expiration of the then current term of the Marchiando Agreement. Mr. Marchiando will receive an annual base salary, commencing on January 1, 2021, of \$280,000 ("Marchiando Base Salary"). The Marchiando Base Salary has increased to \$300,000 one (1) year after the effective date, pursuant to the Company's entering into a term sheet and receives the related financing to receive at least \$10,000,000 in equity or other form of investment or debt ("Third Party Financing") on terms satisfactory to the Company's Board of Directors. Mr. Marchiando has also received \$25,000 upon the closing, prior to December 31, 2021, of a Third Party Financing that raised at least \$10,000,000. Mr. Marchiando has received the maximum bonus of \$50,000, upon the closing prior to December 31, 2021 of a Third Party Financing that raised over \$13,000,000 for the Company.

If Mr. Marchiando's employment is terminated by the Company due to death or Disability, or without Cause, or if Mr. Marchiando resigns for Good Reason (each as defined in the Marchiando Agreement) or if either party does not renew the employment term, Mr. Marchiando will be entitled to receive the following severance benefits: a continuation of the Marchiando Base Salary for one year, payment of an amount equal to Mr. Marchiando's target bonus in the year of termination and a fully-vested, nonqualified stock option to purchase 12,500 shares of Common Stock. Additionally, all outstanding and contingent nonqualified options owned directly or beneficially by Mr. Marchiando shall be converted immediately into vested options, with terms as specified in the applicable award agreement.

The Marchiando Agreement provides that if a Change of Control (as defined in the Marchiando Agreement) occurs and Mr. Marchiando resigns for Good Reason (as defined in the Marchiando Agreement) or Mr. Marchiando's employment is terminated without Cause (as defined in the Marchiando Agreement) during the 24-month period following the Change of Control or during the sixty (60) days immediately preceding the date of a Change of Control, 100% of Mr. Marchiando's unvested options will be fully vested and the restrictions on his restricted shares will lapse. The Marchiando Agreement also provides for severance payments of, amongst other things, a lump sum payment of 200% of the Marchiando Base Salary, 200% of Mr. Marchiando's Performance Bonus (as defined in the Marchiando Agreement) earned in the last 12 months preceding the Change of Control and payment of 24 months of the Marchiando Base Salary in such event.

Mr. Dahl's Employment Agreement:

Mr. Dahl served as our Chief Executive Officer until January 4, 2022. He previously served under the terms of an amended and restated employment agreement dated November 15, 2019 ("Dahl Agreement") that superseded all prior employment agreements and understandings. Mr. Dahl received an annual base salary, commencing on June 1, 2019, of \$440,000 ("Base Salary"), of which \$7,500 per month was deferred until either of the following events occur: (i) within five (5) years after the effective date, the Company enters into a term sheet to receive at least \$25,000,000 in equity or other form of investment or debt on terms satisfactory to the board of directors of the Company including funding at closing on such terms of at least \$10 million; or (ii) within 12 months after the effective date that the Company receives revenue of at least \$10 million. The Dahl Agreement was terminated in January 2022.

Outstanding Equity Awards at Fiscal Year-End 2022

The following table provides information on the outstanding equity awards held by our named executive officers as of December 31, 2022.

Name	Grant Date	Option Awards			
		Number of securities underlying unexercised options exercisable	Number of securities underlying unexercised options unexercisable	Option Exercise Price (\$)	Option Expiration Date
John B. Payne	10/12/2021	11,416	-	\$ 4.48	10/11/2031
	10/21/2021	192,000	-	\$ 5.50	10/20/2031
	12/16/2022	191,016	-	\$ 2.86	12/15/2031
Keith R. Marchiando	1/1/2021(1)	84,375	78,125	\$ 11.20	12/31/2030
	10/25/2021(2)	144,000	144,000	\$ 5.50	10/20/2031
	8/29/2022(2)	15,500	46,500	\$ 3.94	8/28/2032
Andrew A. Dahl	11/8/2017	75,000*	-	\$ 6.40	11/8/2023

*Includes compensatory warrants not issued pursuant to an equity compensation plan, prior to the Company's listing on Nasdaq.

- (1) 37,500 shares underlying the stock option vested immediately, with 15,625 vesting every six months thereafter.
- (2) 25% vested upon acceptance of the grant, and 25% on each of the next three calendar anniversaries of the grant.

Non-Employee Director Compensation

In October 2021, our Board of Directors adopted a non-employee director cash and equity compensation plan. Under this policy, the Company agreed to pay each of its non-employee directors a cash stipend for service on its board of directors and, if applicable, on the Audit Committee, Compensation Committee and Nominating and Corporate Governance committee. Each of the Company's non-employee directors receives an additional stipend for service as the chairperson of the compensation committee, nominating and corporate governance committee or audit committee or service as the non-executive chairperson. The stipends payable to each non-employee director for service on the Company's Board of Directors are as follows:

	Member Annual Service Stipend(1)	Chairperson Additional Annual Service Stipend
Board of Directors	\$ 40,000	\$ 5,000
Audit committee	4,000	2,000
Compensation committee	4,000	2,000
Nominating and corporate governance committee	4,000	2,000

(1) Chairs of each committee do not receive a stipend for being a member of the applicable committee.

Each non-employee director is automatically granted a stock option to purchase shares of Common Stock with an approximate target value of \$50,000 at the close of business on the date of each annual meeting. Such stock options will vest in four equal quarterly installments.

Non-Employee Director Compensation in 2022

The following table sets forth summary information concerning the compensation awarded to, paid to, or earned by the non-employee members of our Board of Directors for the fiscal year ended December 31, 2022:

Name	Fees Earned or Paid in Cash	Option Awards (\$) ^{(1) (2)}	Total (\$)
Nola E. Masterson	\$ 60,308	\$ 58,365	\$ 118,673
Christopher D. Maggione	57,742	58,365	116,107
Alison A. Cornell	68,384	358,365	426,749

- (1) The amounts reported reflect the grant date fair value (excluding the effect of estimated forfeitures). The grant date fair value of each warrant is calculated using the Black Scholes option-pricing model computed in accordance with FASB ASC Topic 718 and do not correspond to the actual amount that will be realized upon exercise by the named Directors. Valuation assumptions used in determining the grant date fair value of 2022 awards are included in the Company's Annual Report on Form 10-K for the year ended December 31, 2022 filed with the SEC on March 14, 2023.
- (2) Represents (i) options to purchase 15,797 shares of Common Stock granted to each non-employee director re-elected at the Company's 2022 Annual Meeting of Shareholders on July 28, 2022 pursuant to its Non-Employee Director Compensation Policy; and (ii) options to purchase an additional 143,688 shares to Ms. Cornell, and 4,244 shares to Mr. Maggione and Ms. Masterson in December 2022.

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

The following table sets forth certain information regarding each person who is known to us to beneficially own more than 5% of our issued and outstanding shares of Common Stock, and the number of shares of our Common Stock beneficially owned by each of our directors and named executive officers, and all officers and directors as a group. All percentages are based on 9,419,660 shares of Common Stock issued and outstanding as of March 1, 2023, and where applicable, beneficial ownership includes shares which the beneficial owner has the right to acquire within 60 days.

Security Ownership of Certain Beneficial Owners:

Name and Address	Number of Shares Beneficially Owned (1)	% of Class	% After Offering
HEP Investments, LLC 2804 Orchard Lake Rd. Suite 205 Keego Harbor, MI 48302	1,751,900(2)	18.0%	12.1%
Strome 1688 Meridian Ave, Suite 727 Miami Beach, FL 33139	657,536(3)	6.7%	4.5%
Christopher D. Maggiore 4788 Nobles Pond Dr. NW Canton, OH 44718	975,795(4)(5)(6)	10.2%	6.8%

Security Ownership of Management:

Name and Address	Number of Shares Beneficially Owned (1)	% of Class	% After Offering
Christopher D. Maggiore	975,795(4)(5)(6)	10.2%	6.8%
Andrew A. Dahl	83,324(7)	*	*
John B. Payne	541,333(8)	5.4%	3.7%
Keith Marchiando	259,500(9)	2.7%	1.8%
Nola E. Masterson	77,456(10)	*	*
Alison A. Cornell	201,612(11)	2.1%	1.4%
All current Directors and Officers as a group (5 persons)	2,055,620(12)	19.3%	13.4%

* Less than 1%

- (1) "Beneficially" owned shares, as defined by the SEC, are those shares as to which a person has voting or investment power, or both, and which the beneficial owner has the right to acquire within 60 days. Unless otherwise indicated, the persons or entities identified in this table have sole voting and investment power with respect to all shares shown as beneficially owned by them. "Beneficial" ownership does not necessarily mean that the named person is entitled to receive the dividends on, or the proceeds from the sale of, the shares.
- (2) Includes 295,487 shares of Common Stock issuable upon the exercise of certain warrants. Laith Yaldoo, the manager and controlling member of HEP Investments, LLC, may be deemed to have voting and dispositive power over the shares held by HEP Investments.

- (3) Represents shares held by Strome Mezzanine Fund, L.P. ("Strome Mezz"), Mark E. Strome, Strome Alpha Fund, L.P. ("Strome Alpha"), and Strome Investment Management, L.P. ("Strome Investment," and together with Strome Mezz and Strome Alpha, "Strome Group"), the general partner of each of the entities in the Strome Group is Mark E. Strome. Includes 331,250 shares of Common Stock issuable upon the exercise of certain warrants. Mark E. Strome, the sole director, president, and chief executive officer of Strome Group, may be deemed to have voting and dispositive power over the shares held by Strome.
- (4) Pursuant to a Schedule 13D/A filed with the SEC on February 14, 2023, Christopher D. Maggiore has sole power to vote 898,285 shares, sole power to dispose 898,285 shares, shared power to vote 81,459 shares and shared power to dispose 81,459 shares.
- (5) Includes options to purchase 69,508 shares of Common Stock and warrants to purchase 101,546 of Common Stock.
- (6) Includes 81,459 beneficial shares held in the estate of the Robert S. McLain Estate of which Mr. Maggiore is the controlling trustee.
- (7) Includes warrants to purchase 75,000 shares of Common Stock. Mr. Dahl's position as an executive officer of the Company ended in January 2022.
- (8) Includes options to purchase 394,432 shares of Common Stock and warrants to purchase 137,500 of Common Stock.
- (9) Includes options to purchase 259,500 shares of Common Stock.
- (10) Includes options to purchase 53,432 shares of Common Stock and warrants to purchase 18,750 of Common Stock.
- (11) Includes options to purchase 174,612 shares of Common Stock.
- (12) Includes options to purchase 951,484 shares of Common Stock and warrants to purchase 257,796 of Common Stock.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

Policies and Procedures for Related Party Transactions

We have adopted a formal policy that our executive officers, directors, holders of more than 5% of any class of our voting securities, and any member of the immediate family of and any entity affiliated with any of the foregoing persons, are not permitted to enter into a related party transaction with us without the prior consent of our Audit Committee, or other independent members of our Board of Directors if it is inappropriate for our audit committee to review such transaction due to a conflict of interest. Any request for us to enter into a transaction with an executive officer, director, principal shareholder, or any of their immediate family members or affiliates, in which the amount involved exceeds the lesser of \$120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years must first be presented to our audit committee for review, consideration and approval. In approving or rejecting any such proposal, our Audit Committee is to consider the relevant facts and circumstances available and deemed relevant to the audit committee, including, but not limited to, whether the transaction is on terms no less favorable than terms generally available to an unaffiliated third party under the same or similar circumstances and the extent of the related party's interest in the transaction. All of the transactions described below were entered into prior to the adoption of this policy.

Related Party Transactions

We describe below transactions and series of similar transactions, since January 1, 2020, to which we were a party or will be a party, in which:

- the amounts involved exceeded or will exceed the lesser of \$120,000 or 1% of the average of our total assets at year-end for the last two completed fiscal years; and
- any of our directors, our nominee for director, executive officers or holders of more than 5% of our outstanding capital stock, or any immediate family member of, or person sharing the household with, any of these individuals or entities, had or will have a direct or indirect material interest.

Other than as described below, there has not been, nor is there any currently proposed, transactions or series of similar transactions to which we have been or will be a party.

HEP Investments

11% Convertible Notes

On December 2, 2011, the Company and HEP Investments entered into the following documents, effective as of December 1, 2011, as amended through May 16, 2018: (i) a Loan Agreement under which the HEP Investments agreed to advance up to \$20,000,000 to the Company, subject to certain conditions, (ii) an 11% Convertible Secured Promissory Note in the principal amount of \$20,000,000 ("Convertible Note") (of which a total of \$18,470,640 was funded, with a total of \$14,380,298 converted into 1,796,287 shares of common stock, leaving a balance advanced of \$4,090,342 as of December 31, 2020), (iii) a Security Agreement, under which the Company granted HEP Investments a security interest in all of its assets, (iv) warrants issued to HEP Investments to purchase 20,833 shares of common stock at an exercise price of \$9.60 per share (including a cashless exercise provision) which expired September 30, 2016, (v) a Registration Rights Agreement with respect to all the shares of common stock issuable to HEP Investments in connection with the Loan Agreement, in each case subject to completion of funding of the full \$20,000,000 called for by the Loan Agreement, and (vi) an Intellectual Property security agreement under which the Company and its subsidiaries granted HEP Investments a security interest in all their respective intellectual properties, including patents, in order to secure their respective obligations to HEP Investments under the Convertible Note and related documents. The Convertible Note was originally convertible into the Company's common stock at \$8.00 per share. In addition, the Company's subsidiaries guaranteed the Company's obligations under the Convertible Note. On March 31, 2021, HEP Investments entered into a "Debt Extension and Conversion Agreement" with the Company providing that the Convertible Notes, including principal and accrued interest, would automatically convert into shares of common stock upon consummation of an underwritten public offering of the Company's common stock.

On June 2, 2021, in accordance with the Debt Extension and Conversion Agreement, all of the outstanding debt and accrued interest for the Convertible Notes was automatically converted into common stock of the Company. The principal amount of \$4,090,342 and the accrued interest to June 2, 2021, of \$2,161,845 totaled \$6,252,187; this total amount was converted into 781,524 shares of common stock (calculated at \$8.00 per share). As of December 31, 2021, the Company has no further remaining financial obligations to the HEP Investments under the terms of the Loan Agreement, the Convertible Note or the Registration Rights Agreement. Additionally, as of the conversion of the total outstanding principal and accrued interest balance, HEP Investments no longer retains a security interest in the Company's intellectual property or other assets.

In January 2019, and in connection with the Convertible Note, HEP Investments entered into a life insurance policy for Andrew Dahl, our former Chief Executive Officer. On February 23, 2021, the Company and HEP Investments entered into a Letter Agreement in which the Company agreed to pay certain premiums of \$2,565 per month under the life insurance policy while payments under the Convertible Note remained outstanding. Upon conversion of the Convertible Notes on June 2, 2021, the Company immediately stopped paying the premiums under the life insurance policy.

License Co-Development Participation Agreement

Between August 2020 and May 2021, HEP Investments invested \$310,000 into License Co-Development Participation Agreements (including the conversion of \$100,000 of a working capital loan), and in connection with such arrangement, received warrants exercisable for (i) 8,438 shares of common stock at \$9.60 per share, (ii) 1,500 shares of common stock at \$11.20 per share, and (iii) 1,688 shares of common stock at \$10.40 per share.

Strome

Convertible Notes

On June 6, 2018, HEP Investments and Strome Mezzanine Fund LP and Strome Alpha Fund LP ("Strome"), a holder of over 5% of our Common Stock, entered into the First Amended and Restated Participation Agreement (amending the June 17, 2017 agreement) whereby Strome agreed to fund a total of \$691,187 ("the committed funding"), through HEP Investment's 11% convertible note (at a conversion price of \$8.00). Additionally, in June 2018, the Company issued to Strome a warrant exercisable for 312,500 shares of Common Stock at an exercise price of \$8.00 for a term of 5 years, in exchange for \$2 million.

On June 2, 2021, in accordance with the Debt Extension and Conversion Agreement between Strome and the Company, all of the \$2,191,187 in principal outstanding debt and \$419,096 in the convertible notes was automatically converted into 326,286 shares of Common Stock at \$8.00 per share. As of the conversion of the total outstanding principal and accrued interest balance, Strome no longer retains a security interest in the Company's intellectual property or other assets.

Other

On June 2, 2021, the Company completed its planned public offering of common stock shares and common stock warrants (the "2021 Offering"). Two of the Company's members of the Board of Directors participated in the 2021 Offering; Christopher D. Maggiore purchased 100,000 units, and Alison A. Cornell purchased 15,000 units. No other related parties participated in the 2021 Offering.

DESCRIPTION OF THE SECURITIES

Our authorized capital stock consists of consists of 150,000,000 Common Stock, \$0.001 par value. As of the date of this prospectus, there were 9,419,660 shares of Common Stock outstanding.

UNITS

We are offering our Units, with each Unit consisting of one share of our Common Stock and one Unit Warrant to purchase one share of our Common Stock, together with the shares of our Common Stock underlying such Unit Warrants, at an assumed public offering price of \$3.15 per Unit.

We are also offering to each purchaser whose purchase of Common Stock in this offering would otherwise result in the purchaser, together with its affiliates, beneficially owning more than 4.99% of our outstanding Common Stock immediately following the consummation of this offering, the opportunity to purchase, if the purchaser so chooses, Units containing pre-funded warrants in lieu of Common Stock that would otherwise result in the purchaser's beneficial ownership exceeding 4.99% of our outstanding Common Stocks. For each pre-funded warrant we sell (without regard to any limitation on exercise set forth therein), the number of Common Stock we are offering will be decreased on a one-for-one basis. Because one Unit Warrant is being sold together in this offering with each Common Stock or, in the alternative, each pre-funded warrant to purchase one Common Stock, the number of Unit Warrants sold in this offering will not change as a result of a change in the mix of the Common Stock and pre-funded warrants sold.

We are also registering the Common Stock included in the Units and the Common Stock issuable from time to time upon exercise of the pre-funded warrants and Unit Warrants included in the Units offered hereby. Our Units have no stand-alone rights and will not be certificated and the shares of our Common Stock and/or pre-funded warrants and the Unit Warrants part of such Units are immediately separable and will be issued separately in this Offering.

UNIT WARRANTS

Overview. The Unit Warrants offered hereby will be issued pursuant to a Warrant Agent Agreement, dated as of the effective date of this Offering (the "Warrant Agent Agreement"), between us and Direct Transfer LLC, as the warrant agent (the "Warrant Agent"). Certain provisions of the Unit Warrants are set forth herein but are only a summary and are qualified in their entirety by the relevant provisions of the Warrant Agent Agreement and the form of Unit Warrant, both of which are filed as exhibits to the registration statement of which this prospectus is a part. Prospective investors should carefully review the terms and provisions set forth in the Warrant Agent Agreement, including the annexes thereto, and form of Unit Warrant.

The Unit Warrants issued in this Offering entitle the registered holder to purchase one share of our Common Stock at a price equal to \$ per share equal to % of the public offering price of the Units, subject to adjustment as discussed below, immediately following the issuance of such Unit Warrant and terminating at 5:00 p.m., New York City time, five years after the closing of this Offering.

Exercisability. The Unit Warrants are exercisable at any time after their original issuance and at any time up to the date that is five (5) years after their original issuance. The Unit Warrants may be exercised by delivering a duly executed exercise notice on or prior to the expiration date at the offices of the Warrant Agent, accompanied by full payment of the exercise price, by certified or official bank check payable to the Warrant Agent, for the number of Unit Warrants being exercised. Under the terms of the Warrant Agreement, we must use our best efforts to maintain the effectiveness of the registration statement and current prospectus relating to Common Stock issuable upon exercise of the Unit Warrants until the expiration of the Unit Warrants. If we fail to maintain the effectiveness of the registration statement and current prospectus relating to the Common Stock issuable upon exercise of the Unit Warrants, the holders of the Unit Warrants shall have the right to exercise the Unit Warrants solely via a cashless exercise feature provided for in the Unit Warrants, until such time as there is an effective registration statement and current prospectus. The Unit Warrant also provides for automatic cashless exercise pursuant to the terms of the Warrant Agreement on the Termination Date, as defined therein.

Exercise Limitation. A holder may not exercise any portion of a Unit Warrant to the extent that the holder, together with its affiliates and any other person or entity acting as a group, would own more than 4.99% of the outstanding Common Stock after exercise, as such percentage ownership is determined in accordance with the terms of the Unit Warrant, except that the holder may waive such limitation up to a percentage not in excess of 9.99%.

Exercise Price. The exercise price per whole share of Common Stock purchasable upon exercise of the Unit Warrants is \$ per share or % of public offering price of the Common Stock. The exercise price is subject to appropriate adjustment in the event of certain stock dividends and distributions, stock splits, stock combinations, reclassifications or similar events affecting our Common Stock and also upon any distributions of assets, including cash, stock or other property to our stockholders. However, the Unit Warrants will not be adjusted for issuances of Common Stock at prices below its exercise price.

Fractional Shares. No fractional shares of Common Stock will be issued upon exercise of the Unit Warrants. If, upon exercise of the Unit Warrant, a holder would be entitled to receive a fractional interest in a share, we will, upon exercise, pay a cash adjustment in respect of such fraction in an amount equal to such fraction multiplied by the exercise price. If multiple Unit Warrants are exercised by the holder at the same time, we shall pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the exercise price.

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

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

Fundamental Transactions. In the event of a fundamental transaction, as described in the Unit Warrants and generally including any reorganization, recapitalization or reclassification of our Common Stock, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding Common Stock, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding Common Stock, upon any subsequent exercise of the Unit Warrants, the holders of the Unit Warrants will be entitled to receive the kind and amount of securities, cash or other property that the holders would have received had they exercised the Unit Warrants immediately prior to such fundamental transaction. Additionally, in the event of a fundamental transaction, we or any successor entity will, at the option of the holder of a Unit Warrant exercisable at any time concurrently with or within 30 days after the consummation of the fundamental transaction (or, if later, the date of the public announcement thereof), purchase the Unit Warrant from the holder by paying to the holder an amount of consideration equal to the value of the remaining unexercised portion of such Unit Warrant on the date of consummation of the fundamental transaction based on the Black-Scholes option pricing model, determined pursuant to a formula set forth in the Unit Warrants. The consideration paid to the holder will be the same type or form of consideration that was offered and paid to the holders of common stock in connection with the fundamental transaction; provided that if no such consideration was offered or paid, the holders of common stock will be deemed to have received common stock of the successor entity in such fundamental transaction for purposes of this provision of the Unit Warrants.

Rights as a Stockholder. The warrant holders do not have the rights or privileges of holders of Common Stock or any voting rights until they exercise their Unit Warrants and receive shares of Common Stock. After the issuance of shares of Common Stock upon exercise of the Unit Warrants, each holder will be entitled to one vote for each share held of record on all matters to be voted on by stockholders.

Governing Law. The Unit Warrants and the Warrant Agency Agreement are governed by New York law.

COMMON STOCK

Holders of Common Stock are entitled to one vote per share on all matters submitted to a vote of the stockholders. Our holders of Common Stock do not have cumulative voting rights. Holders of Common Stock will be entitled to receive ratably such dividends as may be declared by the Board of Directors out of funds legally available therefor, which may be paid in cash, property, or in shares of the Company's capital stock. Upon liquidation, dissolution or winding up of the Company, either voluntarily or involuntarily, the holders of Common Stock will be entitled to receive their ratable share of the net assets of the Company legally available for distribution after payment of all debts and other liabilities. There are no conversion, preemptive or other subscription rights and there are no sinking fund or redemption provisions applicable to the Common Stock.

PRE-FUNDED WARRANTS

We are also offering to each purchaser whose purchase of Common Stock in this offering would otherwise result in the purchaser, together with its affiliates, beneficially owning more than 4.99% of our outstanding Common Stock immediately following the consummation of this offering, the opportunity to purchase, if the purchaser so chooses, Units containing pre-funded warrants in lieu of Common Stock that would otherwise result in the purchaser's beneficial ownership exceeding 4.99% of our outstanding Common Stock. For each pre-funded warrant we sell (without regard to any limitation on exercise set forth therein), the number of Common Stock we are offering will be decreased on a one-for-one basis.

Exercisability. The pre-funded warrants are exercisable at any time after their original issuance until they are exercised in full. Each of the pre-funded warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice and, at any time a registration statement registering the issuance of the common shares underlying the pre-funded warrants under the Securities Act is effective and available for the issuance of such shares, or an exemption from registration under the Securities Act is available for the issuance of such shares, by payment in full in immediately available funds for the number of common shares purchased upon such exercise. If a registration statement registering the issuance of the common shares underlying the pre-funded warrants under the Securities Act is not effective or available and an exemption from registration under the Securities Act is not available for the issuance of such shares, the holder may, in its sole discretion, elect to exercise the pre-funded warrant through a cashless exercise, in which case the holder would receive upon such exercise the net number of common shares determined according to the formula set forth in the pre-funded warrant. No fractional common shares will be issued in connection with the exercise of a pre-funded warrant. In lieu of fractional shares, we will pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price.

Exercise Limitation. A holder will not have the right to exercise any portion of the pre-funded warrants if the holder (together with its affiliates) would beneficially own in excess of 4.99% (or, upon election by a holder prior to the issuance of any pre-funded warrants, 9.99%) of the number of shares of our common shares outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the warrants. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99%, upon at least 61 days' prior notice from the holder to us with respect to any increase in such percentage.

Exercise Price. The exercise price for the pre-funded warrants is \$0.001 per share.

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

Exchange Listing. We do not intend to apply for the listing of the pre-funded warrants offered in this offering on any stock exchange. Without an active trading market, the liquidity of the pre-funded warrants will be limited.

Rights as a Shareholder. Except as otherwise provided in the pre-funded warrants or by virtue of such holder's ownership of our common shares, the holder of a pre-funded warrant does not have the rights or privileges of a holder of our common shares, including any voting rights, until the holder exercises the warrant.

Fundamental Transactions. In the event of a fundamental transaction, as described in the pre-funded warrants and generally including, with certain exceptions, any reorganization, recapitalization or reclassification of our common shares, the sale, transfer or other disposition of all or substantially all of our properties or assets, our consolidation or merger with or into another person, the acquisition of more than 50% of our outstanding common shares, or any person or group becoming the beneficial owner of 50% of the voting power represented by our outstanding common shares, the holders of the pre-funded warrants will be entitled to receive upon exercise of the warrants the kind and amount of securities, cash or other property that the holders would have received had they exercised the warrants immediately prior to such fundamental transaction.

Governing Law. The pre-funded warrants and Warrant Agency Agreement are governed by New York law.

DIVIDENDS

We have not declared or paid any dividends on our Common Stock since our inception and do not anticipate paying dividends for the foreseeable future. The payment of dividends is subject to the discretion of our Board of Directors and will depend, among other things, upon our earnings, our capital requirements, our financial condition, and other relevant factors. We intend to reinvest any earnings in the development and expansion of our business. Any cash dividends in the future to common stockholder will be payable when, as and if declared by our Board of Directors, based upon the board's assessment of our financial condition and performance, earnings, need for funds, capital requirements, prior claims of preferred stock to the extent issued and outstanding, and other factors, including income tax consequences, restrictions and applicable laws. There can be no assurance, therefore, that any dividends on our Common Stock will ever be paid.

ANTI-TAKEOVER EFFECTS OF PROVISIONS OF OUR ARTICLES OF INCORPORATION, BYLAWS AND NEVADA LAW

The following is a brief description of the provisions in our Articles of Incorporation, Bylaws and Nevada Law that could have an effect of delaying, deferring, or preventing a change in control of the Company.

Anti-Takeover Effects of Nevada Law

Business Combinations

We are a Nevada corporation and are generally governed by the Nevada Private Corporations Code, Title 78 of the Nevada Revised Statutes, or "NRS".

The "business combination" provisions of Sections 78.411 to 78.444, inclusive, of the NRS, generally prohibit a Nevada corporation with at least 200 stockholders from engaging in various "combination" transactions with any interested stockholder for a period of two years after the date of the transaction in which the person became an interested stockholder, unless the transaction is approved by the board of directors prior to the date the interested stockholder obtained such status or the combination is approved by the board of directors and thereafter is approved at a meeting of the stockholders by the affirmative vote of stockholders representing at least 60% of the outstanding voting power held by disinterested stockholders, and extends beyond the expiration of the two-year period, unless:

- the combination was approved by the board of directors prior to the person becoming an interested stockholder or the transaction by which the person first became an interested stockholder was approved by the board of directors before the person became an interested stockholder or the combination is later approved by a majority of the voting power held by disinterested stockholders; or
- price per share paid by the interested stockholder within the two years immediately preceding the date of the announcement of the combination or in the transaction in which it became an interested stockholder, whichever is higher, (a) the market value per share of Common Stock on the date of announcement of the combination and the date the interested stockholder acquired the shares, whichever is higher, or (b) for holders of preferred stock, the highest liquidation value of the preferred stock, if it is higher.

A “combination” is generally defined to include mergers or consolidations or any sale, lease exchange, mortgage, pledge, transfer, or other disposition, in one transaction or a series of transactions, with an “interested stockholder” having: (a) an aggregate market value equal to 5% or more of the aggregate market value of the assets of the corporation, (b) an aggregate market value equal to 5% or more of the aggregate market value of all outstanding shares of the corporation, (c) 10% or more of the earning power or net income of the corporation, and (d) certain other transactions with an interested stockholder or an affiliate or associate of an interested stockholder.

In general, an “interested stockholder” is a person who, together with affiliates and associates, owns (or within two years, did own) 10% or more of a corporation’s voting stock. The statute could prohibit or delay mergers or other takeover or change in control attempts and, accordingly, may discourage attempts to acquire our Company even though such a transaction may offer our stockholders the opportunity to sell their stock at a price above the prevailing market price.

Control Share Acquisitions

The “control share” provisions of Sections 78.378 to 78.3793, inclusive, of the NRS apply to “issuing corporations” that are Nevada corporations with at least 200 stockholders, including at least 100 stockholders of record who are Nevada residents, and that conduct business directly or indirectly in Nevada. The control share statute prohibits an acquirer, under certain circumstances, from voting its shares of a target corporation’s stock after crossing certain ownership threshold percentages, unless the acquirer obtains approval of the target corporation’s disinterested stockholders. The statute specifies three thresholds: one-fifth or more but less than one-third, one-third but less than a majority, and a majority or more, of the outstanding voting power.

Generally, once an acquirer crosses one of the above thresholds, those shares in an offer or acquisition and acquired within 90 days thereof become “control shares” and such control shares are deprived of the right to vote until disinterested stockholders restore the right. These provisions also provide that if control shares are accorded full voting rights and the acquiring person has acquired a majority or more of all voting power, all other stockholders who do not vote in favor of authorizing voting rights to the control shares are entitled to demand payment for the fair value of their shares in accordance with statutory procedures established for dissenters’ rights.

A corporation may elect to not be governed by, or “opt out” of, the control share provisions by making an election in its articles of incorporation or bylaws, provided that the opt-out election must be in place on the 10th day following the date an acquiring person has acquired a controlling interest, that is, crossing any of the three thresholds described above. We have not opted out of the control share statutes, and will be subject to these statutes if we are an “issuing corporation” as defined in such statutes.

The effect of the Nevada control share statutes is that the acquiring person, and those acting in association with the acquiring person, will obtain only such voting rights in the control shares as are conferred by a resolution of the stockholders at an annual or special meeting. The Nevada control share law, if applicable, could have the effect of discouraging takeovers of our Company.

Number of Directors; Vacancies; Removal

Our Bylaws provide that our Board of Directors may fix the number of directors at no less than one and no more than nine. Any vacancy on the Board of Directors may be filled by the affirmative vote of a majority of the remaining directors though less than a quorum of the Board of Directors. A director elected to fill a vacancy shall be elected for the unexpired term of his predecessor in office, and shall hold such office until his successor is duly elected and qualified. Any directorship to be filled by reason of an increase in the number of directors shall be filled by the affirmative vote of a majority of the directors then in office or by an election at an annual meeting, or at a special meeting of stockholders called for that purpose. A director chosen to fill a position resulting from an increase in the number of directors shall hold office only until the next election of directors by the stockholders.

Our Bylaws provide that any director or directors of the corporation may be removed from office at any time, with or without cause, by the vote or written consent of stockholders representing not less than a majority of the issued and outstanding capital stock entitled to voting power.

Authorized Shares

Without any action by our shareholders, we may increase or decrease the aggregate number of shares or the number of shares of any class we have authority to issue at any time. The board shall have authority to establish more than one class or series of shares of this corporation, and the different classes and series shall have such relative rights and preferences, with such designations, as the board may by resolution provide. Issuance of such a new class or series could, depending upon the terms of the class or series, delay, defer, or prevent a change of control of the Company.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our Bylaws contain advance notice provisions that a stockholder must follow if it intends to bring business proposals or director nominations, as applicable, before a meeting of stockholders. These provisions may preclude our stockholders from bringing matters before the annual meeting of stockholders or from making nominations at the annual meeting of stockholders.

No Cumulative Voting

Holders of our Common Stock do not have cumulative voting rights in the election of Directors. The absence of cumulative voting may make it more difficult for shareholders owning less than a majority of our Common Stock to elect any Directors to our Board of Directors.

LIMITATION ON LIABILITY AND INDEMNIFICATION OF DIRECTORS AND OFFICERS

Section 78.138 of the NRS provides that, unless the corporation's articles of incorporation provide otherwise, a director or officer will not be individually liable unless it is proven that (i) the director's or officer's acts or omissions constituted a breach of his or her fiduciary duties, and (ii) such breach involved intentional misconduct, fraud, or a knowing violation of the law.

Section 78.7502 of the NRS permits a company to indemnify its directors and officers against expenses, judgments, fines, and amounts paid in settlement actually and reasonably incurred in connection with a threatened, pending, or completed action, suit, or proceeding, if the officer or director (i) is not liable pursuant to NRS 78.138, or (ii) acted in good faith and in a manner the officer or director reasonably believed to be in or not opposed to the best interests of the corporation and, if a criminal action or proceeding, had no reasonable cause to believe the conduct of the officer or director was unlawful. Section 78.7502 of the NRS requires a corporation to indemnify a director or officer that has been successful on the merits or otherwise in defense of any action or suit. Section 78.7502 of the NRS precludes indemnification by the corporation if the officer or director has been adjudged by a court of competent jurisdiction, after exhaustion of all appeals, to be liable to the corporation or for amounts paid in settlement to the corporation, unless and only to the extent that the court determines that in view of all the circumstances, the person is fairly and reasonably entitled to indemnity for such expenses and requires a corporation to indemnify its officers and directors if they have been successful on the merits or otherwise in defense of any claim, issue, or matter resulting from their service as a director or officer.

Section 78.751 of the NRS permits a Nevada company to indemnify its officers and directors against expenses incurred by them in defending a civil or criminal action, suit, or proceeding as they are incurred and in advance of final disposition thereof, upon determination by the stockholders, the disinterested board members, or by independent legal counsel. If so provided in the corporation's articles of incorporation, bylaws, or other agreement, Section 78.751 of the NRS requires a corporation to advance expenses as incurred upon receipt of an undertaking by or on behalf of the officer or director to repay the amount if it is ultimately determined by a court of competent jurisdiction that such officer or director is not entitled to be indemnified by the company. Section 78.751 of the NRS further permits the company to grant its directors and officers additional rights of indemnification under its articles of incorporation, bylaws, or other agreement.

Section 78.752 of the NRS provides that a Nevada company may purchase and maintain insurance or make other financial arrangements on behalf of any person who is or was a director, officer, employee, or agent of the company, or is or was serving at the request of the company as a director, officer, employee, or agent of another company, partnership, joint venture, trust, or other enterprise, for any liability asserted against him and liability and expenses incurred by him in his capacity as a director, officer, employee, or agent, or arising out of his status as such, whether or not the company has the authority to indemnify him against such liability and expenses.

We have entered into indemnification agreements with each of our officers and directors to provide indemnification to the fullest extent permitted by the NRS against expense, liability, and loss reasonably incurred or suffered by them in connection with their service as an officer or director. The agreements provide for advance costs and expenses incurred with respect to any proceeding to which a person is made a party as a result of being a director or officer prior to or after final disposition of such proceeding upon receipt of an undertaking by or on behalf of the director or officer to repay such amount if it is ultimately determined that such person is not entitled to indemnification. We may purchase and maintain liability insurance, or make other arrangements for such obligations or otherwise, to the extent permitted by the NRS.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to the Company's directors, officers or controlling persons pursuant to the provisions described above, or otherwise, the Company has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

TRANSFER AGENT AND REGISTRAR

The transfer agent and registrar for our Common Stock is Issuer Direct Corporation.

LISTING

Our Common Stock and certain of our outstanding warrants trade on Nasdaq under the symbol "ZIVO" and "ZIVOW", respectively.

MATERIAL U.S. FEDERAL INCOME TAX CONSIDERATIONS

Subject to the limitations, assumptions and qualifications described herein, the following is a discussion of the material U.S. federal income tax considerations relating to (i) the purchase, ownership and disposition of our Units and Common Stock purchased in this Offering and (ii) the purchase, exercise, disposition and lapse of the pre-funded warrants and Unit Warrants to purchase shares of Common Stock issued pursuant to this offering. This discussion is for general information purposes only and does not purport to be a complete analysis of all the potential tax considerations. Because the components of a Unit are separable at the option of the holder, the holder of a Unit generally should be treated, for U.S. federal income tax purposes, as the owner of the underlying one share of Common Stock or one pre-funded warrant to purchase one Common Stock and one Unit Warrant to purchase one share of Common Stock that underlie the Unit, as the case may be. As a result, the discussion below with respect to actual holders of Common Stock and Unit Warrants should also apply to holders of Units (as the deemed owners of the underlying Common Stock and Unit Warrants that comprise the Units). The Units, Common Stock, pre-funded warrants and Unit Warrants are collectively referred to herein as our “securities.” This summary is based upon the provisions of the Internal Revenue Code of 1986, as amended (the “Code”), existing and proposed Treasury regulations promulgated thereunder, administrative pronouncements and of the Internal Revenue Service (“IRS”) rulings and judicial decisions, all as of the date hereof. These authorities may be changed, possibly with retroactive effect, so as to result in U.S. federal income different from those set forth below. There can be no assurance that the IRS will not challenge one or more of the tax consequences described herein, and we have not obtained, and do not intend to obtain, an opinion of counsel or ruling from the IRS with respect to the U.S. federal income tax considerations relating to the purchase, ownership or disposition of our securities. **All prospective holders of our securities should consult their tax advisors with respect to the U.S. federal, state, local and non-U.S. tax consequences of the purchase, ownership and disposition of the securities.**

This discussion does not address any alternative minimum tax considerations, any considerations regarding the tax on net investment income, or the tax considerations arising under the laws of any state, local or non-U.S. jurisdiction, or under any non-income tax laws, including U.S. federal gift and estate tax laws. This summary assumes that our securities will be held as capital assets (generally, property held for investment). In addition, this summary does not address tax considerations applicable to an investor’s particular circumstances or to investors that may be subject to special tax rules, including, without limitation:

- banks, insurance companies, or other financial institutions;
- tax-exempt organizations or governmental organizations;
- regulated investment companies and real estate investment trusts;
- insurance companies;
- controlled foreign corporations, passive foreign investment companies, and corporations that accumulate earnings to avoid U.S. federal income tax;
- brokers or dealers in securities or currencies;
- traders in securities that elect to use a mark-to-market method of accounting for their securities holdings;
- persons that own, or are deemed to own, more than 5% of our capital stock (except to the extent explicitly set forth below);
- pension plans;
- persons who hold our securities as a position in a hedging transaction, “straddle,” “conversion transaction,” synthetic security, or other integrated investment;
- persons who do not hold our securities as a capital asset within the meaning of Section 1221 of the Code;
- entities or arrangements classified as partnerships for U.S. federal income tax purposes and other pass-through entities (and partners or other investors therein);
- persons subject to special tax accounting rules as a result of any item of gross income with respect to our securities being taken into account in an applicable financial statement;
- persons deemed to sell our securities under the constructive sale provisions of the Code; or
- certain U.S. expatriates and certain former citizens or long-term residents of the United States.

In addition, if a holder is a partnership or other pass-through entity (including an entity or arrangement treated as a partnership or other type of pass-through entity for U.S. federal income tax purposes), the U.S. federal income tax treatment of a partner or beneficial owner will generally depend on the status of such partner or beneficial owner and the entity's activities. Partnerships, partners and beneficial owners in partnerships or other pass-through entities that own our securities should consult their tax advisors as to the particular U.S. federal income tax considerations applicable to the acquisition, ownership and disposition of the securities.

You are urged to consult your own tax advisors with respect to the application of the U.S. federal income tax laws to your particular situation, as well as any tax consequences of the purchase, ownership and disposition of our securities arising under the U.S. federal estate or gift tax laws or under the laws of any state, local, non-U.S., or other taxing jurisdiction or under any applicable tax treaty.

Allocation of Purchase Price and Characterization of a Unit

No statutory, administrative or judicial authority directly addresses the treatment of a Unit or instruments similar to a Unit for U.S. federal income tax purposes and, therefore, that treatment is not entirely clear. The acquisition of a Unit should be treated for U.S. federal income tax purposes as the acquisition of one share of Common Stock (or pre-funded warrant) and one Unit Warrant to purchase one share of Common Stock. For U.S. federal income tax purposes, each holder of a Unit must allocate the purchase price paid by such holder for such Unit between such one share of Common Stock (or pre-funded warrant) and one Unit Warrant to purchase one share of Common Stock based on their relative fair market values at the time of issuance. Under U.S. federal income tax law, each investor must make his or her own determination of such value based on all the relevant facts and circumstances. Therefore, we strongly urge each investor to consult his or her tax advisor regarding the determination of value for these purposes. The price allocated to each share of Common Stock (or pre-funded warrant) and each Unit Warrant should be the stockholder's tax basis in such share or Unit Warrant, as the case may be. Any disposition of a Unit should be treated for U.S. federal income tax purposes as a disposition of the one share of Common Stock (or pre-funded warrant) and one Unit Warrant to purchase one share of Common Stock comprising the Unit, and the amount realized on the disposition should be allocated between the one share of Common Stock (or pre-funded warrant) and one Unit Warrant to purchase one share of Common Stock based on their respective relative fair market values (as determined by each such Unit holder based on all of the relevant facts and circumstances) at the time of disposition. The separation of the Common Stock (or pre-funded warrant) and Unit Warrants comprising Units should not be a taxable event for U.S. federal income tax purposes.

The foregoing treatment of the Common Stock (or pre-funded warrant) and Unit Warrants and a holder's purchase price allocation are not binding on the IRS or the courts. Because there are no authorities that directly address instruments that are similar to the Units, no assurance can be given that the IRS or the courts will agree with the characterization described above or the discussion below. Accordingly, each prospective investor is urged to consult its own tax advisors regarding the tax consequences of an investment in a Unit (including alternative characterizations of a Unit). The balance of this discussion assumes that the characterization of the Units described above is respected for U.S. federal income tax purposes.

Tax Treatment of the Pre-Funded Warrants

Although it is not entirely free from doubt, we believe that our pre-funded warrants should be treated as shares of our stock for U.S. federal income tax purposes, rather than as warrants. Assuming this position is upheld, upon the exercise of a pre-funded warrant, the holding period of a pre-funded warrant should carry over to the Common Stock received. Similarly, no gain or loss should be recognized upon the exercise of a pre-funded warrant and the tax basis of a pre-funded warrant should carry over to the Common Stock received upon exercise, increased by the exercise price of \$0.01 per share.

However, our position is not binding on the IRS and the IRS may treat the pre-funded warrants as warrants to acquire our Common Stock. You should consult your tax advisor regarding the U.S. federal tax consequences of an investment in the pre-funded warrants. The following discussion assumes our pre-funded warrants are properly treated as shares of our stock.

Consequences to U.S. Holders

The following is a discussion of the U.S. federal income tax consequences that will apply to a U.S. holder of our securities. For purposes of this discussion, you are a U.S. holder if, for U.S. federal income tax purposes, you are a beneficial owner of our securities (other than a partnership or an entity or arrangement classified as a partnership for U.S. federal income tax purposes) that is:

- an individual citizen or resident of the United States;
- a corporation or other entity taxable as a corporation for U.S. federal income tax purposes created or organized in the United States or under the laws of the United States, any State thereof or the District of Columbia;
- an estate whose income is subject to U.S. federal income tax regardless of its source; or
- a trust (x) whose administration is subject to the primary supervision of a U.S. court and which has one or more "United States persons" (within the meaning of Section 7701(a)(30) of the Code) who have the authority to control all substantial decisions of the trust or (y) which has made a valid election to be treated as a "United States person."

Distributions

As described in the section titled “Dividend Policy,” we have never declared or paid cash dividends on our Common Stock and do not anticipate paying any dividends on our Common Stock (or pre-funded warrants) in the foreseeable future. However, if we do make distributions on our Common Stock (or pre-funded warrants), those payments will constitute dividends for U.S. tax purposes to the extent paid from our current or accumulated earnings and profits, as determined under U.S. federal income tax principles. To the extent those distributions exceed both our current and our accumulated earnings and profits, the excess will constitute a return of capital and will first reduce your basis in our Common Stock (or pre-funded warrants), but not below zero, and then will be treated as gain from the sale of stock as described below under “Sale, Exchange or Other Taxable Disposition of Common Stock.”

Dividend income may be taxed to certain non-corporate U.S. holders at the lower rates applicable to long-term capital gains, provided that a minimum holding period and other limitations and requirements are satisfied. Any dividends that we pay to a U.S. holder that is a corporation may qualify for a deduction allowed to U.S. corporations in respect of dividends received from other U.S. corporations equal to a portion of any dividends received, subject to generally applicable limitations on that deduction. U.S. holders should consult their own tax advisors regarding the holding period and other requirements that must be satisfied in order to qualify for the reduced tax rate on dividends or the dividends-received deduction.

Constructive Distributions

The terms of the Unit Warrants allow for changes in the exercise price of the Unit Warrants under certain circumstances. A change in exercise price of a Unit Warrant (or in certain circumstances, a failure to make such an adjustment) that allows holders to receive more shares of Common Stock on exercise may increase a holder’s proportionate interest in our earnings and profits or assets. In that case, such holder may be treated as though it received a constructive distribution in the form of our Common Stock. A taxable constructive stock distribution would generally result, for example, if the exercise price is adjusted to compensate holders for distributions of cash or other property to our stockholders.

Not all changes in the exercise price of the Unit Warrants that result in a holder’s receiving more Common Stock on exercise, however, would be considered as increasing a holder’s proportionate interest in our earnings and profits or assets. For instance, a change in exercise price could simply prevent the dilution of a holder’s interest upon a stock split or other change in capital structure. Changes of this type, if made pursuant to bona fide, reasonable adjustment formula, are not treated as constructive stock distributions for these purposes. Conversely, if an event occurs that dilutes a holder’s interest and the exercise price is not adjusted, the resulting increase in the proportionate interests of our stockholders could be treated as a taxable stock distribution to our stockholders

Any taxable constructive stock distributions resulting from a change to, or a failure to change, the exercise price of the Unit Warrants that is treated as a distribution of Common Stock would be treated for U.S. federal income tax purposes in the same manner as distributions on our Common Stock paid in cash or other property, resulting in a taxable dividend to the recipient to the extent of our current or accumulated earnings and profits (with the recipient's tax basis in its Common Stock or Unit Warrants, as applicable, being increased by the amount of such dividend), and with any excess treated as a return of capital or as capital gain. U.S. holders should consult their own tax advisors regarding whether any taxable constructive stock dividend would be eligible for tax rates applicable to long-term capital gains or the dividends-received deduction described above under "Consequences to U.S. Holders-Distributions," as the requisite applicable holding period requirements might not be considered to be satisfied.

In the event that the exercise price or conversion ratio of pre-funded warrants is adjusted as a result of an action affecting the Common Stock, such as a dividend being paid on the Common Stocks, a U.S. holder may be treated as receiving a constructive distribution from the Company. Such constructive distributions may be treated as a dividend for U.S. federal income tax purposes and may be eligible for preferential tax rates, as described above.

Sale, Exchange or Other Taxable Disposition of Common Stock and Pre-Funded Warrants

A U.S. holder will generally recognize capital gain or loss on the sale, exchange or other taxable disposition of our Common Stock or pre-funded warrants. The amount of gain or loss will equal the difference between the amount realized on the sale and such U.S. holder's tax basis in such Common Stock or pre-funded warrants. The amount realized will include the amount of any cash and the fair market value of any other property received in exchange for such Common Stock or pre-funded warrants. Gain or loss will be long-term capital gain or loss if the U.S. holder has held the Common Stock or pre-funded warrants for more than one year. Long-term capital gains of non-corporate U.S. holders are generally taxed at preferential rates. The deductibility of capital losses is subject to certain limitations.

Sale, Exchange, Redemption, Lapse or Other Taxable Disposition of a Unit Warrant

Upon a sale, exchange, redemption, lapse or other taxable disposition of a Unit Warrant, a U.S. holder generally will recognize capital gain or loss in an amount equal to the difference between the amount realized (if any) on the disposition and such U.S. holder's tax basis in the Unit Warrant. The amount realized will include the amount of any cash and the fair market value of any other property received in exchange for the Unit Warrant. The U.S. holder's tax basis in the Unit Warrant generally will equal the amount the holder paid for the Unit Warrant. Gain or loss will be long-term capital gain or loss if the U.S. holder has held the Unit Warrant for more than one year. Long-term capital gains of non-corporate U.S. holders are generally taxed at preferential rates. The deductibility of capital losses is subject to certain limitations.

Exercise of a Unit Warrant

The exercise of a Unit Warrant for shares of Common Stock generally will not be a taxable event for the exercising U.S. holder, except with respect to cash, if any, received in lieu of a fractional share. A U.S. holder will have a tax basis in the shares of Common Stock received on exercise of a Unit Warrant equal to the sum of the U.S. holder's tax basis in the Unit Warrant surrendered, reduced by any portion of the basis allocable to a fractional share, plus the exercise price of the Unit Warrant. A U.S. Holder's holding period in the Common Stock received upon exercise will commence on the day after such U.S. Holder exercises the Warrants. Although there is no direct legal authority as to the U.S. federal income tax treatment of an exercise of a Unit Warrant on a cashless basis, we intend to take the position that such exercise will not be taxable, either because the exercise is not a gain realization event or because it qualifies as a tax-free recapitalization. In the former case, the holding period of Common Stock received upon exercise of Unit Warrants should commence on the day after the Unit Warrants are exercised. In the latter case, the holding period of the Warrant Shares received upon exercise of Unit Warrants would include the holding period of the exercised Unit Warrants. However, our position is not binding on the IRS and the IRS may treat a cashless exercise of a warrant as a taxable exchange. U.S. holders are urged to consult their tax advisors as to the consequences of an exercise of a Unit Warrant on a cashless basis, including with respect to their holding period and tax basis in the Warrant Shares received.

Consequences to Non-U.S. Holders

The following is a summary of the U.S. federal income tax consequences that will apply to a non-U.S. holder of our securities. A "non-U.S. holder" is a beneficial owner of our securities (other than a partnership or an entity or arrangement classified as a partnership for U.S. federal income tax purposes) that, for U.S. federal income tax purposes, is not a U.S. holder.

Distributions

As mentioned above, we do not anticipate declaring or paying any cash dividends to holders of our Common Stock in the foreseeable future. However, distributions of cash or other property (other than certain distributions of stock) on our Common Stock will constitute dividends to the extent paid out of our current or accumulated earnings and profits, as determined for U.S. federal income tax purposes. Distributions in excess of our current and accumulated earnings and profits will constitute a return of capital and first be applied against and reduce a non-U.S. holder's adjusted tax basis in its common stock, but not below zero. Any excess will be subject to the treatment as described below under "*Gain on Sale, Exchange or Other Taxable Disposition of Common Stock or Unit Warrants*".

Subject to the discussion below regarding effectively connected income, any dividend, including any taxable constructive stock dividend resulting from certain adjustments, or failure to make adjustments, to the exercise price of a Unit Warrant (as described above under "Consequences to U.S. Holders-Constructive Distributions"), paid to a non-U.S. holder generally will be subject to U.S. withholding tax either at a rate of 30% of the gross amount of the dividend or such lower rate as may be specified by an applicable income tax treaty. In order to receive a reduced treaty rate, a non-U.S. holder must provide us with an IRS Form W-8BEN, IRS Form W-8BEN-E or other applicable IRS Form W-8 properly certifying qualification for the reduced rate. These forms may need to be updated periodically. A non-U.S. holder eligible for a reduced rate of U.S. withholding tax pursuant to an income tax treaty may obtain a refund of any excess amounts withheld by timely filing an appropriate claim for refund with the IRS. If a non-U.S. holder holds our securities through a financial institution or other agent acting on the non-U.S. holder's behalf, the non-U.S. holder will be required to provide appropriate documentation to the agent, which then may be required to provide certification to us or our paying agent, either directly or through other intermediaries.

Dividends received by a non-U.S. holder that are effectively connected with its conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States) are generally exempt from such withholding tax if the non-U.S. holder satisfies certain certification and disclosure requirements. In order to obtain this exemption, the non-U.S. holder must provide us with an IRS Form W-8ECI or other applicable IRS Form W-8 properly certifying such exemption. Such effectively connected dividends, although not subject to withholding tax, are taxed at the same graduated U.S. federal income tax rates applicable to U.S. holders, net of certain deductions and credits. In addition, dividends received by a corporate non-U.S. holder that are effectively connected with its conduct of a U.S. trade or business may also be subject to a branch profits tax at a rate of 30% or such lower rate as may be specified by an applicable income tax treaty. Non-U.S. holders should consult their own tax advisors regarding any applicable tax treaties that may provide for different rules.

Gain on Sale, Exchange or Other Taxable Disposition of Common Stock, Pre-Funded Warrants or Unit Warrants

Subject to the discussion below regarding backup withholding and foreign accounts, a non-U.S. holder generally will not be subject to U.S. federal income or withholding tax on any gain realized upon the sale, exchange or other taxable disposition of our Common Stock, pre-funded warrants or a Unit Warrant unless:

- the gain is effectively connected with the non-U.S. holder's conduct of a U.S. trade or business (and, if required by an applicable income tax treaty, the gain is attributable to a permanent establishment or fixed base maintained by the non-U.S. holder in the United States);
- the non-U.S. holder is a non-resident alien individual who is present in the United States for a period or periods aggregating 183 days or more during the calendar year in which the sale or disposition occurs and certain other conditions are met; or
- We are or have been a "United States real property holding corporation," as defined in the Code, at any time within the five-year period ending on the date of disposition or the non-U.S. holder's holding period, whichever period is shorter, and the Non-U.S. Holder is not eligible for an exemption under an applicable income tax treaty.

We believe that we are not, and do not anticipate becoming, a United States real property holding corporation. Even if we are or have been a United States real property holding corporation during the specified testing period, as long as our common stock is regularly traded on an established securities market (such as Nasdaq) at any time during the calendar year in which the disposition occurs, a non-U.S. holder will not be subject to U.S. federal income tax on the disposition of our common stock if the non-U.S. holder does not own or has not owned (actually or constructively) more than 5 percent of our common stock at any time during the shorter of the two periods mentioned above. Special rules may apply to the determination of the 5-percent threshold in the case of a non-U.S. holder of a pre-funded warrants and/or Unit Warrants. Non-U.S. holders are urged to consult their tax advisors regarding the effect of holding pre-funded warrants or Unit Warrants on the calculation of such 5-percent threshold. Non-U.S. holders should consult their tax advisors regarding the application of this regularly traded exception.

In addition, although a 15% withholding tax generally applies to gross proceeds from the sale or other taxable disposition of the stock of or certain other interests in a United States real property holding company, such 15% withholding tax generally will not apply to the disposition of Common Stock so long as our Common Stock is regularly traded on an established securities market. However, the exception described in the previous sentence may not apply to certain dispositions of pre-funded warrants or the Unit Warrants if the non-U.S. holder exceeds the 5-percent threshold mentioned above.

If the non-U.S. holder is described in the first bullet above, it will be required to pay tax on the net gain derived from the sale, exchange or other taxable disposition of our securities under regular graduated U.S. federal income tax rates, and a corporate non-U.S. holder described in the first bullet above also may be subject to the branch profits tax at a rate of 30%, or such lower rate as may be specified by an applicable income tax treaty. An individual non-U.S. holder described in the second bullet above will be required to pay a flat 30% tax (or such lower rate specified by an applicable income tax treaty) on the gain derived from the sale, exchange or other taxable disposition of our securities, which gain may be offset by U.S. source capital losses for the year (provided the non-U.S. holder has timely filed U.S. federal income tax returns with respect to such losses). Non-U.S. holders should consult their own tax advisors regarding any applicable income tax or other treaties that may provide for different rules.

Certain Adjustments to and Distributions on Pre-Funded Warrants and Unit Warrants

As discussed above under “-Constructive Distributions,” an adjustment to the exercise price of the pre-funded warrants or Unit Warrants (or certain failures to make adjustments), may be deemed to be the payment of a distribution with respect to the pre-funded warrants or Unit Warrants. Such a deemed distribution could be deemed to be the payment of a dividend to a non-U.S. holder to the extent of our earnings and profits, notwithstanding the fact that such non-U.S. holder will not receive a cash payment. In the event of such a deemed dividend, we may be required to withhold tax from subsequent distributions of cash or other property to non-U.S. holders. Non-U.S. holders should consult their tax advisors regarding the proper treatment of any adjustments to the pre-funded warrants or Unit Warrants.

Backup Withholding and Information Reporting

Generally, we must report annually to the IRS the amount of distributions (including constructive distributions) paid to you with respect to our securities, your name and address and the amount of tax withheld, if any. A similar report will be sent to you. Pursuant to applicable income tax treaties or other agreements, the IRS may make these reports available to tax authorities in your country of residence.

Payments of distributions on or of proceeds from the disposition of our securities made to you may be subject to information reporting and backup withholding at a current rate of 24% unless you establish an exemption, for example, by properly certifying your non-U.S. status on an IRS Form W-8BEN or IRS Form W-8BEN-E or other applicable IRS Form W-8. Notwithstanding the foregoing, backup withholding and information reporting may apply if either we or our paying agent has actual knowledge, or reason to know, that you are a U.S. person.

Backup withholding is not an additional tax; rather, the U.S. federal income tax liability of persons subject to backup withholding will be reduced by the amount of tax withheld. If withholding results in an overpayment of taxes, a refund or credit may generally be obtained from the IRS, provided that the required information is furnished to the IRS in a timely manner.

Foreign Account Tax Compliance

Under Section 1471 through 1474 of the Code and the U.S. Treasury regulations promulgated thereunder, the Foreign Account Tax Compliance Act (“FATCA”) generally imposes withholding tax at a rate of 30% on dividends on and gross proceeds from the sale or other disposition of our securities paid to a “foreign financial institution” (as specially defined under these rules), unless such institution enters into an agreement with the U.S. government to, among other things, withhold on certain payments and to collect and provide to the U.S. tax authorities substantial information regarding the U.S. account holders of such institution (which includes certain equity and debt holders of such institution, as well as certain account holders that are foreign entities with U.S. owners) or otherwise establishes an exemption. FATCA also generally imposes a U.S. federal withholding tax of 30% on dividends on and gross proceeds from the sale or other disposition of our securities paid to a “non-financial foreign entity” (as specially defined for purposes of these rules) unless such entity provides the withholding agent with a certification identifying certain substantial direct and indirect U.S. owners of the entity, certifies that there are none or otherwise establishes an exemption.

Withholding under FATCA generally (1) applies to payments of dividends (including constructive dividends) on our securities to foreign financial institutions or non-financial foreign entities that fail to satisfy the above requirements and (2) unless otherwise provided by the Treasury Secretary, will apply to payments of gross proceeds from a sale or other disposition of our securities. The Treasury Secretary has issued proposed Treasury Regulations, which, if finalized in their present form, would eliminate withholding under FATCA with respect to payment of gross proceeds from a sale or other disposition of our securities. In its preamble to such proposed Treasury Regulations, the U.S. Treasury stated that taxpayers may generally rely on the proposed Treasury Regulations until final regulations are issued. An intergovernmental agreement between the United States and an applicable foreign country may modify the requirements described in this section. Under certain circumstances, a holder may be eligible for refunds or credits of the tax. Holders should consult their own tax advisors regarding the possible implications of FATCA on their investment in our securities.

Each prospective investor should consult its own tax advisor regarding the particular U.S. federal, state and local and non-U.S. tax consequences of purchasing, owning and disposing of our securities, including the consequences of any proposed changes in applicable laws.

SHARES AVAILABLE FOR FUTURE SALES

Future sales of our Common Stock in the public market, or the availability of such shares for sale in the public market, could adversely affect market prices prevailing from time to time. As described below, the sale of a portion of our shares will be limited after this Offering due to contractual and legal restrictions on resale. Nevertheless, sales of our Common Stock in the public market after such restrictions, lapse, or the perception that those sales may occur, could adversely affect the prevailing market price at such time and our ability to raise equity capital in the future.

Based on the number of shares of our Common Stock outstanding as of December 31, 2022, upon the completion of this Offering 14,181,564 shares of our Common Stock will be outstanding, assuming 4,761,904 Units are issued in this Offering.

Except for shares subject to lock-up agreement, substantially all of our outstanding shares will be freely tradable except that any shares held by our affiliates, as that term is defined in Rule 144 under the Securities Act, may only be sold in compliance with the limitations described below.

Rule 144

In general, under Rule 144 of the Securities Act, as in effect on the date of this prospectus, any person who is not our affiliate at any time during the preceding three months, and who has beneficially owned the relevant shares of our Common Stock for at least six months, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares of our Common Stock into the public markets provided current public information about us is available, and, after owning such shares for at least one year, including the holding period of any prior owner other than one of our affiliates, would be entitled to sell an unlimited number of shares of our Common Stock into the public markets without restriction.

A person who is our affiliate or who was our affiliate at any time during the preceding three months, and who has beneficially owned restricted securities for at least six months, including the affiliates, is entitled to sell within any three-month period a number of shares that does not exceed the greater of:

- 1% of the number of shares of our Common Stock then outstanding, which will equal approximately 141,816 shares immediately following this Offering, based on the number of shares of our Common Stock outstanding as of December 31, 2022; or
- the average weekly trading volume of our Common Stock during the four calendar weeks preceding the filing of a Form 144 notice by such person with respect to such sale, if our class of Common Stock is listed on Nasdaq, the New York Stock Exchange, or the NYSE American.

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

Lock-up Agreements

See the section titled “*Plan of Distribution*” below for a detailed discussion.

PLAN OF DISTRIBUTION

Pursuant to a placement agency agreement, we have engaged Maxim Group LLC to act as our exclusive placement agent to solicit offers to purchase the securities offered by this prospectus. The Placement Agent is not purchasing or selling any securities, nor is it required to arrange for the purchase and sale of any specific number or dollar amount of securities, other than to use its “reasonable best efforts” to arrange for the sale of the securities by us.

Therefore, we may not sell the entire amount of securities being offered. There is no minimum amount of proceeds that is a condition to closing of this offering. We will enter into a securities purchase agreement directly with the investors, at the investor’s option, who purchase our securities in this offering. Investors who do not enter into a securities purchase agreement shall rely solely on this prospectus in connection with the purchase of our securities in this offering. The Placement Agent may engage one or more subagents or selected dealers in connection with this offering.

The placement agency agreement provides that the Placement Agent’s obligations are subject to conditions contained in the placement agency agreement.

We will deliver the securities being issued to the investors upon receipt of investor funds for the purchase of the securities offered pursuant to this prospectus. We expect to deliver the securities being offered pursuant to this prospectus on or about , 2023, subject to the satisfaction of customary closing conditions.

Placement Agent Fees, Commissions and Expenses

Upon the closing of this offering, we will pay the Placement Agent a cash transaction fee equal to 7.0% of the aggregate gross cash proceeds to us from the sale of the securities in the offering. In addition, we will reimburse the Placement Agent for its out-of-pocket expenses incurred in connection with this offering, including the fees and expenses of the counsel for the Placement Agent, up to \$105,000.

The following table shows the public offering price, Placement Agent fees and proceeds, before expenses, to us.

	Per Unit consisting of common stock	Per Unit consisting of pre-funded warrant
Public Offering Price per Unit	\$	\$
Placement Agent fees	\$	\$
Proceeds, before expenses, to us	\$	\$

We estimate that the total expenses of the offering payable by us, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding Placement Agent fees, will be approximately \$, \$20,000 of which was paid in advance for anticipated accountable expenses and will be returned to us to the extent such accountable expenses are not actually incurred in accordance with FINRA Rule 5110(g)(4)(A). This figure includes the Placement Agent’s accountable expenses, including, but not limited to, legal fees for Placement Agent’s legal counsel, that we have agreed to pay at the closing of the offering.

Lock-Up Agreements

We, each of our officers and directors, and holder(s) of five percent (5%) or more of the outstanding common stock as of the date of this prospectus have agreed, subject to certain exceptions, not to offer, issue, sell, contract to sell, encumber, grant any option for the sale of or otherwise dispose of any of our common stock or other securities convertible into or exercisable or exchangeable for our common stock for a period of 90 days after this offering is completed without the prior written consent of the Placement Agent.

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

Indemnification

We have agreed to indemnify the Placement Agent against certain liabilities, including liabilities under the Securities Act, and to contribute to payments that the Placement Agent may be required to make for these liabilities.

Determination of Offering Price and Exercise Price

The actual public offering price of the securities we are offering, and the exercise price of the Unit Warrants and the Pre-Funded Warrants that we are offering, will be negotiated between us and the investors in the offering based on the trading of our Common Stock prior to the offering, among other things. Other factors considered in determining the public offering price of the securities we are offering, as well as the exercise price of the Unit Warrants and the Pre-Funded Warrants that we are offering, will include the stage of development of our business, our business plans for the future and the extent to which they have been implemented, an assessment of our management, the general conditions of the securities markets at the time of the offering and such other factors as are deemed relevant.

Other Compensation

If within twelve months following the consummation of this offering, we complete any equity, equity-linked, convertible or debt or other capital-raising activity of the Company for which the Placement Agent is not acting as underwriter or placement agent (other than the exercise by any person or entity of any options, warrants or other convertible securities) with, or receives any proceeds from, any of the investors that were contacted, introduced or participated in this offering, then the Company shall pay to the Placement Agent a commission as described in this section, in each case only with respect to the portion of such financing received from such investors.

Regulation M

The Placement Agent may be deemed to be an underwriter 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 securities 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 10b-5 and Regulation M under the Exchange Act. These rules and regulations may limit the timing of purchases and sales of our securities by the Placement Agent acting as principal. Under these rules and regulations, the Placement Agent (i) may not engage in any stabilization activity in connection with our securities and (ii) 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.

Electronic Distribution

A prospectus in electronic format may be made available on a website maintained by the Placement Agent. In connection with the offering, the Placement Agent or selected dealers may distribute prospectuses electronically. No forms of electronic prospectus other than prospectuses that are printable as Adobe® PDF will be used in connection with this offering.

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

Certain Relationships

The Placement Agent and its affiliates have and may in the future provide, from time to time, investment banking and financial advisory services to us in the ordinary course of business, for which they may receive customary fees and commissions.

Selling Restrictions

Canada. The securities may be sold in Canada only to purchasers purchasing, or deemed to be purchasing, as principal that are accredited investors, as defined in National Instrument 45-106 Prospectus Exemptions or subsection 73.3(1) of the Securities Act (Ontario), and are permitted clients, as defined in National Instrument 31 103 Registration Requirements, Exemptions and Ongoing Registrant Obligations. Any resale of the securities must be made in accordance with an exemption from, or in a transaction not subject to, the prospectus requirements of applicable securities laws.

Securities legislation in certain provinces or territories of Canada may provide a purchaser with remedies for rescission or damages if this prospectus supplement (including any amendment thereto) contains a misrepresentation, provided that the remedies for rescission or damages are exercised by the purchaser within the time limit prescribed by the securities legislation of the purchaser's province or territory. The purchaser should refer to any applicable provisions of the securities legislation of the purchaser's province or territory for particulars of these rights or consult with a legal advisor.

Pursuant to section 3A.3 of National Instrument 33 105 Underwriting Conflicts (NI 33 105), the underwriters are not required to comply with the disclosure requirements of NI 33-105 regarding underwriters conflicts of interest in connection with this offering.

European Economic Area. In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a “Relevant Member State”) an offer to the public of any securities may not be made in that Relevant Member State, except that an offer to the public in that Relevant Member State of any securities may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

- to any legal entity which is a qualified investor as defined in the Prospectus Directive;
- to fewer than 100 or, if the Relevant Member State has implemented the relevant provision of the 2010 PD Amending Directive, 150, natural or legal persons (other than qualified investors as defined in the Prospectus Directive), as permitted under the Prospectus Directive, subject to obtaining the prior consent of the representatives for any such offer; or
- in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of securities shall result in a requirement for the publication by us or any underwriters of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an “offer to the public” in relation to any securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any securities to be offered so as to enable an investor to decide to purchase any securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State, the expression “Prospectus Directive” means Directive 2003/71/EC (and amendments thereto, including the 2010 PD Amending Directive, to the extent implemented in the Relevant Member State), and includes any relevant implementing measure in the Relevant Member State, and the expression “2010 PD Amending Directive” means Directive 2010/73/EU.

United Kingdom. Each underwriter has represented and agreed that:

- has only communicated or caused to be communicated and will only communicate or cause to be communicated an invitation or inducement to engage in investment activity (within the meaning of Section 21 of the Financial Services and Markets Act 2000 (the FSMA) received by it in connection with the issue or sale of the securities in circumstances in which Section 21(1) of the FSMA does not apply to us; and
- has complied and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

Switzerland. The securities may not be publicly offered in Switzerland and will not be listed on the SIX Swiss Exchange (the SIX) or on any other stock exchange or regulated trading facility in Switzerland. This document has been prepared without regard to the disclosure standards for issuance prospectuses under art. 652a or art. 1156 of the Swiss Code of Obligations or the disclosure standards for listing prospectuses under art. 27 ff. of the SIX Listing Rules or the listing rules of any other stock exchange or regulated trading facility in Switzerland. Neither this document nor any other offering or marketing material relating to the securities or the offering may be publicly distributed or otherwise made publicly available in Switzerland.

Neither this document nor any other offering or marketing material relating to the offering, or the securities have been or will be filed with or approved by any Swiss regulatory authority. In particular, this document will not be filed with, and the offer of securities will not be supervised by, the Swiss Financial Market Supervisory Authority FINMA, and the offer of securities has not been and will not be authorized under the Swiss Federal Act on Collective Investment Schemes (CISA). Accordingly, no public distribution, offering or advertising, as defined in CISA, its implementing ordinances and notices, and no distribution to any non-qualified investor, as defined in CISA, its implementing ordinances and notices, shall be undertaken in or from Switzerland, and the investor protection afforded to acquirers of interests in collective investment schemes under CISA does not extend to acquirers of securities.

Australia. No placement document, prospectus, product disclosure statement or other disclosure document has been lodged with the Australian Securities and Investments Commission (ASIC), in relation to the offering.

This prospectus does not constitute a prospectus, product disclosure statement or other disclosure document under the Corporations Act 2001 (the Corporations Act) and does not purport to include the information required for a prospectus, product disclosure statement or other disclosure document under the Corporations Act.

Any offer in Australia of the securities may only be made to persons (the Exempt Investors) who are “sophisticated investors” (within the meaning of section 708(8) of the Corporations Act), “professional investors” (within the meaning of section 708(11) of the Corporations Act) or otherwise pursuant to one or more exemptions contained in section 708 of the Corporations Act so that it is lawful to offer the securities without disclosure to investors under Chapter 6D of the Corporations Act.

The securities applied for by Exempt Investors in Australia must not be offered for sale in Australia in the period of 12 months after the date of allotment under the offering, except in circumstances where disclosure to investors under Chapter 6D of the Corporations Act would not be required pursuant to an exemption under section 708 of the Corporations Act or otherwise or where the offer is pursuant to a disclosure document which complies with Chapter 6D of the Corporations Act. Any person acquiring securities must observe such Australian on-sale restrictions.

This prospectus contains general information only and does not take account of the investment objectives, financial situation or particular needs of any particular person. It does not contain any securities recommendations or financial product advice. Before making an investment decision, investors need to consider whether the information in this prospectus is appropriate to their needs, objectives and circumstances, and, if necessary, seek expert advice on those matters.

Notice to Prospective Investors in the Cayman Islands. No invitation, whether directly or indirectly, may be made to the public in the Cayman Islands to subscribe for our securities.

Taiwan. The securities have not been and will not be registered with the Financial Supervisory Commission of Taiwan pursuant to relevant securities laws and regulations and may not be sold, issued or offered within Taiwan through a public offering or in circumstances which constitutes an offer within the meaning of the Securities and Exchange Act of Taiwan that requires a registration or approval of the Financial Supervisory Commission of Taiwan. No person or entity in Taiwan has been authorized to offer, sell, give advice regarding or otherwise intermediate the offering and sale of the securities in Taiwan.

Notice to Prospective Investors in Hong Kong. The contents of this prospectus have not been reviewed by any regulatory authority in Hong Kong. You are advised to exercise caution in relation to the offer. If you are in any doubt about any of the contents of this prospectus, you should obtain independent professional advice. Please note that (i) our shares may not be offered or sold in Hong Kong, by means of this prospectus or any document other than to “professional investors” within the meaning of Part I of Schedule 1 of the Securities and Futures Ordinance (Cap.571, Laws of Hong Kong) (SFO) and any rules made thereunder, or in other circumstances which do not result in the document being a “prospectus” within the meaning of the Companies Ordinance (Cap.32, Laws of Hong Kong) (CO) or which do not constitute an offer or invitation to the public for the purpose of the CO or the SFO, and (ii) no advertisement, invitation or document relating to our shares may be issued or may be in the possession of any person for the purpose of issue (in each case whether in Hong Kong or elsewhere) which is directed at, or the contents of which are likely to be accessed or read by, the public in Hong Kong (except if permitted to do so under the securities laws of Hong Kong) other than with respect to the shares which are or are intended to be disposed of only to persons outside Hong Kong or only to “professional investors” within the meaning of the SFO and any rules made thereunder.

Notice to Prospective Investors in the People’s Republic of China. This prospectus may not be circulated or distributed in the PRC and the shares may not be offered or sold, and will not offer or sell to any person for re-offering or resale directly or indirectly to any resident of the PRC except pursuant to applicable laws, rules and regulations of the PRC. For the purpose of this paragraph only, the PRC does not include Taiwan and the special administrative regions of Hong Kong and Macau.

Israel. This document does not constitute a prospectus under the Israeli Securities Law, 5728-1968, or the Securities Law, and has not been filed with or approved by

the Israel Securities Authority. In the State of Israel, this document is being distributed only to, and is directed only at, and any offer of the shares and Warrants is directed only at, investors listed in the first addendum, or the Addendum, to the Israeli Securities Law, consisting primarily of joint investment in trust funds, provident funds, insurance companies, banks, portfolio managers, investment advisors, members of the Tel Aviv Stock Exchange, underwriters, venture capital funds, entities with equity in excess of NIS 50 million and “qualified individuals,” each as defined in the Addendum (as it may be amended from time to time), collectively referred to as qualified investors (in each case purchasing for their own account or, where permitted under the Addendum, for the accounts of their clients who are investors listed in the Addendum). Qualified investors will be required to submit written confirmation that they fall within the scope of the Addendum, are aware of the meaning of same and agree to it.

LEGAL MATTERS

The validity of the securities offered by this prospectus will be passed upon by Honigman LLP, Detroit, Michigan. Thompson Hine, LLP, New York, New York, is acting as counsel for the Placement Agent in this Offering.

EXPERTS

The consolidated financial statements of Zivo Bioscience, Inc. as of December 31, 2022 and 2021 and for the years then ended included in this Prospectus and in the Registration Statement have been so included in reliance on the report of BDO USA, LLP, an independent registered public accounting firm, appearing elsewhere herein and in the Registration Statement, given on the authority of said firm as experts in auditing and accounting. The report on the consolidated financial statements contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

WHERE YOU CAN FIND MORE INFORMATION

We have filed with the SEC a registration statement on Form S-1 under the Securities Act relating to the offering of these securities. The registration statement, including the attached exhibits and schedules, contains additional relevant information about us and the securities. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. For further information respecting our Company and the shares offered by this prospectus, you should refer to the registration statement, including the exhibits and schedules thereto.

We file annual, quarterly and other reports, proxy statements and other information with the SEC. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, including any amendments to those reports, and other information that we file with or furnish to the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act can be accessed free of charge through the Internet. The SEC maintains an Internet site that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC at <http://www.sec.gov>. You may access the registration statement of which this prospectus is a part at the SEC's Internet site.

We make available through our website, free of charge, copies of our SEC filings as soon as reasonably practicable after we electronically file or furnish them to the SEC on our Internet site, www.zivobioscience.com. We have not incorporated by reference into this prospectus the information on our website, and you should not consider it to be a part of this prospectus. We have included our website address in this prospectus solely as an inactive textual reference.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Directors
Zivo Bioscience, Inc.
Bloomfield Hills, Michigan

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of Zivo Bioscience, Inc. and subsidiaries (the “Company”) as of December 31, 2022 and 2021, and the related consolidated statements of operations, stockholders’ equity (deficit), and cash flows for each of the years then ended, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended, in conformity with accounting principles generally accepted in the United States of America.

Going Concern Uncertainty

The accompanying consolidated financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 3 to the consolidated financial statements, the Company has suffered recurring losses and negative cash flows from operations that raise substantial doubt about its ability to continue as a going concern. The consolidated financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (“PCAOB”) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

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

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

Critical Audit Matter

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

Stock-Based Compensation

As discussed in Notes 2, 4 and 10 to the Company’s consolidated financial statements, the Company accounts for stock-based compensation in accordance with ASC 718, which requires compensation to be measured based on the grant-date fair value of the equity-based award and recognized as an expense over the requisite service period. The Company determines the fair value of common stock option awards using the Black Scholes option pricing model. As a result of these awards, the Company recorded expenses of \$2.7 million during the year ended December 31, 2022.

We identified the Company’s estimated grant date fair value of common stock option awards as a critical audit matter. The Company identified certain errors, constituting a material weakness, in the determination of the estimated grant date fair value of common stock option awards. Auditing the Company’s revised estimated grant date fair value of these awards was especially challenging due to the increased auditor effort required.

The primary procedures we performed to address this critical audit matter included:

- Testing the accuracy of the contractual terms utilized in the revised Black Scholes option pricing model by inspecting the underlying agreements.
- Utilizing personnel with specialized knowledge and skills in valuation to assist with evaluating the methodology and the reasonableness of key assumptions utilized in the revised Black Scholes option pricing model.
- Recalculating the revised estimated grant date fair value of each stock option award.

/s/ BDO USA, LLP

We have served as the Company’s auditor since 2022.

Troy, Michigan

March 14, 2023

ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31, 2022	December 31, 2021
ASSETS		
CURRENT ASSETS:		
Cash	\$ 1,799,263	\$ 8,901,875
Prepaid expenses	102,416	58,078
Total current assets	\$ 1,901,679	\$ 8,959,953
PROPERTY AND EQUIPMENT, NET	-	-
OTHER ASSETS:		
Operating lease - right of use asset	189,282	27,225
Security deposit	32,058	3,000
Total other assets	221,340	30,225
TOTAL ASSETS	\$ 2,123,019	\$ 8,990,178
LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT):		
CURRENT LIABILITIES:		
Accounts payable	\$ 490,670	\$ 654,333
Current portion of long-term operating lease	99,259	15,178
Convertible debentures payable	240,000	240,000
Deferred R&D obligations - participation agreements	525,904	1,106,320
Deferred R&D obligations - participation agreements related parties	175,427	369,037
Accrued interest	98,286	95,886
Accrued liabilities - payroll and directors fees	398,176	467,215
Total current liabilities	\$ 2,027,722	\$ 2,947,969
LONG TERM LIABILITIES:		
Long-term operating lease, net of current portion	105,919	-
Total long-term liabilities	105,919	-
TOTAL LIABILITIES	\$ 2,133,641	\$ 2,947,969
COMMITMENTS AND CONTINGENCIES		
STOCKHOLDERS' EQUITY (DEFICIT):		
Common stock, \$0.001 par value, 150,000,000 and 150,000,000 shares authorized as of December 31, 2022 and December 31, 2021; 9,419,660 and 9,419,660 issued and outstanding at December 31, 2022, and December 31, 2021, respectively	\$ 9,420	\$ 9,420
Additional paid-in capital	115,784,488	113,092,026
Accumulated deficit	(115,804,530)	(107,059,237)
Total stockholders' equity (deficit)	\$ (10,622)	\$ 6,042,209
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY (DEFICIT)	\$ 2,123,019	\$ 8,990,178

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

ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	For the year ended December 31, 2022	For the year ended December 31, 2021
REVENUE:		
Service Revenue	\$ -	\$ -
Total Revenues	\$ -	\$ -
COSTS AND EXPENSES:		
General and administrative	6,491,704	6,694,619
Research and development	2,240,270	1,950,500
Total Costs and Expenses	\$ 8,731,974	\$ 8,645,119
LOSS FROM OPERATIONS	\$ (8,731,974)	\$ (8,645,119)
OTHER INCOME (EXPENSE):		
Gain of forgiveness of debt and accrued interest	-	122,520
Interest expense - related parties	-	(188,605)
Interest expense	(13,319)	(44,677)
Total Other Expense	\$ (13,319)	\$ (110,762)
NET LOSS	\$ (8,745,293)	\$ (8,755,881)
BASIC AND DILUTED LOSS PER SHARE	\$ (0.93)	\$ (1.15)
WEIGHTED AVERAGE BASIC AND DILUTED SHARES OUTSTANDING	9,419,660	7,629,069

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

ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENT OF STOCKHOLDERS' EQUITY (DEFICIT)
FOR THE PERIOD JANUARY 1, 2021 THROUGH DECEMBER 31, 2022

	Common Stock		Additional	Accumulated	
	Shares	Amount	Paid in	Deficit	Total
			Capital		
Balance, January 1, 2021	5,162,945	\$ 5,163	\$ 86,987,579	\$ (98,303,356)	\$ (11,310,614)
Employee and director equity-based compensation			2,970,027		2,970,027
Issuance of common stock for cash - related party	4,464	4	49,996		50,000
Issuance of common stock for cash	139,664	140	1,514,829		1,514,969
Issuance of warrants pursuant to the participation agreements			55,697		55,697
Common stock issued on cashless warrant exercise	54,361	54	(54)		-
Public offering issuance of stock and warrants	2,910,000	2,910	14,545,590		14,548,500
Fractional Shares from Split	(99)				-
Underwriting and other expenses for public offering			(1,697,828)		(1,697,828)
Warrants sold as part of the public offering			4,240		4,240
Common stock issued on registered warrant exercise	198,503	199	1,091,568		1,091,767
Common stock issued on conversion of 11% Convertible Debt and accrued interest	942,322	942	7,537,615		7,538,557
Stock issued for services	7,500	8	32,767		32,775
Net loss for the twelve months ended December 31, 2021				(8,755,881)	(8,755,881)
Balance, December 31, 2021	9,419,660	\$ 9,420	\$ 113,092,026	\$ (107,059,237)	\$ 6,042,209
	Common Stock		Additional	Accumulated	
	Shares	Amount	Paid in	Deficit	Total
			Capital		
Balance, December 31, 2021	9,419,660	\$ 9,420	\$ 113,092,026	\$ (107,059,237)	\$ 6,042,209
Employee and director equity-based compensation			2,692,462		2,692,462
Net loss for the twelve months ended December 31, 2022				(8,745,293)	(8,745,293)
Balance, December 31, 2022	9,419,660	\$ 9,420	\$ 115,784,488	\$ (115,804,530)	\$ (10,622)

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

ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	For the Year Ended December 31, 2022	For the Year Ended December 31, 2021
Cash flows from operating activities:		
Net Loss	\$ (8,745,293)	\$ (8,755,881)
Adjustments to reconcile net loss to net cash used in operating activities:		
Stock issued for services rendered	-	32,775
Gain on forgiveness of debt and accrued interest	-	(122,520)
Employee and director equity-based compensation expense	2,692,462	2,970,027
Non-cash lease expense	79,637	22,138
Amortization of deferred R&D obligations - participation agreements	(774,025)	(555,745)
Changes in assets and liabilities:		
Prepaid expenses	(44,338)	(28,125)
Security deposits	(29,058)	-
Accounts payable	(163,663)	(905,295)
Advanced payments for R&D obligations - participation agreements		85,304
Lease liabilities	(51,695)	(29,171)
Accrued liabilities	(66,639)	483,160
Net cash (used) in operating activities	\$ (7,102,612)	\$ (6,803,333)
Cash flows from investing activities:		
Net cash (used) in investing activities	\$ -	\$ -
Cash Flow from Financing Activities:		
Proceeds of loans payable, other	\$ 628,600	\$ 190,500
Payment of loans payable, other	(628,600)	(190,500)
Proceeds from sale of common stock warrants - participation agreements	-	55,697
Proceeds from public sale of common stock	-	15,644,507
Expenses related to public offering	-	(1,697,828)
Proceeds from sale of common stock, related party	-	50,000
Proceeds from sales of common stock	-	1,514,970
Net cash provided by financing activities	\$ -	\$ 15,567,346
Increase (decrease) in cash	\$ (7,102,612)	\$ 8,764,013
Cash at beginning of period	8,901,875	137,862
Cash at end of period	\$ 1,799,263	\$ 8,901,875
Supplemental disclosures of cash flow information:		
Cash paid during the period for:		
Interest	\$ 10,920	\$ 3,084
Income taxes	\$ -	\$ -

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

Supplemental Schedule of Non-Cash Investing and Financing Activities:

For the Year Ended December 31, 2022:

During the year ended December 31, 2022, the Company had no non-cash financing transactions.

During the year ended December 31, 2022, the Company had non-cash investing activities in the amount of \$241,694 related to ROU assets obtained in exchange for ROU liabilities.

For the Year Ended December 31, 2021:

During the year ended December 31, 2021, a related party applied the proceeds of a Loan Payable in the principal amount of \$9,000, against an investment in a Participation Agreement.

During the year ended December 31, 2021, warrants to purchase 139,100 shares of the Company's common stock were exercised on a "cashless" basis resulting in the issuance of 54,361 shares of common stock.

On June 2, 2021, pursuant to the terms of several Debt Extension and Conversion Agreements with holders of our 11% convertible debt, a total of \$7,538,557 comprised of outstanding principal of \$4,940,342 and interest of \$2,598,215 of our convertible notes were automatically converted into 942,322 shares of common stock at \$8.00 per share. See "*Note 7 - Convertible Debt*" for additional information.

On September 9, 2021, the Company received a Notification of Paycheck Protection Program Forgiveness Payment letter from the SBA confirming that the full amount of the principal, \$121,700, and accrued interest, \$1,653, were forgiven by the SBA. The Company recognized the forgiveness of debt principal of \$121,700 and the 2020 accrued interest of \$820 as an Other Income of \$122,520.

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

ZIVO BIOSCIENCE, INC. AND SUBSIDIARIES
NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1 - DESCRIPTION OF BUSINESS

The business model of Zivo Bioscience, Inc. and its subsidiaries (Health Enhancement Corporation, HEPI Pharmaceuticals, Inc., Zivo Bioscience, LLC, Wellmetrix, LLC, WellMetris, LLC, Zivo Biologic, Inc., ZIVOLife, LLC, and Zivo Zoologic, Inc. (collectively the “Company”)) is to derive future income from licensing and selling natural bioactive ingredients derived from their proprietary algae cultures to animal, human and dietary supplement and medical food manufacturers.

NOTE 2 - REVISION OF PREVIOUSLY ISSUED FINANCIAL STATEMENTS**Equity-Based Compensation**

Errors were identified in the historical financial statements related to the valuation and expense of equity-based compensation for management and the members of the Company’s board of directors. The Company accounts for stock-based compensation in accordance with ASC 718. Under the provisions of ASC 718, stock-based compensation cost is estimated at the grant date based on the award’s fair value and is recognized as expense over the requisite service period. At the date of grant, the Company determines the fair value of the stock option award using the Black Scholes option pricing model.

The Company made errors in the application of the Black Scholes option valuation model by applying an inappropriate methodology in determining the expected term of granted options. Based on the limited history relating to exercises of options, the Company determined that the best method for determining the expected life of an option grant is the simplified method. After recalculating the valuations and reviewing the periodic reported expense for all the options issued as equity-based compensation, the Company concluded that, in aggregate, it had overstated the equity-based compensation. In accordance with SEC Staff Accounting Bulletin No. 99, Materiality, and SEC Staff Accounting Bulletin No. 108, Considering the Effects of Prior Year Misstatements when Quantifying Misstatements in Current Year Financial Statements; the Company evaluated the change and has determined that the related impact was not material to any previously presented financial statements. As such the Company corrected the error in the consolidated financial statements for the year ended December 31, 2021.

The impact of the revision on the Company’s previously released financial statements that are referenced in this form 10-K are reflected in the following tables.

CONSOLIDATED BALANCE SHEET as of December 31, 2021

	As Previously Reported	Adjustment	As Revised
Additional paid-in capital	\$ 114,259,830	\$ (1,167,804)	\$ 113,092,026
Accumulated deficit	(108,227,041)	1,167,804	(107,059,237)

CONSOLIDATED STATEMENTS OF OPERATIONS for the Year Ended December 31, 2021

	As Previously Reported	Adjustment	As Revised
General and Administrative	\$ 6,932,921	\$ (238,302)	\$ 6,694,619
Research and Development	2,119,684	(169,184)	1,950,500
Total costs and expenses	9,052,605	(407,486)	8,645,119
LOSS FROM OPERATIONS	(9,052,605)	407,486	(8,645,119)
NET LOSS	(9,163,366)	407,485	(8,775,881)
BASIC AND DILUTED LOSS PER SHARE	\$ (1.20)	\$ 0.05	\$ (1.15)

CONSOLIDATED STATEMENT OF CHANGES IN STOCKHOLDERS' EQUITY (DEFICIT) For the Year Ended December 31, 2021

	As Previously Reported	Adjustment	As Revised
Balance, December 30, 2020 - Additional Paid in Capital	\$ 87,747,898	\$ (760,319)	\$ 86,987,579
Balance, December 30, 2020 - Accumulated Deficit	(99,063,675)	760,319	(98,303,356)
Employee and director equity-based compensation - Additional Paid in Capital	3,377,512	(407,485)	2,970,027
Employee and director equity-based compensation - Total	3,377,512	(407,485)	2,970,027
Net loss for the year ended December 31, 2021 - Accumulated Deficit	(9,163,366)	407,485	(8,775,881)
Net loss for the year ended December 31, 2021 - Total	(9,163,366)	407,485	(8,775,881)
Balance, December 31, 2021 - Additional Paid in Capital	114,259,830	(1,167,804)	113,092,026
Balance, December 31, 2021 - Accumulated Deficit	\$ (108,227,041)	\$ 1,167,804	\$ (107,059,237)

CONSOLIDATED STATEMENT OF CASH FLOWS for the Year Ended December 31, 2021

	As Previously Reported	Adjustment	As Revised
Net Loss	\$ (9,163,366)	\$ 407,485	\$ (8,775,881)
Employee and director equity compensation	3,377,512	(407,485)	2,970,027

NOTE 3 - GOING CONCERN

The Company has incurred net losses since inception, experienced negative cash flows from operations for the year ended December 31, 2022 and has an accumulated deficit of \$115.8 million. The Company has historically financed its operations primarily through the issuance of common stock, warrants, and debt.

The Company expects to continue to incur operating losses and net cash outflows until such time as it generates a level of revenue to support its cost structure. There can be no assurance that the Company will achieve profitable operations, and, if achieved, whether it will be sustained on a continued basis.

The Company intends to fund ongoing activities by utilizing its current cash on hand and by raising additional capital through equity or debt financings. There can be no assurance that the Company will be successful in raising that additional capital or that such capital, if available, will be on terms that are acceptable to the Company. If the Company is unable to raise sufficient additional capital, the Company may be compelled to reduce the scope of its operations and planned capital expenditures.

These factors raise substantial doubt about the Company's ability to continue as a going concern within one year after the date the financial statements are issued. The Company's consolidated financial statements have been prepared on the basis of continuity of operations, realization of assets and satisfaction of liabilities in the ordinary course of business; no adjustments have been made relating to the recoverability and classification of recorded asset amounts and classification of liabilities that might be necessary should the Company not continue as a going concern.

NOTE 4 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Principles of Consolidation

The consolidated financial statements include the accounts of Zivo Bioscience, Inc. and its wholly-owned subsidiaries, Health Enhancement Corporation, HEPI Pharmaceuticals, Inc., Wellmetrix, LLC, Wellmetris, LLC, Zivo Bioscience, LLC, Zivo Biologic, Inc., ZIVOLife, LLC, and Zivo Zoologic, Inc. All significant intercompany transactions and accounts have been eliminated in consolidation.

Accounting Estimates

The Company's consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America, which require management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities, at the date of the financial statements and reported amount of revenues and expenses during the reporting period. Due to the inherent uncertainty involved in making estimates, actual results could differ from those estimates. Management uses its best judgment in valuing these estimates and may, as warranted, solicit external professional advice and other assumptions believed to be reasonable.

Cash

For the purpose of the statements of cash flows, cash equivalents include time deposits, certificates of deposit and all highly liquid debt instruments with original maturities of three months or less. The Company maintains cash and cash equivalents balances at financial institutions and are insured by the Federal Deposit Insurance Corporation ("FDIC") up to \$250,000. At times, balances in certain bank accounts may exceed the FDIC insured limits. At December 31, 2022 and 2021, the Company did not have any cash equivalents.

Property and Equipment

Property and equipment consist of furniture and office equipment and are carried at cost less allowances for depreciation and amortization. Depreciation and amortization are determined by using the straight-line method over the estimated useful lives of the related assets. Repair and maintenance costs that do not improve service potential or extend the economic life of an existing fixed asset are expensed as incurred.

Leases

ASC 842, *Leases*, requires the recognition of a right-of-use ("ROU") and a corresponding lease liability on the balance sheet. ROU assets represent the right to use an underlying asset over the lease term and lease liabilities represent the obligation to make lease payments resulting from the lease agreement. ROU assets and lease liabilities are recognized on commencement of the lease agreement.

ROU assets are included within operating lease right-of-use assets, and the corresponding operating lease liabilities are recorded as current portion of long-term operating lease, and within long-term liabilities as long-term operating lease, net of current portion on the Company's Consolidated Balance Sheets as of December 31, 2022 and December 31, 2021.

Lease assets and lease liabilities are recognized based on the present value of lease payments over the lease term at commencement date. Generally, we do not consider any additional renewal periods to be reasonably certain of being exercised, as comparable locations could generally be identified within the same trade areas for comparable lease rates. Because the Company's leases do not provide an implicit rate of return, the Company used its incremental borrowing rate in determining the present value of lease payments. We have elected the practical expedient not to separate lease and nonlease components for all of our building leases.

Revenue Recognition

Revenue is recognized in accordance with ASC 606, which utilizes five steps to determine whether revenue can be recognized and to what extent: (i) identify the contract with a customer; (ii) identify the performance obligation(s); (iii) determine the transaction price; (iv) allocate the transaction price to the performance obligations in the contract; and (v) determine the recognition period. The Company only applies the five-step model to contracts when it is probable that the Company will collect the consideration it is entitled to in exchange for the goods or services it transfers to the customer. At contract inception, once the contract is determined to be within the scope of ASC 606, *Revenue from Contracts with Customers*, the Company assesses the goods or services promised within each contract and determines those that are performance obligations and assesses whether each promised good or service is distinct. The Company then recognizes as revenue the amount of the transaction price that is allocated to the respective performance obligation when (or as) the performance obligation is satisfied.

Significant judgments exercised by management include the identification of performance obligations, and whether such promised goods or services are considered distinct. The Company evaluates promised goods or services on a contract-by-contract basis to determine whether each promise represents a good or service that is distinct or has the same pattern of transfer as other promises. A promised good or service is considered distinct if the customer can benefit from the good or service independently of other goods/services either in the contract or that can be obtained elsewhere, without regard to contract exclusivity, and the entity's promise to transfer the good or service to the customer is separately identifiable from other promises in the contract. If the good or service is not considered distinct, the Company combines such promises and accounts for them as a single combined performance obligation.

Research and Development

Research and development ("R&D") costs are expensed as incurred. The Company's R&D costs, including internal expenses, consist of clinical study expenses as it relates to the biotech business and the development and growing of algae as it relates to the agtech business. External clinical studies expenses were approximately \$1.4 million and \$1.6 million for the years ended December 31, 2022 and 2021, respectively. Internal expenses, composed of staff salaries compose approximately \$1.5 million and \$800,000 for the years ended December 31, 2022 and 2021, respectively. These costs were offset by the amortization of the R&D obligation of \$774,025 and \$555,745 for the years ending December 31, 2022 and 2021, respectively; \$193,610 of the year ended December 31, 2022 and \$150,805 for the year ended December 31, 2021 of the amortization amount was attributable to related parties (see "Note 9 - Deferred R&D Obligations - Participation Agreements").

Income Taxes

The Company follows the authoritative guidance for accounting for income taxes. Deferred income taxes are determined using the asset and liability method. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases and operating loss and tax credit carry-forwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date.

The tax effects of temporary differences that gave rise to the deferred tax assets and deferred tax liabilities at December 31, 2022 and 2021 were primarily attributable to net operating loss carry forwards. Since the Company has a history of losses, and it is more likely than not that some portion or all of the deferred tax assets will not be realized, a full valuation allowance has been established. In addition, utilization of net operating loss carry-forwards is subject to a substantial annual limitation due to the "change in ownership" provisions of the Internal Revenue Code. The annual limitation may result in the expiration of net operating loss carry-forwards before utilization.

Stock Based Compensation

The Company accounts for stock-based compensation in accordance with FASB ASC 718, *Compensation - Stock Compensation*. Under the provisions of FASB ASC 718, stock-based compensation cost is estimated at the grant date based on the award's fair value and is recognized as expense over the requisite service period. The Company, from time to time, issues common stock or grants common stock options to its employees, consultants and board members. At the date of grant, the Company determines the fair value of the stock option award and recognizes compensation expense over the requisite service period. Issuances of common stock are valued at the closing market price on the date of issuance and the fair value of any stock option or warrant awards is calculated using the Black Scholes option pricing model and employing the simplified term method as the Company does not have a historical basis to determine the term. The Company records forfeiture of options when they occur.

During 2022 and 2021, options were granted to employees, directors and consultants of the Company. As a result of these grants, the Company recorded expenses of \$2.7 million during the year ended December 31, 2022, approximately \$500,000 of this expense was for R&D and \$2.2 million was attributed to G&A. During the year ending December 31, 2021 the Company recorded expenses of \$3.0 million, approximately \$300,000 of this expense was for R&D and \$2.7 million was attributed to G&A.

The fair value of options and warrants were estimated on the date of grant using the Black-Scholes option-pricing model based on the following weighted average assumptions:

Year Ended December 31,

	2022	2021
Expected volatility	116.42% to 130.18%	123.40% to 143.97%
Expected dividends	0%	0%
Expected term	5 to 5.75 years	3.25 to 5.87 years
Risk free rate	1.88 to 3.70%	0.24% to 1.34%

The Black-Scholes option-pricing model was developed for use in estimating the fair value of traded options that have no vesting restrictions and are fully transferable. In addition, option-pricing models require the input of highly subjective assumptions, including the expected stock price volatility. In considering the expected term of the options, the Company employs the simplified method. The Company uses this method as it does not have a history of option exercises to establish a robust estimated term based on experience. The simplified term is used for the determination of expected volatility as well as the identification of the risk free rate.

Income (Loss) Per Share

Basic loss per share is computed by dividing the Company's net loss by the weighted average number of shares of common stock outstanding during the period presented. Diluted loss per share is based on the treasury stock method and includes the effect from potential issuance of common stock such as shares issuable pursuant to the exercise of options and warrants and conversions of debentures. Potentially dilutive securities as of December 31, 2022, consisted of 53,546 shares of common stock from convertible debentures and related accrued interest and 6,267,602 shares of common stock underlying outstanding options and warrants. Potentially dilutive securities as of December 31, 2021, consisted of 53,076 shares of common stock from convertible debentures and related accrued interest and 7,250,206 shares of common stock underlying outstanding options and warrants. For 2022 and 2021, diluted and basic weighted average shares were the same, as potentially dilutive shares are anti-dilutive.

Segment Reporting

The Company's Chief Executive Officer, who is considered to be the chief operating decision maker (CODM), reviews financial information presented on a consolidated basis, accompanied by information about operating segments for purposes of making operating decisions and assessing financial performance. Operating segments are defined as components of an enterprise about which separate financial information is available that is evaluated regularly by the CODM in deciding how to allocate resources and in assessing performance. The Company operates solely in the United States.

Fair Value of Financial Instruments

We account for fair value measurements of assets and liabilities that are recognized or disclosed at fair value in the financial statements on a recurring or nonrecurring basis adhering to the Financial Accounting Standards Board ("FASB") fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to measurements involving significant unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

- Level 1 Inputs: Unadjusted quoted prices in active markets for identical assets or liabilities accessible to the Company at the measurement date.
- Level 2 Inputs: Other than quoted prices included in Level 1 inputs that are observable for the asset or liability, either directly or indirectly, for substantially the full term of the asset or liability.
- Level 3 Inputs: Unobservable inputs for the asset or liability used to measure fair value to the extent that observable inputs are not available, thereby allowing for situations in which there is little, if any, market activity for the asset or liability at measurement date.

As of December 31, 2022 and 2021, fair values of cash, prepaid, other assets, accounts payable and accrued expenses approximated their carrying values because of the short-term nature of these assets or liabilities. As of December 31, 2022 and 2021 the fair value of the convertible notes approximated their carrying value.

Concentrations of Credit Risk

Financial instruments that potentially subject the Company to significant concentrations of credit risk consist principally of cash and cash equivalents. The Company has historically maintained cash balances at financial institutions which exceed the current FDIC limit of \$250,000 at times during the year.

The Company has not experienced losses on these accounts and management believes the Company is not exposed to significant risks on such account.

Recently Adopted Accounting Standards

In June 2016, the FASB issued ASU 2016-13, Measurement of Credit Losses on Financial Instruments (Topic 326): Measurement of Credit Losses on Financial Instruments, which requires companies to measure credit losses utilizing a methodology that reflects expected credit losses and requires a consideration of a broader range of reasonable and supportable information to inform credit loss estimates. The standard is effective for fiscal years beginning after December 15, 2022, with early adoption permitted. The Company adopted this ASU beginning January 1, 2023. The Company has determined there is no impact of this standard on its financial statements.

In May 2021, the FASB issued ASU No. 2021-04, Earnings Per Share (Topic 260), Debt-Modifications and Extinguishments (Subtopic 470-50), Compensation-Stock Compensation (Topic 718), and Derivatives and Hedging-Contracts in Entity's Own Equity (Subtopic 815-40): Issuer's Accounting for Certain Modifications or Exchanges of Freestanding Equity-Classified Written Call Options. This update provides guidance for a modification or an exchange of a freestanding equity-classified written call option that is not within the scope of another Topic. This update is effective for fiscal years beginning after December 15, 2021. The Company has determined there is no impact of this standard on its financial statements.

Recent Accounting Pronouncements Not Yet Adopted

In August 2020, the FASB issued ASU No. 2020-06 ("ASU 2020-06"), Debt - Debt with Conversion and Other Options (Subtopic 470-20) and Derivatives and Hedging - Contracts in Entity's Own Equity (Subtopic 815-40) ("ASU 2020-06"). ASU 2020-06 eliminates the beneficial conversion and cash conversion accounting models for convertible instruments. It also amends the accounting for certain contracts in an entity's own equity that are currently accounted for as derivatives because of specific settlement provisions. In addition, ASU 2020-06 modifies how particular convertible instruments and certain contracts that may be settled in cash or shares impact the diluted EPS computation. The amendments in this update are effective for public business entities for fiscal years beginning after December 15, 2021 (or December 15, 2023 for companies who meet the SEC definition of Smaller Reporting Companies), and interim periods within those fiscal years. The amendment is to be adopted through either a fully retrospective or modified retrospective method of transition. Early adoption is permitted. The Company is currently evaluating the impact of this standard on its financial statements and related disclosures.

NOTE 5 - LEASES

On December 17, 2020, the Company entered into a 25 ½ month lease agreement for a facility that contains office, warehouse, lab and R&D space in Ft. Myer, Florida. The lease agreement commenced on December 17, 2020 and ends on January 31, 2023. The lease agreement provided for a total rent of \$54,993 over the period. Occupancy of the property commenced on December 17, 2020, and there was a 6-week rent holiday and a commencement date of February 1, 2021. Lease expense for operating lease payments is recognized on a straight-line basis over the lease term. Rent is \$3,291 per month from January 15, 2021 to January 31, 2022 and \$1,154 from February 1, 2022 to January 31, 2023. On June 5, 2022, the Company exercised an option to extend the lease through December 31, 2024. The lease extension rent is \$2,261 per month for calendar year 2023, and \$2,300 per month for calendar year 2024, and totals an additional rent obligation of \$54,743 of rent over the extension period.

On January 14, 2022, the Company entered into a 34-month sublease agreement for a 4,843 square-foot office in Bloomfield Hills, Michigan. The Company moved its headquarters to this location. The agreement commenced on January 29, 2022 and ends on November 30, 2024. The agreement provided for a total rent of \$232,464. Occupancy of the property commenced on January 29, 2022, there was a three-month rent holiday with a rent commencement date of April 29, 2022. Lease expense for operating lease payments is recognized on a straight-line basis over the lease term. Rent is \$7,265 per month from commencement to November 30, 2022, \$7,466 from November 30, 2022 to November 30, 2023, and \$7,668 from November 30, 2023 to the lease end date.

The balances for our operating lease where we are the lessee are presented as follows within our consolidated balance sheet:

Operating leases:

	December 31, 2022	December 31, 2021
Assets:		
Operating lease right-of-use asset	\$ 189,282	\$ 27,225
Liabilities:		
Current portion of long-term operating lease	\$ 99,259	\$ 15,178
Long-term operating lease, net of current portion	105,918	-
	\$ 205,177	\$ 15,178

The components of lease expense are as follows within our consolidated statement of operations:

	For the Year ended	
	December 31, 2022	December 31, 2021
Operating lease expense	\$ 102,249	\$ 25,879

Other information related to leases where we are the lessee is as follows:

	For the Year ended	
	December 31, 2022	December 31, 2021
Weighted-average remaining lease term:		
Operating leases	1.94 Years	1.08 Years
Discount rate:		
Operating leases	11.00%	11.00%

Supplemental cash flow information related to leases where we are the lessee is as follows:

	For the Year ended	
	December 31, 2022	December 31, 2021
Cash paid for amounts included in the measurement of lease liabilities:	\$ 74,307	\$ 32,913
Non-cash investment in ROU asset	241,694	-

As of December 31, 2022, the maturities of our operating lease liability are as follows:

	Operating Lease
Year Ended:	
December 31, 2023	\$ 116,933
December 31, 2024	111,956
Total minimum lease payments	\$ 228,889
Less: Interest	(23,711)
Present value of lease obligations	\$ 205,178
Less: Current portion	99,259
Long-term portion of lease obligations	\$ 105,919

NOTE 6 - LOAN PAYABLE, RELATED PARTIES

HEP Investments, LLC

During the year ended December 31, 2021, the Company and HEP Investments, LLC (“HEP”, or “HEP Investments”) agreed to exchange the \$9,000 in related party debt into an equal investment of \$9,000 in the Participation Agreements (see “*Note 9 - Deferred R&D Obligations - Participation Agreements*”). This agreement eliminated any remaining third-party debt with HEP Investments. As of December 31, 2021, there were no Loans Payable to related parties.

NOTE 7 - CONVERTIBLE DEBT

HEP Investments, LLC - Related Party

On December 2, 2011, the Company and HEP Investments entered into the following documents, effective as of December 1, 2011, as amended through May 16, 2018: (i) a Loan Agreement under which the HEP Investments agreed to advance up to \$20,000,000 to the Company, subject to certain conditions, (ii) an 11% Convertible Secured Promissory Note in the principal amount of \$20,000,000 (“Convertible Note”) (of which a total of \$18,470,640 was funded, with a total of \$14,380,298 converted into 1,796,287 shares of common stock, leaving a balance advanced of \$4,090,342 as of December 31, 2020), (iii) a Security Agreement, under which the Company granted HEP Investments a security interest in all of its assets, (iv) warrants issued to HEP Investments to purchase 20,833 shares of common stock at an exercise price of \$9.60 per share (including a cashless exercise provision) which expired September 30, 2016, (v) a Registration Rights Agreement with respect to all the shares of common stock issuable to HEP Investments in connection with the Loan Agreement, in each case subject to completion of funding of the full \$20,000,000 called for by the Loan Agreement, and (vi) an Intellectual Property security agreement under which the Company and its subsidiaries granted HEP Investments a security interest in all their respective intellectual properties, including patents, in order to secure their respective obligations to HEP Investments under the Convertible Note and related documents. The Convertible Note was originally convertible into the Company’s common stock at \$8.00 per share. In addition, the Company’s subsidiaries guaranteed the Company’s obligations under the Convertible Note. On March 31, 2021, HEP Investments entered into a “Debt Extension and Conversion Agreement” with the Company providing that the Convertible Notes, including principal and accrued interest, would automatically convert into shares of common stock upon consummation of an underwritten public offering of the Company’s common stock.

On June 2, 2021, in accordance with the Debt Extension and Conversion Agreement, all of the outstanding debt and accrued interest for the Convertible Notes was automatically converted into common stock of the Company. The principal amount of \$4,090,342 and the accrued interest to June 2, 2021, of \$2,161,845 totaled \$6,252,187; this total amount was converted into 781,524 shares of common stock (calculated at \$8.00 per share). As of December 31, 2022, the Company had no further remaining financial obligations to the HEP Investments under the terms of the Loan Agreement, the Convertible Note or the Registration Rights Agreement. Additionally, as of the conversion of the total outstanding principal and accrued interest balance, HEP Investments no longer retains a security interest in the Company's intellectual property or other assets.

In January 2019, and in connection with the Convertible Note, HEP Investments entered into a life insurance policy for Andrew Dahl, our former Chief Executive Officer. On February 23, 2021, the Company and HEP Investments entered into a Letter Agreement in which the Company agreed to pay certain premiums of \$2,565 per month under the life insurance policy while payments under the Convertible Note remained outstanding. Upon conversion of the Convertible Notes on June 2, 2021, the Company immediately stopped paying the premiums under the life insurance policy.

Paulson Investment Company, LLC - Related Debt

The Company previously entered into a Placement Agent Agreement with Paulson Investment Company, LLC ("Paulson"). The Placement Agent Agreement provided that Paulson could provide up to \$2 million in financings to "accredited investors". The Company received gross proceeds of \$1,250,000 in connection with loans received from the "New Lenders". Each loan included (i) a Loan Agreement, (ii) a Convertible Secured Promissory Note ("New Lenders Notes") in the principal amount of the loan, (iii) a Security Agreement under which the Company granted the New Lenders a security interest in all of its assets and (iv) an Intercreditor Agreement with HEP Investments whereby HEP Investments and the New Lenders agree to participate in all collateral on a pari passu basis. The New Lender Notes had a two-year term and matured September 2018 (\$600,000) and October 2018 (\$650,000). Paulson received a 10% cash finance fee for monies invested in the Company in the form of convertible debt, along with 5-year warrants, exercisable at \$8.00 per share, all the warrants have expired as of December 31, 2021. The New Lenders Notes were convertible into the Company's common stock at \$8.00 per share.

In May 2021, each of the remaining New Lenders entered into a Debt Extension and Conversion Agreement with the Company. These agreements provided that the New Lender Notes, including principal and accrued interest, would automatically convert into shares of common stock upon consummation of an underwritten public offering of the Company's common stock.

On June 2, 2021, in accordance with the Debt Extension and Conversion Agreement between the remaining New Lenders and the Company, all of the remaining outstanding debt and accrued interest for the New Lenders Notes were automatically converted to common stock. The remaining principal amount of \$850,000 and the accrued interest to June 2, 2021, of \$436,369 totaled \$1,286,369; this total amount was converted into 160,798 shares of common stock at \$8.00 per share. As of December 31, 2021, the Company had no further remaining financial obligations to the New Lenders under the terms of the New Lenders Notes. All security interests of the New Lenders in the Company's assets have been terminated.

Other Debt

The Company's 1% convertible debentures allow for rolling 30-day extensions until notice is given by the lender to the Company to the contrary As of December 31, 2022, that agreement is still in place.

NOTE 8 - NOTE PAYABLE

Paycheck Protection Program Loan

On May 7, 2020, the Company received \$121,700 in loan funding from the Paycheck Protection Program (the "PPP") established pursuant to the recently enacted Coronavirus Aid, Relief, and Economic Security Act of 2020 (the "CARES Act") and administered by the U.S. Small Business Administration ("SBA"). The unsecured loan (the "PPP Loan") is evidenced by a promissory note of the Company, dated April 29, 2020 (the "Note") in the principal amount of \$121,700 with Comerica Bank (the "Bank"), the lender.

Under the terms of the Note and the PPP Loan, interest accrues on the outstanding principal at the rate of 1.0% per annum. The term of the Note was two years, though it could have been payable sooner in connection with an event of default under the Note.

The CARES Act and the PPP provide a mechanism for forgiveness of up to the full amount borrowed. Under the PPP, the Company was eligible to apply for forgiveness for all or a part of the PPP Loan. The amount of loan proceeds eligible for forgiveness, as amended, was based on a formula that takes into account a number of factors, including: (i) the amount of loan proceeds that are used by the Company during the covered period after the loan origination date for certain specified purposes including payroll costs, interest on certain mortgage obligations, rent payments on certain leases, and certain qualified utility payments, provided that at least 60% of the loan amount is used for eligible payroll costs; (ii) the Company maintaining or rehiring employees, and maintaining salaries at certain levels; and (iii) other factors established by the SBA. Subject to the other requirements and limitations on loan forgiveness, only that portion of the loan proceeds spent on payroll and other eligible costs during the covered period will qualify for forgiveness.

In August 2021, the Company applied to the SBA for forgiveness of the outstanding loan principal and accrued interest under the CARES Act. On September 9, 2021, the Company received a Notification of Paycheck Protection Program Forgiveness Payment letter from the SBA confirming that the full amount of the principal, \$121,700, and accrued interest, \$1,653, were forgiven by the SBA. The Company recognized the forgiveness of debt principal of \$121,700 and the 2020 accrued interest of \$820 as an Other Income of \$122,520, the remaining interest due for the PPP Loan in 2021 through the forgiveness date of \$833 was booked to offset the 2021 interest expense. The Company's PPP loan and application for forgiveness of loan amounts remain subject to review and audit by SBA for compliance with program requirements.

Short Term Loan

On February 21, 2022, the Company entered into a short-term, unsecured loan agreement to finance a portion of the Company's directors' and officers' insurance premiums. The note in the amount of \$628,600 carried a 4.15% annual percentage rate and was paid down in nine equal payments of \$71,058 beginning in March 2022. The loan was fully paid off, and there was no remaining principal balance as of December 31, 2022.

NOTE 9 - DEFERRED R&D OBLIGATIONS - PARTICIPATION AGREEMENTS

The Company entered into twenty-one (21) License Co-Development Participation Agreements (the “Participation Agreements”) with certain investors (“Participants”) for aggregate proceeds of \$2,985,000. The Participation Agreements provide for the issuance of warrants to such Participants and allows the Participants to participate in the fees (the “Fees”) from licensing or selling bioactive ingredients or molecules derived from ZIVO’s algae cultures. Specifically, ZIVO has agreed to provide to the Participants a 44.78% “Revenue Share” of all license fees generated by ZIVO from any licensee (See the Table below).

According to the terms of the Agreements, and pursuant to ASC 730-20-25 the Company has bifurcated the proceeds of \$2,985,000 as follows: 1) the 106,315 warrants sold were attributed a value of \$953,897 based on the Black Scholes pricing model using the following assumptions: volatilities ranging from 129.13% to 154.26%; annual rate of dividends 0%; discount rates ranging from 0.26% to 0.87%, and recorded as Additional Paid In Capital; 2) the remaining \$2,031,103 was recorded as Deferred R&D Obligation - Participation Agreements. Since the Company believes there is an obligation to perform pursuant to ASC 730-20-25, the Deferred R&D Obligation will be amortized ratably based on expenses incurred as the Company develops the technology for bioactive ingredients or molecules (including its TLR4 Inhibitor molecule) derived from the Company’s algae cultures. In the year ending December 31, 2022, the Company recognized \$774,025 as a contra R&D expense related to personnel and third-party expenses to develop the subject technology. \$193,610 of this total contra R&D expense was attributed to deferred R&D obligations funded by a related party. As of December 31, 2022, the remaining R&D obligation was \$701,331, of which \$175,427 was attributed to a related party. In the prior year ending December 31, 2021, the Company recognized \$55,745 as a contra R&D expense related to personnel and third-party expenses to develop the subject technology. \$150,805 of this total contra R&D expense was attributed to deferred R&D obligations funded by a related party. As of December 31, 2021, the remaining R&D obligation was \$1,475,357, of which \$369,037 was attributed to a related party.

The Participation Agreements allow the Company the option to buy back the right, title and interest in the Revenue Share for an amount equal to the amount funded plus a forty percent (40%) premium, if the option is exercised less than 18 months following execution, and for either forty (40%) or fifty percent (50%) if the option is exercised more than 18 months following execution. Pursuant to the terms of twelve of the Participation Agreements, the Company may not exercise its option until it has paid the Participants a revenue share equal to a minimum of thirty percent (30%) of the amount such Participant’s total payment amount. Pursuant to the terms of one of the Participation Agreements, the Company may not exercise its option until it has paid the Participant a revenue share equal to a minimum of one hundred forty percent (140%) of such Participant’s total payment amount. Five of the Participation Agreements have no minimum threshold payment. Once this minimum threshold is met, the Company may exercise its option by delivering written notice to a Participant of its intent to exercise the option, along with repayment terms of the amount funded, which may be paid, in the Company’s sole discretion, in one lump sum or in four (4) equal quarterly payments. If the Company does not make such quarterly payments timely for any quarter, then the Company shall pay the prorated Revenue Share amount, retroactive on the entire remaining balance owed, that would have been earned during such quarter until the default payments have been made and the payment schedule is no longer in default. See below a summary of the Participation Agreements:

Agreement #	Date of Funding	Amount Funded	Warrants	Term	Exercise Price	Revenue Share	Minimum Payment Threshold	Buy-back Premium % pre-18 mos.	Buy-back Premium % post 18 mos.
1	April 13, 2020	\$ 100,000	3,750	5 Years	\$ 9.60	1.500%	\$ -	40%	40%
2	April 13, 2020	150,000	5,625	5 Years	9.60	2.250%	-	40%	40%
3	April 13, 2020	150,000	5,625	5 Years	9.60	2.250%	-	40%	40%
4	May 7, 2020	250,000	9,375	5 Years	9.60	3.750%	-	40%	40%
5	June 1, 2020	275,000	10,313	5 Years	8.80	4.125%	82,500	40%	50%
6	June 3, 2020	225,000	8,438	5 Years	8.80	3.375%	67,500	40%	50%
7	July 8, 2020	100,000	3,750	5 Years	9.60	1.500%	30,000	40%	50%
8	Aug. 24, 2020	125,000	4,688	5 Years	9.60	1.875%	37,500	40%	50%
9	Sept. 14, 2020	150,000	5,625	5 Years	9.60	2.250%	45,000	40%	50%
10	Sept. 15, 2020	50,000	1,875	5 Years	9.60	0.750%	15,000	40%	50%
11	Sept. 15, 2020	50,000	1,875	5 Years	9.60	0.750%	15,000	40%	50%
12	Sept. 25, 2020	300,000	5,625	5 Years	9.60	4.500%	420,000	40%	50%
13	Oct. 8, 2020	500,000	18,750	5 Years	9.60	7.500%	150,000	40%	40%
14	Oct. 4, 2020	100,000	3,750	5 Years	9.60	1.500%	40,000	40%	50%
15	Oct. 4, 2020	250,000	9,375	5 Years	9.60	3.750%	-	40%	40%
16	Oct. 9, 2020	50,000	1,875	5 Years	9.60	0.750%	15,000	40%	40%
17	Dec. 16, 2020	10,000	375	5 Years	9.60	0.150%	17,000	40%	50%
18	Jan. 22, 2021	40,000	1,500	5 Years	11.20	0.600%	12,000	40%	50%
19	Jan. 25, 2021	40,000	1,500	5 Years	11.20	0.600%	12,000	40%	50%
20	Jan. 27, 2021	25,000	938	5 Years	11.20	0.375%	12,000	40%	50%
21	May 14, 2021	45,000	1,688	5 Years	10.40	0.675%	13,500	40%	50%
		<u>\$ 2,985,000</u>	<u>106,315</u>			<u>44.775%</u>	<u>\$ 984,000</u>		

Certain of the Participation Agreements are owned by related parties. Participation Agreements numbers 8, 14, and 19 totaling \$265,000 are owned by HEP Investments, Participation Agreement 21 in the amount of \$45,000 is owned by MKY MTS LLC an entity controlled by the owners of HEP Investments, and Participation Agreement 13 in the amount of \$500,000 is owned by an investment company owned by a significant shareholder Mark Strome (“Strome”).

NOTE 10 - STOCKHOLDERS' EQUITY (DEFICIT)

Recapitalization - Reverse Stock Split

On May 27, 2021, the Company filed a certificate of amendment to its articles of incorporation with the Secretary of State of the State of Nevada (the “Certificate of Amendment”) to (i) effectuate a reverse stock split (the “Reverse Stock Split”) of its issued and outstanding shares of common stock and treasury shares on a 1-for-80 basis and (ii) decrease the number of total authorized shares of common stock of the Company from 1,200,000,000 to 150,000,000 shares.

As of the Effective Time, every 80 shares of issued and outstanding common stock were converted into one share of common stock. No fractional shares were issued in connection with the Reverse Stock Split. Instead, a holder of record of old common stock as of immediately prior to the Effective Time who would otherwise have been entitled to a fraction of a share was entitled to receive cash in lieu thereof.

The Company’s transfer agent, Issuer Direct Corporation acted as the exchange agent for the Reverse Stock Split. The Reverse Stock Split did not alter the par value of the Company’s common stock or modify any voting rights or other terms of the common Stock. In addition, pursuant to their terms, a proportionate adjustment was made to the per share exercise price and number of shares issuable under all of the Company’s outstanding stock options and warrants to purchase shares of common Stock, and the number of shares authorized and reserved for issuance pursuant to the Company’s equity incentive plan will be reduced proportionately.

All issued and outstanding common stock and per share amounts contained in the financial statements have been retroactively adjusted to reflect this Reverse Stock Split for all periods presented. In addition, a proportionate adjustment was made to the per share exercise price and the number of shares issuable upon the exercise of all outstanding stock options, restricted stock units and warrants to purchase shares of common stock. A proportionate adjustment was also made to the number of shares reserved for issuance pursuant to the Company’s equity incentive compensation plans to reflect the Reverse Stock Split.

Board of Directors Fees

On October 12, 2021, our Board of Directors approved the Non-Employee Director Compensation Policy. Pursuant to that policy, the Board granted to each of the four non-employee directors \$50,000 in value of common stock options. The Company used the Black Scholes option pricing model to determine the number of shares that would derive a value of \$50,000 for each non-employee director. The Black Scholes pricing model use the following assumptions: term of 10 years; volatility 142.54%; annual rate of dividends 0%; discount rate 1.59%. The model yielded an award grant of 45,664 total options, 11,416 for each of the four non-employee directors. In addition, the Board granted Ms. Cornell a pro rata number of options for her tenure from February 2, 2021, through October 11, 2021; a grant of 7,660 shares valued at \$33,549 using the same Black Scholes assumptions.

On July 28, 2022, our Board of Directors awarded options pursuant to the Non-Employee Director Compensation Policy. The Board granted to each of the three non-employee directors \$50,000 in value of common stock options. The Company used the Black Scholes option pricing model to determine the number of shares that would derive a value of \$50,000 for each non-employee director. The Black Scholes pricing model used the following assumptions: term of 5.31 years; volatility 120.99%; annual rate of dividends 0%; discount rate 2.69%. The model yielded an award grant of 47,391 total options, 15,797 for each of the three non-employee directors.

On December 16, 2022, our Board of Directors awarded options to each of the three non-employee directors of \$10,000 in value of common stock options. The Company used the Black Scholes option pricing model to determine the number of shares that would derive a value of \$10,000 for each non-employee director. The Black Scholes pricing model used the following assumptions: term of 5 years; volatility 116.42%; annual rate of dividends 0%; discount rate 3.61%. The model yielded an award grant of 12,732 total options, 4,244 for each of the three non-employee directors.

On December 19, 2022, our Board of Directors appointed Ms. Alison Cornell as lead independent director. In recognition of that appointment the Board of Directors awarded to Ms. Cornell \$300,000 in value of common stock options. The Company used the Black Scholes option pricing model to determine the number of shares that would derive a value of \$300,000 for the lead independent director. The Black Scholes pricing model used the following assumptions: term of 5 years; volatility 116.47%; annual rate of dividends 0%; discount rate 3.70%. The model yielded an award grant of 139,444 total options.

The Company recorded directors' fees of \$1,155,722 and \$710,481 (as adjusted) for the years ended December 31, 2022 and 2021, respectively, representing the cash fees paid or accrued and the expense associated with the common stock options described above.

Stock Based Compensation

On January 1, 2021, in connection with his appointment as the Company's Chief Financial Officer, Mr. Marchiando received a stock option award issued pursuant to the 2019 Plan to purchase 162,500 shares of the Company's common stock, with an exercise price of \$11.20 per share. Vesting of these options shall be as follows: 37,500 shares vested immediately upon grant of the option award, and 15,625 shares will vest on each 6 month anniversary of January 1, 2021.

The Company, on June 15, 2021, issued 5,000 shares of unregistered common stock to CorProminence, LLC (d/b/a COREir) for services in accordance with the consulting agreement between COREir and the Company (See "Note 11 - Commitments and Contingencies"). The shares were valued at the market price on June 15, 2021, \$4.48 per share for a total expense of \$22,400. On October 15, 2021, the Company, per its consulting agreement with CorProminence, LLC (dba COREir), issued an additional 2,500 shares of common stock to CorProminence, LLC. The shares were valued on October 15, 2021, at \$4.15 per share for a total expense in the aggregate of \$10,375.

On October 21, 2021, the Board of directors granted options under its 2021 equity incentive plan (the "2021 Plan") to purchase 924,000 shares of common stock to several directors and officers of the Company. The options have a term of ten years and 260,000 shares granted to board members vest over one year, and the 664,000 shares granted to the officers vest over three years. The options were valued at \$3,476,392 using the Black Scholes pricing model relying on the following assumptions: volatility 141.38%; annual rate of dividends 0%; discount rate 1.68%.

On February 22, 2022, the Board of directors granted options under its 2021 equity incentive plan (the "2021 Plan") to purchase 172,500 shares of common stock to certain employees of the Company. The options have a term of ten years and vest over three years. The options were valued at \$493,536 using the Black Scholes pricing model relying on the following assumptions: simplified term of 5.75 years; volatility 130.18%; annual rate of dividends 0%; discount rate 1.88%.

On August 29, 2022, the Board of directors granted options under its 2021 equity incentive plan (the “2021 Plan”) to purchase 73,000 shares of common stock to certain employees of the Company. The options have a term of ten years and vest over three years. The options were valued at \$590,896 using the Black Scholes pricing model relying on the following assumptions: simplified term of 5.75 years; volatility 121.19%; annual rate of dividends 0%; discount rate 3.25%.

Stock Issuances

During the year ended December 31, 2021, the Company issued 139,664 shares for proceeds of \$1,514,969 to investors in private placements. In addition, during this same period, a related party purchased 4,464 shares of the Company’s common stock at \$11.20 per share for proceeds of \$50,000.

On June 2, 2021, the Company completed its public offering of common stock and common stock warrants. The Company issued 2,760,000 units at \$5.00 (each unit consisting of one share of the Company’s common stock and one warrant (“registered warrant”) with an exercise price \$5.50 per share) for gross proceeds of \$13,804,240, and net proceeds of \$12,181,602 after related underwriting and other costs of \$1,622,638.

On July 2, 2021, the underwriter of the June 2021 Offering exercised its overallotment option and purchased an additional 150,000 shares of the Company’s common stock at \$4.99 per share for gross proceeds of \$748,500, and net proceeds of \$673,159 after related underwriting and other costs of \$75,191.

Stock Warrants Exercised

During the twelve months ended December 31, 2021, warrants to purchase 139,100 shares of the Company’s common stock were exercised on a “cashless” basis resulting in the issuance of 54,361 shares of common stock.

In September 2021, two groups of the Company’s registered warrants were exercised resulting in the Company issuing 198,503 shares of common stock. The exercise price of the registered warrants was \$5.50 per share, resulting in gross cash proceeds to the Company of \$1,091,767.

Sale of Common Stock Warrants

During the twelve months ending December 31, 2021, and in connection with the Participation Agreements (see *Note 9 - Deferred R&D Obligation - Participation Agreements*”), the Company sold warrants to purchase 5,626 shares of common stock for \$55,697. The warrants were valued based on the Black Scholes pricing model relying on the following assumptions: volatility 129.13% to 140.20%; annual rate of dividends 0%; discount rate 0.41% to 0.87%.

On June 2, 2021, the Company completed its public offering of common stock and warrants. As part of the transaction, the Company sold 414,000 warrants (“registered warrants”) with an exercise price of \$5.50 per share, from the overallotment option that was exercised by the underwriter for \$4,140. Additionally, the Company issued the underwriter 8% of the number of shares of common stock in the offering in 220,800 unregistered warrants for shares of common stock, for an aggregate price to the Company of \$100. These warrants are exercisable 180 days after the offering date and expire five years after the first day they are exercisable. The warrants were valued at \$946,675 based on the Black Scholes pricing model relying on the following assumptions: volatility 132.46%; annual rate of dividends 0%; discount rate 0.80%. This was recognized by the company as an underwriting cost and was accounted for as an offset to funds raised.

2021 Equity Incentive Plan

On October 12, 2021, after approval from the stockholders at the Company’s 2021 annual meeting of stockholders, the Company adopted the 2021 Plan for the purpose of enhancing the Company’s ability to attract and retain highly qualified directors, officers, key employees and other persons and to motivate such persons to improve the business results and earnings of the Company by providing an opportunity to acquire or increase a direct proprietary interest in the operations and future success of the Company. The 2021 Plan is administered by the compensation committee of the Board who will, amongst other duties, have full power and authority to take all actions and to make all determinations required or provided for under the 2021 Plan. Pursuant to the 2021 Plan, the Company may grant options, share appreciation rights, restricted shares, restricted share units, unrestricted shares and dividend equivalent rights. The 2021 Plan has a duration of 10 years.

Subject to adjustment as described in the 2021 Plan, the aggregate number of shares of common stock available for issuance under the 2021 Plan is initially set at 1,000,000 shares; this number is automatically increased each January 1st by an amount equal to 5% of the number of common stock shares outstanding at that date. As of December 31, 2022, 1,327,407 options have been issued under the 2021 Plan, and 143,576 shares remained available for issuance.

2019 Omnibus Long-Term Incentive Plan

Prior to the adoption of the 2021 Equity Incentive Plan, the Company maintained a 2019 Omnibus Long-Term Incentive Plan (the “2019 Plan”). Following the approval by the shareholders of the 2021 Equity Incentive Plan, no additional awards have been or will be made under the 2019 Plan. As of December 31, 2022, 781,250 stock options had been issued under the 2019 Plan with terms between 5 years and 10 years, of which 362,500 remained outstanding.

Common Stock Options

A summary of the status of the Company’s options issued under the Company’s equity incentive plans is presented below. As of December 31, 2022 there is no intrinsic value in any of the Company’s outstanding options as the market price of the Company’s common stock is in all cases lower than the exercise price of options.

	December 31, 2022		December 31, 2021	
	Number of Options	Weighted Average Exercise Price	Number of Options	Weighted Average Exercise Price
Outstanding, beginning of year	1,721,074	\$ 7.38	606,250	\$ 9.67
Forfeited	(767,250)	6.81	(37,500)	11.84
Issued	736,083	3.73	1,152,324	6.32
Outstanding, end of period	1,689,907	\$ 6.05	1,721,074	\$ 7.38

Options outstanding and exercisable by price range as of December 31, 2022 were as follows:

Outstanding Options			Exercisable Options		
Range of Exercise Price	Number	Average Weighted Remaining Contractual Life in Years	Range of Exercise Price	Number	Weighted Average Exercise Price
\$ 2.00-2.99	343,192	9.97	\$ 2.00-2.99	343,192	\$ 2.76
3.00-3.99	220,391	9.65	3.00-3.99	54,850	3.87
\$ 4.00-4.99	53,324	8.78	\$ 4.00-4.99	53,324	\$ 4.48
5.00-5.99	710,500	8.89	5.00-5.99	443,062	5.50
8.00-8.99	6,250	2.54	8.00-8.99	7,813	8.80
9.00-9.99	25,000	2.63	9.00-9.99	25,000	9.60
11.00-11.99	162,500	7.80	11.00-11.99	84,375	11.20
12.00-12.99	168,750	2.14	12.00-12.99	168,750	12.80
	1,689,907	8.31		1,180,366	\$ 6.14

As of December 31, 2022, total compensation cost related to non-vested awards not yet recognized is \$1,061,925; and the weighted-average period over which it is expected to be recognized is 0.79 years.

Common Stock Warrants - Unregistered

A summary of the status of the Company's unregistered warrants is presented below.

	December 31, 2022		December 31, 2021	
	Number of Warrants	Weighted Average Exercise Price	Number of Warrants	Weighted Average Exercise Price
Outstanding, beginning of year	2,553,635	\$ 7.57	2,502,291	\$ 7.67
Issued	-	-	226,426	5.64
Exercised	-	-	(139,099)	6.41
Cancelled	-	-	-	-
Expired	(951,437)	7.10	(35,983)	6.52
Outstanding, end of period	1,602,198	\$ 7.85	2,553,635	\$ 7.57

Unregistered warrants outstanding and exercisable by price range as of December 31, 2022 were as follows:

Outstanding Warrants				Exercisable Warrants			
Range of	Number	Average Weighted Remaining Contractual Life in Years		Exercise Price	Number	Weighted Average Exercise Price	
\$ 5.00-5.99	220,800	3.42		\$ 5.00-5.99	220,800	5.50	
6.00-6.99	156,875	2.50		6.00-6.99	156,875	6.40	
8.00-8.99	950,084	0.79		8.00-8.99	950,084	8.04	
9.00-9.99	231,938	2.69		9.00-9.99	231,938	9.60	
10.00-10.99	1,688	3.37		10.00-10.99	1,688	10.40	
11.00-11.99	35,813	1.00		11.00-11.99	35,813	11.20	
14.00-14.99	5,000	1.99		14.00-14.99	5,000	14.40	
	1,602,198	1.61			1,602,198	\$ 7.85	

Common Stock Warrants - Registered

A summary of the status of the Company's registered warrants is presented below:

	December 31, 2022		December 31, 2021	
	Number of Registered Warrants	Weighted Average Exercise Price	Number of Registered Warrants	Weighted Average Exercise Price
Outstanding, beginning of year	2,975,497	\$ 5.50	-	\$ -
Issued	-	-	3,174,000	5.50
Exercised	-	-	(198,503)	5.50
Cancelled	-	-	-	-
Expired	-	-	-	-
Outstanding, end of period	2,975,497	\$ 5.50	2,975,497	\$ 5.50

Registered warrants outstanding and exercisable by price range as of December 31, 2022, were as follows:

Outstanding Registered Warrants			Exercisable Registered Warrants		
Exercise Price	Number	Average Weighted Remaining Contractual Life in Years	Exercise Price	Number	Weighted Average Exercise Price
\$ 5.50	2,975,497	1.5	\$ 5.50	2,975,497	5.50

NOTE 11 - COMMITMENTS AND CONTINGENCIES

Employment Agreements

At December 31, 2022, the Company had compensation agreements with its President / Chief Executive Officer, and Chief Financial Officer.

Corporate Advisory Agreement

In August 2021, the Company entered into an agreement with an Investment Opportunity Provider (IOP). The IOP has been engaged as an exclusive financial advisor in connection with a proposed transaction involving the creation of a ZIVO Photobioreactor Facility ("Phase 1") and additional Photobioreactor Facilities ("Phase 3"). The Company has agreed to pay the IOP, upon the completion of Phase 1, a fee of 6% of the aggregate value of the transaction (50% in cash, and 50% in equity) and upon the completion of Phase 3, a fee of 3% of the aggregate value of the transaction in cash. As of December 31, 2022, in connection with this agreement, no successful transactions have taken place.

Investor / Public Relations

On February 15, 2021, the Company signed a consulting agreement with CorProminence, LLC (dba COREir) to provide us with investor relations and public relations services. The COREir agreement includes a provision to issue to COREir on the four (4) month anniversary of the effective date, or as soon thereafter as is practically possible, 10,000 authorized restricted shares of common stock of the Company, of which 5,000 shares shall vest immediately upon receipt, 2,500 shall vest on the eight (8) month anniversary of the contract effective date and 2,500 shares shall vest on the twelve (12) month anniversary of the effective date of the COREir agreement. In addition, the agreement requires the Company to pay COREir \$15,000 per month, plus out of pocket expenses, for their consulting services.

On October 15, 2021, the Company, per its consulting agreement with CorProminence, LLC (dba COREir), issued 2,500 shares of common stock to CorProminence, LLC. The shares were valued on October 15, 2021, at \$4.15 per share for a total expense in the aggregate of \$10,375. On October 31, 2021, the Company informed CorProminence LLC that it was immediately terminating the consulting agreement. Under the termination clause of the agreement, the Company may be liable for an additional 2,500 shares to be issued to CorProminence.

Legal Contingencies

On April 13, 2022, AEGLE Partners, 2 LLC (“AEGLE”) initiated an arbitration in Michigan against the Company with the American Arbitration Association. AEGLE asserted claims related to a certain Supply Chain Consulting Agreement entered into between AEGLE and the Company in 2019 (as amended from time to time, the “Agreement”), and a disagreement between AEGLE and the Company regarding whether AEGLE is entitled to payment of certain fees and warrants pursuant to the Agreement. AEGLE's complaint seeks, among other things, three times the payment of such alleged fees and warrants and recovery of AEGLE's costs and expenses. We believe that the claims made by AEGLE in its complaint are without merit and we intend to vigorously defend ourselves against them. Arbitration in this matter is scheduled to begin in April 2023.

We may become a party to litigation in the normal course of business. In the opinion of management, there are no legal matters involving us that would have a material adverse effect upon our financial condition, results of operation or cash flows.

NOTE 12 - RELATED PARTY TRANSACTIONS

Loan Payable - Related Party

See “*Note 6 - Loan Payable, Related Parties*” for disclosure of loans payable to related parties.

Employment Agreement

See “*Note 11 - Commitments and Contingencies*” for disclosure of the employment agreements with the Chief Executive Officer and current and Chief Financial Officer.

Building Lease

In January 2022 the Company terminated its agreement for the rental of its office space from M&M Keego Center LLC, an entity controlled by an immediate family member of a principal shareholder.

Stock Issuances

On June 2, 2021, the Company completed its public offering of units consisting of common stock and warrants. Two of the Company’s directors participated in the offering; Chris Maggiore purchased 100,000 units, and Alison Cornell purchased 15,000 units.

NOTE 13 - INCOME TAXES

The following table presents the components of net loss before income taxes:

	Years Ended December 31,	
	2022	2021
Domestic	\$ (8,745,293)	\$ (8,755,881)
(Loss) before provision for income taxes	(8,745,293)	(8,755,881)

There was no income tax for the years ended December 31, 2022 and December 31, 2021. The Company's tax expense differs from the "statutory" tax expense for the years ended December 31, 2022, and 2021 as noted below:

	For the Years Ended December 31,			
	2022		2021	
Income tax (benefit) / Expense at federal statutory rate	\$ (1,836,512)	21.0%	\$ (1,838,735)	21.0%
Apportioned state income taxes	(131,407)	1.5%	-	0.0%
Stock based compensation	297,653	(3.3)%	(104,601)	1.2%
Rate change	(31,180)	0.3%	(138,284)	1.6%
Return to provision adjustments	(1,515)	0.0%	-	0.0%
Other non-deductible items	-	0.0%	(21,692)	0.2%
Change in valuation allowance	1,702,961	(19.5)%	2,103,312	(24.0)%
Total income tax provision	\$ -	0.0%	\$ -	0.0%

Deferred income taxes reflect the net tax effects of (a) temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, and (b) operating losses and tax credit carryforwards. The tax effects of significant items comprising the Company's deferred taxes were as follows:

	For the Years Ended December 31,	
	2022	2021
Deferred tax assets/(liabilities)		
Federal net operating loss carryforwards	\$ 7,606,833	\$ 6,661,795
State net operating loss carryforwards	74,353	-
Stock based compensation	2,738,159	2,502,856
Section 174 research and experimental expenditures	374,926	(73,521)
Other deferred tax assets (liabilities)	(180)	-
Total deferred tax assets	\$ 10,794,091	\$ 9,091,130
Valuation allowance	(10,794,091)	(9,091,130)
Total deferred income taxes	\$ -	\$ -

During 2022, immaterial errors were identified in deferred taxes related to certain federal and state net operating losses (NOLs). The 2021 amounts in the tables above have been adjusted which resulted in the reduction of the federal net operating loss carryforwards, the state net operating loss carryforwards, stock-based compensation, and Section 174 research and experimental expenditures as of December 31, 2021 within gross deferred tax assets as previously disclosed by approximately \$11.0 million, \$3.1 million, \$400,000, and \$100,000, respectively, with a corresponding decrease in the valuation allowance of \$14.6 million. Corresponding adjustments were made to the rate reconciliation table including an adjustment to the apportioned state income taxes by approximately \$(400,000) for the year ended December 31, 2021.

ASC 740 *Income Taxes* requires that the tax benefit of net operating losses ("NOLs"), temporary differences and credit carryforwards be recorded as an asset to the extent that management assesses that realization is "more likely than not." Realization of the future tax benefits is dependent on the Company's ability to generate sufficient taxable income within the carryforward period. Management believes that realization of the deferred tax assets arising from the above-mentioned future tax benefits from operating loss carryforwards is currently not more likely than not and, accordingly, has provided a valuation allowance. The valuation allowance increased by \$1.7 million for the year ended December 31, 2022 and increased by \$2.1 million for the year ended December 31, 2021.

[Table of Contents](#)

As of December 31, 2022 and 2021 the Company's deferred tax asset contains the tax effect of approximately \$6.2 million and \$31.7 million of Federal NOLs, respectively. The Federal NOLs' generated prior to December 31, 2017 were written off of the deferred tax asset, while NOLs generated subsequent to this date remain. Under the new Tax Cuts and Jobs Act, all Federal NOLs incurred after December 31, 2017 are carried forward indefinitely for Federal tax purposes.

	Net Operating Losses recorded as Federal deferred tax asset	Net Operating Losses recorded as State deferred tax asset
2023 through 2037	\$ -	\$ -
Total expiring operating losses (incurred prior to December 31, 2017)	-	-
Non-expiring operating losses (incurred after December 31, 2017)	36,223,016	1,351,870
Total Operating Loss	\$ 36,223,016	\$ 1,351,870

In the ordinary course of its business the Company incurs costs that, for tax purposes, may be qualified research expenditures within the meaning of IRC Code Sec. 41 and are, therefore, may be eligible for the Increasing Research Activities credit under IRC Code Sec. 41. The Company has not claimed a credit pursuant to IRC Code Sec. 41 on its federal returns, i.e. no deferred tax asset on the books.

As of December 31, 2022, the Company has no uncertain tax positions. It is the Company's policy to account for interest and penalties related to uncertain tax positions as interest expense and general and administrative expense, respectively in its statements of operations. No interest or penalties have been recorded related to the uncertain tax positions.

It is not expected that there will be a significant change in uncertain tax positions in the next 12 months. The Company is subject to U.S. federal and state income tax as well as to income tax in multiple state jurisdictions. In the normal course of business, the Company is subject to examination by tax authorities. As of the date of the financial statements, there are no tax examinations in progress. The statute of limitations for tax years ended after December 31, 2018, are open for federal and state tax purposes.

The 2017 Tax Act amended Section 174 of the Internal Revenue Code which affects the Federal tax treatment of research and experimental (R&E) expenditures. Preceding this law change, R&E expenditures were expensed as incurred for Federal Income Tax purposes. In taxable years beginning after December 31, 2021, R&E expenditures must be capitalized and amortized over 5 years for expenditures incurred in the United States, or 15 years for expenditures incurred outside the United States. Due to the nature of the Company's operations, R&E expenditures are a significant portion of total expenditures. The Company calculated an estimated amount for income tax provision purposes based on guidance available to determine the capitalized amount.

NOTE 14 - SUBSEQUENT EVENTS

2021 Plan Evergreen Provision

Under the 2021 Plan, the shares reserved automatically increase on January 1st of each year, for a period of not more than ten years from the date the 2020 Plan is approved by the stockholders of the Company, commencing on January 1, 2022, and ending on (and including) January 1, 2029, by an amount equal to 5% of the shares of common stock outstanding as of December 31st of the preceding calendar year. Notwithstanding the foregoing, the Board of Directors may act prior to January 1st of a given year to provide that there will be no January 1st increase in the share reserve for such year or that the increase in the share reserve for such year will be a lesser number of shares of common stock than would otherwise occur pursuant to the preceding sentence. On January 1, 2023, 470,983 shares were added to the 2021 Plan as a result of the evergreen provision.

Nasdaq Compliance

On November 22, 2022, the Company received written notice from Nasdaq stating that the Company no longer complied with the minimum stockholders' equity requirement under Nasdaq Listing Rule 5550(b)(1) for continued listing on The Nasdaq Capital Market. On January 6, 2023, the Company submitted its compliance plan to Nasdaq.

On January 11, 2023, Nasdaq notified the Company that it had determined to grant the Company an extension until May 22, 2023 to regain compliance. There can be no assurance that the Company will be successful in implementing its plan to regain compliance with the minimum stockholders' equity requirement.

Short Term Loan

On February 14, 2023, the Company entered into a short unsecured loan agreement to finance a portion of the Company's directors' and officers', and employment practices liability insurance premiums. The note in the amount of \$605,600 carries a 8.4% annual percentage rate and will be paid down in nine equal monthly payments of \$9,666 beginning on March 10, 2023.



Up to 4,761,904 Units
Each Unit Consisting of
One Share of Common Stock or Pre-Funded Warrants to Purchase Common Stock and
One Warrant to Purchase One Share of Common Stock
Up to 4,761,904 Shares of Common Stock Issuable Upon Exercise of the Unit Warrants
Up to 4,761,904 Shares of Common Stock Issuable Upon Exercise of the Pre-Funded Warrants

PROSPECTUS

Maxim Group LLC

_____, 2023

PART II**INFORMATION NOT REQUIRED IN THE PROSPECTUS****Item 13. Other Expenses of Issuance and Distribution.**

The following table sets forth all expenses to be paid by the Registrant, other than Placement Agent fees, upon the completion of this Offering. All amounts shown are estimates except for the SEC registration fee and the FINRA filing fee.

SEC registration fee	\$	3,306
FINRA filing fee		2,350
Legal fees and expenses		200,000
Accounting fees and expenses		50,000
Printing and engraving expenses		50,000
Transfer agent and registrar fees		2,000
Miscellaneous expenses		12,344
Total	\$	<u>320,000</u>

Item 14. Indemnification of Directors and Officers.

We are incorporated in Nevada. Section 78.7502(1) of the NRS, provides that a corporation may indemnify, pursuant to that statutory provision, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that he is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred by him or her in connection with such action, suit or proceeding if he is not liable pursuant to NRS 78.138 or if he acted in good faith and in a manner he reasonably believed to be in or not opposed to the best interests of the corporation, and, with respect to any criminal action or proceeding, had no reasonable cause to believe his or her conduct was unlawful. NRS 78.138(7) provides that, subject to limited statutory exceptions and unless the articles of incorporation or an amendment thereto (in each case filed on or after October 1, 2003) provide for greater individual liability, a director or officer is not individually liable to the corporation or its stockholders or creditors for any damages as a result of any act or failure to act in his or her capacity as a director or officer unless the presumption established by NRS 78.138(3) has been rebutted and it is proven that (i) his or her act or failure to act constituted a breach of his or her fiduciary duties as a director or officer, and (ii) such breach involved intentional misconduct, fraud or a knowing violation of the law.

NRS 78.7502(2) permits a corporation to indemnify, pursuant to that statutory provision, any person who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above against expenses, including amounts paid in settlement and attorneys' fees actually and reasonably incurred by him or her in connection with the defense or settlement of such action or suit if he acted under similar standards, except that no indemnification pursuant to NRS 78.7502 may be made in respect of any claim, issue or matter as to which such person shall have been adjudged by a court of competent jurisdiction, after any appeals taken therefrom, to be liable to the corporation or for amounts paid in settlement to the corporation, unless and only to the extent that the court in which such action or suit was brought or other court of competent jurisdiction determines that, in view of all the circumstances of the case, such person is fairly and reasonably entitled to indemnity for such expenses as the court deems proper. NRS 78.751(1) provides that a corporation shall indemnify any person who is a director, officer, employee or agent of the corporation, against expenses actually and reasonably incurred by the person in connection with defending an action (including, without limitation, attorney's fees), to the extent that the person is successful on the merits or otherwise in defense of any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative, including, without limitation, an action by or in the right of the corporation, by reason of the fact that the person is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise, or any claim, issue or matter in such action.

NRS 78.751 provides that the indemnification pursuant to NRS 78.7502 shall not be deemed exclusive or exclude any other rights to which the indemnified party may be entitled (except that indemnification may not be made to or on behalf of any director or officer finally adjudged by a court of competent jurisdiction, after exhaustion of any appeals taken therefrom, to be liable for intentional misconduct, fraud or a knowing violation of the law and such intentional misconduct, fraud or a knowing violation of the law was material to the cause of action) and that the indemnification shall continue as to directors, officers, employees or agents who have ceased to hold such positions, and to their heirs, executors and administrators. NRS 78.752 permits a corporation to purchase and maintain insurance on behalf of a director, officer, employee or agent of the corporation against any liability asserted against him or her or incurred by him or her in any such capacity or arising out of his or her status as such whether or not the corporation would have the power to indemnify him or her against such liabilities.

Bylaws

Our bylaws include express provisions providing for the indemnification of our directors and officers to the fullest extent permitted under the NRS, and the mandatory payment by us of expenses incurred by such persons in defending a civil or criminal action, suit or proceeding in advance of the final disposition of the action, suit or proceeding, upon receipt of an undertaking by or on behalf of the director or officer to repay the amount if it is ultimately determined that such person is not entitled to be indemnified by us. Our bylaws also permit us to purchase and maintain insurance or make other financial arrangements on behalf of any such person for certain liability and expenses, whether or not we have the authority to indemnify such person against such liability and expenses.

See also the undertakings set out in response to Item 17 herein.

Item 15. Recent Sales of Unregistered Securities.

The following is a summary of all securities that we have issued since January 1, 2020 without registration under the Securities Act of 1933, as amended (the “Securities Act”):

Common Stock:

Name	Form	Date	Common Stock Shares	Amount Received
Alex Oakes	Warrant exercise from Warrant transfer	13-Jan-20	12,500	\$100,000
Santa Marina Group	Conversion of loan payable and accrued interest	15-Jan-20	8,514	\$68,113
Apregan Family Trust	Conversion of loan payable and accrued interest	15-Jan-20	8,514	\$68,113
Thomas Cox	Warrant exercise (cashless)	17-Jan-20	1,286	-
Minish Joe Hede	Warrant exercise (cashless)	17-Jan-20	609	-
Cory Mann	Warrant exercise (cashless)	17-Jan-20	21,562	-
Timothy Eliot-Cone	Warrant exercise from Warrant transfer	27-Jan-20	6,250	\$50,000
Santa Marina Group	Warrant exercise	27-Jan-20	62	\$500
Apregan Family Trust	Warrant exercise	27-Jan-20	62	\$500
Nicholas Stone	Warrant exercise from Warrant transfer	11-Feb-20	6,250	\$50,000
Michael Gildea	Warrant exercise from Warrant transfer	18-Feb-20	12,500	\$100,000
Jascha Raadtgever	Warrant exercise from Warrant transfer	28-Feb-20	3,125	\$25,000
John Katoula	Purchase of Common Stock	09-Mar-20	1,953	\$25,000

Javier Abreu	Warrant exercise from Warrant transfer	17-Mar-20	6,250	\$50,000
Nola Masterson	Warrant exercise (cashless)	08-Apr-20	3,977	-
Cory Mann	Warrant exercise	14-Apr-20	23,437	\$150,000
Michael Silverstein	Warrant exercise from Warrant transfer	08-May-20	625	\$4,400
Jeanye Irwin	Warrant exercise from Warrant transfer	11-May-20	6,250	\$50,000
Cory Mann	Warrant exercise (cashless)	26-Jun-20	193	-
Nola Masterson	Warrant exercise (cashless)	27-Aug-20	520	-
Christopher Maggiore	Warrant exercise	15-Sep-20	2,500	\$20,000
Christopher Maggiore	Warrant exercise (cashless)	15-Sep-20	46	-
Philip Rice	Warrant exercise (cashless)	15-Sep-20	176	
John Payne	Warrant exercise (cashless)	21-Sep-20	176	
Yun il yi	Purchase of Common Stock	07-Oct-20	12,500	\$100,000
Christopher Maggiore	Purchase of Common Stock	21-Oct-20	156	\$1,254
Alex Oakes	Purchase of Common Stock	22-Oct-20	5,000	\$40,000
Steve Kalabat	Purchase of Common Stock	22-Oct-20	1,875	\$15,000
Platform Securities Nominees Ltd	Purchase of Common Stock	23-Oct-20	7,500	\$60,000
Penelope Mountbatten	Purchase of Common Stock	27-Oct-20	6,250	\$50,000
Novtek International Ltd.	Warrant exercise from Warrant transfer		31,250	
Phil Rice	Warrant exercise (cashless)	20-Nov-20	291	
Fergus Wright	Purchase of Common Stock	08-Feb-21	2,678	\$30,000
Edward Yaldoo	Purchase of Common Stock	08-Feb-21	4,464	\$50,000
Meldelson Family Investments, LLC.	Purchase of Common Stock	08-Feb-21	6,696	\$75,000
Jonny Creagh-Cohen,	Purchase of Common Stock	10-Feb-21	4,464	\$50,000
Nicholas Sibley	Purchase of Common Stock	23-Feb-21	24,038	\$250,000
Damian Sibley	Purchase of Common Stock	23-Feb-21	24,038	\$250,000
Isaya Sasiprapha	Purchase of Common Stock	23-Feb-21	2,172	\$24,329
Nutriquest LLC	Purchase of Common Stock	23-Feb-21	918	\$10,283
Voormolen	Purchase of Common Stock	23-Feb-21	2,232	\$25,000
Phil Rice	Warrant exercise (cashless)	17-Mar-21	287	
Derek Montgomery LLC	Purchase of Common Stock	25-Mar-21	3,125	\$35,000
James Byrne	Purchase of Common Stock	17-Mar-21	8,928	\$100,000
David Mendelson	Purchase of Common Stock	22-Mar-21	13,392	\$150,000
RBI Private Investments III	Purchase of Common Stock	24-Mar-21	8,928	\$100,000
KIM D	Purchase of Common Stock	8-Apr-21	1,785	\$20,000
KIM M	Purchase of Common Stock	8-Apr-21	1,785	\$20,000
KIM C	Purchase of Common Stock	8-Apr-21	2,678	\$30,000
KIM K	Purchase of Common Stock	8-Apr-21	892	\$10,000
KIM W	Purchase of Common Stock	8-Apr-21	4,464	\$50,000
LEE Y	Purchase of Common Stock	8-Apr-21	892	\$10,000
CHOI M	Purchase of Common Stock	8-Apr-21	892	\$10,000
Eliot-Cohen	Purchase of Common Stock	13-Apr-21	4,807	\$50,000
Hanna	Purchase of Common Stock	14-Apr-21	8,928	\$100,000
Luz Investments	Purchase of Common Stock	22-Apr-21	4,464	\$50,000
Sridharan	Purchase of Common Stock	23-Apr-21	6,696	\$75,000
River Integrity Investments LLC	Warrant exercise (cashless)	16-Apr-21	299	
Phil Rice	Warrant exercise (cashless)	4-May-21	234	
Cypress Cove	Warrant exercise (cashless)	30-Apr-21	53,828	
Corprominence LLC	Share issuance	12-Aug-21	5,000	N/A
Corprominence LLC	Share issuance	01-Nov-21	2,500	N/A

Warrant Issuances:

Name	Date	Exercise Price	Shares Underlying Warrant	Consideration
Ted Kennedy	04/13/20	\$9.60	3,750	Per Co-Development Participation Agreement
Pok Chang	04/13/20	\$9.60	5,625	Per Co-Development Participation Agreement
Young Chang	04/13/20	\$9.60	5,625	Per Co-Development Participation Agreement
Johnny Karmo	05/07/20	\$9.60	9,375	Per Co-Development Participation Agreement
Jeffery Mendelson	06/01/20	\$8.80	10,312	Per Co-Development Participation Agreement
Sarah B Kornblum Living Trust	06/03/20	\$8.80	8,437	Per Co-Development Participation Agreement
David Richmond	07/08/20	\$9.60	3,750	Per Co-Development Participation Agreement
Veyo Partners LLC	08/17/20	\$9.60	1,875	Service as Consultant
Norman Yaldoo	08/24/20	\$9.60	4,687	Per Co-Development Participation Agreement
Chitayat-Mahboubian Family Trust	09/14/20	\$9.60	5,625	Per Co-Development Participation Agreement
Emanuel Mansour	09/15/20	\$9.60	1,875	Per Co-Development Participation Agreement
John Mansour	09/15/20	\$9.60	1,875	Per Co-Development Participation Agreement
Veyo Partners LLC	09/18/20	\$9.60	1,875	Service as Consultant
Veyo Partners LLC	09/18/20	\$9.60	1,875	Service as Consultant
Perry Johnson	09/25/20	\$9.60	5,625	Per Co-Development Participation Agreement
John Payne	09/30/20	\$9.60	125,000	Service on Board of Directors
Nola Masterson	09/30/20	\$9.60	6,250	Service on Board of Directors
Robert Rondeau	09/30/20	\$9.60	6,250	Service on Board of Directors
Chris Maggiore	09/30/20	\$9.60	6,250	Service on Board of Directors
HEP Investments	10/04/20	\$9.60	3,750	Per Co-Development Participation Agreement
Sea Green	10/04/20	\$9.60	9,375	Per Co-Development Participation Agreement
Mark Strome	10/08/20	\$9.60	18,750	Per Co-Development Participation Agreement
J Abreu Investments LLC	10/09/20	\$9.60	1,875	Per Co-Development Participation Agreement
Julian Leese	11/24/20	\$8.00	37,500	Service as Consultant
Julian Leese	11/24/20	\$9.60	6,250	Service as Consultant
Pat Kennedy	12/16/20	\$9.60	375	Per Co-Development Participation Agreement
Travis Heidt	01/22/21	\$11.20	1,500	Per Co-Development Participation Agreement
HEP Investments	01/25/21	\$11.20	1,500	Per Co-Development Participation Agreement
Mendelson Family Investments, LLC	01/27/21	\$11.20	937	Per Co-Development Participation Agreement
MKY FTS Sales LLC	05/14/21	\$10.40	1,687	Per Co-Development Participation Agreement

None of the foregoing transactions involved any underwriters, underwriting discounts or commissions, or any public offering. We believe the offers, sales and issuances of the above securities were exempt from registration under the Securities Act by virtue of Section 4(a)(2) of the Securities Act because the issuance of securities to the recipients did not involve a public offering, or in reliance on Rule 701 because the transactions were pursuant to compensatory benefit plans or contracts relating to compensation as provided under such rule. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about us. The sales of these securities were made without any general solicitation or advertising. The recipients of the securities in each of these transactions represented their intentions to acquire the securities for investment only and not with a view to or for sale in connection with any distribution thereof, and appropriate legends were placed upon the stock certificates issued in these transactions. All recipients had adequate access, through their relationships with us, to information about ZIVO.

Item 16. Exhibits and Financial Statement Schedules.

- (a) See the Exhibit Index on the page immediately preceding the signature page hereto for a list of exhibits filed as part of this registration statement on Form S-1, which Exhibit Index is incorporated herein by reference.
- (b) Financial Statements begin on page F-1 of the prospectus. All schedules have been omitted because they are not applicable or the required information is included in the Consolidated Financial Statements or Notes thereto.

Item 17. Undertakings.

The undersigned registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by section 10(a)(3) of the Securities Act;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

provided, however, that:

paragraphs (i), (ii) and (iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this registration statement or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.
- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the Offering.
- (4) That, for the purpose of determining liability under the Securities Act to any purchaser, if the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.
- (5) That for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:
 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the Offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the Offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;
 - (iii) The portion of any other free writing prospectus relating to the Offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
 - (iv) Any other communication that is an offer in the Offering made by the undersigned registrant to the purchaser.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

The undersigned registrant hereby undertakes that:

- (1) For purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act shall be deemed to be part of this registration statement as of the time it was declared effective.
- (2) For the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

EXHIBIT INDEX

(3) Exhibits.

EXHIBIT NUMBER	DESCRIPTION OF DOCUMENT
<u>3.1</u>	<u>Articles of Incorporation of the Registrant as amended (previously filed as Exhibit 3.1 to the Registrant's Quarterly Report on Form 10-Q filed on August 22, 2011)</u>
<u>3.2</u>	<u>Certificate of Amendment to Articles of Incorporation dated October 16, 2014 (previously filed as Exhibit 3.12 to the Registrant's Quarterly Report on Form 10-Q filed on November 14, 2014)</u>
<u>3.3</u>	<u>Certificate to Amendment dated May 28, 2021 (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on June 2, 2021)</u>
<u>3.4</u>	<u>Amended and Restated By-laws of the Registrant (previously filed as Exhibit 3.2 to the Registrant's Quarterly Report on Form 10-Q filed on May 17, 2010)</u>
<u>3.5</u>	<u>Second Amended and Restated By-laws of the Registrant (prev Exhibit 3.1 to the Registrant's Current Report on Form 8-K filed on July 7, 2022)</u>
<u>4.1*</u>	<u>Form of Common Stock Purchase Warrant</u>
<u>4.2*</u>	<u>Form of Warrant Agency Agreement</u>
<u>4.3*</u>	<u>Form of Pre-Funded Warrant</u>
<u>5.1*</u>	<u>Opinion of Fennemore Craig, P.C.</u>
<u>5.2*</u>	<u>Opinion of Honigman LLP</u>
<u>10.1+</u>	<u>2019 Omnibus Long-Term Incentive Plan (previously filed as Exhibit 10.34 to the Registrant's Annual Report on Form 10-K filed on March 26, 2020)</u>
<u>10.1.1+</u>	<u>Stock Option Grant Notice for 2019 Omnibus Long-Term Incentive Plan (previously filed as Exhibit 10.37 to the Registrant's Annual Report on Form 10-K filed on March 26, 2020)</u>
<u>10.2+</u>	<u>2021 Equity Incentive Plan (previously filed as Exhibit 10.2 to the Registrant's Current Report on Form 8-K filed on February 16, 2022)</u>
<u>10.3</u>	<u>Supply Chain Agreement with Aegle Partners 2 LLC, dated February 27, 2019 (previously filed as Exhibit 10.38 to the Registrant's Registration Statement on Form S-1/A filed on May 26, 2021)</u>
<u>10.3.1</u>	<u>First Amendment to Supply Chain Agreement with Aegle Partners 2 LLC, dated September 14, 2019 (previously filed as Exhibit 10.39 to the Registrant's Registration Statement on Form S-1/A filed on May 26, 2021)</u>
<u>10.3.2</u>	<u>Second Amendment to Supply Chain Agreement with Aegle Partners 2 LLC, dated November 24, 2020 (previously filed as Exhibit 10.40 to the Registrant's Registration Statement on Form S-1/A filed on May 26, 2021)</u>
<u>10.4+</u>	<u>Employment Agreement, dated as of February 15, 2022, by and between John Payne and the Company (previously filed as Exhibit 10.1 of the Registrant's Current Report on Form 8-K filed on February 16, 2022)</u>
<u>10.4.1+*</u>	<u>Amendment No. 1 to Employment Agreement, dated as of December 16, 2022, by and between John Payne and the Company</u>
<u>10.5+</u>	<u>Letter Agreement between Keith Marchiando and Zivo Bioscience, Inc., dated January 1, 2021 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K filed on January 7, 2021)</u>
<u>10.6</u>	<u>Form of Paulson Convertible Note (previously filed as Exhibit 10.45 to the Registrant's Registration Statement on Form S-1/A filed on May 26, 2021)</u>
<u>10.7</u>	<u>Form of Shapiro Convertible Note (previously filed as Exhibit 10.46 to the Registrant's Registration Statement on Form S-1/A filed on May 26, 2021)</u>
<u>10.8</u>	<u>Zivo Bioscience, Inc. Non-Employee Director Compensation Policy (previously filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q filed with the Securities and Exchange Commission on November 15, 2021)</u>

[Table of Contents](#)

<u>10.9</u>	<u>Stock Option Grant Notice and Agreement to Zivo Bioscience, Inc. 2021 Equity Incentive Plan (incorporated by reference to Exhibit 10.2 filed with the Securities and Exchange Commission on November 15, 2021)</u>
<u>10.10*</u>	<u>Form of Securities Purchase Agreement</u>
<u>10.11*</u>	<u>Form of Placement Agency Agreement</u>
<u>21.1</u>	<u>Subsidiaries of the Registrant (previously filed as Exhibit 21.1 to the Registrant Annual Report on Form 10-K on March 14, 2023)</u>
<u>23.1*</u>	<u>Consent of BDO USA, LLP</u>
<u>23.2*</u>	<u>Consent of Fennemore Craig, P.C. (included in Exhibit 5.1 hereto)</u>
<u>23.3*</u>	<u>Consent of Honigman, LLP (included in Exhibit 5.2 hereto)</u>
<u>24.1*</u>	<u>Power of Attorney (included on signature page hereto)</u>
<u>107*</u>	<u>Filing Fee Table</u>
<u>101.INS*</u>	<u>Inline XBRL Instance Document</u>
<u>101.SCH*</u>	<u>Inline XBRL Taxonomy Extension Schema Document</u>
<u>101.CAL*</u>	<u>Inline XBRL Taxonomy Extension Calculation Linkbase Document</u>
<u>101.LAB*</u>	<u>Inline XBRL Taxonomy Extension Label Linkbase Document</u>
<u>101.PRE*</u>	<u>Inline XBRL Taxonomy Extension Presentation Linkbase Document</u>
<u>101.DEF*</u>	<u>Inline XBRL Taxonomy Extension Definition Linkbase Document</u>
<u>104*</u>	<u>Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)</u>

* Filed herewith.

+ Indicates a management contract or compensatory plan.

† Certain schedules and exhibits have been omitted pursuant to Item 601(a)(5) of Regulation S-K. A copy of any omitted schedule and/or exhibit will be furnished to the SEC upon request.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Bloomfield Hills, State of Michigan, on March 22, 2023.

ZIVO BIOSCIENCE, INC.

By: /s/ Keith Marchiando
Keith Marchiando
Chief Financial Officer, and Secretary

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that the undersigned officers and directors of Zivo Bioscience, Inc., a Nevada corporation, do hereby constitute and appoint each of Keith Marchiando and John B. Payne as his or her true and lawful attorney-in-fact and agent, with full power of substitution and re-substitution, for him and in his name, place, and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments, exhibits thereto and other documents in connection therewith) to this Registration Statement and any subsequent registration statement filed by the registrant pursuant to Rule 462(b) of the Securities Act of 1933, as amended, which relates to this Registration Statement, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement on Form S-1 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date
<u>/s/ John B. Payne</u> John B. Payne	President, Chief Executive Officer, and Director (Principal Executive Officer)	March 22, 2023
<u>/s/ Keith Marchiando</u> Keith Marchiando	Chief Financial Officer, and Secretary (Principal Accounting and Financial Officer)	March 22, 2023
<u>/s/ Christopher Maggiore</u> Christopher Maggiore	Director	March 22, 2023
<u>/s/ Nola Masterson</u> Nola Masterson	Director	March 22, 2023
<u>/s/ Alison A. Cornell</u> Alison A. Cornell	Director	March 22, 2023

COMMON STOCK PURCHASE WARRANT

ZIVO BIOSCIENCE, INC.

Warrant Shares: [●]
 CUSIP: 98978N 101
 ISIN: [●]

Issue Date: [●], 2023

THIS COMMON STOCK PURCHASE WARRANT (the “Warrant”) certifies that, for value received, _____, or its assigns (the “Holder”) is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the Issue Date and on or prior to 5:00 p.m. (New York City time) on [●], 20[●] (the “Termination Date”) but not thereafter, to subscribe for and purchase from Zivo Bioscience, Inc., a Nevada corporation (the “Company”), up to [●] shares of common stock, par value, \$0.001 per share (“Common Stock”), of the Company (as subject to adjustment hereunder, the “Warrant Shares”). The purchase price per share of Common Stock under this Warrant shall be equal to the Exercise Price, as defined in Section 2(b). This Warrant shall initially be issued and maintained in the form of a security held in book-entry form and The Depository Trust Company or its nominee (“DTC”) shall initially be the sole registered holder of this Warrant, subject to a Holder’s right to elect to receive a Warrant in certificated form pursuant to the terms of the Warrant Agency Agreement, in which case this sentence shall not apply.

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1.

“**Affiliate**” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

“**Bid Price**” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Shares are then listed or quoted on a Trading Market, the bid price of the Shares for the time in question (or the nearest preceding date) on the Trading Market on which the Shares are then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Shares for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Shares are not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Shares are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per Share so reported, or (d) in all other cases, the fair market value of a Share as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“**Business Day**” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York are generally open for use by customers on such day.

“**Commission**” means the United States Securities and Exchange Commission.

“**Common Stock Equivalents**” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Shares, including, without limitation, any debt, preferred shares, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Shares.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Purchase Agreement” means the Securities Purchase Agreement, dated as of [●], 2023 among the Company and certain purchasers signatory thereto, as amended, modified or supplemented from time to time in accordance with its terms.

“Registration Statement” means the Company’s registration statement on Form S-1 (File No. 333-[●]).

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Shares” means shares of Common Stock and any other class of securities into which such securities may hereafter be reclassified or changed.

“Subsidiary” means any subsidiary of the Company, which is actively engaged in a trade or business, and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the Shares are traded on a Trading Market.

“Trading Market” means any of the following markets or exchanges on which the Shares are listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means Computershare Trust Company, N.A., the current transfer agent of the Company with a mailing address of 150 Royall Street, Canton, MA 02021, and any successor transfer agent of the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Shares are then listed or quoted on a Trading Market, the daily volume weighted average price of the Shares for such date (or the nearest preceding date) on the Trading Market on which the Shares are then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Shares for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Shares are not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Shares are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per Share so reported, or (d) in all other cases, the fair market value of a Share as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Warrant Agency Agreement” means that certain warrant agency agreement, dated on or about the Issue Date, between the Company and the Warrant Agent.

“Warrant Agent” means the Transfer Agent or its affiliate that acts as warrant agent and any successor warrant agent of the Company.

“Warrants” means this Warrant and other Share purchase warrants issued by the Company pursuant to the Registration Statement.

Section 2. Exercise.

(a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company or the Warrant Agent until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company or the Warrant Agent for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within two (2) Business Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

Notwithstanding the foregoing in this Section 2(a), a holder whose interest in this Warrant is a beneficial interest in certificate(s) representing this Warrant held in book-entry form through DTC (or another established clearing corporation performing similar functions), shall effect exercises made pursuant to this Section 2(a) by delivering to DTC (or such other clearing corporation, as applicable) the appropriate instruction form for exercise, complying with the procedures to effect exercise that are required by DTC (or such other clearing corporation, as applicable), subject to a Holder’s right to elect to receive a Definitive Warrant pursuant to the terms of the Warrant Agency Agreement, in which case this sentence shall not apply. Notwithstanding anything to the contrary contained herein, a beneficial holder of the Warrant shall have all of the rights and remedies of the “Holder” hereunder.

(b) Exercise Price. The exercise price per Share under this Warrant shall be \$[●], subject to adjustment hereunder (the “Exercise Price”).

(c) Cashless Exercise. If at the time of exercise hereof, there is no effective registration statement registering, or the prospectus contained therein is not available for the issuance of the Warrant Shares to the Holder, then this Warrant may also be exercised, in whole or in part, at such time by means of a “cashless exercise” in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Shares on the principal Trading Market as reported by Bloomberg L.P. (“Bloomberg”) as of the time of the Holder’s execution of the applicable Notice of Exercise if such Notice of Exercise is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

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

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrant being exercised. The Company agrees not to take any position contrary to this Section 2(c).

Notwithstanding anything herein to the contrary, on the Termination Date, this Warrant shall be automatically exercised via cashless exercise pursuant to this Section 2(c).

(d) Mechanics of Exercise.

(i) Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's or its designee's balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to the Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company or the Warrant Agent of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company or the Warrant Agent of the Notice of Exercise (such date, the "Warrant Share Delivery Date"). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver or cause the delivery to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Shares on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth (5th) Trading Day after the Warrant Share Delivery Date) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Shares as in effect on the date of delivery of the Notice of Exercise.

(ii) Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver or cause the Warrant Agent to deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

(iii) Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

(iv) Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date (other than any such failure that is due to any action or inaction by the Holder with respect to such exercise), and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, Shares to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) provided that such price set forth in (y) (2) of this clause (A) is on actual market terms, pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the Shares so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of Shares that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Shares having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of this Warrant to purchase Shares with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence, the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver Shares upon exercise of the Warrant as required pursuant to the terms hereof.

(v) No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the next whole share.

(vi) Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to The Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

(vii) Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

(e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of Shares beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of Shares issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of Shares which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the number of outstanding Shares, a Holder may rely on the number of outstanding Shares as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of Shares outstanding. Upon the written or oral request of a Holder, the Company shall within one Trading Day confirm orally and in writing to the Holder the number of Shares then outstanding. In any case, the number of outstanding Shares shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding Shares was reported. The "Beneficial Ownership Limitation" shall be 4.99% (or, upon election by the Holder prior to the issuance of any Warrants, 9.99%) of the number of the Shares outstanding immediately after giving effect to the issuance of Shares issuable upon exercise of this Warrant. The Holder may, upon notice to the Company, increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of the Shares outstanding immediately after giving effect to the issuance of Shares upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

(a) Share Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a share dividend or otherwise makes a distribution or distributions on its Shares or any other equity or equity equivalent securities payable in Shares (which, for avoidance of doubt, shall not include any Shares issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding Shares into a larger number of shares, (iii) combines (including by way of reverse share split) outstanding Shares into a smaller number of shares or (iv) issues by reclassification of the Shares any share capital of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of Shares (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of Shares outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

(b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase shares, warrants, securities or other property pro rata to the record holders of any class of Shares (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of Shares acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of Shares are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such Shares as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

(c) Pro Rata Distributions. If the Company, at any time while this Warrant is outstanding, shall distribute to all holders of Common Stock (and not to the Holder) evidences of its indebtedness or assets (including cash and cash dividends) or rights or warrants to subscribe for or purchase any security, then in each such case the Exercise Price shall be adjusted by multiplying the Exercise Price in effect immediately prior to the record date fixed for determination of stockholders entitled to receive such distribution by a fraction of which the denominator shall be the VWAP determined as of the record date mentioned above, and of which the numerator shall be such VWAP on such record date less the then per share fair market value at such record date of the portion of such assets or evidence of indebtedness or rights or warrants so distributed applicable to one outstanding share of the Common Stock as determined by the Board of Directors in good faith. In either case the adjustments shall be described in a statement provided to the Holder of the portion of assets or evidences of indebtedness so distributed or such subscription rights applicable to one share of Common Stock. Such adjustment shall be made whenever any such distribution is made and shall become effective immediately after the record date mentioned above.

(d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company (and all of its Subsidiaries, taken as a whole), directly or indirectly, effects any sale, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Shares are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Shares or 50% or more of the voting power of the common equity of the Company, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Shares or any compulsory share exchange pursuant to which the Shares are effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires 50% or more of the outstanding Shares or 50% or more of the voting power of the common equity of the Company (each a “Fundamental Transaction”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of Shares of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of Shares for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one Share in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Shares are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. Notwithstanding anything to the contrary, in the event of a Fundamental Transaction, the Company or any Successor Entity (as defined below) shall, at the Holder’s option, exercisable at any time concurrently with, or within 30 days after, the consummation of the Fundamental Transaction (or, if later, the date of the public announcement of the applicable Fundamental Transaction), purchase this Warrant from the Holder by paying to the Holder an amount of cash equal to the Black Scholes Value (as defined below) of the remaining unexercised portion of this Warrant on the date of the consummation of such Fundamental Transaction; provided, however, if the Fundamental Transaction is not within the Company’s control, including not approved by the Company’s Board of Directors, the Holder shall only be entitled to receive from the Company or any 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 this Warrant, that is being offered and paid to the holders of Shares of the Company in connection with the Fundamental Transaction, whether that consideration be in the form of cash, shares or any combination thereof, or whether the holders of Shares are given the choice to receive from among alternative forms of consideration in connection with the Fundamental Transaction; provided, further, that if holders of Shares of the Company are not offered or paid any consideration in such Fundamental Transaction, such holders of Shares will be deemed to have received common stock of the Successor Entity (which Entity may be the Company following such Fundamental Transaction) in such Fundamental Transaction. “Black Scholes Value” means the value of this Warrant based on the Black-Scholes Option Pricing Model obtained from the “OV” function on Bloomberg determined as of the day of consummation of the applicable Fundamental Transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable contemplated Fundamental Transaction and the Termination Date, (B) an expected volatility equal to the 100 day volatility obtained from the HVT function on Bloomberg (determined utilizing a 365 day annualization factor) as of the Trading Day immediately following the public announcement of the applicable contemplated Fundamental Transaction, (C) the underlying price per share used in such calculation shall be the greater of (i) the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such Fundamental Transaction and (ii) the highest VWAP during the period beginning on the Trading Day immediately preceding the public announcement of the applicable contemplated Fundamental Transaction (or the consummation of the applicable Fundamental Transaction, if earlier) and ending on the Trading Day of the Holder’s request pursuant to this Section 3(d) and (D) a remaining option time equal to the time between the date of the public announcement of the applicable contemplated Fundamental Transaction and the Termination Date and (E) a zero cost of borrow. The payment of the Black Scholes Value will be made by wire transfer of immediately available funds (or such other consideration) within the later of (i) five Business Days of the Holder’s election and (ii) the date of consummation of the Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the Shares acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the Shares pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction), and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein. For the avoidance of doubt, the Holder shall be entitled to the benefits of the provisions of this Section 3(d) regardless of (i) whether the Company has sufficient authorized Shares for the issuance of Warrant Shares and/or (ii) whether a Fundamental Transaction occurs prior to the Issue Date.

(e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of Shares deemed to be issued and outstanding as of a given date shall be the sum of the number of Shares (excluding treasury shares, if any) issued and outstanding.

(f) Notice to Holder.

(i) Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

(ii) Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Shares, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Shares, (C) the Company shall authorize the granting to all holders of the Shares rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Shares, any consolidation or merger to which the Company (and its Subsidiaries, taken as a whole) is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Shares are converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice (unless such information is filed with the Commission, in which case a notice shall not be required) stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Shares of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Shares of record shall be entitled to exchange their Shares for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

(g) Voluntary Adjustment by Company. Subject to the rules and regulations of the Trading Market, the Company may at any time during the term of this Warrant reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the board of directors of the Company.

Section 4. Transfer of Warrant.

(a) Transferability. This Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. The Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

(b) New Warrants. If this Warrant is not held in global form through DTC (or any successor depositary), this Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the Issue Date and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

(c) Warrant Register. The Warrant Agent (or, in the event a Holder elects to receive a Definitive Certificate (as defined in the Warrant Agency Agreement), the Company) shall register this Warrant, upon records to be maintained by the Warrant Agent (or, in the event a Holder elects to receive a Definitive Certificate, the Company) for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company and the Warrant Agent may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

(a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a "cashless exercise" pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

(b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of an affidavit of loss reasonably satisfactory to the Company evidencing the loss, theft, destruction or mutilation of this Warrant or any share certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or share certificate, if mutilated, the Company will make and deliver a new Warrant or share certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or share certificate.

(c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Trading Day, then, such action may be taken or such right may be exercised on the next succeeding Trading Day.

(d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Shares a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Shares may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the holders of a majority of the then outstanding Warrants (based on the number of Warrant Shares underlying such Warrants), the Company shall not by any action, including, without limitation, amending its articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

(e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof.

(f) Jurisdiction; Agent for Process. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, stockholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that, subject to applicable law, such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding. In addition to and without limiting the foregoing, the Company has confirmed that it has appointed Honigman LLP, with a business address at [2290 First National Building, 600 Woodward Avenue, Detroit, MI 48226, as its authorized agent (the "Authorized Agent") upon whom process may be served in any suit, action or proceeding arising out of or based upon this Warrant or the transactions contemplated herein which may be instituted in any New York federal or state court, by a Holder, the directors, officers, partners, employees and agents of such Holder and each affiliate of such Holder, and expressly accept the non-exclusive jurisdiction of any such court in respect of any such suit, action or proceeding. The Company hereby represents and warrants that the Authorized Agent has accepted such appointment and has agreed to act as said agent for service of process, and the Company agrees to take any and all action, including the filing of any and all documents that may be necessary to continue such appointment in full force and effect as aforesaid. The Company hereby authorizes and directs the Authorized Agent to accept such service. Service of process upon the Authorized Agent shall be deemed, in every respect, effective service of process upon the Company. If the Authorized Agent shall cease to act as agent for service of process, the Company shall appoint, without unreasonable delay, another such agent in the United States, and notify the Holders of such appointment. Notwithstanding the foregoing and except as set forth herein, any action arising out of or based upon this Warrant may be instituted by a Holder, the directors, officers, partners, employees and agents of the Holder (if applicable) and each respective affiliate of the Holder, in any court of competent jurisdiction in the Republic of the Marshall Islands. Notwithstanding the foregoing, nothing in this paragraph shall limit or restrict the federal district court in which a Holder may bring a claim under the federal securities laws. This paragraph shall survive any termination of this Warrant, in whole or in part.

(g) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

(h) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if the Company willfully and knowingly fails to comply with any provision of this Warrant, which results in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

(i) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile, e-mail or sent by a nationally recognized overnight courier service, addressed to:

If to the Warrant Agent

Direct Transfer, LLC

[●]

Attention: [●]

Email address: [●]

If to the Company

Zivo Bioscience, Inc.

21 East Long Lake Road, Suite 100

Bloomfield Hills, Michigan 48304

Tel: (248) 452-9866

Email: [●]

Facsimile: [●]

Attn: Chief Executive Officer

or such other facsimile number, email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (a) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or e-mail (or e-mail attachment) at the email address set forth on the signature pages attached hereto at or prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or e-mail (or e-mail attachment) at the e-mail address as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2nd) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

(j) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Share or as a stockholder of the Company, whether such liability is asserted by the Company or by creditors of the Company.

(k) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

(l) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

(m) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company, on the one hand, and the Holder or the beneficial owner of this Warrant, on the other hand.

(n) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

(o) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

(p) Warrant Agency Agreement. If this Warrant is held in global form through DTC (or any successor depositary), this Warrant is issued subject to the Warrant Agency Agreement. To the extent any provision of this Warrant conflicts with the express provisions of the Warrant Agency Agreement, the provisions of this Warrant shall govern and be controlling.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

ZIVO BIOSCIENCE, INC.

By: _____
Name:
Title:

NOTICE OF EXERCISE

TO: ZIVO BIOSCIENCE, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only required if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

☐ in lawful money of the United States; or

☐ if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

DTC number:

Account name:

Account number:

[SIGNATURE OF HOLDER]

Name of Investing Entity:

*Signature of Authorized Signatory of
Investing Entity:*

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name:

(Please Print)

Address:

(Please Print)

Phone Number:

Email Address:

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____

WARRANT AGENT AGREEMENT

WARRANT AGENT AGREEMENT (this “Warrant Agreement”) dated as of [____], 2023 (the “Issuance Date”) between ZIVO Bioscience, Inc., a company incorporated under the laws of the State of Nevada (the “Company”), and Direct Transfer LLC, a Delaware limited liability company (the “Warrant Agent”).

WHEREAS, pursuant to the terms of that certain Placement Agency Agreement (“Agreement”), dated [____], 2023, by and between the Company and Maxim Group, LLC, as placement agent, the Company is engaged in a public offering (the “Offering”) of (i) up to [●] of the Company’s Units (the “Units”), each Unit consisting of (a) one share (collectively for all Units, the “Shares”) of the Company’s common stock, par value \$0.001 per share (the “Common Stock”) or for some purchasers, in lieu of a Share, one pre-funded warrant, each to purchase one share of Common Stock (the “Prefunded Warrants”), (b) one immediately exercisable warrant, each to purchase one share of Common Stock (collectively for all Units, the “Common Warrants” and together with the Prefunded Warrants, the “Warrants”), and (ii) the shares of Common Stock underlying the Warrants and the shares of Common Stock underlying the Prefunded Warrants issuable upon exercise of the Warrants;

WHEREAS, the Company has filed with the Securities and Exchange Commission (the “Commission”) a Registration Statement, No. 333-[____], on Form S-1 (as the same may be amended from time to time, the “Registration Statement”), for the registration under the Securities Act of 1933, as amended (the “Securities Act”), of the Units, the Warrants and the Warrant Shares, and such Registration Statement was declared effective on [____], 2023;

WHEREAS, the shares of Common Stock (or Prefunded Warrants) and Common Warrants to be issued in connection with this Offering shall be issued separately, but will be purchased together in the Offering;

WHEREAS, the Company desires the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing to so act, in accordance with the terms set forth in this Warrant Agreement in connection with the issuance, registration, transfer and exchange of the Warrants and the issuance, registration, transfer and exchange of the Warrant Shares;

WHEREAS, the Company desires to provide for the provisions of the Warrants, the terms upon which they shall be issued and exercised, and the respective rights, limitation of rights, and immunities of the Company, the Warrant Agent, and the holders of the Warrants; and

WHEREAS, all acts and things have been done and performed which are necessary to make the Warrants the valid, binding and legal obligations of the Company, and to authorize the execution and delivery of this Warrant Agreement.

NOW, THEREFORE, in consideration of the mutual agreements herein contained, the parties hereto agree as follows:

1. Appointment of Warrant Agent. The Company hereby appoints the Warrant Agent to act as agent for the Company with respect to the Warrants, and the Warrant Agent hereby accepts such appointment and agrees to perform the same in accordance with the express terms and conditions set forth in this Warrant Agreement (and no implied terms or conditions).

2. Warrants.

2.1 Form of Warrants. The Warrants shall be initially evidenced by a global Warrant certificate ("Common Warrant Global Certificate") in the form of **Annex A-I** with respect to the Common Warrants, and by a Prefunded Global Warrant certificate ("Prefunded Global Certificate", together with the Common Warrant Global Certificate, the "Global Certificate") in the form of **Annex A-II** to this Warrant Agreement, which shall be deposited on behalf of the Company with a custodian for The Depository Trust Company ("DTC") and registered in the name of Cede & Co., a nominee of DTC. If DTC subsequently ceases to make its settlement system available for the Warrants, the Company may instruct the Warrant Agent to arrange for book-entry settlement. In the event that it is no longer necessary to have the Warrants available, in the name of Cede & Co., a nominee of DTC, the Company may instruct the Warrant Agent to provide written instructions to DTC to deliver to the Warrant Agent for cancellation the Global Certificate, and the Company shall instruct the Warrant Agent to deliver to each Holder (as defined below) separate certificates evidencing Warrants ("Definitive Certificates" and, together with the Global Certificate, "Warrant Certificates"), in the form of **Annex C** to this Warrant Agreement. The Warrants represented by the Global Certificate are referred to as "Global Warrants."

2.2 Issuance and Registration of Warrants.

2.2.1 Warrant Register. The Warrant Agent shall maintain books (the "Warrant Register") for the registration of original issuance and the registration of transfer of the Warrants.

2.2.2 Issuance of Warrants. Upon the initial issuance of the Warrants, the Warrant Agent shall issue the Global Certificate and deliver the Warrants in the DTC settlement system in accordance with written instructions delivered to the Warrant Agent by the Company. Ownership of beneficial interests in the Warrants shall be shown on, and the transfer of such ownership shall be effected through, records maintained (i) by DTC and (ii) by institutions that have accounts with DTC (each, a "Participant"), subject to a Holder's right to elect to receive a Warrant in certificated form in the form of **Annex C** to this Warrant Agreement. Any Holder desiring to elect to receive a Warrant in certificated form shall make such request in writing delivered to the Warrant Agent pursuant to Section 2.2.8, and shall surrender to the Warrant Agent the interest of the Holder on the books of the Participant evidencing the Warrants which are to be represented by a Definitive Certificate through the DTC settlement system. Thereupon, the Warrant Agent shall countersign and deliver to the person entitled thereto a Warrant Certificate or Warrant Certificates, as the case may be, as so requested.

2.2.3 Beneficial Owner; Holder. Prior to due presentment for registration of transfer of any Warrant, the Company and the Warrant Agent may deem and treat the person in whose name that Warrant shall be registered on the Warrant Register (the “Holder”) as the absolute owner of such Warrant for purposes of any exercise thereof, and for all other purposes, and neither the Company nor the Warrant Agent shall be affected by any notice to the contrary. Notwithstanding the foregoing, nothing herein shall prevent the Company, the Warrant Agent or any agent of the Company or the Warrant Agent from giving effect to any written certification, proxy or other authorization furnished by DTC governing the exercise of the rights of a holder of a beneficial interest in any Warrant. The rights of beneficial owners in a Warrant evidenced by the Global Certificate shall be exercised by the Holder or a Participant through the DTC system, except to the extent set forth herein or in the Global Certificate.

2.2.4 Execution. The Warrant Certificates shall be executed on behalf of the Company by any authorized officer of the Company (an “Authorized Officer”), which need not be the same authorized signatory for all of the Warrant Certificates, either manually or by facsimile signature. The Warrant Certificates shall be countersigned by an authorized signatory of the Warrant Agent, which need not be the same signatory for all of the Warrant Certificates, and no Warrant Certificate shall be valid for any purpose unless so countersigned. In case any Authorized Officer of the Company that signed any of the Warrant Certificates ceases to be an Authorized Officer of the Company before countersignature by the Warrant Agent and issuance and delivery by the Company, such Warrant Certificates, nevertheless, may be countersigned by the Warrant Agent, issued and delivered with the same force and effect as though the person who signed such Warrant Certificates had not ceased to be such officer of the Company; and any Warrant Certificate may be signed on behalf of the Company by any person who, at the actual date of the execution of such Warrant Certificate, shall be an Authorized Officer of the Company authorized to sign such Warrant Certificate, although at the date of the execution of this Warrant Agreement any such person was not such an Authorized Officer.

2.2.5 Registration of Transfer. At any time at or prior to the Expiration Date (as defined below), a transfer of any Warrants may be registered and any Warrant Certificate or Warrant Certificates may be split up, combined or exchanged for another Warrant Certificate or Warrant Certificates evidencing the same number of Warrants as the Warrant Certificate or Warrant Certificates surrendered. Any Holder desiring to register the transfer of Warrants or to split up, combine or exchange any Warrant Certificate shall make such request in writing delivered to the Warrant Agent, and shall surrender to the Warrant Agent the Warrant Certificate or Warrant Certificates evidencing the Warrants the transfer of which is to be registered or that is or are to be split up, combined or exchanged. Thereupon, the Warrant Agent shall countersign and deliver to the person entitled thereto a Warrant Certificate or Warrant Certificates, as the case may be, as so requested. The Warrant Agent may require reasonable and customary payment, by the Holder requesting a registration of transfer of Warrants or a split-up, combination or exchange of a Warrant Certificate (but, for purposes of clarity, not upon the exercise of the Warrants and issuance of Warrant Shares to the Holder), of a sum sufficient to cover any tax or governmental charge that may be imposed in connection with such registration of transfer, split-up, combination or exchange, together with reimbursement to the Warrant Agent of all reasonable expenses incidental thereto.

2.2.6 Loss, Theft and Mutilation of Warrant Certificates. Upon receipt by the Company and the Warrant Agent of evidence reasonably satisfactory to them of the loss, theft, destruction or mutilation of a Warrant Certificate, and, in case of loss, theft or destruction, of indemnity or security in customary form and amount (which shall in no event include the posting of any bond by any institutional investor that holds a Definitive Certificate), and reimbursement to the Company and the Warrant Agent of all reasonable expenses incidental thereto, and upon surrender to the Warrant Agent and cancellation of the Warrant Certificate if mutilated, the Warrant Agent shall, on behalf of the Company, countersign and deliver a new Warrant Certificate of like tenor to the Holder in lieu of the Warrant Certificate so lost, stolen, destroyed or mutilated. The Warrant Agent may charge the Holder an administrative fee for processing the replacement of lost Warrant Certificates, which shall be charged only once in instances where a single surety bond obtained covers multiple certificates. The Warrant Agent may receive compensation from the surety companies or surety bond agents for administrative services provided to them.

2.2.7 Proxies. The Holder of a Warrant may grant proxies or otherwise authorize any person, including the Participants and beneficial holders that may own interests through the Participants, to take any action that a Holder is entitled to take under this Agreement or the Warrants; provided, however, that at all times that Warrants are evidenced by a Global Certificate, exercise of those Warrants shall be effected on their behalf by Participants through DTC in accordance with the procedures administered by DTC.

2.2.8 Warrant Certificate Request. A Holder has the right to elect at any time or from time to time a Warrant Exchange (as defined below) pursuant to a Warrant Certificate Request Notice (as defined below). Upon written notice by a Holder to the Warrant Agent for the exchange of some or all of such Holder's Global Warrants for a Definitive Certificate evidencing the same number of Warrants, which request shall be in forms attached hereto as **Annex E** ("Warrant Certificate Request Notice") and the date of delivery of such Warrant Certificate Request Notice by the Holder, the "Warrant Certificate Request Notice Date" and the deemed surrender upon delivery by the Holder of a number of Global Warrants for the same number of Warrants evidenced by a Definitive Certificate, a "Warrant Exchange"), the Warrant Agent shall promptly effect the Warrant Exchange and shall promptly issue and deliver to the Holder a Definitive Certificate for such number of Warrants in the name set forth in the Warrant Certificate Request Notice. Such Definitive Certificate shall be dated the original issue date of the Warrants, shall be manually executed by an authorized signatory of the Company, shall be in the form attached hereto as **Annex C**, and shall be reasonably acceptable in all respects to such Holder. In connection with a Warrant Exchange, the Company agrees to deliver, or to direct the Warrant Agent to deliver, the Definitive Certificate to the Holder within three (3) Trading Days of the Warrant Certificate Request Notice pursuant to the delivery instructions in the Warrant Certificate Request Notice ("Warrant Certificate Delivery Date"). If the Company fails for any reason to deliver to the Holder the Definitive Certificate subject to the Warrant Certificate Request Notice by the Warrant Certificate Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares evidenced by such Definitive Certificate (based on the VWAP (as defined in the Warrants) of the Common Stock on the Warrant Certificate Request Notice Date), \$10 per Business Day for each Business Day after such Warrant Certificate Delivery Date until such Definitive Certificate is delivered or, prior to delivery of such Warrant Certificate, the Holder rescinds such Warrant Exchange. The Company covenants and agrees that, upon the date of delivery of the Warrant Certificate Request Notice, the Holder shall be deemed to be the holder of the Definitive Certificate and, notwithstanding anything to the contrary set forth herein, the Definitive Certificate shall be deemed for all purposes to contain all of the terms and conditions of the Warrants evidenced by such Warrant Certificate and the terms of this Agreement, other than Sections 3(c) and 9 herein, shall not apply to the Warrants evidenced by the Definitive Certificate.

2.2.9 Terms of the Warrant. The terms of the Warrants are set forth in the form of the Definitive Certificate attached hereto as **Annex C**, which form is incorporated by reference into this Warrant Agreement. If there is any discrepancy between any Section of this Warrant Agreement or the Global Certificate applicable to the Warrants and the form of Definitive Certificate attached hereto as **Annex C**, the form of Definitive Certificate shall govern and control.

3. Terms and Exercise of Warrants.

3.1 Exercise Price. Each Warrant shall entitle the Holder, subject to the provisions of the applicable Warrant Certificate and of this Warrant Agreement, to purchase from the Company the number of shares of Common Stock stated therein, at the Exercise Price per whole share, subject to the subsequent adjustments provided by Section 3 of the Warrant Certificate. The term “Exercise Price” as used in this Warrant Agreement refers to the price per share at which shares of Common Stock may be purchased at the time a Warrant is exercised (as such term is defined in the Common Warrants and Prefunded Warrants, respectively).

3.2 Duration of Warrants. Common Warrants may be exercised only during the period commencing on the Issuance Date and terminating at 5:00 P.M., New York City time (the “close of business”) on [], 2028 (the “Common Expiration Date”), unless the Expiration Date is not a Business Day, in which case the Expiration Date will be the next Business Day. Each Common Warrant not exercised on or before the Expiration Date shall become void, and all rights thereunder and all rights in respect thereof under this Warrant Agreement shall cease at the close of business on the Expiration Date. Prefunded Warrants may be exercised during the period commencing on the Issuance Date until the Prefunded Warrants are exercised in full (the “Prefunded Expiration Date” and together with the Common Expiration Date, the “Expiration Date”).

3.3 Exercise of Warrants.

3.3.1 Exercise and Payment. Subject to the provisions of this Warrant Agreement, a Holder (or a Participant or a designee of a Participant acting on behalf of a Holder) may exercise the purchase rights represented by the Warrants, in whole or in part, at any time or times on or before the Expiration Date by delivering to the Warrant Agent, a duly executed facsimile copy or PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed as **Annex B** hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer or cashier’s check drawn on a United States bank unless the cashless exercise procedure specified in Section 3.3.7 below is specified in the applicable Notice of Exercise. Notwithstanding any other provision in this Agreement, a holder whose interest in a Global Warrant is a beneficial interest in a Global Certificate held in book-entry form through the DTC (or another established clearing corporation performing similar functions), shall effect exercises by delivering to the DTC (or such other clearing corporation, as applicable) the appropriate instruction form for exercise, and complying with the procedures to effect exercise that are required by the DTC (or such other clearing corporation, as applicable). The Company acknowledges that the bank accounts maintained by the Warrant Agent in connection with the services provided under this Agreement will be in its name and that the Warrant Agent may receive investment earnings in connection with the investment at Warrant Agent risk and for its benefit of funds held in those accounts from time to time. Neither the Company nor the Holders will receive interest on any deposits or Exercise Price. The “Exercise Date” will be the first Business Day on which the materials in the foregoing sentence are received by the Warrant Agent (if by 5:00 P.M., New York City time), or the following Trading Day (if after 5:00 P.M., New York City time), regardless of any earlier date written on the materials. If the materials discussed in this Section 3.3.1 are received or deemed to be received after the Expiration Date, the exercise thereof will be null and void and any funds delivered to the Company will be returned to the Holder or Participant, as the case may be, as soon as practicable. In no event will interest accrue on any funds deposited with the Warrant Agent or the Company in respect of an exercise or attempted exercise of the Warrants.

3.3.2 Issuance of Warrant Shares.

(a) The Warrant Agent shall on the Trading Day following the Exercise Date of any Warrant, advise the Company, the transfer agent and registrar for the Company's Common Stock, in respect of (i) the number of Warrant Shares indicated on the Notice of Exercise as issuable upon such exercise with respect to such exercised Warrants, (ii) the instructions of the Holder or Participant, as the case may be, provided to the Warrant Agent with respect to the delivery of the Warrant Shares and the number of Warrants that remain outstanding after such exercise and (iii) such other information as the Company or such transfer agent and registrar shall reasonably request.

(b) Upon the Warrant Agent's receipt, at or prior to the close of business on the Expiration Date, of the executed Notice of Exercise, accompanied by payment of the Exercise Price pursuant to Section 2(b) of the Warrant Certificate (other than in the case of a Cashless Exercise), the Warrant Agent shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's or its designee's balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise no later than the Warrant Share Delivery Date.

3.3.3 Valid Issuance. All Warrant Shares issued by the Company upon the proper exercise of a Warrant in conformity with this Warrant Agreement shall be validly issued, fully paid and non-assessable.

3.3.4 No Fractional Exercise. No fractional Warrant Shares will be issued upon the exercise of the Warrant. As to any fraction of a share which a Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the nearest whole Warrant Share to be issued to such Holder.

3.3.5 Charges, Taxes, and Expenses. Issuance of Warrant Shares shall be made without charge to a Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of a Holder or in such name or names as may be directed by a Holder; provided, however, that in the event that Warrant Shares are to be issued in a name other than the name of a Holder, the Warrant, when surrendered for exercise, shall be accompanied by the Assignment Form attached to the Warrant duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to DTC (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

3.3.6 Date of Issuance. The Company will treat an exercising Holder as a beneficial owner of the Warrant Shares as of the Exercise Date of any Warrant, except that, if such date is a date when the stock transfer books of the Company are closed, such person shall be deemed to have become the holder of such shares at the open of business on the next succeeding date on which the stock transfer books are open.

3.3.7 Restrictive Legend Events; Cashless Exercise Under Certain Circumstances

(a) The Company shall use its reasonable best efforts to maintain the effectiveness of the Registration Statement and the current status of the prospectus included therein or to file and maintain the effectiveness of another registration statement and another current prospectus covering the Warrants and the Warrant Shares at any time that the Warrants are exercisable. The Company shall provide to the Warrant Agent and each Holder prompt written notice of any time that the Company is unable to deliver the Warrant Shares via DTC transfer or otherwise without restrictive legend because (A) the Commission has issued a stop order with respect to the Registration Statement, (B) the Commission otherwise has suspended or withdrawn the effectiveness of the Registration Statement, either temporarily or permanently, (C) the Company has suspended or withdrawn the effectiveness of the Registration Statement, either temporarily or permanently, (D) the prospectus contained in the Registration Statement is not available for the issuance of the Warrant Shares to the Holder or (E) otherwise (each a “Restrictive Legend Event”). To the extent that the Warrants cannot be exercised as a result of a Restrictive Legend Event or a Restrictive Legend Event occurs after a Holder has exercised Warrants in accordance with the terms of the Warrants but prior to the delivery of the Warrant Shares, the Company shall, at the election of the Holder, which shall be given within five (5) days of receipt of such notice of the Restrictive Legend Event, either (A) rescind the previously submitted Election to Purchase and the Company shall return all consideration paid by such Holder upon such rescission or (B) treat the attempted exercise as a cashless exercise as described in paragraph (b) below and refund the cash portion of the exercise price to the Holder.

(b) If a Restrictive Legend Event has occurred, the Warrant may be exercisable on a cashless basis pursuant to Section 2(c) of the Warrant Certificate. Notwithstanding anything herein to the contrary, the Company shall not be required to make any cash payments or net cash settlement to the Holder in lieu of delivery of the Warrant Shares. If the Warrant Shares are issued in such a cashless exercise, the Company acknowledges and agrees that, in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised and the Company agrees not to take any position contrary thereto.

Upon receipt of a Notice of Exercise for a cashless exercise, the Warrant Agent will promptly deliver a copy of the Notice of Exercise to the Company to confirm the number of Warrant Shares issuable in connection with the cashless exercise. The Company shall promptly calculate and transmit to the Warrant Agent in a written notice, and the Warrant Agent shall have no duty, responsibility or obligation under this section to calculate, the number of Warrant Shares issuable in connection with any cashless exercise. The Warrant Agent shall be entitled to rely conclusively on any such written notice provided by the Company, and the Warrant Agent shall not be liable for any action taken, suffered or omitted to be taken by it in accordance with such written instructions or pursuant to this Warrant Agreement.

3.3.8 Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the number of Warrant Shares issuable in connection with any exercise, the Company shall promptly deliver to the Holder the number of Warrant Shares that are not disputed.

3.3.9 Beneficial Ownership Limitation. The Company and Warrant Agent shall not effect any exercise of a Warrant, and a Holder shall not have the right to exercise any portion of a Warrant, pursuant to Section 3 or otherwise, in contravention of the Beneficial Ownership Limitation set forth in Section 2(e) of the Warrant Certificate.

4. Adjustments. The Exercise Price, the number of Warrant Shares issuable upon exercise of each Warrant and the number of Warrants outstanding are subject to adjustment from time to time as provided in Section 3 of the Warrant Certificate. Upon every adjustment of the Exercise Price or the number of Warrant Shares issuable upon exercise of a Warrant, the Company shall give written notice thereof to the Warrant Agent, which notice shall state the Exercise Price resulting from such adjustment and the increase or decrease, if any, in the number of Warrant Shares purchasable at such price upon the exercise of a Warrant, setting forth in reasonable detail the method of calculation and the facts upon which such calculation is based. Upon the occurrence of any event causing any such adjustment, the Company shall give written notice to each Holder, at the last address set forth for such holder in the Warrant Register, as of the record date or the effective date of the event. Failure to give such notice, or any defect therein, shall not affect the legality or validity of such event. The Warrant Agent shall be entitled to rely conclusively on, and shall be fully protected in relying on, any certificate, notice or instructions provided by the Company with respect to any adjustment of the Exercise Price or the number of shares issuable upon exercise of a Warrant, or any related matter, and the Warrant Agent shall not be liable for any action taken, suffered or omitted to be taken by it in accordance with any such certificate, notice or instructions or pursuant to this Warrant Agreement. The Warrant Agent shall not be deemed to have knowledge of any such adjustment unless and until it shall have received written notice thereof from the Company.

5. Restrictive Legends; Fractional Warrants. In the event that a Warrant Certificate surrendered for transfer bears a restrictive legend, the Warrant Agent shall not register that transfer until the Warrant Agent has received an opinion of counsel for the Company stating that such transfer may be made and indicating whether the Warrants must also bear a restrictive legend upon that transfer. The Company and the Warrant Agent shall not issue fractions of Warrants or distribute a Global Warrant or Warrant Certificates that evidence fractional Warrants. Whenever any fractional Warrant would otherwise be required to be issued or distributed, the actual issuance or distribution shall reflect a rounding of such fraction up to the nearest whole Warrant. The Warrant Agent shall not be required to effect any registration of transfer or exchange which will result in the transfer of or delivery of a Warrant Certificate for a fraction of a Warrant.

6. Other Provisions Relating to Rights of Holders of Warrants.

6.1 No Rights as Stockholder. Except as otherwise specifically provided herein and in accordance with Section 5(a) of the Warrant Certificate, a Holder, solely in its capacity as a holder of Warrants, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant Agreement be construed to confer upon a Holder, solely in its capacity as the registered holder of Warrants, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of share capital, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights or rights to participate in new issues of shares, or otherwise, prior to the issuance to the Holder of the Warrant Shares which it is then entitled to receive upon the due exercise of Warrants.

6.2 Reservation of Common Stock. The Company shall at all times reserve and keep available a number of its authorized but unissued shares of Common Stock pursuant to Section 5(d) of the Warrant Certificate.

7. Concerning the Warrant Agent and Other Matters.

7.1 Any instructions given to the Warrant Agent orally, as permitted by any provision of this Warrant Agreement, shall be confirmed in writing by the Company as soon as practicable. The Warrant Agent shall not be liable or responsible and shall be fully authorized and protected for acting, or failing to act, in accordance with any oral instructions which do not conform with the written confirmation received in accordance with this Section 7.1

7.2 (a) Whether or not any Warrants are exercised, for the Warrant Agent's services as agent for the Company hereunder, the Company shall pay to the Warrant Agent such fees as may be separately agreed between the Company and Warrant Agent and the Warrant Agent's out of pocket expenses in connection with this Warrant Agreement, including, without limitation, the reasonable fees and expenses of the Warrant Agent's counsel. While the Warrant Agent endeavors to maintain out-of-pocket charges (both internal and external) at competitive rates, these charges may not reflect actual out-of-pocket costs, and may include handling charges to cover internal processing and use of the Warrant Agent's billing systems. (b) All amounts owed by the Company to the Warrant Agent under this Warrant Agreement are due within 30 days of the Company's receipt of an invoice. Delinquent payments are subject to a late payment charge of one and one-half percent (1.5%) per month commencing 45 days from the invoice date. The Company agrees to reimburse the Warrant Agent for any reasonable attorney's fees and any other costs associated with collecting delinquent payments. (c) No provision of this Warrant Agreement shall require Warrant Agent to expend or risk its own funds or otherwise incur any financial liability in the performance of any of its duties under this Warrant Agreement or in the exercise of its rights.

7.3 As agent for the Company hereunder the Warrant Agent: (a) shall have no duties or obligations other than those specifically set forth herein or as may subsequently be agreed to in writing by the Warrant Agent and the Company; (b) shall be regarded as making no representations and having no responsibilities as to the validity, sufficiency, value, or genuineness of the Warrants or any Warrant Shares; (c) shall not be obligated to take any legal action hereunder; if, however, the Warrant Agent determines to take any legal action hereunder, and where the taking of such action might, in its judgment, subject or expose it to any expense or liability it shall not be required to act unless it has been furnished with an indemnity reasonably satisfactory to it; (d) may rely on and shall be fully authorized and protected in acting or failing to act upon any certificate, instrument, opinion, notice, letter, telegram, telex, facsimile transmission or other document or security delivered to the Warrant Agent and believed by it to be genuine and to have been signed by the proper party or parties; (e) shall not be liable or responsible for any recital or statement contained in the Registration Statement or any other documents relating thereto; (f) shall not be liable or responsible for any failure on the part of the Company to comply with any of its covenants and obligations relating to the Warrants, including without limitation obligations under applicable securities laws; (g) may rely on and shall be fully authorized and protected in acting or failing to act upon the written, telephonic or oral instructions with respect to any matter relating to its duties as Warrant Agent covered by this Warrant Agreement (or supplementing or qualifying any such actions) of officers of the Company, and is hereby authorized and directed to accept instructions with respect to the performance of its duties hereunder from the Company or counsel to the Company, and may apply to the Company, for advice or instructions in connection with the Warrant Agent's duties hereunder, and the Warrant Agent shall not be liable for any delay in acting while waiting for those instructions; any applications by the Warrant Agent for written instructions from the Company may, at the option of the Agent, set forth in writing any action proposed to be taken or omitted by the Warrant Agent under this Warrant Agreement and the date on or after which such action shall be taken or such omission shall be effective; the Warrant Agent shall not be liable for any action taken by, or omission of, the Warrant Agent in accordance with a proposal included in such application on or after the date specified in such application (which date shall not be less than five business days after the date such application is sent to the Company, unless the Company shall have consented in writing to any earlier date) unless prior to taking any such action, the Warrant Agent shall have received written instructions in response to such application specifying the action to be taken or omitted; (h) may consult with counsel satisfactory to the Warrant Agent, including its in-house counsel, and the advice of such counsel shall be full and complete authorization and protection in respect of any action taken, suffered, or omitted by it hereunder in good faith and in accordance with the advice of such counsel; (i) may perform any of its duties hereunder either directly or by or through nominees, correspondents, designees, or subagents, and it shall not be liable or responsible for any misconduct or negligence on the part of any nominee, correspondent, designee, or subagent appointed with reasonable care by it in connection with this Warrant Agreement; (j) is not authorized, and shall have no obligation, to pay any brokers, dealers, or soliciting fees to any person; and (k) shall not be required hereunder to comply with the laws or regulations of any country other than the United States of America or any political subdivision thereof.

7.4 (a) In the absence of gross negligence or willful or illegal misconduct on its part, the Warrant Agent shall not be liable for any action taken, suffered, or omitted by it or for any error of judgment made by it in the performance of its duties under this Warrant Agreement. Anything in this Warrant Agreement to the contrary notwithstanding, in no event shall Warrant Agent be liable for special, indirect, incidental, consequential or punitive losses or damages of any kind whatsoever (including but not limited to lost profits), even if the Warrant Agent has been advised of the possibility of such losses or damages and regardless of the form of action. Any liability of the Warrant Agent will be limited in the aggregate to the amount of fees paid by the Company hereunder. The Warrant Agent shall not be liable for any failures, delays or losses, arising directly or indirectly out of conditions beyond its reasonable control including, but not limited to, acts of government, exchange or market ruling, suspension of trading, work stoppages or labor disputes, fires, civil disobedience, riots, rebellions, storms, electrical or mechanical failure, computer hardware or software failure, communications facilities failures including telephone failure, war, terrorism, insurrection, earthquakes, floods, acts of God or similar occurrences. (b) In the event any question or dispute arises with respect to the proper interpretation of the Warrants or the Warrant Agent's duties under this Warrant Agreement or the rights of the Company or of any Holder, the Warrant Agent shall not be required to act and shall not be held liable or responsible for its refusal to act until the question or dispute has been judicially settled (and, if appropriate, it may file a suit in interpleader or for a declaratory judgment for such purpose) by final judgment rendered by a court of competent jurisdiction, binding on all persons interested in the matter which is no longer subject to review or appeal, or settled by a written document in form and substance satisfactory to Warrant Agent and executed by the Company and each such Holder. In addition, the Warrant Agent may require for such purpose, but shall not be obligated to require, the execution of such written settlement by all the Holders and all other persons that may have an interest in the settlement.

7.5 The Company covenants to indemnify the Warrant Agent and hold it harmless from and against any loss, liability, claim or expense ("Loss") arising out of or in connection with the Warrant Agent's duties under this Warrant Agreement, including the costs and expenses of defending itself against any Loss, unless such Loss shall have been determined by a court of competent jurisdiction to be a result of the Warrant Agent's gross negligence or willful misconduct.

7.6 Unless terminated earlier by the parties hereto, this Agreement shall terminate 90 days after the earlier of the Expiration Date and the date on which no Warrants remain outstanding (the “Termination Date”). On the business day following the Termination Date, the Agent shall deliver to the Company any entitlements, if any, held by the Warrant Agent under this Warrant Agreement. The Agent’s right to be reimbursed for fees, charges and out-of-pocket expenses as provided in this Section 7 shall survive the termination of this Warrant Agreement.

7.7 If any provision of this Warrant Agreement shall be held illegal, invalid, or unenforceable by any court, this Warrant Agreement shall be construed and enforced as if such provision had not been contained herein and shall be deemed an Agreement among the parties to it to the full extent permitted by applicable law.

7.8 The Company represents and warrants that: (a) it is duly incorporated and validly existing under the laws of its jurisdiction of incorporation; (b) the offer and sale of the Warrants and the execution, delivery and performance of all transactions contemplated thereby (including this Warrant Agreement) have been duly authorized by all necessary corporate action and will not result in a breach of or constitute a default under the articles of association, bylaws or any similar document of the Company or any indenture, agreement or instrument to which it is a party or is bound; (c) this Warrant Agreement has been duly executed and delivered by the Company and constitutes the legal, valid, binding and enforceable obligation of the Company; (d) the Warrants will comply in all material respects with all applicable requirements of law; and (e) to the best of its knowledge, there is no litigation pending or threatened as of the date hereof in connection with the offering of the Warrants.

7.9 In the event of inconsistency between this Warrant Agreement and the descriptions in the Registration Statement, as they may from time to time be amended, the terms of this Warrant Agreement shall control.

7.10 Set forth in **Annex D** hereto is a list of the names and specimen signatures of the persons authorized to act for the Company under this Warrant Agreement (the “Authorized Representatives”). The Company shall, from time to time, certify to you the names and signatures of any other persons authorized to act for the Company under this Warrant Agreement.

7.11 Except as expressly set forth elsewhere in this Warrant Agreement, all notices, instructions and communications under this Agreement shall be in writing, shall be effective upon receipt and shall be addressed, if to the Company, at 21 East Long Lake Road, Suite 100, Bloomfield Hills, MI 48304, Attention: Keith Marchiando, E-mail: [*], or, if to the Warrant Agent, to Direct Transfer LLC, One Glenwood Avenue, Suite 1001, Raleigh, NC, 27603, Attention: Julie Felix, E-mail: [*] or to such other address of which a party hereto has notified the other party.

7.12 (a) This Warrant Agreement shall be governed by and construed in accordance with the laws of the State of New York. All actions and proceedings relating to or arising from, directly or indirectly, this Warrant Agreement may be litigated in courts located within the State of North Carolina. The Company hereby submits to the personal jurisdiction of such courts and consents that any service of process may be made by certified or registered mail, return receipt requested, directed to the Company at its address last specified for notices hereunder. Each of the parties hereto hereby waives the right to a trial by jury in any action or proceeding arising out of or relating to this Warrant Agreement. (b) This Warrant Agreement shall inure to the benefit of and be binding upon the successors and assigns of the parties hereto. This Warrant Agreement may not be assigned, or otherwise transferred, in whole or in part, by either party without the prior written consent of the other party, which the other party will not unreasonably withhold, condition or delay; except that (i) consent is not required for an assignment or delegation of duties by Warrant Agent to any affiliate of Warrant Agent and (ii) any reorganization, merger, consolidation, sale of assets or other form of business combination by Warrant Agent or the Company shall not be deemed to constitute an assignment of this Warrant Agreement. (c) No provision of this Warrant Agreement may be amended, modified or waived, except in a written document signed by both parties. The Company and the Warrant Agent may amend or supplement this Warrant Agreement without the consent of any Holder for the purpose of curing any ambiguity, or curing, correcting or supplementing any defective provision contained herein or adding or changing any other provisions with respect to matters or questions arising under this Agreement as the parties may deem necessary or desirable and that the parties determine, in good faith, shall not adversely affect the interest of the Holders. All other amendments and supplements shall require the vote or written consent of Holders of at least 50.1% of the then outstanding Warrants, provided that adjustments may be made to the Warrant terms and rights in accordance with Section 4 without the consent of the Holders.

7.13 Payment of Taxes. The Company will from time to time promptly pay all taxes and charges that may be imposed upon the Company or the Warrant Agent in respect of the issuance or delivery of Warrant Shares upon the exercise of Warrants, but the Company may, pursuant to the terms of the Warrant, require the Holders to pay any transfer taxes in respect of the Warrants or such shares. The Warrant Agent may refrain from registering any transfer of Warrants or any delivery of any Warrant Shares unless or until the persons requesting the registration or issuance shall have paid to the Warrant Agent for the account of the Company the amount of such tax or charge, if any, or shall have established to the reasonable satisfaction of the Company and the Warrant Agent that such tax or charge, if any, has been paid.

7.14 Resignation of Warrant Agent.

7.14.1 Appointment of Successor Warrant Agent. The Warrant Agent, or any successor to it hereafter appointed, may resign its duties and be discharged from all further duties and liabilities hereunder after giving thirty (30) days' notice in writing to the Company and the Holders of the Warrants, or such shorter period of time agreed to by the Company. The Company may terminate the services of the Warrant Agent, or any successor Warrant Agent, after giving thirty (30) days' notice in writing to the Warrant Agent or successor Warrant Agent and the Holders of the Warrants, or such shorter period of time as agreed. If the office of the Warrant Agent becomes vacant by resignation, termination or incapacity to act or otherwise, the Company shall appoint in writing a successor Warrant Agent in place of the Warrant Agent. If the Company shall fail to make such appointment within a period of 30 days after it has been notified in writing of such resignation or incapacity by the Warrant Agent, then the Warrant Agent or any Holder may apply to any court of competent jurisdiction for the appointment of a successor Warrant Agent at the Company's cost. Pending appointment of a successor to such Warrant Agent, either by the Company or by such a court, the duties of the Warrant Agent shall be carried out by the Company. Any successor Warrant Agent (but not including the initial Warrant Agent), whether appointed by the Company or by such court, shall be a person organized and existing under the laws of any state of the United States of America, in good standing, and authorized under such laws to exercise corporate trust powers and subject to supervision or examination by federal or state authority. After appointment, any successor Warrant Agent shall be vested with all the authority, powers, rights, immunities, duties, and obligations of its predecessor Warrant Agent with like effect as if originally named as Warrant Agent hereunder, without any further act or deed, and except for executing and delivering documents as provided in the sentence that follows, the predecessor Warrant Agent shall have no further duties, obligations, responsibilities or liabilities hereunder, but shall be entitled to all rights that survive the termination of this Warrant Agreement and the resignation or removal of the Warrant Agent, including but not limited to its right to indemnity hereunder. If for any reason it becomes necessary or appropriate or at the request of the Company, the predecessor Warrant Agent shall execute and deliver, at the expense of the Company, an instrument transferring to such successor Warrant Agent all the authority, powers, and rights of such predecessor Warrant Agent hereunder; and upon request of any successor Warrant Agent the Company shall make, execute, acknowledge, and deliver any and all instruments in writing for more fully and effectually vesting in and confirming to such successor Warrant Agent all such authority, powers, rights, immunities, duties, and obligations.

7.14.2 Notice of Successor Warrant Agent. In the event a successor Warrant Agent shall be appointed, the Company shall give notice thereof to the predecessor Warrant Agent and the transfer agent for the Common Stock not later than the effective date of any such appointment.

7.14.3 Merger or Consolidation of Warrant Agent. Any person into which the Warrant Agent may be merged or converted or with which it may be consolidated or any person resulting from any merger, conversion or consolidation to which the Warrant Agent shall be a party or any person succeeding to the shareowner services business of the Warrant Agent or any successor Warrant Agent shall be the successor Warrant Agent under this Warrant Agreement, without any further act or deed. For purposes of this Warrant Agreement, "person" shall mean any individual, firm, corporation, partnership, limited liability company, joint venture, association, trust or other entity, and shall include any successor (by merger or otherwise) thereof or thereto.

8. Miscellaneous Provisions.

8.1 Persons Having Rights under this Warrant Agreement. Nothing in this Warrant Agreement expressed and nothing that may be implied from any of the provisions hereof is intended, or shall be construed, to confer upon, or give to, any person or corporation other than the parties hereto and the Holders any right, remedy, or claim under or by reason of this Warrant Agreement or of any covenant, condition, stipulation, promise, or agreement hereof.

8.2 Examination of the Warrant Agreement. A copy of this Warrant Agreement shall be available at all reasonable times at the office of the Warrant Agent designated for such purpose for inspection by any Holder. Prior to such inspection, the Warrant Agent may require any such holder to provide reasonable evidence of its interest in the Warrants.

8.3 Counterparts. This Warrant Agreement may be executed in any number of original, facsimile or electronic counterparts and each of such counterparts shall for all purposes be deemed to be an original, and all such counterparts shall together constitute but one and the same instrument.

8.4 Effect of Headings. The Section headings herein are for convenience only and are not part of this Warrant Agreement and shall not affect the interpretation thereof.

9. Certain Definitions. As used herein, the following terms shall have the following meanings:

(a) “Business Day” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York are generally are open for use by customers on such day.

(b) “Standard Settlement Period” means the standard settlement period, expressed in a number of Trading Days, on the Company’s primary Trading Market with respect to the Common Stock as in effect on the date of delivery of the Notice of Exercise.

(c) “Trading Day” means any day on which the Common Stock is traded on the Trading Market.

(d) "Trading Market" means any of the following markets or exchanges on which the Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

(e) "Warrant Share Delivery Date" means the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company or the Warrant Agent of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company or the Warrant Agent of the Notice of Exercise, all subject to receipt of any cash payments required by the Holder.

[Signature Page to Follow]

IN WITNESS WHEREOF, this Warrant Agent Agreement has been duly executed by the parties hereto as of the day and year first above written.

ZIVO BIOSCIENCE, INC.

By: _____

Name: _____

Title: _____

DIRECT TRANSFER LLC

By: _____

Name: _____

Title: _____

Annex A - Form of Global Certificate
Annex B - Notice of Exercise
Annex C - Form of Certificated Warrant
Annex D - Authorized Representatives
Annex E - Form of Warrant Certificate Request Notice

[Signature Page-Warrant Agent Agreement
ZIVO Bioscience, Inc.]

ANNEX A-I
[FORM OF COMMON WARRANT GLOBAL CERTIFICATE]

UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY, A NEW YORK CORPORATION (“DTC”), TO ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE, OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

ZIVO BIOSCIENCE, INC.
GLOBAL WARRANT CERTIFICATE
NOT EXERCISABLE AFTER [____], 2028

This certifies that the person whose name and address appears below, or registered assigns, is the registered owner of the number of Warrants set forth below. Each Warrant entitles its registered holder to purchase from ZIVO BIOSCIENCE, INC., a Nevada corporation (the “Company”), at any time prior to 5:00 P.M. (New York City time) on [____], 2028 (the “Expiration Date”) (unless such date is not a Business Day, in which case the Expiration Date will be the next Business Day), one share of common stock, par value \$0.001 per share, of the Company (each, a “Warrant Share” and collectively, the “Warrant Shares”), at an exercise price of \$[] per share, subject to possible adjustments as provided in the Warrant Agreement (as defined below).

This Warrant Certificate, with or without other Warrant Certificates, upon surrender at the designated office of the Warrant Agent, may be exchanged for another Warrant Certificate or Warrant Certificates evidencing the same number of Warrants as the Warrant Certificate or Warrant Certificates surrendered. A transfer of the Warrants evidenced hereby may be registered upon surrender of this Warrant Certificate at the designated office of the Warrant Agent by the registered holder in person or by a duly authorized attorney, properly endorsed or accompanied by proper instruments of transfer, a signature guarantee, and such other and further documentation as the Warrant Agent may reasonably request and duly stamped as may be required by the laws of the State of New York and of the United States of America.

The terms and conditions of the Warrants and the rights and obligations of the holder of this Warrant Certificate are set forth in the Warrant Agent Agreement dated as of [____], 2023, including, but not limited to, the terms set forth in the Definitive Certificate in the form attached thereto as Annex C (the “Warrant Agreement”) by and between the Company and Direct Transfer LLC (the “Warrant Agent”). A copy of the Warrant Agreement is available for inspection during business hours at the office of the Warrant Agent.

This Warrant Certificate shall not be valid or obligatory for any purpose until it shall have been countersigned by an authorized signatory of the Warrant Agent.

Annex A-I

WITNESS the facsimile signature of a proper officer of the Company.

ZIVO BIOSCIENCE, INC.

By: _____

Name: _____

Title: _____

Dated: [____], 2023
Countersigned:
DIRECT TRANSFER LLC
as Warrant Agent
By:
Name:
Title:

PLEASE DETACH HERE

Certificate No.: 1 Number of Warrants

WARRANT CUSIP NO.: [_____]

Cede & Co.

DIRECT TRANSFER LLC
By Mail:
One Glenwood Avenue, Suite 1001
Raleigh, NC, 27603
By hand or overnight courier:

Annex A-I

NNEX A-II
[FORM OF PREFUNDED GLOBAL CERTIFICATE]

UNLESS THIS CERTIFICATE IS PRESENTED BY AN AUTHORIZED REPRESENTATIVE OF THE DEPOSITORY TRUST COMPANY, A NEW YORK CORPORATION ("DTC"), TO ISSUER OR ITS AGENT FOR REGISTRATION OF TRANSFER, EXCHANGE, OR PAYMENT, AND ANY CERTIFICATE ISSUED IS REGISTERED IN THE NAME OF CEDE & CO. OR IN SUCH OTHER NAME AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC (AND ANY PAYMENT IS MADE TO CEDE & CO. OR TO SUCH OTHER ENTITY AS IS REQUESTED BY AN AUTHORIZED REPRESENTATIVE OF DTC), ANY TRANSFER, PLEDGE, OR OTHER USE HEREOF FOR VALUE OR OTHERWISE BY OR TO ANY PERSON IS WRONGFUL INASMUCH AS THE REGISTERED OWNER HEREOF, CEDE & CO., HAS AN INTEREST HEREIN.

ZIVO BIOSCIENCE, INC.
GLOBAL PREFUNDED WARRANT CERTIFICATE

This certifies that the person whose name and address appears below, or registered assigns, is the registered owner of the number of Prefunded Warrants set forth below. Each Prefunded Warrant entitles its registered holder to purchase from ZIVO BIOSCIENCE, INC., a Nevada corporation (the "Company"), at any time until this Prefunded Warrant is exercised in full, one share of common stock, par value \$0.001 per share, of the Company (each, a "Prefunded Warrant Share" and collectively, the "Prefunded Warrant Shares"), at an exercise price of \$[] per share, subject to possible adjustments as provided in the Warrant Agreement (as defined below).

This Prefunded Warrant Certificate, with or without other Prefunded Warrant Certificates, upon surrender at the designated office of the Warrant Agent, may be exchanged for another Prefunded Warrant Certificate or Prefunded Warrant Certificates evidencing the same number of Prefunded Warrants as the Prefunded Warrant Certificate or Prefunded Warrant Certificates surrendered. A transfer of the Prefunded Warrants evidenced hereby may be registered upon surrender of this Prefunded Warrant Certificate at the designated office of the Warrant Agent by the registered holder in person or by a duly authorized attorney, properly endorsed or accompanied by proper instruments of transfer, a signature guarantee, and such other and further documentation as the Warrant Agent may reasonably request and duly stamped as may be required by the laws of the State of New York and of the United States of America.

The terms and conditions of the Prefunded Warrants and the rights and obligations of the holder of this Prefunded Warrant Certificate are set forth in the Warrant Agent Agreement dated as of [____], 2023, including, but not limited to, the terms set forth in the Definitive Certificate in the form attached thereto as Annex C (the "Warrant Agreement") by and between the Company and Direct Transfer LLC (the "Warrant Agent"). A copy of the Warrant Agreement is available for inspection during business hours at the office of the Warrant Agent.

This Prefunded Warrant Certificate shall not be valid or obligatory for any purpose until it shall have been countersigned by an authorized signatory of the Warrant Agent.

WITNESS the facsimile signature of a proper officer of the Company.

ZIVO BIOSCIENCE, INC.

By: _____

Name: _____

Title: _____

Dated: [____], 2023
Countersigned:
DIRECT TRANSFER LLC
as Warrant Agent
By:
Name:
Title:

PLEASE	DETACH	HERE
Certificate No.: 1 Number of Warrants		

PREFUNDED WARRANT CUSIP NO.: [_____]

Cede & Co.

DIRECT TRANSFER LLC
By Mail:
One Glenwood Avenue, Suite 1001
Raleigh, NC, 27603
By hand or overnight courier:

Annex A-II

ANNEX B
NOTICE OF EXERCISE

TO: ZIVO BIOSCIENCE, INC.

(1) The undersigned hereby elects to purchase _____ Prefunded Warrant Shares of the Company pursuant to the terms of the attached Prefunded Warrant (only required if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

☐ in lawful money of the United States; or

☐ if permitted the cancellation of such number of Prefunded Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Prefunded Warrant with respect to the maximum number of Prefunded Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Prefunded Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Prefunded Warrant Shares shall be delivered to the following DWAC Account Number:

DTC number:

Account name:

Account number:

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing

Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:

Annex B

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name:

(Please Print)

Address:

(Please Print)

Phone Number:

Email Address:

Dated:

Holder's Signature:

Holder's Address:

[Signature Guarantee]

Annex B

ANNEX C
FORM OF CERTIFICATED WARRANT
COMMON STOCK PURCHASE WARRANT
PREFUNDED WARRANT
ZIVO BIOSCIENCE, INC.

Warrant Shares: _____

Initial Exercise Date: [] [], 2023
Issue Date: [] [], 2023

Annex C

ANNEX D
AUTHORIZED REPRESENTATIVES

Name	Title	Signature
John B Payne	Chief Executive Officer	
Keith Marchiando	Chief Financial Officer	

Annex D

ANNEX E
Form of Warrant Certificate Request Notice

WARRANT CERTIFICATE REQUEST NOTICE

To: Direct Transfer LLC, as Warrant Agent for ZIVO Bioscience, Inc. (the “Company”)

The undersigned Holder of Common Stock Purchase Warrants (“Warrants”) in the form of Global Warrants issued by the Company hereby elects to receive a Definitive Certificate evidencing the Warrants held by the Holder as specified below:

1. Name of Holder of Warrants in form of Global Warrants:

2. Name of Holder in Definitive Certificate (if different from name of Holder of Warrants in form of Global Warrants):

3. Number of Warrants in name of Holder in form of Global Warrants:

4. Number of Warrants for which Definitive Certificate shall be issued:

5. Number of Warrants in name of Holder in form of Global Warrants after issuance of Definitive Certificate, if any:

6. Definitive Certificate shall be delivered to the following address:

The undersigned hereby acknowledges and agrees that, in connection with this Warrant Exchange and the issuance of the Definitive Certificate, the Holder is deemed to have surrendered the number of Warrants in form of Global Warrants in the name of the Holder equal to the number of Warrants evidenced by the Definitive Certificate.

Annex E

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:

Annex E

PRE-FUNDED COMMON STOCK PURCHASE WARRANT

ZIVO BIOSCIENCE, INC.

Warrant Shares: [●]
 CUSIP: 98978N 101
 ISIN: [●]

Initial Exercise Date: [●], 2023

THIS PRE-FUNDED COMMON STOCK PURCHASE WARRANT (this “Warrant”) certifies that, for value received, or its assigns (the “Holder”), is entitled, upon the terms and subject to the limitations on exercise and the conditions hereinafter set forth, at any time on or after the date hereof (the “Initial Exercise Date”), and until this Warrant is exercised in full (the “Termination Date”) but not thereafter, to subscribe for and purchase from Zivo Bioscience, Inc., a Nevada corporation (the “Company”), up to [●] shares of common stock, par value \$0.001 per share (“Common Stock”), of the Company (as subject to adjustment hereunder, the “Warrant Shares”). The purchase price per share of Common Stock under this Warrant shall be equal to the Aggregate Exercise Price, as defined in Section 2(b). This Warrant shall initially be issued and maintained in the form of a security held in book-entry form, and The Depository Trust Company or its nominee (“DTC”) shall initially be the sole registered holder of this Warrant, subject to a Holder’s right to elect to receive a Warrant in certificated form pursuant to the terms of the Warrant Agency Agreement, in which case this sentence shall not apply.

Section 1. Definitions. In addition to the terms defined elsewhere in this Warrant, the following terms have the meanings indicated in this Section 1:

“Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person, as such terms are used in and construed under Rule 405 under the Securities Act.

“Bid Price” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Shares are then listed or quoted on a Trading Market, the bid price of the Shares for the time in question (or the nearest preceding date) on the Trading Market on which the Shares are then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Shares for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Shares are not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Shares are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per Share so reported, or (d) in all other cases, the fair market value of a Share as determined by an independent appraiser selected in good faith by the Holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Business Day” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York are generally are open for use by customers on such day.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Shares, including, without limitation, any debt, preferred stock, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Shares.

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Purchase Agreement” means the Securities Purchase Agreement, dated as of [●], 2023 among the Company and certain purchasers signatory thereto, as amended, modified or supplemented from time to time in accordance with its terms.

“Registration Statement” means the Company’s registration statement on Form S-1 (File No. 333-[●]).

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Shares” means shares of Common Stock and any other class of securities into which such securities may hereafter be reclassified or changed.

“Subsidiary” means any subsidiary of the Company, which is actively engaged in a trade or business, and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the Shares are traded on a Trading Market.

“Trading Market” means any of the following markets or exchanges on which the Common Shares are listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market or the New York Stock Exchange (or any successors to any of the foregoing).

“Transfer Agent” means Issuer Direct Corporation, the current transfer agent of the Company with a mailing address of [●], and any successor transfer agent of the Company.

“VWAP” means, for any date, the price determined by the first of the following clauses that applies: (a) if the Shares are then listed or quoted on a Trading Market, the daily volume weighted average price of the Shares for such date (or the nearest preceding date) on the Trading Market on which the Shares are then listed or quoted as reported by Bloomberg L.P. (based on a Trading Day from 9:30 a.m. (New York City time) to 4:02 p.m. (New York City time)), (b) if OTCQB or OTCQX is not a Trading Market, the volume weighted average price of the Shares for such date (or the nearest preceding date) on OTCQB or OTCQX as applicable, (c) if the Shares are not then listed or quoted for trading on OTCQB or OTCQX and if prices for the Shares are then reported on the Pink Open Market (or a similar organization or agency succeeding to its functions of reporting prices), the most recent bid price per Share so reported, or (d) in all other cases, the fair market value of a Share as determined by an independent appraiser selected in good faith by the holders of a majority in interest of the Warrants then outstanding and reasonably acceptable to the Company, the fees and expenses of which shall be paid by the Company.

“Warrant Agency Agreement” means that certain warrant agency agreement, dated on or about the Initial Exercise Date, between the Company and the Warrant Agent.

“Warrant Agent” means the Transfer Agent or its affiliate that acts as warrant agent and any successor warrant agent of the Company.

“Warrants” means this Warrant and all other Pre-Funded Common Stock Purchase Warrants issued by the Company pursuant to the Registration Statement.

Section 2. Exercise.

a) Exercise of Warrant. Exercise of the purchase rights represented by this Warrant may be made, in whole or in part, at any time or times on or after the Initial Exercise Date and on or before the Termination Date by delivery to the Company of a duly executed PDF copy submitted by e-mail (or e-mail attachment) of the Notice of Exercise in the form annexed hereto (the “Notice of Exercise”). Within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period (as defined in Section 2(d)(i) herein) following the date of exercise as aforesaid, the Holder shall deliver the aggregate Exercise Price for the shares specified in the applicable Notice of Exercise by wire transfer unless the cashless exercise procedure specified in Section 2(c) below is specified in the applicable Notice of Exercise. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise be required. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company or the Warrant Agent until the Holder has purchased all of the Warrant Shares available hereunder and the Warrant has been exercised in full, in which case, the Holder shall surrender this Warrant to the Company or the Warrant Agent for cancellation within five (5) Trading Days of the date on which the final Notice of Exercise is delivered to the Company. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. **The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within two (2) Trading Days of receipt of such notice. The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may be less than the amount stated on the face hereof.**

Notwithstanding the foregoing in this Section 2(a), a holder whose interest in this Warrant is a beneficial interest in certificate(s) representing this Warrant held in book-entry form through DTC (or another established clearing corporation performing similar functions), shall effect exercises made pursuant to this Section 2(a) by delivering to DTC (or such other clearing corporation, as applicable) the appropriate instruction form for exercise, complying with the procedures to effect exercise that are required by DTC (or such other clearing corporation, as applicable), subject to a Holder’s right to elect to receive a Definitive Warrant pursuant to the terms of the Warrant Agency Agreement, in which case this sentence shall not apply. Notwithstanding anything to the contrary contained herein, a beneficial holder of the Warrant shall have all of the rights and remedies of the “Holder” hereunder.

b) Exercise Price. The aggregate exercise price of this Warrant, except for a nominal exercise price of \$[●] per Warrant Share (the “Aggregate Exercise Price”), was pre-funded to the Company on or prior to the Initial Exercise Date and, consequently, no additional consideration (other than the nominal exercise price of \$[●] per Warrant Share) shall be required to be paid by the Holder to any Person to effect any exercise of this Warrant. The Holder shall not be entitled to the return or refund of all, or any portion, of the pre-paid Aggregate Exercise Price under any circumstance or for any reason whatsoever, including in the event this Warrant shall not have been exercised prior to the Termination Date. The remaining unpaid exercise price per Warrant Share under this Warrant shall be \$[●], subject to adjustment hereunder (the “Exercise Price”).

c) Cashless Exercise. This Warrant may also be exercised, in whole or in part, at such time by means of a “cashless exercise” in which the Holder shall be entitled to receive a number of Warrant Shares equal to the quotient obtained by dividing [(A-B) (X)] by (A), where:

(A) = as applicable: (i) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise if such Notice of Exercise is (1) both executed and delivered pursuant to Section 2(a) hereof on a day that is not a Trading Day or (2) both executed and delivered pursuant to Section 2(a) hereof on a Trading Day prior to the opening of “regular trading hours” (as defined in Rule 600(b) of Regulation NMS promulgated under the federal securities laws) on such Trading Day, (ii) at the option of the Holder, either (y) the VWAP on the Trading Day immediately preceding the date of the applicable Notice of Exercise or (z) the Bid Price of the Shares on the principal Trading Market as reported by Bloomberg L.P. as of the time of the Holder’s execution of the applicable Notice of Exercise if such Notice of Exercise is executed during “regular trading hours” on a Trading Day and is delivered within two (2) hours thereafter (including until two (2) hours after the close of “regular trading hours” on a Trading Day) pursuant to Section 2(a) hereof or (iii) the VWAP on the date of the applicable Notice of Exercise if the date of such Notice of Exercise is a Trading Day and such Notice of Exercise is both executed and delivered pursuant to Section 2(a) hereof after the close of “regular trading hours” on such Trading Day;

(B) = the Exercise Price of this Warrant, as adjusted hereunder; and

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

If Warrant Shares are issued in such a cashless exercise, the parties acknowledge and agree that in accordance with Section 3(a)(9) of the Securities Act, the Warrant Shares shall take on the registered characteristics of the Warrants being exercised. The Company agrees not to take any position contrary to this Section 2(c).

d) Mechanics of Exercise.

i. Delivery of Warrant Shares Upon Exercise. The Company shall cause the Warrant Shares purchased hereunder to be transmitted by the Transfer Agent to the Holder by crediting the account of the Holder's or its designee's balance account with The Depository Trust Company through its Deposit or Withdrawal at Custodian system ("DWAC") if the Company is then a participant in such system and either (A) there is an effective registration statement permitting the issuance of the Warrant Shares to the Holder or (B) this Warrant is being exercised via cashless exercise, and otherwise by physical delivery of a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of Warrant Shares to which the Holder is entitled pursuant to such exercise to the address specified by the Holder in the Notice of Exercise by the date that is the earliest of (i) two (2) Trading Days after the delivery to the Company or the Warrant Agent of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Company and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to the Company or the Warrant Agent of the Notice of Exercise (such date, the "Warrant Share Delivery Date"). Upon delivery of the Notice of Exercise, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date of delivery of the Warrant Shares, provided that payment of the aggregate Exercise Price (other than in the case of a cashless exercise) is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver or cause the delivery to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each \$1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Shares on the date of the applicable Notice of Exercise), \$10 per Trading Day (increasing to \$20 per Trading Day on the fifth (5th) Trading Day after the Warrant Share Delivery Date) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Shares as in effect on the date of delivery of the Notice of Exercise. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise delivered on or prior to 12:00 p.m. (New York City time) on the Initial Exercise Date, which may be delivered at any time after the time of execution of the Purchase Agreement, the Company agrees to deliver the Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Initial Exercise Date and the Initial Exercise Date shall be the Warrant Share Delivery Date for purposes hereunder. Notwithstanding anything to the contrary contained herein, the Company shall not be required to deliver any Shares upon a cash exercise of a Warrant unless or until the aggregate Exercise Price with respect to such exercise has been delivered to the Company.

ii. Delivery of New Warrants Upon Exercise. If this Warrant shall have been exercised in part, the Company shall, at the request of a Holder and upon surrender of this Warrant certificate, at the time of delivery of the Warrant Shares, deliver or cause the Warrant Agent to deliver to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

iii. Rescission Rights. If the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares pursuant to Section 2(d)(i) by the Warrant Share Delivery Date, then the Holder will have the right to rescind such exercise.

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date (other than any such failure that is due to any action or inaction by the Holder with respect to such exercise), and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, Shares to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) provided that such price set forth in (y)(2) of this clause (A) is on actual market terms, pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the Shares so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of Shares that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Shares having a total purchase price of \$11,000 to cover a Buy-In with respect to an attempted exercise of this Warrant to purchase Shares with an aggregate sale price giving rise to such purchase obligation of \$10,000, under clause (A) of the immediately preceding sentence, the Company shall be required to pay the Holder \$1,000. The Holder shall provide the Company written notice indicating the amounts payable to the Holder in respect of the Buy-In and, upon request of the Company, evidence of the amount of such loss. Nothing herein shall limit a Holder's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver Shares upon exercise of the Warrant as required pursuant to the terms hereof.

v. No Fractional Shares or Scrip. No fractional shares or scrip representing fractional shares shall be issued upon the exercise of this Warrant. As to any fraction of a share which the Holder would otherwise be entitled to purchase upon such exercise, the Company shall, at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Exercise Price or round up to the nearest whole share.

vi. Charges, Taxes and Expenses. Issuance of Warrant Shares shall be made without charge to the Holder for any issue or transfer tax or other incidental expense in respect of the issuance of such Warrant Shares, all of which taxes and expenses shall be paid by the Company, and such Warrant Shares shall be issued in the name of the Holder or in such name or names as may be directed by the Holder; provided, however, that, in the event that Warrant Shares are to be issued in a name other than the name of the Holder, this Warrant when surrendered for exercise shall be accompanied by the Assignment Form attached hereto duly executed by the Holder and the Company may require, as a condition thereto, the payment of a sum sufficient to reimburse it for any transfer tax incidental thereto. The Company shall pay all Transfer Agent fees required for same-day processing of any Notice of Exercise and all fees to The Depository Trust Company (or another established clearing corporation performing similar functions) required for same-day electronic delivery of the Warrant Shares.

vii. Closing of Books. The Company will not close its stockholder books or records in any manner which prevents the timely exercise of this Warrant, pursuant to the terms hereof.

e) Holder's Exercise Limitations. The Company shall not effect any exercise of this Warrant, and a Holder shall not have the right to exercise any portion of this Warrant, pursuant to Section 2 or otherwise, to the extent that after giving effect to such issuance after exercise as set forth on the applicable Notice of Exercise, the Holder (together with the Holder's Affiliates, and any other Persons acting as a group together with the Holder or any of the Holder's Affiliates (such Persons, "Attribution Parties")), would beneficially own in excess of the Beneficial Ownership Limitation (as defined below). For purposes of the foregoing sentence, the number of Shares beneficially owned by the Holder and its Affiliates and Attribution Parties shall include the number of Shares issuable upon exercise of this Warrant with respect to which such determination is being made, but shall exclude the number of Shares which would be issuable upon (i) exercise of the remaining, nonexercised portion of this Warrant beneficially owned by the Holder or any of its Affiliates or Attribution Parties and (ii) exercise or conversion of the unexercised or nonconverted portion of any other securities of the Company (including, without limitation, any other Common Stock Equivalents) subject to a limitation on conversion or exercise analogous to the limitation contained herein beneficially owned by the Holder or any of its Affiliates or Attribution Parties. Except as set forth in the preceding sentence, for purposes of this Section 2(e), beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder, it being acknowledged by the Holder that the Company is not representing to the Holder that such calculation is in compliance with Section 13(d) of the Exchange Act and the Holder is solely responsible for any schedules required to be filed in accordance therewith. To the extent that the limitation contained in this Section 2(e) applies, the determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable shall be in the sole discretion of the Holder, and the submission of a Notice of Exercise shall be deemed to be the Holder's determination of whether this Warrant is exercisable (in relation to other securities owned by the Holder together with any Affiliates and Attribution Parties) and of which portion of this Warrant is exercisable, in each case subject to the Beneficial Ownership Limitation, and the Company shall have no obligation to verify or confirm the accuracy of such determination. In addition, a determination by the Holder as to any group status as contemplated above shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. For purposes of this Section 2(e), in determining the total number of outstanding Shares, a Holder may rely on the number of outstanding Shares as reflected in (A) the Company's most recent periodic or annual report filed with the Commission, as the case may be, (B) a more recent public announcement by the Company or (C) a more recent written notice by the Company or the Transfer Agent setting forth the number of Shares outstanding. Upon the written request of a Holder, the Company shall within one Trading Day confirm in writing to the Holder the number of Shares then outstanding. In any case, the number of outstanding Shares shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder or its Affiliates or Attribution Parties since the date as of which such number of outstanding Shares was reported. The "Beneficial Ownership Limitation" shall be 4.99% (or, upon election by a Holder prior to the issuance of any Warrants, 9.99%) of the number of Shares outstanding immediately after giving effect to the issuance of Shares issuable upon exercise of this Warrant. The Holder, upon notice to the Company, may increase or decrease the Beneficial Ownership Limitation provisions of this Section 2(e), provided that the Beneficial Ownership Limitation shall in no event exceed 9.99% of the number of Shares outstanding immediately after giving effect to the issuance of Shares upon exercise of this Warrant held by the Holder and the provisions of this Section 2(e) shall continue to apply. Any increase in ownership of Shares in excess of the Beneficial Ownership Limitation will not be effective until the 61st day after such notice is delivered to the Company. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 2(e) in order to correct this paragraph (or any portion hereof), if necessary, which may be defective or inconsistent with the intended Beneficial Ownership Limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation. The limitations contained in this paragraph shall apply to a successor holder of this Warrant.

Section 3. Certain Adjustments.

a) Stock Dividends and Splits. If the Company, at any time while this Warrant is outstanding: (i) pays a stock dividend or otherwise makes a distribution or distributions on Shares or any other common equity equivalent securities payable in Shares (which, for avoidance of doubt, shall not include any Shares issued by the Company upon exercise of this Warrant), (ii) subdivides outstanding Shares into a larger number of shares, (iii) combines (including by way of reverse stock split) outstanding Shares into a smaller number of shares, or (iv) issues by reclassification of Shares any shares of capital stock of the Company, then in each case the Exercise Price shall be multiplied by a fraction of which the numerator shall be the number of Shares (excluding treasury shares, if any) outstanding immediately before such event and of which the denominator shall be the number of Shares outstanding immediately after such event, and the number of shares issuable upon exercise of this Warrant shall be proportionately adjusted such that the aggregate Exercise Price of this Warrant shall remain unchanged. Any adjustment made pursuant to this Section 3(a) shall become effective immediately after the record date for the determination of stockholders entitled to receive such dividend or distribution and shall become effective immediately after the effective date in the case of a subdivision, combination or re-classification.

b) Subsequent Rights Offerings. In addition to any adjustments pursuant to Section 3(a) above, if at any time the Company grants, issues or sells any Common Stock Equivalents or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Shares (the "Purchase Rights"), then the Holder will be entitled to acquire, upon the terms applicable to such Purchase Rights, the aggregate Purchase Rights which the Holder could have acquired if the Holder had held the number of Shares acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date on which a record is taken for the grant, issuance or sale of such Purchase Rights, or, if no such record is taken, the date as of which the record holders of Shares are to be determined for the grant, issue or sale of such Purchase Rights (provided, however, that, to the extent that the Holder's right to participate in any such Purchase Right would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Purchase Right to such extent (or beneficial ownership of such Shares as a result of such Purchase Right to such extent) and such Purchase Right to such extent shall be held in abeyance for the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

c) Pro Rata Distributions. During such time as this Warrant is outstanding, if the Company shall declare or make any dividend or other distribution of its assets (or rights to acquire its assets) to holders of Shares, by way of return of capital or otherwise (including, without limitation, any distribution of cash, stock or other securities, property or options by way of a dividend, spin off, reclassification, corporate rearrangement, scheme of arrangement or other similar transaction) (except to the extent an adjustment was already made pursuant to Section 3(a)) (a "Distribution"), at any time after the issuance of this Warrant, then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of Shares acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Beneficial Ownership Limitation) immediately before the date of which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of Shares are to be determined for the participation in such Distribution (provided, however, that, to the extent that the Holder's right to participate in any such Distribution would result in the Holder exceeding the Beneficial Ownership Limitation, then the Holder shall not be entitled to participate in such Distribution to such extent (or in the beneficial ownership of any Shares as a result of such Distribution to such extent) and the portion of such Distribution shall be held in abeyance for the benefit of the Holder until such time, if ever, as its right thereto would not result in the Holder exceeding the Beneficial Ownership Limitation).

d) Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company or any Subsidiaries, directly or indirectly, effects any sale, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Shares are permitted to sell, tender or exchange their shares for other securities, cash or property and has been accepted by the holders of 50% or more of the outstanding Shares or 50% or more of the voting power of the common equity of the Company, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Shares or any compulsory share exchange pursuant to which the Shares are effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off, merger, or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires 50% or more of the outstanding Shares or 50% or more of the voting power of the common equity of the Company (each a “Fundamental Transaction”), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of Shares of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the “Alternate Consideration”) receivable as a result of such Fundamental Transaction by a holder of the number of Shares for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one Share in such Fundamental Transaction, and the Company shall apportion the Exercise Price among the Alternate Consideration in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Shares are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holder shall be given the same choice as to the Alternate Consideration it receives upon any exercise of this Warrant following such Fundamental Transaction. The Company shall cause any successor entity in a Fundamental Transaction in which the Company is not the survivor (the “Successor Entity”) to assume in writing all of the obligations of the Company under this Warrant in accordance with the provisions of this Section 3(d) pursuant to written agreements in form and substance reasonably satisfactory to the Holder and approved by the Holder (without unreasonable delay) prior to such Fundamental Transaction and shall, at the option of the Holder, deliver to the Holder in exchange for this Warrant a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant which is exercisable for a corresponding number of shares of capital stock of such Successor Entity (or its parent entity) equivalent to the Shares acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and with an exercise price which applies the exercise price hereunder to such shares of capital stock (but taking into account the relative value of the Shares pursuant to such Fundamental Transaction and the value of such shares of capital stock, such number of shares of capital stock and such exercise price being for the purpose of protecting the economic value of this Warrant immediately prior to the consummation of such Fundamental Transaction) and which is reasonably satisfactory in form and substance to the Holder. Upon the occurrence of any such Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the “Company” shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein.

e) Calculations. All calculations under this Section 3 shall be made to the nearest cent or the nearest 1/100th of a share, as the case may be. For purposes of this Section 3, the number of Shares deemed to be issued and outstanding as of a given date shall be the sum of the number of Shares (excluding treasury shares, if any) issued and outstanding.

f) Notice to Holder.

i. Adjustment to Exercise Price. Whenever the Exercise Price is adjusted pursuant to any provision of this Section 3, the Company shall promptly deliver to the Holder by facsimile or email a notice setting forth the Exercise Price after such adjustment and any resulting adjustment to the number of Warrant Shares and setting forth a brief statement of the facts requiring such adjustment.

ii. Notice to Allow Exercise by Holder. If (A) the Company shall declare a dividend (or any other distribution in whatever form) on the Shares, (B) the Company shall declare a special nonrecurring cash dividend on or a redemption of the Shares, (C) the Company shall authorize the granting to all holders of the Shares rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Company shall be required in connection with any reclassification of the Shares, any consolidation or merger to which the Company is a party, any sale or transfer of all or substantially all of the assets of the Company, or any compulsory share exchange whereby the Shares are converted into other securities, cash or property, or (E) the Company shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Company, then, in each case, the Company shall cause to be delivered by facsimile or email to the Holder at its last facsimile number or email address as it shall appear upon the Warrant Register of the Company, at least ten (10) trading days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Shares of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Shares of record shall be entitled to exchange their Shares for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange; provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice. To the extent that any notice provided in this Warrant constitutes, or contains, material, non-public information regarding the Company or any of the Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K. The Holder shall remain entitled to exercise this Warrant during the period commencing on the date of such notice to the effective date of the event triggering such notice except as may otherwise be expressly set forth herein.

Section 4. Transfer of Warrant.

a) Transferability. This Warrant and all rights hereunder are transferable, in whole or in part, upon surrender of this Warrant at the principal office of the Company or its designated agent, together with a written assignment of this Warrant substantially in the form attached hereto duly executed by the Holder or its agent or attorney and funds sufficient to pay any transfer taxes payable upon the making of such transfer. Upon such surrender and, if required, such payment, the Company shall execute and deliver a new Warrant or Warrants in the name of the assignee or assignees, as applicable, and in the denomination or denominations specified in such instrument of assignment, and shall issue to the assignor a new Warrant evidencing the portion of this Warrant not so assigned, and this Warrant shall promptly be cancelled. Notwithstanding anything herein to the contrary, the Holder shall not be required to physically surrender this Warrant to the Company unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Company within five (5) Trading Days of the date on which the Holder delivers an assignment form to the Company assigning this Warrant in full. This Warrant, if properly assigned in accordance herewith, may be exercised by a new holder for the purchase of Warrant Shares without having a new Warrant issued.

b) New Warrants. If this Warrant is not held in global form through DTC (or any successor depository), this Warrant may be divided or combined with other Warrants upon presentation hereof at the aforesaid office of the Company, together with a written notice specifying the names and denominations in which new Warrants are to be issued, signed by the Holder or its agent or attorney. Subject to compliance with Section 4(a), as to any transfer which may be involved in such division or combination, the Company shall execute and deliver a new Warrant or Warrants in exchange for the Warrant or Warrants to be divided or combined in accordance with such notice. All Warrants issued on transfers or exchanges shall be dated the initial issuance date of this Warrant and shall be identical with this Warrant except as to the number of Warrant Shares issuable pursuant thereto.

c) Warrant Register. The Warrant Agent (or, in the event a Holder elects to receive a Definitive Certificate (as defined in the Warrant Agency Agreement), the Company) shall register this Warrant, upon records to be maintained by the Warrant Agent (or, in the event a Holder elects to receive a Definitive Certificate, the Company) for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Company and the Warrant Agent may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise; No Settlement in Cash. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i), except as expressly set forth in Section 3. Without limiting any rights of a Holder to receive Warrant Shares on a "cashless exercise" pursuant to Section 2(c) or to receive cash payments pursuant to Section 2(d)(i) and Section 2(d)(iv) herein, in no event shall the Company be required to net cash settle an exercise of this Warrant.

b) Loss, Theft, Destruction or Mutilation of Warrant. The Company covenants that upon receipt by the Company of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of this Warrant or any stock certificate relating to the Warrant Shares, and in case of loss, theft or destruction, of indemnity or security reasonably satisfactory to it (which, in the case of the Warrant, shall not include the posting of any bond), and upon surrender and cancellation of such Warrant or stock certificate, if mutilated, the Company will make and deliver a new Warrant or stock certificate of like tenor and dated as of such cancellation, in lieu of such Warrant or stock certificate.

c) Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Trading Day, then, such action may be taken or such right may be exercised on the next succeeding Trading Day.

d) Authorized Shares.

The Company covenants that, during the period the Warrant is outstanding, it will reserve from its authorized and unissued Shares a sufficient number of shares to provide for the issuance of the Warrant Shares upon the exercise of any purchase rights under this Warrant. The Company further covenants that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of issuing the necessary Warrant Shares upon the exercise of the purchase rights under this Warrant. The Company will take all such reasonable action as may be necessary to assure that such Warrant Shares may be issued as provided herein without violation of any applicable law or regulation, or of any requirements of the Trading Market upon which the Shares may be listed. The Company covenants that all Warrant Shares which may be issued upon the exercise of the purchase rights represented by this Warrant will, upon exercise of the purchase rights represented by this Warrant and payment for such Warrant Shares in accordance herewith, be duly authorized, validly issued, fully paid and nonassessable and free from all taxes, liens and charges created by the Company in respect of the issue thereof (other than taxes in respect of any transfer occurring contemporaneously with such issue).

Except and to the extent as waived or consented to by the holders of a majority of the then outstanding Warrants (based on the number of Warrant Shares underlying such Warrants), the Company shall not by any action, including, without limitation, amending its articles of incorporation or through any reorganization, transfer of assets, consolidation, merger, dissolution, issue or sale of securities or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such actions as may be necessary or appropriate to protect the rights of Holder as set forth in this Warrant against impairment. Without limiting the generality of the foregoing, the Company will (i) not increase the par value of any Warrant Shares above the amount payable therefor upon such exercise immediately prior to such increase in par value, (ii) take all such action as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable Warrant Shares upon the exercise of this Warrant and (iii) use commercially reasonable efforts to obtain all such authorizations, exemptions or consents from any public regulatory body having jurisdiction thereof, as may be, necessary to enable the Company to perform its obligations under this Warrant.

Before taking any action which would result in an adjustment in the number of Warrant Shares for which this Warrant is exercisable or in the Exercise Price, the Company shall obtain all such authorizations or exemptions thereof, or consents thereto, as may be necessary from any public regulatory body or bodies having jurisdiction thereof.

e) **Governing Law.** All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, stockholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding. In addition to and without limiting the foregoing, the Company has confirmed that it has appointed Honigman LLP, with a business address at 2290 First National Building, 600 Woodward Avenue, Detroit, MI 48226, as its authorized agent (the "Authorized Agent") upon whom process may be served in any suit, action or proceeding arising out of or based upon this Warrant or the transactions contemplated herein which may be instituted in any New York federal or state court, by a Holder, the directors, officers, partners, employees and agents of such Holder and each affiliate of such Holder, and expressly accept the non-exclusive jurisdiction of any such court in respect of any such suit, action or proceeding. The Company hereby represents and warrants that the Authorized Agent has accepted such appointment and has agreed to act as said agent for service of process, and the Company agrees to take any and all action, including the filing of any and all documents that may be necessary to continue such appointment in full force and effect as aforesaid. The Company hereby authorizes and directs the Authorized Agent to accept such service. Service of process upon the Authorized Agent shall be deemed, in every respect, effective service of process upon the Company. If the Authorized Agent shall cease to act as agent for service of process, the Company shall appoint, without unreasonable delay, another such agent in the United States, and notify the Holders of such appointment. Notwithstanding the foregoing and except as set forth herein, any action arising out of or based upon this Warrant may be instituted by a Holder, the directors, officers, partners, employees and agents of the Holder (if applicable) and each respective affiliate of the Holder, in any court of competent jurisdiction in the Republic of the Marshall Islands. Notwithstanding the foregoing, nothing in this paragraph shall limit or restrict the federal district court in which a Holder may bring a claim under the federal securities laws. This paragraph shall survive any termination of this Warrant, in whole or in part.

f) Restrictions. The Holder acknowledges that the Warrant Shares acquired upon the exercise of this Warrant, if not registered, and the Holder does not utilize cashless exercise, will have restrictions upon resale imposed by state and federal securities laws.

g) Nonwaiver and Expenses. No course of dealing or any delay or failure to exercise any right hereunder on the part of Holder shall operate as a waiver of such right or otherwise prejudice the Holder's rights, powers or remedies. Without limiting any other provision of this Warrant, if it is finally adjudicated (without possibility of appeal) that the Company has willfully and knowingly failed to comply with any provision of this Warrant, which has resulted in any material damages to the Holder, the Company shall pay to the Holder such amounts as shall be sufficient to cover any costs and expenses including, but not limited to, reasonable attorneys' fees, including those of appellate proceedings, incurred by the Holder in collecting any amounts due pursuant hereto or in otherwise enforcing any of its rights, powers or remedies hereunder.

h) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Exercise, shall be in writing and delivered personally, by facsimile, e-mail or sent by a nationally recognized overnight courier service, addressed to:

If to the Warrant Agent

Direct Transfer, LLC

[●]

Attention: [●]

Email address: [●]

If to the Company

Zivo Bioscience, Inc.

21 East Long Lake Road, Suite 100

Bloomfield Hills, Michigan 48304

Tel: (248) 452-9866

Email: [●]

Attn: Chief Executive Officer

or such other facsimile number, email address or address as the Company may specify for such purposes by notice to the Holders. Any and all notices or other communications or deliveries to be provided by the Company hereunder shall be in writing and delivered personally, by facsimile or e-mail, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number, e-mail address or address of such Holder appearing on the books of the Company. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (a) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or e-mail (or e-mail attachment) at the email address set forth on the signature pages attached hereto at or prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number or e-mail (or e-mail attachment) at the e-mail address as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2nd) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

i) Limitation of Liability. No provision hereof, in the absence of any affirmative action by the Holder to exercise this Warrant to purchase Warrant Shares, and no enumeration herein of the rights or privileges of the Holder, shall give rise to any liability of the Holder for the purchase price of any Shares or as a stockholders of the Company, whether such liability is asserted by the Company or by creditors of the Company.

j) Remedies. The Holder, in addition to being entitled to exercise all rights granted by law, including recovery of damages, will be entitled to seek specific performance of its rights under this Warrant. The Company agrees that monetary damages would not be adequate compensation for any loss incurred by reason of a breach by it of the provisions of this Warrant and hereby agrees to waive and not to assert the defense in any action for specific performance that a remedy at law would be adequate.

k) Successors and Assigns. Subject to applicable securities laws and the terms hereof, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company, on the one hand, and the Holder, on the other hand.

m) Severability. Wherever possible, each provision of this Warrant shall be interpreted in such manner as to be effective and valid under applicable law, but if any provision of this Warrant shall be prohibited by or invalid under applicable law, such provision shall be ineffective to the extent of such prohibition or invalidity, without invalidating the remainder of such provisions or the remaining provisions of this Warrant.

n) Headings. The headings used in this Warrant are for the convenience of reference only and shall not, for any purpose, be deemed a part of this Warrant.

o) Warrant Agency Agreement. If this Warrant is held in global form through DTC (or any successor depositary), this Warrant is issued subject to the Warrant Agency Agreement. To the extent any provision of this Warrant conflicts with the express provisions of the Warrant Agency Agreement, the provisions of this Warrant shall govern and be controlling.

(Signature Page Follows)

IN WITNESS WHEREOF, the Company has caused this Warrant to be executed by its officer thereunto duly authorized as of the date first above indicated.

ZIVO BIOSCIENCE, INC.

By: _____
Name:
Title:

NOTICE OF EXERCISE

TO: ZIVO BIOSCIENCE, INC.

(1) The undersigned hereby elects to purchase ____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only required if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of (check applicable box):

☐ in lawful money of the United States by wire transfer; or

☐ if permitted the cancellation of such number of Warrant Shares as is necessary, in accordance with the formula set forth in subsection 2(c), to exercise this Warrant with respect to the maximum number of Warrant Shares purchasable pursuant to the cashless exercise procedure set forth in subsection 2(c).

(3) Please issue said Warrant Shares in the name of the undersigned or in such other name as is specified below:

The Warrant Shares shall be delivered to the following DWAC Account Number:

[SIGNATURE OF HOLDER]

Name of Investing Entity:

Signature of Authorized Signatory of Investing Entity:

Name of Authorized Signatory:

Title of Authorized Signatory:

Date:

ASSIGNMENT FORM

(To assign the foregoing Warrant, execute this form and supply the required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name:

(Please Print)

Address:

(Please Print)

Phone Number:

Email Address:

Dated: _____, _____

Holder's Signature: _____

Holder's Address: _____

FENNEMORE.

7800 Rancharrah Parkway
Reno, NV 89511
PH (775) 788-2200 | FX (775) 786-1177
fennemorecraig.com

March 22, 2023

Zivo Bioscience, Inc.
21 East Long Lake Road, Suite 100
Bloomfield Hills, Michigan 48304

Re: Registration on Form S-1 for Zivo Bioscience, Inc.

Ladies and Gentlemen:

We are acting as special Nevada counsel for Zivo Bioscience, Inc., a Nevada corporation (the “Company”), in connection with the registration of additional securities of the Company under a Registration Statement on Form S-1, defined below, under the Securities Act of 1933, as amended (the “Act”). The S-1 relates to the proposed issuance (collectively, the “Offering”) of up to: \$15,000,000 of units of Company securities (“Units”), with each Unit consisting of: (A) either (i) one share (the “Offered Shares”) of the Company’s common stock, par value \$0.001 per share (the “Common Stock”) or (ii) a pre-funded warrant to purchase one share of the Company’s Common Stock; and (B) a warrant to purchase one share of the Company’s Common Stock; together with the shares of the Company’s Common Stock to be issued upon exercise of the Warrants (the “Warrant Shares”) or the Pre-Funded Warrants (the “Pre-Funded Warrant Shares”).

We have examined originals or copies of each of the documents listed below:

1. The Articles of Incorporation of the Company, as amended, as certified by an officer of the Company;
 2. The Second Amended and Restated Bylaws of the Company, as certified by an officer of the Company;
 3. The forms of the securities purchase agreement (the “SPA”);
 4. The forms of the common stock purchase warrant (the “Warrants”);
 5. The forms of the pre-funded common stock purchase warrant (the “Pre-Funded Warrants”);
 6. Resolutions of the Board of Directors of the Company (the “Board”), dated as of March 20, 2023, relating to the registration and issuance of the Offered Shares, the Warrants, and the Pre-Funded Warrants, as certified by an officer of the Company (collectively, the “Resolutions”); and
-

Zivo Bioscience, Inc.

Re: Registration of Common Stock, Warrant, and Pre-Funded Warrant

March 22, 2023

Page 2

7. The Registration Statement on Form S-1 to be filed by the Company with the Securities and Exchange Commission ("SEC") on March 22, 2023 (the "Registration Statement").

We have examined originals or copies of such other corporate records, certificates of corporate officers and public officials and other agreements and documents as we have deemed necessary or advisable for purposes of this opinion letter. We have relied upon the certificates of all public officials and corporate officers with respect to the accuracy of all factual matters contained therein.

Without limiting the generality of the foregoing, in our examination, we have, with your permission, assumed without independent verification, that (i) all documents submitted to us as originals are authentic, the signatures on all documents that we examined are genuine, and all documents submitted to us as certified, conformed, photostatic, electronic or facsimile copies conform to the original document; and (ii) all corporate records made available to us by the Company and all public records we have reviewed are accurate and complete.

We have assumed that the Board will reserve, and the Company will continue to maintain reserved prior to the issuance of any Units, a sufficient number of its duly authorized, but unissued, shares of the Company's Common Stock as is necessary to provide for the issuance of the Offered Shares, the Warrant Shares, and the Pre-Funded Warrant Shares.

Based on the foregoing, and subject to the qualifications, exceptions, and limitations set forth herein it is our opinion that:

1. Issuance of the Offered Shares has been duly authorized by the Company and, when issued and paid for in accordance with the terms of the Registration Statement, the SPA, the Resolutions, and the duly adopted resolutions of the Board setting the price per Unit, the Offered Shares will be validly issued, fully paid and nonassessable.

2. Issuance of the Warrants has been duly authorized by the Company and, when issued and paid for in accordance with the terms of the Registration Statement, the SPA, and duly adopted resolutions of the Board setting the price per Unit, the Warrants will be validly issued.

3. Issuance of the Pre-Funded Warrants has been duly authorized by the Company and, when issued and paid for in accordance with the terms of the Registration Statement, the SPA, and duly adopted resolutions of the Board setting the price per Unit, the Pre-Funded Warrants will be validly issued.

FENNEMORE.

Zivo Bioscience, Inc.

Re: Registration of Common Stock, Warrant, and Pre-Funded Warrant

March 22, 2023

Page 3

4. Issuance of the Warrant Shares has been duly authorized by the Company and, when issued and paid for in accordance with the respective Warrant, the Warrant Shares will be validly issued, fully paid and nonassessable.

5. Issuance of the Pre-Funded Warrant Shares has been duly authorized by the Company and, when issued and paid for in accordance with the respective Pre-Funded Warrant, the Pre-Funded Warrant Shares will be validly issued, fully paid and nonassessable.

We express no opinion as to the laws of any jurisdiction other than the laws of the State of Nevada. The opinions expressed above concern only the effect of the laws (excluding the principles of conflict of laws) of the State of Nevada currently in effect. We assume no obligation to supplement this opinion if any applicable laws change after the date of this opinion, or if we become aware of any facts that might change the opinions expressed above after the date of this opinion.

This opinion is issued in the State of Nevada. By issuing this opinion, Fennemore Craig, P.C. (i) shall not be deemed to be transacting business in any other state or jurisdiction other than the State of Nevada and (ii) does not consent to the jurisdiction of any state other than the State of Nevada. Any claim or cause of action arising out of the opinions expressed herein must be brought in the State of Nevada. Your acceptance of this opinion shall constitute your agreement to the foregoing.

We consent to your filing of this opinion as an exhibit to the Registration Statement and further consent to the use of our name wherever appearing in the Registration Statement. In giving these consents, we do not thereby admit that we are within the category of persons whose consent is required under Section 7 of the Act, the rules and regulations of the Securities and Exchange Commission promulgated thereunder, or Item 509 of Regulation S-K. The opinions expressed in this letter are rendered as of the date hereof, and we express no opinion as to circumstances or events that may occur subsequent to such date. Our opinion is expressly limited to the matters set forth above and we render no opinion, whether by implication or otherwise, as to any other matters relating to the Company, the Offered Shares, the Warrants, the Warrant Shares, the Pre-Funded Warrant, or the Pre-Funded Warrant Shares.

Very truly yours,

/s/ FENNEMORE CRAIG, P.C.

CETE/Dlew



March 22, 2023

Zivo Bioscience, Inc.
21 E. Long Lake Road, Suite 100
Bloomfield Hills, MI 48304

Re: Registration Statement on Form S-1

Ladies and Gentlemen:

We have acted as counsel to Zivo Bioscience, Inc., a Nevada corporation (the “**Company**”), in connection with preparing and filing with the Securities and Exchange Commission (the “**Commission**”) pursuant to the Securities Act of 1933, as amended (the “**Securities Act**”), of a Registration Statement on Form S-1 (as amended and supplemented from time to time, the “**Registration Statement**”) relating to the offer and sale by the Company of (i) up to \$15,000,000 of the Company’s Units (the “**Units**”), each Unit consisting of (a) one share (collectively for all Units, the “**Shares**”) of the Company’s common stock, par value \$0.001 per share (the “**Common Stock**”) or for some purchasers, in lieu of a Share, one pre-funded warrant, each to purchase one share of Common Stock (collectively for all Units, the “**Pre-Funded Warrants**”), and (b) one immediately exercisable warrant, each to purchase one share of Common Stock (collectively for all Units, the “**Public Warrants**” and together with the Pre-Funded Warrants, the “**Warrants**”), and (ii) the shares of Common Stock underlying the Warrants (the “**Warrant Shares**,” and the “**Pre-Funded Warrant Shares**”, together with the Shares and the Warrants, the “**Securities**”) issuable upon exercise of the Warrants. The Securities are to be sold to the public as described in the Registration Statement and pursuant to the placement agency agreement referred to in the Registration Statement (the “**Placement Agency Agreement**”) and pursuant to a securities purchase agreement referred to in the Registration Statement (the “**Securities Purchase Agreement**”). The Warrants will be issued under a Warrant Agency Agreement (the “**Warrant Agency Agreement**”) between the Company and [Direct Transfer LLC], as warrant agent (the “**Warrant Agent**”).

We have assumed that the sale of the Units, the Shares and the Warrants and the exercise price of the Warrants will be at a price established by the Pricing Committee of the Board of Directors of the Company at a price no less than the minimum price authorized by the Board of Directors as of the date hereof, in accordance with the Nevada Private Corporations law. We have also assumed that (i) the Shares, when offered, sold, issued and delivered by the Company as described in the Registration Statement and the related prospectus and in accordance with, and in the manner set forth in, the Placement Agency Agreement, the Securities Purchase Agreement and the Warrant Agency Agreement (including, without limitation, the payment in full of all applicable consideration therefor), against payment therefore, will be validly issued, fully paid and non-assessable, and (ii) the Warrant Shares, when they and the Warrants are offered, sold, issued and delivered by the Company as described in the Registration Statement and the related prospectus and in accordance with, and in the manner set forth in, the Warrant Agency Agreement, the Placement Agency Agreement, the Securities Purchase Agreement, the Warrant Agency Agreement, the Warrants (including, without limitation, the payment in full of all applicable consideration therefor, including the exercise price, and issuance and delivery to the persons exercising the Warrants of certificates for the underlying Warrant Shares in the form approved by the Company’s Board of Directors), against payment therefore, will be validly issued, fully paid and non-assessable. With respect to the Warrant Shares, we express no opinion to the extent that, notwithstanding the Company’s current reservation of shares of Common Stock, future issuances of securities of the Company, including the Warrant Shares, and/or anti-dilution adjustments to outstanding securities of the Company, including the Warrants, may cause the Warrants to be exercisable for more shares of Common Stock than the number that then remain authorized but unissued and available for issuance.

We have also assumed that the Company (a) is a corporation validly existing and in good standing under the laws of the State of Nevada, and (b) has the requisite corporate power and authority to execute and deliver, and to perform its obligations under, the Placement Agency Agreement, the Securities Purchase Agreement, the Warrant Agency Agreement, the Units and the Warrants. We have also assumed that (x) the execution, delivery and performance by the Company of the Placement Agency Agreement, the Securities Purchase Agreement, the Warrant Agency Agreement, the Units and Warrants (i) have been duly authorized by all necessary corporate action by the Company, and (ii) do not violate the Articles of Incorporation, as amended, or the Second Amended and Restated Bylaws of the Company or any applicable Nevada law, and (y) the Placement Agency Agreement, the Securities Purchase Agreement, the Warrant Agency Agreement, the Units and Warrants have been duly executed and delivered by the Company to the extent such execution and delivery is governed by Nevada law.

Honigman LLP 2290 First National Building 660 Woodward Avenue Detroit, Michigan 48226-3506

47357634.1

We note that various matters concerning the Company and Nevada law are addressed in the opinion letter of Fennemore Craig, P.C., separately filed, and we express no opinion with respect to those matters.

For the purpose of rendering this opinion, we examined originals or copies of such documents as we deemed relevant. In conducting our examination, we assumed, without investigation, the genuineness of all signatures, the correctness of all certificates, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted as certified or photostatic copies, and the authenticity of the originals of such copies, and the accuracy and completeness of all records made available to us by the Company.

Our opinion is limited solely to matters set forth herein. The law covered by the opinion expressed herein is limited to the internal laws of the State of New York as it relates to the Units and the Warrants.

Based upon our examination of such documents and other matters as we deem relevant, we are of the opinion that:

1. The Units, when offered, sold, issued, duly executed (with respect to the underlying Warrants) and delivered by the Company in accordance with and in the manner described in the Registration Statement, the Placement Agency Agreement, the Securities Purchase Agreement, the Warrant Agency Agreement and the Warrants, will constitute binding obligations of the Company to the extent governed by New York law.

2. The Warrants, when offered, sold, issued, duly executed and delivered by the Company in accordance with and in the manner described in the Registration Statement, the Placement Agency Agreement, the Securities Purchase Agreement, the Warrant Agency Agreement and the Warrants, will constitute binding obligations of the Company.

We hereby consent to the filing of this opinion as Exhibit 5.2 to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the Registration Statement. In giving such consent, we do not admit that we are within the category of persons whose consent is required by Section 7 of the Securities Act or the rules and regulations promulgated thereunder by the Commission. This opinion is expressed as of the date hereof, and we disclaim any undertaking to advise you of any subsequent changes in the facts stated or assumed herein or of any subsequent changes in applicable law.

Very truly yours,

/s/ Honigman LLP
Honigman LLP

FIRST AMENDMENT TO EMPLOYMENT AGREEMENT

This FIRST AMENDMENT TO EMPLOYMENT AGREEMENT (this “*Amendment*”) is made and entered into as of December 22, 2022 (the “*Effective Date*”), by and between John Payne (“*Executive*”) and Zivo Bioscience, Inc., a Nevada corporation (the “*Company*”). Executive and the Company are referred to herein each as a “*Party*” and, together, as the “*Parties*.” Capitalized terms that are not defined herein shall have the meanings ascribed to them in the Employment Agreement between the Parties dated February 15, 2022 (the “*Employment Agreement*”).

RECITALS

- A. Executive and the Company are parties to the Employment Agreement; and
- B. the Parties have agreed to amend the Employment Agreement as set forth in this Amendment; and
- C. the Board of Directors (the “*Board*”) has approved this Amendment of the Employment Agreement as outlined herein.

NOW THEREFORE, in consideration of the mutual promises and covenants contained in this Amendment, and other valuable consideration, the Parties agree as follows, effective as of the Effective Date:

TERMS AND CONDITIONS

1. ***Long-Term Incentive Compensation.*** Section 5 of the Employment Agreement is amended and replaced in its entirety with the following:

“***Long-Term Incentive Compensation.*** With respect to each calendar year during the Employment Term and subject in each case to Employee’s continued employment and good standing through the date of grant, at or about the time that the Company makes annual grants generally to its senior officers, the Company shall award Employee that number of stock options pursuant to the Zivo Bioscience, Inc. 2021 Equity Incentive Plan (the “***EI Plan***”) with an approximate value of \$400,000.00 on the date of the grant, determined in accordance with, and subject to the terms and conditions of, the EI Plan and the applicable award agreement.”

2. ***Construction.*** The terms of this Amendment amend and modify the Employment Agreement as if fully set forth therein. If there is any conflict between the terms and conditions of this Amendment and the Employment Agreement, this Amendment’s terms and conditions will control. All other provisions of the Employment Agreement not specifically amended by this Amendment shall remain in full force and effect. Any waiver, alteration or modification of any of the terms of this Amendment shall be valid only if in writing and signed by both Parties hereto.

3. ***Counterparts.*** This Amendment may be executed in one or more counterparts and either originally or by facsimile or pdf signature, each of which will constitute an original, and all of which will constitute one and the same instrument.
-

This *First Amendment to Employment Agreement* is hereby executed as of the date first above written.

EXECUTIVE:

THE COMPANY:

ZIVO BIOSCIENCE, INC.

/s/ John Payne
JOHN PAYNE

By: /s/ Keith Marchiando
Name: Keith Marchiando
Title: Chief Financial Officer

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (this “Agreement”) is dated as of March [●], 2023, between Zivo Bioscience, Inc., a Nevada corporation (the “Company”), and each purchaser identified on the signature pages hereto (each, including its successors and assigns, a “Purchaser” and collectively the “Purchasers”).

WHEREAS, subject to the terms and conditions set forth in this Agreement and pursuant to an effective registration statement under the Securities Act (as defined below) as to the Shares, Prefunded Warrants and Common Warrants and Warrant Shares, the Company desires to issue and sell to each Purchaser, and each Purchaser, severally and not jointly, desires to purchase from the Company, securities of the Company as more fully described in this Agreement.

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and each Purchaser agree as follows:

ARTICLE I. DEFINITIONS

1.1 Definitions

. In addition to the terms defined elsewhere in this Agreement, for all purposes of this Agreement, the following terms have the meanings set forth in this Section 1.1:

“Acquiring Person” shall have the meaning ascribed to such term in Section 4.5.

“Action” shall have the meaning ascribed to such term in Section 3.1(j).

“Affiliate” means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person as such terms are used in and construed under Rule 405 under the Securities Act.

“Board of Directors” means the board of directors of the Company.

“Business Day” means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed; provided, however, for clarification, commercial banks shall not be deemed to be authorized or required by law to remain closed due to “stay at home”, “shelter-in-place”, “non-essential employee” or any other similar orders or restrictions or the closure of any physical branch locations at the direction of any governmental authority so long as the electronic funds transfer systems (including for wire transfers) of commercial banks in The City of New York are generally open for use by customers on such day.

“Closing” means the closing of the purchase and sale of the Securities pursuant to Section 2.1.

“Closing Date” means the Trading Day on which all of the Transaction Documents have been executed and delivered by the applicable parties thereto, and all conditions precedent to (i) the Purchasers’ obligations to pay the Subscription Amount and (ii) the Company’s obligations to deliver the Securities, in each case, have been satisfied or waived, but in no event later than the second (2nd) Trading Day following the date hereof.

“Commission” means the United States Securities and Exchange Commission.

“Common Stock” means the shares of common stock of the Company, par value \$0.001 per share, and any other class of securities into which such securities may hereafter be reclassified or changed.

“Common Stock Equivalents” means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred shares, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

“Common Units” means each Common Unit consisting of (a) one Share and (b) a Common Warrant to purchase one Common Warrant Share.

“Common Unit Purchase Price” equals \$[●] per each Common Unit, subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

“Common Unit Subscription Amount” means, as to each Purchaser, the aggregate amount to be paid for the Common Units hereunder as specified below such Purchaser’s name on the signature page of this Agreement and next to the heading “Common Unit Subscription Amount,” in United States dollars and in immediately available funds.

“Common Warrants” means, collectively, the Common Stock purchase warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof, which Common Warrants shall be exercisable immediately and have a term of exercise equal to five (5) years, in the form of Exhibit A attached hereto.

“Common Warrant Shares” means the Common Stock issuable upon exercise of the Common Warrants.

“Company Counsel” means Honigman LLP, with offices located at 2290 First National Building, 600 Woodward Avenue, Detroit, MI 48226.

“Disclosure Schedules” means the Disclosure Schedules of the Company delivered concurrently herewith.

“Disclosure Time” means, (i) if this Agreement is signed on a day that is not a Trading Day or after 9:00 a.m. (New York City time) and before midnight (New York City time) on any Trading Day, 9:01 a.m. (New York City time) on the Trading Day immediately following the date hereof, unless otherwise instructed as to an earlier time by the Placement Agent, and (ii) if this Agreement is signed between midnight (New York City time) and 9:00 a.m. (New York City time) on any Trading Day, no later than 9:01 a.m. (New York City time) on the date hereof, unless otherwise instructed as to an earlier time by the Placement Agent.

“Evaluation Date” shall have the meaning ascribed to such term in Section 3.1(s).

“Exchange Act” means the Securities Exchange Act of 1934, as amended, and the rules and regulations promulgated thereunder.

“Exempt Issuance” means the issuance of (a) Common Stock or equity awards to employees, officers or directors of the Company pursuant to any stock or option plan duly adopted for such purpose, by a majority of the non-employee members of the Board of Directors or a majority of the members of a committee of non-employee directors established for such purpose for services rendered to the Company, (b) securities upon the exercise or exchange of or conversion of any Securities issued hereunder and/or other securities exercisable or exchangeable for or convertible into Common Stock issued and outstanding on the date of this Agreement, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities (other than in connection with automatic price resets, stock splits, adjustments or combinations as set forth in such securities) or to extend the term of such securities, and (c) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Company, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement for 75 days following the Closing Date, and provided that any such issuance shall only be to a Person (or to the equityholders of a Person) which is, itself or through its subsidiaries, an operating company or an owner of an asset in a business synergistic with the business of the Company and shall provide to the Company additional benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

“FCPA” means the Foreign Corrupt Practices Act of 1977, as amended.

“GAAP” shall have the meaning ascribed to such term in Section 3.1(h).

“Indebtedness” shall have the meaning ascribed to such term in Section 3.1(aa).

“Intellectual Property Rights” shall have the meaning ascribed to such term in Section 3.1(p).

“Legend Removal Date” shall have the meaning ascribed to such term in Section 4.1(c).

“Lock-Up Agreement” means the Lock-Up Agreement, dated as of the date hereof, by and among the Company and the directors, officers, and 5% stockholders of the Company.

“Liens” means a lien, charge, pledge, security interest, encumbrance, right of first refusal, preemptive right or other restriction.

“Material Adverse Effect” shall have the meaning assigned to such term in Section 3.1(b).

“Material Permits” shall have the meaning ascribed to such term in Section 3.1(n).

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Placement Agent” means Maxim Group LLC.

“Placement Agent Counsel” means Thompson Hine LLP, with offices located at 335 Madison Avenue 12th Floor, New York, New York 10017-4611.

“Prefunded Units” means each Prefunded Unit consisting of (a) one Prefunded Warrant to purchase one Prefunded Warrant Share and (b) a Common Warrant to purchase one Common Warrant Share.

“Prefunded Unit Purchase Price” equals \$[●] per each Prefunded Unit, subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

“Prefunded Unit Subscription Amount” means, as to each Purchaser, the aggregate amount to be paid for the Prefunded Units purchased hereunder as specified below such Purchaser’s name on the signature page of this Agreement and next to the heading “Prefunded Unit Subscription Amount,” in United States dollars and in immediately available funds.

“Prefunded Warrant” means, collectively, the prefunded Common Stock purchase warrants delivered to the Purchasers at the Closing in accordance with Section 2.2(a) hereof, which Prefunded Warrants shall be exercisable immediately and shall expire when exercised in full, in the form of Exhibit B attached hereto.

“Prefunded Warrant Shares” means the Common Stock issuable upon exercise of the Prefunded Warrants.

“Preliminary Prospectus” means any preliminary prospectus included in the Registration Statement, as originally filed or as part of any amendment thereto, or filed with the Commission pursuant to Rule 424(a) of the rules and regulations of the Commission under the Securities Act.

“Pricing Prospectus” means (i) the Preliminary Prospectus relating to the Securities that was included in the Registration Statement immediately prior to 9:00 a.m. (New York City time) on the date hereof and (ii) any free writing prospectus (as defined in the Securities Act) identified on Schedule A hereto, taken together.

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an informal investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Prospectus” means the final prospectus filed for the Registration Statement.

“Purchaser Party” shall have the meaning ascribed to such term in Section 4.8.

“Registration Statement” means the effective registration statement with Commission file No. 333-[●] which registers the sale of the Shares, the Prefunded Warrants, the Common Warrants, the Prefunded Warrant Shares and the Common Warrant Shares to the Purchasers, and includes any Rule 462(b) Registration Statement.

“Required Approvals” shall have the meaning ascribed to such term in Section 3.1(e).

“Rule 144” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended or interpreted from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same purpose and effect as such Rule.

“Rule 462(b) Registration Statement” means any registration statement prepared by the Company registering additional securities, which was filed with the Commission on or prior to the date hereof and became automatically effective pursuant to Rule 462(b) promulgated by the Commission pursuant to the Securities Act.

“SEC Reports” shall have the meaning ascribed to such term in Section 3.1(h).

“Securities” means the Units, Shares, the Warrants and the Warrant Shares.

“Securities Act” means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

“Shares” means shares of Common Stock issued or issuable to each Purchaser pursuant to this Agreement, which for the avoidance of doubt, does not include the Warrant Shares.

“Short Sales” means all “short sales” as defined in Rule 200 of Regulation SHO under the Exchange Act (but shall not be deemed to include locating and/or borrowing Common Stock).

“Subscription Amount” means, as to each Purchaser, the Common Unit Subscription Amount and/or the Prefunded Unit Subscription Amount, as applicable, in accordance with Section 2.1 herein.

“Subsidiary” means any subsidiary of the Company as set forth on Schedule 3.1(a), and shall, where applicable, also include any direct or indirect subsidiary of the Company formed or acquired after the date hereof.

“Trading Day” means a day on which the principal Trading Market is open for trading.

“Trading Market” means any of the following markets or exchanges on which the Common Stock are listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, or the New York Stock Exchange (or any successors to any of the foregoing).

“Transaction Documents” means this Agreement, the Warrant Agency Agreement, the Warrants, all exhibits and schedules thereto and hereto and any other documents or agreements executed in connection with the transactions contemplated hereunder.

“Transfer Agent” means Issuer Direct Corporation, the current transfer agent of the Company with a mailing address of [●], a phone number of [●] and an email address of [●] and, and any successor transfer agent of the Company.

“Units” means, collectively, the Common Units and the Prefunded Units.

“Variable Rate Transaction” shall have the meaning ascribed to such term in Section 4.21(b).

“Warrant Agency Agreement” means the warrant agency agreement dated on or about the Closing Date, between the Company and the Transfer Agent.

“Warrants” means, collectively, the Common Warrants and the Prefunded Warrants.

“Warrant Shares” means the Common Stock issuable upon exercise of the Common Warrants and the Prefunded Warrants.

ARTICLE II.

PURCHASE AND SALE

2.1 Closing. On the Closing Date, upon the terms and subject to the conditions set forth herein, substantially concurrent with the execution and delivery of this Agreement by the parties hereto, the Company agrees to sell, and the Purchasers, severally and not jointly, agree to purchase, up to an aggregate of \$15,000,000 of Common Units as determined pursuant to Section 2.2(a); provided, however, that, to the extent that a Purchaser determines, in its sole discretion, that such Purchaser (together with such Purchaser’s Affiliates, and any Person acting as a group together with such purchaser or any of such Purchaser’s Affiliates) would beneficially own in excess of the Beneficial Ownership Limitation, or as such Purchaser may otherwise choose, in lieu of purchasing Common Units such Purchaser may elect to purchase Prefunded Units at the Prefunded Unit Purchase Price in lieu of Common Units. The “Beneficial Ownership Limitation” shall be 4.99% (or, at the election of the Purchaser at Closing, 9.99%) of the number of Common Stock outstanding immediately after giving effect to the issuance of the Securities on the Closing Date. Unless otherwise directed by the Placement Agent, each Purchaser’s Subscription Amount as set forth on the signature page hereto executed by such Purchaser shall be made available for “Delivery Versus Payment” settlement with the Company or its designee. The Company shall deliver to each Purchaser its respective Shares and Common Warrants and/or Prefunded Warrants and Common Warrants (as applicable to such Purchaser) as determined pursuant to Section 2.2(a), and the Company and each Purchaser shall deliver the other items set forth in Section 2.2 deliverable at the Closing. Upon satisfaction of the covenants and conditions set forth in Sections 2.2 and 2.3, the Closing shall occur at the offices of the Placement Agent Counsel or such other location as the parties shall mutually agree. Unless otherwise directed by the Placement Agent, settlement of the Shares shall occur via “Delivery Versus Payment” (“DVP”) (i.e., on the Closing Date, the Company shall issue the Shares registered in the Purchasers’ names and addresses and released by the Transfer Agent directly to the account(s) at the Placement Agent identified by each Purchaser; upon receipt of such Shares, the Placement Agent shall promptly electronically deliver such Shares to the applicable Purchaser, and payment therefor shall be made by the Placement Agent (or its clearing firm) by wire transfer to the Company). Notwithstanding anything to the contrary herein and a Purchaser’s Subscription Amount set forth on the signature pages attached hereto, the number of Shares purchased by a Purchaser (and its Affiliates) hereunder shall not, when aggregated with all other Common Stock owned by such Purchaser (and its Affiliates) at such time, result in such Purchaser beneficially owning (as determined in accordance with Section 13(d) of the Exchange Act) in excess of 9.99% of the then issued and outstanding Common Stock outstanding at the Closing (the “Beneficial Ownership Maximum”), and such Purchaser’s Subscription Amount, to the extent it would otherwise exceed the Beneficial Ownership Maximum immediately prior to the Closing, shall be conditioned upon the issuance of Shares at the Closing to the other Purchasers signatory hereto. To the extent that a Purchaser’s beneficial ownership of the Shares would otherwise be deemed to exceed the Beneficial Ownership Maximum, such Purchaser’s Subscription Amount shall automatically be reduced as necessary in order to comply with this paragraph. Notwithstanding the foregoing, with respect to any Notice(s) of Exercise (as defined in the Prefunded Warrants) delivered on or prior to 12:00 p.m. (New York City time) on the Closing Date, which may be delivered at any time after the time of execution of the this Agreement, the Company agrees to deliver the Prefunded Warrant Shares subject to such notice(s) by 4:00 p.m. (New York City time) on the Closing Date and the Closing Date shall be the Warrant Share Delivery Date (as defined in the Prefunded Warrants) for purposes hereunder.

2.2 Deliveries.

(a) On or prior to the Closing Date (except as indicated below), the Company shall deliver or cause to be delivered to each Purchaser the following:

(i) this Agreement duly executed by the Company;

(ii) a legal opinion of Company Counsel and the favorable opinions of Nevada legal counsel of the Company, substantially in the form of Exhibit D attached hereto;

(iii) subject to the seventh sentence of Section 2.1, the Company shall have provided each Purchaser with the Company's wire instructions, on Company letterhead and executed by the Chief Executive Officer and Chief Financial Officer;

(iv) subject to the seventh sentence of Section 2.1, a copy of the irrevocable instructions to the Transfer Agent instructing the Transfer Agent to deliver on an expedited basis via The Depository Trust Company Deposit or Withdrawal at Custodian system ("DWAC") Shares equal to such Purchaser's Common Unit Subscription Amount divided by the Common Unit Purchase Price, registered in the name of such Purchaser;

(v) a Common Warrant registered in the name of such Purchaser to purchase up to a number of Common Stock equal to 100% of such Purchaser's Shares plus the Prefunded Warrant Shares underlying such Purchaser's Prefunded Warrants on the date hereof, with an exercise price equal to \$[●], subject to adjustment therein via The Depository Trust Company Deposit or Withdrawal at Custodian system;

(vi) for each Purchaser of Prefunded Warrants pursuant to Section 2.1, a Prefunded Warrant registered in the name of such Purchaser to purchase up to a number of Common Stock as set forth in the Prefunded Warrant, with an exercise price equal to \$[●], subject to adjustment therein via The Depository Trust Company Deposit or Withdrawal at Custodian system;

(vii) the duly executed Warrant Agency Agreement;

(viii) on the date hereof, the duly executed Lock-Up Agreements; and

(ix) the Preliminary Prospectus and Prospectus (which may be delivered in accordance with Rule 172 under the Securities Act).

(b) On or prior to the Closing Date, each Purchaser shall deliver or cause to be delivered to the Company the following:

(i) this Agreement duly executed by such Purchaser; and

(ii) such Purchaser's Subscription Amount, which shall be made available for "Delivery Versus Payment" settlement with the Company or its designee.

2.3 Closing Conditions.

(a) The obligations of the Company hereunder in connection with the Closing are subject to the following conditions being met:

(i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality, in all respects) on the Closing Date of the representations and warranties of the Purchasers contained herein (unless as of a specific date therein in which case they shall be accurate in all material respects (or, to the extent representations or warranties are qualified by materiality, in all respects) as of such date);

(ii) all obligations, covenants and agreements of each Purchaser required to be performed at or prior to the Closing Date shall have been performed;

and

(iii) the delivery by each Purchaser of the items set forth in Section 2.2(b) of this Agreement.

(b) The respective obligations of the Purchasers hereunder in connection with the Closing are subject to the following conditions being met:

(i) the accuracy in all material respects (or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) when made and on the Closing Date of the representations and warranties of the Company contained herein (unless as of a specific date therein in which case they shall be accurate in all material respects or, to the extent representations or warranties are qualified by materiality or Material Adverse Effect, in all respects) as of such date);

(ii) all obligations, covenants and agreements of the Company required to be performed at or prior to the Closing Date shall have been performed;

(iii) the delivery by the Company of the items set forth in Section 2.2(a) of this Agreement;

(iv) there shall have been no Material Adverse Effect with respect to the Company; and

(v) from the date hereof to the Closing Date, trading in the Common Stock shall not have been suspended by the Commission or the Company's principal Trading Market, and, at any time prior to the Closing Date, trading in securities generally as reported by Bloomberg L.P. shall not have been suspended or limited, or minimum prices shall not have been established on securities whose trades are reported by such service, or on any Trading Market, nor shall a banking moratorium have been declared either by the United States or New York State authorities nor shall there have occurred any material outbreak or escalation of hostilities or other national or international calamity of such magnitude in its effect on, or any material adverse change in, any financial market which, in each case, in the reasonable judgment of such Purchaser, makes it impracticable or inadvisable to purchase the Securities at the Closing.

ARTICLE III. REPRESENTATIONS AND WARRANTIES

3.1 Representations and Warranties of the Company. Except as set forth in the Disclosure Schedules, which Disclosure Schedules shall be deemed a part hereof and shall qualify any representation or otherwise made herein to the extent of the disclosure contained in the corresponding section of the Disclosure Schedules, the Company hereby makes the following representations and warranties to each Purchaser:

(a) Subsidiaries. All of the Subsidiaries of the Company are set forth on Schedule 3.1(a). The Company owns, directly or indirectly, all of the capital stock or other equity interests of each Subsidiary free and clear of any Liens, and all of the issued and outstanding shares of capital stock of each Subsidiary are validly issued and are fully paid, non-assessable and free of preemptive and similar rights to subscribe for or purchase securities.

(b) Organization and Qualification. The Company and each of the Subsidiaries is an entity duly incorporated or otherwise organized, validly existing and in good standing under the laws of the jurisdiction of its incorporation or organization, with the requisite power and authority to own and use its properties and assets and to carry on its business as currently conducted. Neither the Company nor any Subsidiary is in violation nor default of any of the provisions of its respective certificate or articles of incorporation, bylaws or other organizational or charter documents. Each of the Company and the Subsidiaries is duly qualified to conduct business and is in good standing as a foreign corporation or other entity in each jurisdiction in which the nature of the business conducted or property owned by it makes such qualification necessary, except where the failure to be so qualified or in good standing, as the case may be, could not have or reasonably be expected to result in: (i) a material adverse effect on the legality, validity or enforceability of any Transaction Document, (ii) a material adverse effect on the results of operations, assets, business, prospects or condition (financial or otherwise) of the Company and the Subsidiaries, taken as a whole, or (iii) a material adverse effect on the Company's ability to perform in any material respect on a timely basis its obligations under any Transaction Document (any of (i), (ii) or (iii), a "Material Adverse Effect") and no Proceeding has been instituted in any such jurisdiction revoking, limiting or curtailing or seeking to revoke, limit or curtail such power and authority or qualification.

(c) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and each of the other Transaction Documents to which it is a party and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of this Agreement and each of the other Transaction Documents by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Board of Directors or the Company's shareholders in connection herewith or therewith other than in connection with the Required Approvals. This Agreement and each other Transaction Document to which the Company is a party has been (or upon delivery will have been) duly executed by the Company and, when delivered in accordance with the terms hereof and thereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by Applicable Law.

(d) No Conflicts. The execution, delivery and performance by the Company of this Agreement and the other Transaction Documents to which it is a party, the issuance and sale of the Securities and the consummation by it of the transactions contemplated hereby and thereby do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, anti-dilution or similar adjustments, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any Applicable Law or other restriction of any court or Governmental Authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

(e) Filings, Consents and Approvals. The Company is not required to obtain any consent, waiver, authorization or order of, give any notice to, or make any filing or registration with, any court or other federal, state, local or other Governmental Authority or other Person in connection with the execution, delivery and performance by the Company of the Transaction Documents, other than: (i) the filings required pursuant to Section 4.4 of this Agreement, (ii) the filing with the Commission of the Prospectus, (iii) application(s) to each applicable Trading Market for the listing of the Shares and Warrant Shares for trading thereon in the time and manner required thereby, and (iv) such other filings as are required to be made under applicable federal and state securities laws (collectively, the "Required Approvals").

(f) Issuance of the Securities; Registration. The Securities are duly authorized and, when issued and paid for in accordance with the applicable Transaction Documents, will be duly and validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Warrant Shares are duly authorized and, when issued in accordance with the terms of the Warrants, will be validly issued, fully paid and nonassessable, free and clear of all Liens imposed by the Company. The Company has reserved from its duly authorized capital stock the maximum number of Common Stock issuable pursuant to this Agreement and the Warrants. The Securities are not and will not be subject to the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company. All corporate action required to be taken for the authorization, issuance and sale of the Securities has been duly and validly taken. The Securities conform in all material respects to all statements with respect thereto contained in the Registration Statement and the Prospectus. The Company has prepared and filed the Registration Statement in conformity with the requirements of the Securities Act, which became effective on March [●], 2023 (the "Effective Date"), including the Prospectus, and such amendments and supplements thereto as may have been required to the date of this Agreement. The Registration Statement is effective under the Securities Act and no stop order preventing or suspending the effectiveness of the Registration Statement or suspending or preventing the use of the Preliminary Prospectus or the Prospectus has been issued by the Commission and no proceedings for that purpose have been instituted or, to the knowledge of the Company, are threatened by the Commission. The Company, if required by the rules and regulations of the Commission, shall file the Prospectus with the Commission pursuant to Rule 424(b). At the time the Registration Statement and any amendments thereto became effective, at the date of this Agreement and at the Closing Date, the Registration Statement and any amendments thereto conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein not misleading; and the Pricing Prospectus and the Prospectus and any amendments or supplements thereto, at the time the Pricing Prospectus or the Prospectus, as applicable, or any amendment or supplement thereto was issued and at the Closing Date, conformed and will conform in all material respects to the requirements of the Securities Act and did not and will not contain an untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading.

(g) Capitalization. The capitalization of the Company as of the date hereof is as set forth on Schedule 3.1(g), which Schedule 3.1(g) shall also include the number of Common Stock owned beneficially, and of record, by Affiliates of the Company as of the date hereof. The Company has not issued any capital stock since its most recently filed periodic report under the Exchange Act, other than pursuant to the exercise of employee stock options under the Company's stock option plans, the issuance of Common Stock to employees pursuant to the Company's employee stock purchase plans and pursuant to the conversion and/or exercise of Common Stock Equivalents outstanding as of the date of the most recently filed periodic report under the Exchange Act. No Person has any right of first refusal, preemptive right, right of participation, or any similar right to participate in the transactions contemplated by the Transaction Documents. Except as a result of the purchase and sale of the Securities and as set forth on Schedule 3.1(g), there are no outstanding options, warrants, scrip rights to subscribe to, calls or commitments of any character whatsoever relating to, or securities, rights or obligations convertible into or exercisable or exchangeable for, or giving any Person any right to subscribe for or acquire, any Common Stock or the capital stock of any Subsidiary, or contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to issue additional Common Stock or Common Stock Equivalents or capital stock of any Subsidiary. The issuance and sale of the Securities will not obligate the Company or any Subsidiary to issue Common Stock or other securities to any Person (other than the Purchasers). There are no outstanding securities or instruments of the Company or any Subsidiary with any provision that adjusts the exercise, conversion, exchange or reset price of such security or instrument upon the issuance of securities by the Company or any Subsidiary. There are no outstanding securities or instruments of the Company or any Subsidiary that contain any redemption or similar provisions, and there are no contracts, commitments, understandings or arrangements by which the Company or any Subsidiary is or may become bound to redeem a security of the Company or such Subsidiary. The Company does not have any stock appreciation rights or "phantom stock" plans or agreements or any similar plan or agreement. All of the outstanding shares of capital stock of the Company are duly authorized, validly issued, fully paid and nonassessable, have been issued in compliance with all federal and state securities laws, and none of such outstanding shares was issued in violation of any preemptive rights or similar rights to subscribe for or purchase securities. The authorized shares of the Company conform in all material respects to all statements relating thereto contained in the Registration Statement, the Pricing Prospectus and the Prospectus. The offers and sales of the Company's securities were at all relevant times either registered under the Securities Act and the applicable state securities or Blue Sky laws or, based in part on the representations and warranties of the purchasers, exempt from such registration requirements. No further approval or authorization of any shareholder, the Board of Directors or others is required for the issuance and sale of the Securities. There are no shareholders agreements, voting agreements or other similar agreements with respect to the Company's capital stock to which the Company is a party or, to the knowledge of the Company, between or among any of the Company's shareholders.

(h) SEC Reports; Financial Statements. The Company has filed all reports, schedules, forms, statements and other documents required to be filed by the Company under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof, for the two years preceding the date hereof (or such shorter period as the Company was required by law or regulation to file such material) (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, together with the Pricing Prospectus and the Prospectus, being collectively referred to herein as the “SEC Reports”) on a timely basis or has received a valid extension of such time of filing and has filed any such SEC Reports prior to the expiration of any such extension. As of their respective dates, the SEC Reports complied in all material respects with the requirements of the Securities Act and the Exchange Act, as applicable, and none of the SEC Reports, when filed, contained any untrue statement of a material fact or omitted to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading. The Company has never been an issuer subject to Rule 144(i) under the Securities Act. The financial statements of the Company included in the SEC Reports comply in all material respects with applicable accounting requirements and the rules and regulations of the Commission with respect thereto as in effect at the time of filing. Such financial statements have been prepared in accordance with United States generally accepted accounting principles applied on a consistent basis during the periods involved (“GAAP”), except as may be otherwise specified in such financial statements or the notes thereto and except that unaudited financial statements may not contain all footnotes required by GAAP, and fairly present in all material respects the financial position of the Company and its consolidated Subsidiaries as of and for the dates thereof and the results of operations and cash flows for the periods then ended, subject, in the case of unaudited statements, to normal, immaterial, year-end audit adjustments. The agreements and documents described in the Registration Statement, the Pricing Prospectus, the Prospectus, and the SEC Reports conform in all material respects to the descriptions thereof contained therein and there are no agreements or other documents required by the Securities Act and the rules and regulations thereunder to be described in the Registration Statement, the Pricing Prospectus, the Prospectus or the SEC Reports or to be filed with the Commission as exhibits to the Registration Statement, that have not been so described or filed. Each agreement or other instrument (however characterized or described) to which the Company is a party or by which it is or may be bound or affected and (i) that is referred to in the Registration Statement, the Pricing Prospectus, the Prospectus or the SEC Reports, or (ii) is material to the Company’s business, has been duly authorized and validly executed by the Company, is in full force and effect in all material respects and is enforceable against the Company and, to the Company’s knowledge, the other parties thereto, in accordance with its terms, except (x) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors’ rights generally, (y) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws, and (z) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefore may be brought. None of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the best of the Company’s knowledge, any other party is in default thereunder and, to the best of the Company’s knowledge, no event has occurred that, with the lapse of time or the giving of notice, or both, would constitute a default thereunder. To the best of the Company’s knowledge, performance by the Company of the material provisions of such agreements or instruments will not result in a violation of any existing Applicable Law or order or decree of any Governmental Authority or court, domestic or foreign, having jurisdiction over the Company or any of its assets or businesses, including, without limitation, those relating to environmental laws and regulations.

(i) Material Changes; Undisclosed Events, Liabilities or Developments. Since the date of the latest audited financial statements included within the SEC Reports, except as set forth on Schedule 3.1(i), (i) there has been no event, occurrence or development that has had or that could reasonably be expected to result in a Material Adverse Effect, (ii) the Company has not incurred any liabilities (contingent or otherwise) other than (A) trade payables and accrued expenses incurred in the ordinary course of business consistent with past practice and (B) liabilities not required to be reflected in the Company's financial statements pursuant to GAAP or disclosed in filings made with the Commission, (iii) the Company has not altered its method of accounting, (iv) the Company has not declared or made any dividend or distribution of cash or other property to its shareholders or purchased, redeemed or made any agreements to purchase or redeem any shares of its capital stock and (v) the Company has not issued any equity securities to any officer, director or Affiliate, except pursuant to existing Company stock option plans and the issuance of Common Stock Equivalents as set forth on Schedule 3.1(i). The Company does not have pending before the Commission any request for confidential treatment of information. Except for the issuance of the Securities contemplated by this Agreement or as set forth on Schedule 3.1(i), no event, liability, fact, circumstance, occurrence or development has occurred or exists or is reasonably expected to occur or exist with respect to the Company or its Subsidiaries or their respective businesses, prospects, properties, operations, assets or financial condition that would be required to be disclosed by the Company under applicable securities laws at the time this representation is made or deemed made that has not been publicly disclosed at least one (1) Trading Day prior to the date that this representation is made. Unless otherwise set forth on Section 3.1(i), since January 1, 2020, the Company has not: (i) issued any securities or incurred any liability or obligation, direct or contingent, for borrowed money; or (ii) declared or paid any dividend or made any other distribution on or in respect to its capital stock.

(j) Litigation. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any action, suit, inquiry, notice of violation, proceeding or investigation pending or, to the knowledge of the Company, threatened against or affecting the Company, any Subsidiary or any of their respective properties before or by any court, arbitrator, Governmental Authority (federal, state, county, local or foreign) (collectively, an "Action"), except as set forth on Schedule 3.1(j). There are no Actions that (i) adversely affects or challenges the legality, validity or enforceability of any of the Transaction Documents or the Securities or, (ii) could, if there were an unfavorable decision, have or reasonably be expected to result in a Material Adverse Effect. Neither the Company nor any Subsidiary, nor any director or officer thereof, is or has been the subject of any Action involving a claim of violation of or liability under federal or state securities laws or a claim of breach of fiduciary duty. There has not been, and to the knowledge of the Company, there is not pending or contemplated, any investigation by the Commission involving the Company or any current or former director or officer of the Company. The Commission has not issued any stop order or other order suspending the effectiveness of any registration statement filed by the Company or any Subsidiary under the Exchange Act or the Securities Act.

(k) Labor Relations. No labor dispute exists or, to the knowledge of the Company, is imminent with respect to any of the employees of the Company, which could reasonably be expected to result in a Material Adverse Effect. None of the Company's or its Subsidiaries' employees is a member of a union that relates to such employee's relationship with the Company or such Subsidiary, and neither the Company nor any of its Subsidiaries is a party to a collective bargaining agreement, and the Company and its Subsidiaries believe that their relationships with their employees are good. To the knowledge of the Company, no executive officer of the Company or any Subsidiary, is, or is now expected to be, in violation of any material term of any employment contract, confidentiality, disclosure or proprietary information agreement or non-competition agreement, or any other contract or agreement or any restrictive covenant in favor of any third party, and the continued employment of each such executive officer does not subject the Company or any of its Subsidiaries to any liability with respect to any of the foregoing matters that would reasonably be expected to have a Material Adverse Effect. The Company and its Subsidiaries are in compliance with all U.S. federal, state, local and foreign laws and regulations relating to employment and employment practices, terms and conditions of employment and wages and hours, except where the failure to be in compliance could not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect. The Company and each of the Subsidiaries (A) is in compliance, in all material respects, with Applicable Laws (including pursuant to the Occupational Health and Safety Act or its foreign equivalents) relating to the protection of human health and safety in the workplace ("Occupational Laws"); (B) has received all Authorizations or other approvals required of it under applicable Occupational Laws to conduct its business as currently conducted; and (C) is in compliance, in all material respects, with all terms and conditions of such Authorizations or approval. No action, proceeding, revocation proceeding, writ, injunction or claim is pending or, to the Company's knowledge, threatened against the Company or any of its Subsidiaries relating to Occupational Laws, and the Company does not have knowledge of any facts, circumstances or developments relating to its operations or cost accounting practices that could reasonably be expected to form the basis for or give rise to such actions, suits, investigations or proceedings.

(l) Compliance. Neither the Company nor any Subsidiary: (i) is in default under or in violation of (and no event has occurred that has not been waived that, with notice or lapse of time or both, would result in a default by the Company or any Subsidiary under), nor has the Company or any Subsidiary received notice of a claim that it is in default under or that it is in violation of, any credit facility or loan agreement to which the Company or any of its Subsidiaries is a party or their assets are bound as disclosed in the Registration Statement and the Prospectus or other indenture, loan or credit agreement or any other agreement or instrument to which it is a party or by which it or any of its properties is bound (whether or not such default or violation has been waived), (ii) is in violation of any judgment, decree or order of any court, arbitrator or other governmental authority or (iii) is or has been in violation of any statute, rule, ordinance or regulation of any governmental authority, including without limitation all foreign, federal, state and local laws relating to taxes, environmental protection, occupational health and safety, product quality and safety and employment and labor matters, except in each case as could not have or reasonably be expected to result in a Material Adverse Effect.

(m) Environmental Laws. Neither the Company nor any of its Subsidiaries is in violation of any applicable international, national, state or local convention, law, regulation, order, governmental license, convention, treaty (including those promulgated by the International Maritime Organization) or other requirement relating to pollution or protection of human health or safety (as they relate to exposure to Materials of Environmental Concern (as defined below)) or protection of the environment (including, without limitation, ambient air, surface water, groundwater, land surface or subsurface strata) or protection of natural resources, including without limitation, conventions, laws or regulations relating to emissions, discharges, releases or threatened releases of chemicals, pollutants, contaminants, wastes, toxic substances, hazardous substances, petroleum, petroleum products or other hydrocarbons (collectively, "Materials of Environmental Concern"), or otherwise relating to the manufacture, processing, distribution, use, treatment, storage, disposal, transport or handling of Materials of Environmental Concern (collectively, "Environmental Laws"), nor has the Company or any Subsidiary received any written communication, whether from a Governmental Authority, citizens group, employee or otherwise, that alleges that the Company or any such Subsidiary is in violation of any Environmental Law or governmental license required pursuant to Environmental Law; except, in each case, as would not, individually or in the aggregate, have a Material Adverse Effect; (b) there is no claim, action or cause of action filed with a court or Governmental Authority and no investigation, or other action with respect to which the Company or any Subsidiary has received written notice alleging potential liability for investigatory costs, cleanup costs, governmental response costs, natural resources damages, property damages, personal injuries, attorneys' fees or penalties arising out of, based on or resulting from the presence, or release into the environment, of any Material of Environmental Concern at any location owned, leased or operated by the Company or any Subsidiary, now or in the past, or from any vessel owned, leased or operated by the Company or any Subsidiary, now or in the past (collectively, "Environmental Claim"), pending or, to the knowledge of the Company, threatened against the Company or any Subsidiary or any person or entity whose liability for any Environmental Claim the Company or any Subsidiary has retained or assumed either contractually or by operation of law, except as would not, individually or in the aggregate, have a Material Adverse Effect; (c) to the knowledge of the Company, there are no past or present actions, activities, circumstances, conditions, events or incidents, including, without limitation, the release, emission, discharge, presence or disposal of any Material of Environmental Concern, that reasonably would be expected to result in a violation of any Environmental Law, require expenditures to be incurred pursuant to Environmental Law, or form the basis of an Environmental Claim against the Company, any Subsidiary or against any person or entity whose liability for any Environmental Claim the Company or any Subsidiary has retained or assumed either contractually or by operation of law, except as would not, individually or in the aggregate, have a Material Adverse Effect (for the avoidance of doubt, the operation of vessels in the ordinary course of business shall not be deemed, by itself, an action, activity, circumstance or condition set forth in this clause (c)); and (d) none of the Company or any Subsidiary is subject to any pending proceeding under Environmental Law to which a Governmental Authority is a party and which the Company reasonably believes is likely to result in monetary sanctions of US\$100,000 or more. The Company has reasonably concluded that any existing compliance and remediation costs and liabilities arising under Environmental Laws and resulting from the business, operations or properties of the Company or any Subsidiary would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Effect, except as set forth in or contemplated in the Registration Statement, Pricing Prospectus and the Prospectus. In the ordinary course of its business, the Company conducts a periodic review of the effect of Environmental Laws on the business, operations and properties of the Company and the Subsidiaries, in the course of which it identifies and evaluates associated costs and liabilities (including, without limitation, any capital or operating expenditures required for clean-up, closure of properties or compliance with Environmental Laws or any Authorizations, any related constraints on operating activities and any potential liabilities to third parties). No facts or circumstances have come to the Company's attention that could result in costs or liabilities that could be expected, individually or in the aggregate, to have a Material Adverse Effect.

(n) Law and Permits. Except as described in the Registration Statement or the Pricing Prospectus or the Prospectus, the Company and each of the Subsidiaries: (A) is and at all times since January 1, 2020 has been in material compliance with all United States (federal, state and local) and foreign statutes, rules, regulations, codes, treaties, or guidance applicable to the Company or the Subsidiaries (“Applicable Laws”); (B) since January 1, 2020 has not received any notice of adverse finding, warning letter, untitled letter or other correspondence or notice from any Governmental Authority (as defined below) alleging or asserting noncompliance with any Applicable Laws or any licenses, certificates, approvals, clearances, authorizations, permits and supplements or amendments thereto required by any such Applicable Laws (“Authorizations”); (C) since January 1, 2020 has not received notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any Governmental Authority or third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations and has no knowledge that any such Governmental Authority or third party intends to assert any such claim, litigation, arbitration, action, suit, investigation or proceeding; (D) since January 1, 2020 has not received notice that any Governmental Authority has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations and the Company has no knowledge that any such Governmental Authority is considering such action; and (E) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or Authorizations and that all such reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments were complete and correct in all material respects on the date filed (or were corrected or supplemented by a subsequent submission), except in the case of (A) through (E) above, as could not, individually or in the aggregate, reasonably be expected to result in a Material Adverse Effect. “Governmental Authority” means any federal, provincial, state, local, foreign or other governmental, quasi-governmental or administrative agency, court or body or any other type of regulatory authority or body, including, without limitation, the Nasdaq Capital Market. The aggregate of all pending legal or governmental proceedings to which the Company or any Subsidiary is a party or of which any of their respective property or assets is the subject which are not described in the Registration Statement, Pricing Prospectus and the Prospectus, including ordinary routine litigation incidental to the business, would not result in a Material Adverse Effect.

(o) Title to Assets. The Company and the Subsidiaries have good and marketable title in fee simple to all real property owned by them and good and marketable title in all personal property owned by them that is material to the business of the Company and the Subsidiaries, in each case free and clear of all Liens, except for (i) Liens arising under any credit facility or loan agreement to which the Company or any of its Subsidiaries is a party or their assets are bound as disclosed in the Registration Statement and the Prospectus, (ii) Liens as do not materially affect the value of such property and do not materially interfere with the use made and proposed to be made of such property by the Company and the Subsidiaries and (iii) Liens for the payment of foreign, federal, state or other taxes, for which appropriate reserves have been made therefor in accordance with GAAP and, the payment of which is neither delinquent nor subject to penalties. Any real property and facilities held under lease by the Company and the Subsidiaries are held by them under valid, subsisting and enforceable leases with which the Company and the Subsidiaries are in compliance.

(p) Intellectual Property. The Company and each of its Subsidiaries owns, possesses, or can acquire on reasonable terms, all Intellectual Property (as defined below) necessary for the conduct of their respective businesses as now conducted or as described in the Registration Statement, the Pricing Prospectus and the Prospectus to be conducted. Except as would not result in a Material Adverse Effect, (A) there are no rights of third parties to any such Intellectual Property owned by the Company; (B) to the knowledge of the Company, there is no infringement, misappropriation or violation by third parties of any such Intellectual Property; (C) there is no pending or, to the knowledge of the Company, threatened, action, suit, proceeding or claim by others challenging the Company’s or any Subsidiary’s rights in or to any such Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such claim; (D) the Intellectual Property owned by the Company and each of the Subsidiaries, and to the knowledge of the Company, the Intellectual Property licensed to the Company, each of the Subsidiaries, has not been adjudged invalid or unenforceable, in whole or in part, and there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others challenging the validity or scope of any such Intellectual Property, and the Company is unaware of any facts which would form a reasonable basis for any such claim; (E) there is no pending or, to the knowledge of the Company, threatened action, suit, proceeding or claim by others that the Company or any of its Subsidiaries infringes, misappropriates or otherwise violates any Intellectual Property or other proprietary rights of others, and neither the Company nor any of the Subsidiaries has received any written notice of such claim; and (F) to the Company’s knowledge, no employee of the Company or any of its Subsidiaries is in or has ever been in violation of any term of any employment contract, patent disclosure agreement, invention assignment agreement, non-competition agreement, non-solicitation agreement, nondisclosure agreement or any restrictive covenant to or with a former employer where the basis of such violation relates to such employee’s employment with the Company or any of its Subsidiaries or actions undertaken by the employee while employed with the Company or any of its Subsidiaries. “Intellectual Property” shall mean all patents, patent applications, trade and service marks, trade and service mark registrations, trade names, copyrights, licenses, inventions, trade secrets, domain names, technology, know-how and other intellectual property.

(q) Insurance. The Company and the Subsidiaries are insured by insurers of recognized financial responsibility against such losses and risks and in such amounts as are prudent and customary in the businesses in which the Company and the Subsidiaries are engaged. Neither the Company nor any Subsidiary has any reason to believe that it will not be able to renew its existing insurance coverage as and when such coverage expires or to obtain similar coverage from similar insurers as may be necessary to continue its business without a significant increase in cost.

(r) Transactions With Affiliates and Employees. Except as set forth on Schedule 3.1(r), none of the officers or directors of the Company or any Subsidiary and, to the knowledge of the Company, none of the employees of the Company or any Subsidiary is presently a party to any transaction with the Company or any Subsidiary (other than for services as employees, officers and directors), including any contract, agreement or other arrangement providing for the furnishing of services to or by, providing for rental of real or personal property to or from, providing for the borrowing of money from or lending of money to or otherwise requiring payments to or from any officer, director or such employee or, to the knowledge of the Company, any entity in which any officer, director, or any such employee has a substantial interest or is an officer, director, trustee, stockholder, member or partner, in each case in excess of \$120,000 other than for (i) payment of salary or consulting fees for services rendered, (ii) reimbursement for expenses incurred on behalf of the Company and (iii) other employee benefits, including stock option agreements under any stock option plan of the Company.

(s) Sarbanes-Oxley: Internal Accounting Controls. The Company and the Subsidiaries are in compliance with any and all applicable requirements of the Sarbanes-Oxley Act of 2002, as amended, that are effective as of the date hereof, and any and all applicable rules and regulations promulgated by the Commission thereunder that are effective as of the date hereof and as of the Closing Date. Except as set forth on Schedule 3.1(s), the Company and the Subsidiaries maintain a system of internal accounting controls sufficient to provide reasonable assurance that: (i) transactions are executed in accordance with management's general or specific authorizations, (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability, (iii) access to assets is permitted only in accordance with management's general or specific authorization, and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. The Company and the Subsidiaries have established disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) for the Company and the Subsidiaries and designed such disclosure controls and procedures to ensure that information required to be disclosed by the Company in the reports it files or submits under the Exchange Act is recorded, processed, summarized and reported, within the time periods specified in the Commission's rules and forms. The Company's certifying officers have evaluated the effectiveness of the disclosure controls and procedures of the Company and the Subsidiaries as of the end of the period covered by the most recently filed periodic report under the Exchange Act (such date, the "Evaluation Date"). The Company presented in its most recently filed periodic report under the Exchange Act the conclusions of the certifying officers about the effectiveness of the disclosure controls and procedures based on their evaluations as of the Evaluation Date. Since the Evaluation Date, there have been no changes in the internal control over financial reporting (as such term is defined in the Exchange Act) of the Company and its Subsidiaries that have materially affected, or is reasonably likely to materially affect, the internal control over financial reporting of the Company and its Subsidiaries.

(t) Certain Fees. Except for fees payable by the Company to the Placement Agent and as set forth in the Pricing Prospectus or the Prospectus, no brokerage or finder's fees or commissions are or will be payable by the Company, any Subsidiary or Affiliate of the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. The Purchasers shall have no obligation with respect to any fees or with respect to any claims made by or on behalf of other Persons for fees of a type contemplated in this Section that may be due in connection with the transactions contemplated by the Transaction Documents.

(u) Investment Company. The Company is not, and is not an Affiliate of, and immediately after receipt of payment for the Securities, will not be or be an Affiliate of, an “investment company” within the meaning of the Investment Company Act of 1940, as amended. The Company shall conduct its business in a manner so that it will not become an “investment company” subject to registration under the Investment Company Act of 1940, as amended.

(v) Registration Rights. No Person has any right to cause the Company or any Subsidiary to effect the registration under the Securities Act of any securities of the Company or any Subsidiary, other than the Purchasers and those rights that have been waived or satisfied.

(w) Listing and Maintenance Requirements. The Common Stock are registered pursuant to Section 12(b) or 12(g) of the Exchange Act, and the Company has taken no action designed to, or which to its knowledge is likely to have the effect of, terminating the registration of the Common Stock under the Exchange Act nor has the Company received any notification that the Commission is contemplating terminating such registration. Except as set forth on Schedule 3.1(w), the Company is, and has no reason to believe that it will not in the foreseeable future continue to be, in compliance with all such listing and maintenance requirements. The Common Stock is currently eligible for electronic transfer through the Depository Trust Company or another established clearing corporation and the Company is current in payment of the fees to the Depository Trust Company (or such other established clearing corporation) in connection with such electronic transfer.

(x) Application of Takeover Protections. The Company and the Board of Directors have taken all necessary action, if any, in order to render inapplicable any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or other similar anti takeover provision under the Company’s certificate of incorporation (or similar charter documents) or the laws of its state or jurisdiction of incorporation that is or could become applicable to the Purchasers as a result of the Purchasers and the Company fulfilling their obligations or exercising their rights under the Transaction Documents, including without limitation as a result of the Company’s issuance of the Securities and the Purchasers’ ownership of the Securities.

(y) Disclosure. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, the Company confirms that neither it nor any other Person acting on its behalf has provided any of the Purchasers or their agents or counsel with any information that it believes constitutes or might constitute material, non-public information which is not otherwise disclosed in the Pricing Prospectus or the Prospectus. The Company understands and confirms that the Purchasers will rely on the foregoing representation in effecting transactions in securities of the Company. All of the disclosure furnished by or on behalf of the Company to the Purchasers regarding the Company and its Subsidiaries, their respective businesses and the transactions contemplated hereby, including the Disclosure Schedules to this Agreement, is true and correct and does not contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein, in the light of the circumstances under which they were made, not misleading. The SEC Reports, when they were filed with the Commission, conformed in all material respects to the requirements of the Securities Act and the Exchange Act, as applicable, and the applicable rules and regulations, and none of such documents, when they were filed with the Commission, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein (with respect to the SEC Reports incorporated by reference in the Prospectus), in light of the circumstances under which they were made not misleading; and any further documents so filed and incorporated by reference in the Prospectus, when such documents are filed with the Commission, will conform in all material respects to the requirements of the Exchange Act and the applicable rules and regulations, as applicable, and will not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in light of the circumstances under which they were made not misleading. The press releases disseminated by the Company during the twelve months preceding the date of this Agreement taken as a whole do not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary in order to make the statements therein, in the light of the circumstances under which they were made and when made, not misleading. The Company acknowledges and agrees that no Purchaser makes or has made any representations or warranties with respect to the transactions contemplated hereby other than those specifically set forth in Section 3.2 hereof. No post-effective amendment to the Registration Statement reflecting any facts or events arising after the date thereof which represent, individually or in the aggregate, a fundamental change in the information set forth therein is required to be filed with the Commission. There are no documents required to be filed with the Commission in connection with the transaction contemplated hereby that (x) have not been filed as required pursuant to the Securities Act or (y) will not be filed within the requisite time period. There are no contracts or other documents required to be described in the Preliminary Prospectus or Prospectus, or to be filed as exhibits or schedules to the Registration Statement, which have not been described or filed as required.

(z) No Integrated Offering. Assuming the accuracy of the Purchasers' representations and warranties set forth in Section 3.2, neither the Company, nor any of its Affiliates, nor any Person acting on its or their behalf has, directly or indirectly, made any offers or sales of any security or solicited any offers to buy any security, under circumstances that would cause this offering of the Securities to be integrated with prior offerings by the Company for purposes of any applicable shareholder approval provisions of any Trading Market on which any of the securities of the Company are listed or designated.

(aa) Solvency. Based on the consolidated financial condition of the Company as of the Closing Date, after giving effect to the receipt by the Company of the proceeds from the sale of the Securities hereunder, (i) the fair saleable value of the Company's assets exceeds the amount that will be required to be paid on or in respect of the Company's existing debts and other liabilities (including known contingent liabilities) as they mature, (ii) the Company's assets do not constitute unreasonably small capital to carry on its business as now conducted and as proposed to be conducted including its capital needs taking into account the particular capital requirements of the business conducted by the Company, consolidated and projected capital requirements and capital availability thereof as such matters are described in the Registration Statement, and (iii) the current cash flow of the Company, together with the proceeds the Company would receive, were it to liquidate all of its assets, after taking into account all anticipated uses of the cash, would be sufficient to pay all amounts on or in respect of its liabilities when such amounts are required to be paid. The Company does not intend to incur debts beyond its ability to pay such debts as they mature (taking into account the timing and amounts of cash to be payable on or in respect of its debt). The Company has no knowledge of any facts or circumstances which lead it to believe that it will file for reorganization or liquidation under the bankruptcy or reorganization laws of any jurisdiction within one year from the Closing Date. Schedule 3.1(aa) sets forth as of the date hereof all outstanding secured and unsecured Indebtedness of the Company or any Subsidiary, or for which the Company or any Subsidiary has commitments. For the purposes of this Agreement, "Indebtedness" means (x) any liabilities for borrowed money or amounts owed in excess of \$50,000 (other than trade accounts payable incurred in the ordinary course of business), (y) all guaranties, endorsements and other contingent obligations in respect of indebtedness of others, whether or not the same are or should be reflected in the Company's consolidated balance sheet (or the notes thereto), except guaranties by endorsement of negotiable instruments for deposit or collection or similar transactions in the ordinary course of business; and (z) the present value of any lease payments in excess of \$50,000 due under leases required to be capitalized in accordance with GAAP. Neither the Company nor any Subsidiary is in default with respect to any Indebtedness.

(bb) Tax Status. Except for matters that would not, individually or in the aggregate, have or reasonably be expected to result in a Material Adverse Effect, the Company and its Subsidiaries each (i) has made or filed all United States federal, state and local income and all foreign income and franchise tax returns, reports and declarations required by any jurisdiction to which it is subject, (ii) has paid all taxes and other governmental assessments and charges that are material in amount, shown or determined to be due on such returns, reports and declarations and (iii) has set aside on its books provision reasonably adequate for the payment of all material taxes for periods subsequent to the periods to which such returns, reports or declarations apply. There are no unpaid taxes in any material amount claimed to be due by the taxing authority of any jurisdiction, and the officers of the Company or of any Subsidiary know of no basis for any such claim. The provisions for taxes payable, if any, shown on the financial statements filed with or as part of the Registration Statement are sufficient for all accrued and unpaid taxes, whether or not disputed, and for all periods to and including the dates of such consolidated financial statements. The term "taxes" mean all federal, state, local, foreign, and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments, or charges of any kind whatsoever, together with any interest and any penalties, additions to tax, or additional amounts with respect thereto. The term "returns" means all returns, declarations, reports, statements, and other documents required to be filed in respect to taxes.

(cc) Foreign Corrupt Practices. Neither the Company nor any Subsidiary, nor to the knowledge of the Company or any Subsidiary, any agent or other person acting on behalf of the Company or any Subsidiary, has (i) directly or indirectly, used any funds for unlawful contributions, gifts, entertainment or other unlawful expenses related to foreign or domestic political activity, (ii) made any unlawful payment to foreign or domestic government officials or employees or to any foreign or domestic political parties or campaigns from corporate funds, (iii) failed to disclose fully any contribution made by the Company or any Subsidiary (or made by any person acting on its behalf of which the Company is aware) which is in violation of Applicable Law, or (iv) violated in any material respect any provision of FCPA or any foreign equivalent. The Company has taken reasonable steps to ensure that its accounting controls and procedures are sufficient to cause the Company to comply in all material respects with the FCPA or any foreign equivalent.

(dd) Accountants. The Company's accounting firm is BDO USA, LLP. To the knowledge and belief of the Company, such accounting firm (i) is an independent registered public accounting firm as required by the Exchange Act and (ii) shall express its opinion with respect to the financial statements included in the Company's Annual Report for the fiscal year ending December 31, 2023.

(ee) Acknowledgment Regarding Purchasers' Purchase of Securities. The Company acknowledges and agrees that each of the Purchasers is acting solely in the capacity of an arm's length purchaser with respect to the Transaction Documents and the transactions contemplated thereby. The Company further acknowledges that no Purchaser is acting as a financial advisor or fiduciary of the Company (or in any similar capacity) with respect to the Transaction Documents and the transactions contemplated thereby and any advice given by any Purchaser or any of their respective representatives or agents in connection with the Transaction Documents and the transactions contemplated thereby is merely incidental to the Purchasers' purchase of the Securities. The Company further represents to each Purchaser that the Company's decision to enter into this Agreement and the other Transaction Documents has been based solely on the independent evaluation of the transactions contemplated hereby by the Company and its representatives.

(ff) Acknowledgment Regarding Purchaser's Trading Activity. Anything in this Agreement or elsewhere herein to the contrary notwithstanding (except for Sections 3.2(f) and 4.14 hereof), it is understood and acknowledged by the Company that: (i) none of the Purchasers has been asked by the Company to agree, nor has any Purchaser agreed, to desist from purchasing or selling, long and/or short, securities of the Company, or "derivative" securities based on securities issued by the Company or to hold the Securities for any specified term; (ii) past or future open market or other transactions by any Purchaser, specifically including, without limitation, Short Sales or "derivative" transactions, before or after the closing of this or future private placement transactions, may negatively impact the market price of the Company's publicly-traded securities; (iii) any Purchaser, and counter-parties in "derivative" transactions to which any such Purchaser is a party, directly or indirectly, presently may have a "short" position in the Common Stock, and (iv) each Purchaser shall not be deemed to have any affiliation with or control over any arm's length counter-party in any "derivative" transaction. The Company further understands and acknowledges that (y) one or more Purchasers may engage in hedging activities at various times during the period that the Securities are outstanding, including, without limitation, during the periods that the value of the Warrant Shares deliverable with respect to Securities are being determined, and (z) such hedging activities (if any) could reduce the value of the existing stockholders' equity interests in the Company at and after the time that the hedging activities are being conducted. The Company acknowledges that such aforementioned hedging activities do not constitute a breach of any of the Transaction Documents.

(gg) Regulation M Compliance. The Company has not, and to its knowledge no one acting on its behalf has, (i) taken, directly or indirectly, any action designed to cause or to result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of any of the Securities, (ii) sold, bid for, purchased, or, paid any compensation for soliciting purchases of, any of the Securities, or (iii) paid or agreed to pay to any Person any compensation for soliciting another to purchase any other securities of the Company, other than, in the case of clauses (ii) and (iii), compensation paid to the Placement Agent in connection with the placement of the Securities.

(hh) Cybersecurity. (i)(x) There has been no security breach or other compromise of or relating to any of the Company's or any Subsidiary's information technology and computer systems, networks, hardware, software, data (including the data of its respective customers, employees, suppliers, vendors and any third party data maintained by or on behalf of it), equipment or technology (collectively, "IT Systems and Data") and (y) the Company and the Subsidiaries have not been notified of, and has no knowledge of any event or condition that would reasonably be expected to result in, any security breach or other compromise to its IT Systems and Data; (ii) the Company and the Subsidiaries are presently in compliance with all applicable laws or statutes and all judgments, orders, rules and regulations of any court or arbitrator or governmental or regulatory authority, internal policies and contractual obligations relating to the privacy and security of IT Systems and Data and to the protection of such IT Systems and Data from unauthorized use, access, misappropriation or modification, except as would not, individually or in the aggregate, have a Material Adverse Effect; (iii) the Company and the Subsidiaries have implemented and maintained commercially reasonable safeguards to maintain and protect its material confidential information and the integrity, continuous operation, redundancy and security of all IT Systems and Data; and (iv) the Company and the Subsidiaries have implemented backup and disaster recovery technology consistent with industry standards and practices.

(ii) Stock Option Plans. Each stock option granted by the Company under the Company's stock option plan was granted (i) in accordance with the terms of the Company's stock option plan and (ii) with an exercise price at least equal to the fair market value of the Common Stock on the date such stock option would be considered granted under GAAP and Applicable Law. No stock option granted under the Company's stock option plan has been backdated. The Company has not knowingly granted, and there is no and has been no Company policy or practice to knowingly grant, stock options prior to, or otherwise knowingly coordinate the grant of stock options with, the release or other public announcement of material information regarding the Company or its Subsidiaries or their financial results or prospects.

(jj) Office of Foreign Assets Control. Neither the Company nor any Subsidiary nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company or any Subsidiary is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC").

(kk) U.S. Real Property Holding Corporation. The Company is not and has never been a U.S. real property holding corporation within the meaning of Section 897 of the Internal Revenue Code of 1986, as amended, and the Company shall so certify upon Purchaser's request.

(ll) Bank Holding Company Act. Neither the Company nor any of its Subsidiaries or Affiliates is subject to the Bank Holding Company Act of 1956, as amended (the "BHCA") and to regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Neither the Company nor any of its Subsidiaries or Affiliates owns or controls, directly or indirectly, five percent (5%) or more of the outstanding shares of any class of voting securities or twenty-five percent (25%) or more of the total equity of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve. Neither the Company nor any of its Subsidiaries or Affiliates exercises a controlling influence over the management or policies of a bank or any entity that is subject to the BHCA and to regulation by the Federal Reserve.

(mm) Money Laundering. The operations of the Company and its Subsidiaries are and have been conducted at all times in compliance with applicable financial record-keeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, applicable money laundering statutes and applicable rules and regulations thereunder (collectively, the "Money Laundering Laws"), and no Action or Proceeding by or before any court or Governmental Authority or body or any arbitrator involving the Company or any Subsidiary with respect to the Money Laundering Laws is pending or, to the knowledge of the Company or any Subsidiary, threatened.

3.2 Representations and Warranties of the Purchasers. Each Purchaser, for itself and for no other Purchaser, hereby represents and warrants as of the date hereof and as of the Closing Date to the Company as follows (unless as of a specific date therein, in which case they shall be accurate as of such date):

(a) Organization; Authority. Such Purchaser is either an individual or an entity duly incorporated or formed, validly existing and in good standing under the laws of the jurisdiction of its incorporation or formation with full right, corporate, partnership, limited liability company or similar power and authority to enter into and to consummate the transactions contemplated by the Transaction Documents and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of the Transaction Documents and performance by such Purchaser of the transactions contemplated by the Transaction Documents have been duly authorized by all necessary corporate, partnership, limited liability company or similar action, as applicable, on the part of such Purchaser. Each Transaction Document to which it is a party has been duly executed by such Purchaser, and when delivered by such Purchaser in accordance with the terms hereof, will constitute the valid and legally binding obligation of such Purchaser, enforceable against it in accordance with its terms, except: (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by Applicable Law.

(b) Understandings or Arrangements. Such Purchaser is acquiring the Securities as principal for its own account and has no direct or indirect arrangement or understandings with any other persons to distribute or regarding the distribution of such Securities (this representation and warranty not limiting such Purchaser's right to sell the Securities pursuant to the Registration Statement or otherwise in compliance with applicable federal and state securities laws).

(c) Purchaser Status. At the time such Purchaser was offered the Securities, it was, and as of the date hereof it is, and on each date on which it exercises any Warrants, it will be an "accredited investor" as defined in Rule 501(a)(1), (a)(2), (a)(3), (a)(7), (a)(8), (a)(9), (a)(12), or (a)(13) under the Securities Act.

(d) Experience of Such Purchaser. Such Purchaser, either alone or together with its representatives, has such knowledge, sophistication and experience in business and financial matters so as to be capable of evaluating the merits and risks of the prospective investment in the Securities, and has so evaluated the merits and risks of such investment. Such Purchaser is able to bear the economic risk of an investment in the Securities and, at the present time, is able to afford a complete loss of such investment.

(e) Access to Information. Such Purchaser acknowledges that it has had the opportunity to review the Transaction Documents (including all exhibits and schedules thereto) and the SEC Reports and has been afforded, (i) the opportunity to ask such questions as it has deemed necessary of, and to receive answers from, representatives of the Company concerning the terms and conditions of the offering of the Securities and the merits and risks of investing in the Securities; (ii) access to information about the Company and its financial condition, results of operations, business, properties, management and prospects sufficient to enable it to evaluate its investment; and (iii) the opportunity to obtain such additional information that the Company possesses or can acquire without unreasonable effort or expense that is necessary to make an informed investment decision with respect to the investment. Such Purchaser acknowledges and agrees that neither the Placement Agent nor any Affiliate of the Placement Agent has provided such Purchaser with any information or advice with respect to the Securities nor is such information or advice necessary or desired. Neither the Placement Agent nor any Affiliate has made or makes any representation as to the Company or the quality of the Securities and the Placement Agent and any Affiliate may have acquired non-public information with respect to the Company which such Purchaser agrees need not be provided to it. In connection with the issuance of the Securities to such Purchaser, neither the Placement Agent nor any of its Affiliates has acted as a financial advisor or fiduciary to such Purchaser.

(f) Certain Transactions and Confidentiality. Other than consummating the transactions contemplated hereunder, such Purchaser has not, nor has any Person acting on behalf of or pursuant to any understanding with such Purchaser, directly or indirectly executed any purchases or sales, including Short Sales, of the securities of the Company during the period commencing as of the time that such Purchaser first received a term sheet (written or oral) from the Company or any other Person representing the Company setting forth the definitive pricing terms of the transactions contemplated hereunder and ending immediately prior to the execution hereof. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser's assets, the representation set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement. Other than to other Persons party to this Agreement or to such Purchaser's representatives, including, without limitation, its officers, directors, partners, legal and other advisors, employees, agents and Affiliates, such Purchaser has maintained the confidentiality of all disclosures made to it in connection with this transaction (including the existence and terms of this transaction). Notwithstanding the foregoing, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.

The Company acknowledges and agrees that the representations contained in this Section 3.2 shall not modify, amend or affect such Purchaser's right to rely on the Company's representations and warranties contained in this Agreement or any representations and warranties contained in any other Transaction Document or any other document or instrument executed and/or delivered in connection with this Agreement or the consummation of the transactions contemplated hereby. Notwithstanding the foregoing, for the avoidance of doubt, nothing contained herein shall constitute a representation or warranty, or preclude any actions, with respect to locating or borrowing shares in order to effect Short Sales or similar transactions in the future.

ARTICLE IV. OTHER AGREEMENTS OF THE PARTIES

4.1 Warrant Shares. The Shares and Warrants shall be issued free of legends. If all or any portion of a Warrant is exercised at a time when there is an effective registration statement to cover the issuance or resale of the Warrant Shares or if the Warrant is exercised via cashless exercise, the Warrant Shares issued pursuant to any such exercise shall be issued free of all legends. If at any time following the date hereof the Registration Statement (or any subsequent registration statement registering the sale or resale of the Warrant Shares) is not effective or is not otherwise available for the sale or resale of the Warrant Shares, the Company shall promptly notify the holders of the Warrants in writing that such registration statement is not then effective and thereafter shall promptly notify such holders when the registration statement is effective again and available for the sale or resale of the Warrant Shares (it being understood and agreed that the foregoing shall not limit the ability of the Company to issue, or any Purchaser to sell, any of the Warrant Shares in compliance with applicable federal and state securities laws). The Company shall use best efforts to keep a registration statement (including the Registration Statement) registering the issuance or resale of the Warrant Shares effective during the term of the Warrants.

4.2 Furnishing of Information. Until the earliest of the time that (i) no Purchaser owns Securities or (ii) the Warrants have expired, the Company covenants to timely file (or obtain extensions in respect thereof and file within the applicable grace period) all reports required to be filed by the Company after the date hereof pursuant to the Exchange Act even if the Company is not then subject to the reporting requirements of the Exchange Act.

4.3 Integration. The Company shall not sell, offer for sale or solicit offers to buy or otherwise negotiate in respect of any security (as defined in Section 2 of the Securities Act) that would be integrated with the offer or sale of the Securities in a manner that would require shareholder approval prior to the closing of such other transaction unless shareholder approval is obtained before the closing of such subsequent transaction.

4.4 Securities Laws Disclosure; Publicity. The Company shall (a) by the Disclosure Time, issue a press release disclosing the material terms of the transactions contemplated hereby, and (b) file a Current Report on Form 8-K, including the Transaction Documents as exhibits thereto, with the Commission within the time required by the Exchange Act. From and after the issuance of such press release, the Company represents to the Purchasers that it shall have publicly disclosed all material, non-public information delivered to any of the Purchasers by the Company or any of its Subsidiaries, or any of their respective officers, directors, employees, Affiliates or agents, including, without limitation, the Placement Agent, in connection with the transactions contemplated by the Transaction Documents. In addition, effective upon the issuance of such press release, the Company acknowledges and agrees that any and all confidentiality or similar obligations under any agreement, whether written or oral, between the Company, any of its Subsidiaries or any of their respective officers, directors, agents, employees, Affiliates or agents, including, without limitation, the Placement Agent, on the one hand, and any of the Purchasers or any of their Affiliates on the other hand, shall terminate and be of no further force or effect. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company. The Company and each Purchaser shall consult with each other in issuing any other press releases with respect to the transactions contemplated hereby, and neither the Company nor any Purchaser shall issue any such press release nor otherwise make any such public statement without the prior consent of the Company, with respect to any press release of any Purchaser, or without the prior consent of each Purchaser, with respect to any press release of the Company, which consent shall not unreasonably be withheld or delayed, except if such disclosure is required by law, in which case the disclosing party shall promptly provide the other party with prior notice of such public statement or communication. Notwithstanding the foregoing, the Company shall not publicly disclose the name of any Purchaser, or include the name of any Purchaser in any filing with the Commission or any regulatory agency or Trading Market, without the prior written consent of such Purchaser, except (a) as required by federal securities law in connection with the filing of final Transaction Documents with the Commission and (b) to the extent such disclosure is required by law or Trading Market regulations, in which case the Company shall provide the Purchasers with prior notice of such disclosure permitted under this clause (b) and reasonably cooperate with such Purchaser regarding such disclosure.

4.5 Shareholder Rights Plan. No claim will be made or enforced by the Company or, with the consent of the Company, any other Person, that any Purchaser is an “Acquiring Person” under any control share acquisition, business combination, poison pill (including any distribution under a rights agreement) or similar anti-takeover plan or arrangement in effect or hereafter adopted by the Company, or that any Purchaser could be deemed to trigger the provisions of any such plan or arrangement, by virtue of receiving Securities under the Transaction Documents or under any other agreement between the Company and the Purchasers.

4.6 Non-Public Information. Except with respect to the material terms and conditions of the transactions contemplated by the Transaction Documents, which shall be disclosed pursuant to Section 4.4, the Company covenants and agrees that neither it, nor any other Person acting on its behalf will provide any Purchaser or its agents or counsel with any information that constitutes, or the Company reasonably believes constitutes, material non-public information, unless prior thereto such Purchaser shall have consented in writing to the receipt of such information and agreed in writing with the Company to keep such information confidential. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company. To the extent that the Company, any of its Subsidiaries, or any of their respective officers, directors, agents, employees or Affiliates delivers any material, non-public information to a Purchaser without such Purchaser’s consent, the Company hereby covenants and agrees that such Purchaser shall not have any duty of confidentiality to the Company, any of its Subsidiaries, or any of their respective officers, directors, employees, Affiliates or agents, including, without limitation, the Placement Agent, or a duty to the Company, any of its Subsidiaries or any of their respective officers, directors, employees, Affiliates or agents, including, without limitation, the Placement Agent, not to trade on the basis of, such material, non-public information, provided that the Purchaser shall remain subject to Applicable Law. To the extent that any notice provided pursuant to any Transaction Document constitutes, or contains, material, non-public information regarding the Company or any Subsidiaries, the Company shall simultaneously with the delivery of such notice file such notice with the Commission pursuant to a Current Report on Form 8-K. The Company understands and confirms that each Purchaser shall be relying on the foregoing covenant in effecting transactions in securities of the Company.

4.7 Use of Proceeds. Except as set forth in the Pricing Prospectus and the Prospectus, the Company shall use the net proceeds from the sale of the Securities hereunder for working capital purposes and shall not use such proceeds: (a) for the satisfaction of any portion of the Company’s debt (other than payment of trade payables in the ordinary course of the Company’s business and prior practices), (b) for the redemption of any Common Stock or Common Stock Equivalents, (c) for the settlement of any outstanding litigation or (d) in violation of FCPA or OFAC regulations.

4.8 Indemnification of Purchasers. Subject to the provisions of this Section 4.8, the Company will indemnify and hold each Purchaser and its directors, officers, shareholders, members, partners, employees and agents (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title), each Person who controls such Purchaser (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, shareholders, agents, members, partners or employees (and any other Persons with a functionally equivalent role of a Person holding such titles notwithstanding a lack of such title or any other title) of such controlling persons (each, a “Purchaser Party”) harmless from any and all losses, liabilities, obligations, claims, contingencies, damages, costs and expenses, including all judgments, amounts paid in settlements, court costs and reasonable attorneys’ fees and costs of investigation that any such Purchaser Party may suffer or incur as a result of or relating to (a) any breach of any of the representations, warranties, covenants or agreements made by the Company in this Agreement or in the other Transaction Documents or (b) any action instituted against the Purchaser Parties in any capacity, or any of them or their respective Affiliates, by any stockholder of the Company who is not an Affiliate of such Purchaser Party, with respect to any of the transactions contemplated by the Transaction Documents (unless such action is solely based upon a material breach of such Purchaser Party’s representations, warranties or covenants under the Transaction Documents or any agreements or understandings such Purchaser Party may have with any such stockholder or any violations by such Purchaser Party of state or federal securities laws or any conduct by such Purchaser Party which is finally judicially determined to constitute fraud, gross negligence, willful misconduct or malfeasance). If any action shall be brought against any Purchaser Party in respect of which indemnity may be sought pursuant to this Agreement, such Purchaser Party shall promptly notify the Company in writing, and the Company shall have the right to assume the defense thereof with counsel of its own choosing reasonably acceptable to the Purchaser Party. Any Purchaser Party shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Purchaser Party except to the extent that (i) the employment thereof has been specifically authorized by the Company in writing, (ii) the Company has failed after a reasonable period of time to assume such defense and to employ counsel or (iii) in such action there is, in the reasonable opinion of counsel, a material conflict on any material issue between the position of the Company and the position of such Purchaser Party, in which case the Company shall be responsible for the reasonable fees and expenses of no more than one such separate counsel. The Company will not be liable to any Purchaser Party under this Agreement (y) for any settlement by a Purchaser Party effected without the Company’s prior written consent, which shall not be unreasonably withheld or delayed; or (z) to the extent that a loss, claim, damage or liability is attributable to any Purchaser Party’s breach of any of the representations, warranties, covenants or agreements made by such Purchaser Party in this Agreement or in the other Transaction Documents. The indemnification required by this Section 4.8 shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as and when bills are received or are incurred. The indemnity agreements contained herein shall be in addition to any cause of action or similar right of any Purchaser Party against the Company or others and any liabilities the Company may be subject to pursuant to law.

4.9 Reservation of Common Stock. As of the date hereof, the Company has reserved and the Company shall continue to reserve and keep available at all times, free of preemptive rights, a sufficient number of Common Stock for the purpose of enabling the Company to issue Shares pursuant to this Agreement and Warrant Shares pursuant to any exercise of the Warrants.

4.10 Listing of Common Stock. The Company hereby agrees to use best efforts to maintain the listing or quotation of the Common Stock on the Trading Market on which it is currently listed, and concurrently with the Closing, the Company shall apply to list or quote all of the Shares and Warrant Shares on such Trading Market and promptly secure the listing of all of the Shares and Warrant Shares on such Trading Market. The Company further agrees, if the Company applies to have the Common Stock traded on any other Trading Market, it will then include in such application all of the Shares and Warrant Shares, and will take such other action as is necessary to cause all of the Shares and Warrant Shares to be listed or quoted on such other Trading Market as promptly as possible. The Company will then take all action reasonably necessary to continue the listing and trading of its Common Stock on a Trading Market and will comply in all respects with the Company’s reporting, filing and other obligations under the bylaws or rules of the Trading Market. The Company agrees to maintain the eligibility of the Common Stock for electronic transfer through the Depository Trust Company or another established clearing corporation, including, without limitation, by timely payment of fees to the Depository Trust Company or such other established clearing corporation in connection with such electronic transfer.

4.11 Board Composition and Board Designations; Internal Controls. The Company shall ensure that: (i) the qualifications of the persons serving as board members and the overall composition of the Board of Directors comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder and with the listing requirements of the Trading Market and (ii) if applicable, at least one member of the Board of Directors qualifies as a “financial expert” as such term is defined under the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder. The Company will maintain a system of internal accounting controls sufficient to provide reasonable assurances that: (i) transactions are executed in accordance with management’s general or specific authorization; (ii) transactions are recorded as necessary in order to permit preparation of financial statements in accordance with GAAP and to maintain accountability for assets; (iii) access to assets is permitted only in accordance with management’s general or specific authorization; and (iv) the recorded accountability for assets is compared with existing assets at reasonable intervals and appropriate action is taken with respect to any differences.

4.12 Equal Treatment of Purchasers. No consideration (including any modification of any Transaction Documents) shall be offered or paid to any Person to amend or consent to a waiver or modification of any provision of the Transaction Documents unless the same consideration is also offered to all of the parties to the Transaction Documents. For clarification purposes, this provision constitutes a separate right granted to each Purchaser by the Company and negotiated separately by each Purchaser, and is intended for the Company to treat the Purchasers as a class and shall not in any way be construed as the Purchasers acting in concert or as a group with respect to the purchase, disposition or voting of Securities or otherwise.

4.13 Certain Transactions and Confidentiality. Each Purchaser, severally and not jointly with the other Purchasers, covenants that neither it nor any Affiliate acting on its behalf or pursuant to any understanding with it will execute any purchases or sales, including Short Sales of any of the Company's securities during the period commencing with the execution of this Agreement and ending at such time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4. Each Purchaser, severally and not jointly with the other Purchasers, covenants that until such time as the transactions contemplated by this Agreement are publicly disclosed by the Company pursuant to the initial press release as described in Section 4.4, such Purchaser will maintain the confidentiality of the existence and terms of this transaction and the information included in the Disclosure Schedules (other than as disclosed to its legal and other representatives). Notwithstanding the foregoing and notwithstanding anything contained in this Agreement to the contrary, the Company expressly acknowledges and agrees that (i) no Purchaser makes any representation, warranty or covenant hereby that it will not engage in effecting transactions in any securities of the Company after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4, (ii) no Purchaser shall be restricted or prohibited from effecting any transactions in any securities of the Company in accordance with applicable securities laws from and after the time that the transactions contemplated by this Agreement are first publicly announced pursuant to the initial press release as described in Section 4.4 and (iii) no Purchaser shall have any duty of confidentiality or duty not to trade in the securities of the Company to the Company, any of its Subsidiaries, or any of their respective officers, directors, employees, Affiliates, or agent, including, without limitation, the Placement Agent, after the issuance of the initial press release as described in Section 4.4. Notwithstanding the foregoing, in the case of a Purchaser that is a multi-managed investment vehicle whereby separate portfolio managers manage separate portions of such Purchaser's assets and the portfolio managers have no direct knowledge of the investment decisions made by the portfolio managers managing other portions of such Purchaser's assets, the covenant set forth above shall only apply with respect to the portion of assets managed by the portfolio manager that made the investment decision to purchase the Securities covered by this Agreement.

4.14 Exercise Procedures. The form of Notice of Exercise included in the Warrants set forth the totality of the procedures required of the Purchasers in order to exercise the Warrants. No additional legal opinion, other information or instructions shall be required of the Purchasers to exercise their Warrants. Without limiting the preceding sentences, no ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required in order to exercise the Warrants. The Company shall honor exercises of the Warrants and shall deliver Warrant Shares in accordance with the terms, conditions and time periods set forth in the Transaction Documents.

4.15 Accountants. For a period of three (3) years from the Effective Date, the Company shall continue to retain the Auditor or another nationally recognize independent registered public accounting firm.

4.16 Transfer Agent. For a period of three (3) years from the Closing Date, the Company shall retain the Transfer Agent or a nationally recognized transfer and registrar agent.

4.17 [Reserved].

4.18 Exchange Act Registration. For a period of three years from the Closing Date, the Company will use its best efforts to maintain the registration of the Common Stock under the Exchange Act. The Company will not voluntarily deregister the Common Stock under the Exchange Act without the prior written consent of the Placement Agent.

4.19 Subsequent Equity Sales.

(a) From the date hereof until ninety (90) days after the Closing Date, neither the Company nor any Subsidiary shall (i) issue, enter into any agreement to issue or announce the issuance or proposed issuance of any Common Stock or Common Stock Equivalents or (ii) file any registration statement or amendment or supplement thereto, other than the Prospectus or the filing of a registration statement on Form S-8 in connection with any employee benefit plan.

(b) From the date hereof until ninety (90) days after the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction. "Variable Rate Transaction" means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible, exchangeable or exercisable for, or include the right to receive additional Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon and/or varies with the trading prices of or quotations for the Common Stock at any time after the initial issuance of such debt or equity securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit or an "at-the-market offering", whereby the Company may issue securities at a future determined price regardless of whether such agreement is subsequently canceled. Any Purchaser shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(c) Notwithstanding the foregoing, this Section 4.21 shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance.

4.20 Capital Changes. Until one hundred fifty (150) days after the Closing Date, the Company shall not undertake a reverse or forward stock split or reclassification of the Common Stock without the prior written consent of the Placement Agent.

4.21 Lock-Up Agreements. The Company shall not amend, modify, waive or terminate any provision of any of the Lock-Up Agreements except to extend the term of the lock-up period and shall enforce the provisions of each Lock-Up Agreement in accordance with its terms. If any party to a Lock-Up Agreement breaches any provision of a Lock-Up Agreement, the Company shall promptly use its best efforts to seek specific performance of the terms of such Lock-Up Agreement.

ARTICLE V. MISCELLANEOUS

5.1 Termination. This Agreement may be terminated by any Purchaser, as to such Purchaser's obligations hereunder only and without any effect whatsoever on the obligations between the Company and the other Purchasers, by written notice to the other parties, if the Closing has not been consummated on or before the fifth (5th) Trading Day following the date hereof; provided, however, that no such termination will affect the right of any party to sue for any breach by any other party (or parties).

5.2 Fees and Expenses. Except as expressly set forth in the Transaction Documents to the contrary, each party shall pay the fees and expenses of its advisers, counsel, accountants and other experts, if any, and all other expenses incurred by such party incident to the negotiation, preparation, execution, delivery and performance of this Agreement. The Company shall pay all Transfer Agent fees (including, without limitation, any fees required for same-day processing of any instruction letter delivered by the Company and any exercise notice delivered by a Purchaser), stamp taxes and other taxes and duties levied in connection with the delivery of any Securities to the Purchasers.

5.3 Entire Agreement. The Transaction Documents, together with the exhibits and schedules thereto, the Pricing Prospectus and the Prospectus, contain the entire understanding of the parties with respect to the subject matter hereof and thereof and supersede all prior agreements and understandings, oral or written, with respect to such matters, which the parties acknowledge have been merged into such documents, exhibits and schedules.

5.4 Notices. Any and all notices or other communications or deliveries required or permitted to be provided hereunder shall be in writing and shall be deemed given and effective on the earliest of: (a) the time of transmission, if such notice or communication is delivered via email attachment at the email address as set forth on the signature pages attached hereto at or prior to 5:30 p.m. (New York City time) on a Trading Day, (b) the next Trading Day after the time of transmission, if such notice or communication is delivered via email attachment at the email address as set forth on the signature pages attached hereto on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (c) the second (2nd) Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service or (d) upon actual receipt by the party to whom such notice is required to be given. The address for such notices and communications shall be as set forth on the signature pages attached hereto.

5.5 Amendments; Waivers. No provision of this Agreement may be waived, modified, supplemented or amended except in a written instrument signed, in the case of an amendment, by the Company and Purchasers which purchased at least 50.1% in interest of the Shares based on the initial Subscription Amounts hereunder (or, prior to the Closing, the Company and each Purchaser) or, in the case of a waiver, by the party against whom enforcement of any such waived provision is sought, provided that if any amendment, modification or waiver disproportionately and adversely impacts a Purchaser (or group of Purchasers), the consent of such disproportionately impacted Purchaser (or group of Purchasers) shall also be required. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of any party to exercise any right hereunder in any manner impair the exercise of any such right. Any proposed amendment or waiver that disproportionately, materially and adversely affects the rights and obligations of any Purchaser relative to the comparable rights and obligations of the other Purchasers shall require the prior written consent of such adversely affected Purchaser. Any amendment effected in accordance with this Section 5.5 shall be binding upon each Purchaser and holder of Securities and the Company.

5.6 Headings. The headings herein are for convenience only, do not constitute a part of this Agreement and shall not be deemed to limit or affect any of the provisions hereof.

5.7 Successors and Assigns. This Agreement shall be binding upon and inure to the benefit of the parties and their successors and permitted assigns. The Company may not assign this Agreement or any rights or obligations hereunder without the prior written consent of each Purchaser (other than by merger). Any Purchaser may assign any or all of its rights under this Agreement to any Person to whom such Purchaser assigns or transfers any Securities, provided that such transferee agrees in writing to be bound, with respect to the transferred Securities, by the provisions of the Transaction Documents that apply to the "Purchasers."

5.8 No Third-Party Beneficiaries. The Placement Agent shall be the third party beneficiary of the representations and warranties of the Company in Section 3.1 and the representations and warranties of the Purchasers in Section 3.2. This Agreement is intended for the benefit of the parties hereto and their respective successors and permitted assigns and is not for the benefit of, nor may any provision hereof be enforced by, any other Person, except as otherwise set forth in Section 4.8 and this Section 5.8.

5.9 Governing Law. All questions concerning the construction, validity, enforcement and interpretation of the Transaction Documents shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal Proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Agreement and any other Transaction Documents (whether brought against a party hereto or its respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein (including with respect to the enforcement of any of the Transaction Documents), and hereby irrevocably waives, and agrees not to assert in any Action or Proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such Action or Proceeding is improper or is an inconvenient venue for such Proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such Action or Proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If any party shall commence an Action or Proceeding to enforce any provisions of the Transaction Documents, then, in addition to the obligations of the Company under Section 4.8, the prevailing party in such Action or Proceeding shall be reimbursed by the non-prevailing party for its reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such Action or Proceeding.

5.10 Survival. The representations and warranties contained herein shall survive the Closing and the delivery of the Securities.

5.11 Execution. This Agreement may be executed in two or more counterparts, all of which when taken together shall be considered one and the same agreement and shall become effective when counterparts have been signed by each party and delivered to each other party, it being understood that the parties need not sign the same counterpart. In the event that any signature is delivered by e-mail delivery of a “.pdf” format data file, such signature shall create a valid and binding obligation of the party executing (or on whose behalf such signature is executed) with the same force and effect as if such “.pdf” signature page were an original thereof.

5.12 Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their commercially reasonable efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

5.13 Rescission and Withdrawal Right. Notwithstanding anything to the contrary contained in (and without limiting any similar provisions of) any of the other Transaction Documents, whenever any Purchaser exercises a right, election, demand or option under a Transaction Document and the Company does not timely perform its related obligations within the periods therein provided, then such Purchaser may rescind or withdraw, in its sole discretion from time to time upon written notice to the Company, any relevant notice, demand or election in whole or in part without prejudice to its future actions and rights; provided, however, that, in the case of a rescission of an exercise of a Warrant, the applicable Purchaser shall be required to return any Common Stock subject to any such rescinded exercise notice concurrently with the return to such Purchaser of the aggregate exercise price paid to the Company for such shares and the restoration of such Purchaser’s right to acquire such shares pursuant to such Purchaser’s Warrant (including, issuance of a replacement warrant certificate evidencing such restored right).

5.14 Replacement of Securities. If any certificate or instrument evidencing any Securities is mutilated, lost, stolen or destroyed, the Company shall issue or cause to be issued in exchange and substitution for and upon cancellation thereof (in the case of mutilation), or in lieu of and substitution therefor, a new certificate or instrument, but only upon receipt of evidence reasonably satisfactory to the Company of such loss, theft or destruction. The applicant for a new certificate or instrument under such circumstances shall also pay any reasonable third-party costs (including customary indemnity) associated with the issuance of such replacement Securities.

5.15 Remedies. In addition to being entitled to exercise all rights provided herein or granted by law, including recovery of damages, each of the Purchasers and the Company will be entitled to specific performance under the Transaction Documents. The parties agree that monetary damages may not be adequate compensation for any loss incurred by reason of any breach of obligations contained in the Transaction Documents and hereby agree to waive and not to assert in any Action for specific performance of any such obligation the defense that a remedy at law would be adequate.

5.16 Payment Set Aside. To the extent that the Company makes a payment or payments to any Purchaser pursuant to any Transaction Document or a Purchaser enforces or exercises its rights thereunder, and such payment or payments or the proceeds of such enforcement or exercise or any part thereof are subsequently invalidated, declared to be fraudulent or preferential, set aside, recovered from, disgorged by or are required to be refunded, repaid or otherwise restored to the Company, a trustee, receiver or any other Person under any law (including, without limitation, any bankruptcy law, state or federal law, common law or equitable cause of action), then to the extent of any such restoration the obligation or part thereof originally intended to be satisfied shall be revived and continued in full force and effect as if such payment had not been made or such enforcement or setoff had not occurred.

5.17 Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser under any Transaction Document are several and not joint with the obligations of any other Purchaser, and no Purchaser shall be responsible in any way for the performance or non-performance of the obligations of any other Purchaser under any Transaction Document. Nothing contained herein or in any other Transaction Document, and no action taken by any Purchaser pursuant hereto or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert or as a group with respect to such obligations or the transactions contemplated by the Transaction Documents. Each Purchaser shall be entitled to independently protect and enforce its rights including, without limitation, the rights arising out of this Agreement or out of the other Transaction Documents, and it shall not be necessary for any other Purchaser to be joined as an additional party in any Proceeding for such purpose. Each Purchaser has been represented by its own separate legal counsel in its review and negotiation of the Transaction Documents. For reasons of administrative convenience only, each Purchaser and its respective counsel have chosen to communicate with the Company through the Placement Agent Counsel. The Placement Agent Counsel does not represent any of the Purchasers and only represents the Placement Agent. The Company has elected to provide all Purchasers with the same terms and Transaction Documents for the convenience of the Company and not because it was required or requested to do so by any of the Purchasers. It is expressly understood and agreed that each provision contained in this Agreement and in each other Transaction Document is between the Company and a Purchaser, solely, and not between the Company and the Purchasers collectively and not between and among the Purchasers.

5.18 Liquidated Damages. The Company's obligations to pay any partial liquidated damages or other amounts owing under the Transaction Documents is a continuing obligation of the Company and shall not terminate until all unpaid partial liquidated damages and other amounts have been paid notwithstanding the fact that the instrument or security pursuant to which such partial liquidated damages or other amounts are due and payable shall have been canceled.

5.19 Saturdays, Sundays, Holidays, etc. If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall not be a Business Day, then such action may be taken or such right may be exercised on the next succeeding Business Day.

5.20 Construction. The parties agree that each of them and/or their respective counsel have reviewed and had an opportunity to revise the Transaction Documents and, therefore, the normal rule of construction to the effect that any ambiguities are to be resolved against the drafting party shall not be employed in the interpretation of the Transaction Documents or any amendments thereto. In addition, each and every reference to share prices and Common Stock in any Transaction Document shall be subject to adjustment for reverse and forward stock splits, stock dividends, stock combinations and other similar transactions of the Common Stock that occur after the date of this Agreement.

5.21 **WAIVER OF JURY TRIAL. IN ANY ACTION, SUIT, OR PROCEEDING IN ANY JURISDICTION BROUGHT BY ANY PARTY AGAINST ANY OTHER PARTY, THE PARTIES EACH KNOWINGLY AND INTENTIONALLY, TO THE GREATEST EXTENT PERMITTED BY APPLICABLE LAW, HEREBY ABSOLUTELY, UNCONDITIONALLY, IRREVOCABLY AND EXPRESSLY WAIVES FOREVER TRIAL BY JURY.**

(Signature Pages Follow)

IN WITNESS WHEREOF, the parties hereto have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

ZIVO BIOSCIENCE, INC.

Address for Notice:
21 East Long Lake Road, Suite 100
Bloomfield Hills, Michigan 48304
Attention: Keith R. Marchiando
Email: [●]

By: _____
Name: _____
Title: _____

With a copy to (which shall not constitute notice):
Honigman LLP
2290 First National Building
600 Woodward Avenue
Detroit, MI 48226-3506
Attention: Jeffrey Kuras, Esq., Emily J. Johns, Esq.
Email: [●]

[REMAINDER OF PAGE INTENTIONALLY LEFT BLANK
SIGNATURE PAGE FOR PURCHASER FOLLOWS]

[PURCHASER SIGNATURE PAGES TO ZIVO SECURITIES PURCHASE AGREEMENT]

IN WITNESS WHEREOF, the undersigned have caused this Securities Purchase Agreement to be duly executed by their respective authorized signatories as of the date first indicated above.

Name of Purchaser: _____
Signature of Authorized Signatory of Purchaser: _____
Name of Authorized Signatory: _____
Title of Authorized Signatory: _____
Email Address of Authorized Signatory: _____
Address for Notice to Purchaser: _____

Address for Delivery of Securities to Purchaser (if not same as address for notice): _____

DWAC for Delivery of Shares: _____

Common Unit Subscription Amount: \$ _____

Common Units: _____

Shares: _____

Common Warrant Shares: _____ Beneficial Ownership Blocker ☐ 4.99% or ☐ 9.99%

Prefunded Unit Subscription Amount: \$ _____

Prefunded Units: _____

Prefunded Warrant Shares: _____ Beneficial Ownership Blocker ☐ 4.99% or ☐ 9.99%

Common Warrant Shares: _____ Beneficial Ownership Blocker ☐ 4.99% or ☐ 9.99%

EIN Number: _____

☐ Notwithstanding anything contained in this Agreement to the contrary, by checking this box (i) the obligations of the above-signed to purchase the securities set forth in this Agreement to be purchased from the Company by the above-signed, and the obligations of the Company to sell such securities to the above-signed, shall be unconditional and all conditions to Closing shall be disregarded, (ii) the Closing shall occur on the second (2nd) Trading Day following the date of this Agreement and (iii) any condition to Closing contemplated by this Agreement (but prior to being disregarded by clause (i) above) that required delivery by the Company or the above-signed of any agreement, instrument, certificate or the like or purchase price (as applicable) shall no longer be a condition and shall instead be an unconditional obligation of the Company or the above-signed (as applicable) to deliver such agreement, instrument, certificate or the like or purchase price (as applicable) to such other party on the Closing Date.

[SIGNATURE PAGES CONTINUE]

SCHEDULE A

PLACEMENT AGENCY AGREEMENT

March [●], 2023

Maxim Group LLC
 300 Park Avenue, 16th Floor
 New York, NY 10022

Ladies and Gentlemen:

Introduction. Subject to the terms and conditions herein (this “Agreement”), Zivo Bioscience, Inc., a Nevada corporation (the “Company”), hereby agrees to sell up to an aggregate of \$15 million of registered securities of the Company, including, but not limited to, (i) up to [●] of units (the “Units”), each unit consisting of (a) one share(collectively for all Units, the “Shares”) of the Company’s common stock, \$0.001 par value per share (the “Common Stock”), or for some purchasers, in lieu of a Share, one pre-funded common stock purchase warrant (the “Prefunded Warrants”), and (b) one common stock purchase warrant (collectively for all Units, the “Common Warrants”), and together with the Prefunded Warrants, the “Warrants”) and (ii) the Common Stock underlying the Warrants and the Prefunded Warrants (“Warrant Shares”) directly to various investors (each, an “Investor” and, collectively, the “Investors”) through Maxim Group LLC (the “Placement Agent”) as placement agent. The Shares, the Warrants and the Warrant Shares are referred to herein as the “Securities”. The documents executed and delivered by the Company and the Investors in connection with the Offering (as defined below), including, without limitation, a securities purchase agreement (the “Purchase Agreement”), shall be collectively referred to herein as the “Transaction Documents.” The purchase price to the Investors for each Share is \$[●], the purchase price to the Investors for each Prefunded Warrant is \$[●], the exercise price to the Investors for each Common Stock issuable upon exercise of the Prefunded Warrants is \$[●], and the exercise price to the Investors for each Common Stock issuable upon exercise of the Common Warrants and Private Warrants is \$[●]. The Placement Agent may retain other brokers or dealers to act as sub-agents or selected-dealers on its behalf in connection with the Offering.

The Company hereby confirms its agreement with the Placement Agent as follows:

Section 1. Agreement to Act as Placement Agent.

(a) On the basis of the representations, warranties and agreements of the Company herein contained, and subject to all the terms and conditions of this Agreement, the Placement Agent shall be the exclusive placement agent in connection with the offering and sale by the Company of the Securities pursuant to the Company’s registration statement on Form S-1 (File No. 333-[●]) (the “Registration Statement”) with the terms of such offering (the “Offering”) to be subject to market conditions and negotiations between the Company, the Placement Agent and the prospective Investors. The Placement Agent will act on a reasonable best efforts basis and the Company agrees and acknowledges that there is no guarantee of the successful placement of the Securities, or any portion thereof, in the prospective Offering. Under no circumstances will the Placement Agent or any of its “Affiliates” (as defined below) be obligated to underwrite or purchase any of the Securities for its own account or otherwise provide any financing. The Placement Agent shall act solely as the Company’s agent and not as principal. The Placement Agent shall have no authority to bind the Company with respect to any prospective offer to purchase Securities and the Company shall have the sole right to accept offers to purchase Securities and may reject any such offer, in whole or in part. Subject to the terms and conditions hereof, payment of the purchase price for, and delivery of, the Securities shall be made at one or more closings (each a “Closing” and the date on which each Closing occurs, a “Closing Date”). The Closing of the issuance of the Securities shall occur via “Delivery Versus Payment”, i.e., on the Closing Date, the Company shall issue the Securities directly to the account designated by the Placement Agent and, upon receipt of such Securities, the Placement Agent shall electronically deliver such Securities to the applicable Investor and payment shall be made by the Placement Agent (or its clearing firm) by wire transfer to the Company. As compensation for services rendered, on each Closing Date, the Company shall pay to the Placement Agent the fees and expenses set forth below:

(i) A cash fee equal to 7.0% of the gross proceeds received by the Company from the sale of the Securities at the closing of the Offering (the "Closing").

(ii) In the event of a Closing of the Offering, the Company agrees to reimburse the Placement Agent's expenses up to a maximum of \$105,000 (inclusive of any advance paid by the Company to the Placement Agent) payable immediately upon the Closing of the Offering.

(iii) In the event that there is not a Closing of the Offering, the Company agrees to reimburse the Placement Agent's expenses up to a maximum of \$40,000 (inclusive of any advance paid by the Company to the Placement Agent).

(b) The term of the Placement Agent's exclusive engagement will be as set forth in the Engagement Agreement (as defined below). Notwithstanding anything to the contrary contained herein, the provisions concerning confidentiality, indemnification and contribution contained herein and the Company's obligations contained in the indemnification provisions will survive any expiration or termination of this Agreement, and the Company's obligation to pay fees actually earned and payable and to reimburse expenses actually incurred and reimbursable pursuant to Section 1 hereof and which are permitted to be reimbursed under FINRA Rule 5110(g)(4)(A), will survive any expiration or termination of this Agreement. Nothing in this Agreement shall be construed to limit the ability of the Placement Agent or its Affiliates to pursue, investigate, analyze, invest in, or engage in investment banking, financial advisory or any other business relationship with Persons (as defined below) other than the Company. As used herein (i) "Persons" means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind and (ii) "Affiliate" means any Person that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a Person as such terms are used in and construed under Rule 405 under the Securities Act of 1933, as amended (the "Securities Act").

Section 2. Representations, Warranties and Covenants of the Company. The Company hereby represents, warrants and covenants to the Placement Agent as of the date hereof, and as of each Closing Date, as follows:

(a) Securities Law Filings. The Company has filed with the Securities and Exchange Commission (the "Commission") the Registration Statement under the Securities Act, which was initially filed on March [●], 2023 and declared effective on March [●], 2023 for the registration of the Securities under the Securities Act. Following the determination of pricing among the Company and the prospective Investors introduced to the Company by Placement Agent, the Company will file with the Commission pursuant to Rules 430B and 424(b) under the Securities Act, and the rules and regulations (the "Rules and Regulations") of the Commission promulgated thereunder, a final prospectus relating to the placement of the Securities, their respective pricings and the plan of distribution thereof and will advise the Placement Agent of all further information (financial and other) with respect to the Company required to be set forth therein. Such registration statement, at any given time, including the exhibits thereto filed at such time, as amended at such time, is hereinafter called the "Registration Statement"; such prospectus in the form in which it appears in the Registration Statement at the time of effectiveness is hereinafter called the "Preliminary Prospectus"; and the final prospectus, in the form in which it will be filed with the Commission pursuant to Rules 430A and/or 424(b) (including the Preliminary Prospectus as it may be amended or supplemented) is hereinafter called the "Final Prospectus." The Registration Statement at the time it originally became effective is hereinafter called the "Original Registration Statement." Any reference in this Agreement to the Registration Statement, the Original Registration Statement, the Preliminary Prospectus or the Final Prospectus shall be deemed to refer to and include the documents incorporated by reference therein (the "Incorporated Documents"), if any, which were or are filed under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), at any given time, as the case may be; and any reference in this Agreement to the terms "amend," "amendment" or "supplement" with respect to the Registration Statement, the Original Registration Statement, the Preliminary Prospectus or the Final Prospectus shall be deemed to refer to and include the filing of any document under the Exchange Act after the date of this Agreement, or the issue date of the Preliminary Prospectus or the Final Prospectus, as the case may be, deemed to be incorporated therein by reference. All references in this Agreement to financial statements and schedules and other information which is "contained," "included," "described," "referenced," "set forth" or "stated" in the Registration Statement, the Preliminary Prospectus or the Final Prospectus (and all other references of like import) shall be deemed to mean and include all such financial statements and schedules and other information which is or is deemed to be incorporated by reference in the Registration Statement, the Preliminary Prospectus or the Final Prospectus, as the case may be. As used in this paragraph and elsewhere in this Agreement, "Time of Sale Disclosure Package" means the Preliminary Prospectus, any subscription agreement between the Company and the Investors, the final terms of the Offering provided to the Investors (orally or in writing) and any issuer free writing prospectus as defined in Rule 433 of the Act (each, an "Issuer Free Writing Prospectus"), if any, that the parties hereto shall hereafter expressly agree in writing to treat as part of the Time of Sale Disclosure Package. The term "any Prospectus" shall mean, as the context requires, the Preliminary Prospectus, the Final Prospectus, and any supplement to either thereof. The Company has not received any notice that the Commission has issued or intends to issue a stop order suspending the effectiveness of the Registration Statement or the use of the Preliminary Prospectus or any prospectus supplement or intends to commence a proceeding for any such purpose.

(b) Assurances. The Original Registration Statement, as amended, (and any further documents to be filed with the Commission) contains all exhibits and schedules as required by the Securities Act. Each of the Registration Statement and any post-effective amendment thereto, at the time it became effective, complied in all material respects with the Securities Act and the applicable Rules and Regulations and did not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Final Prospectus, as of its date, complied or will comply in all material respects with the Securities Act and the applicable Rules and Regulations. The Final Prospectus, as amended or supplemented, did not and will not contain as of the date thereof any untrue statement of a material fact or omit to state a material fact necessary in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Incorporated Documents, when they were filed with the Commission, conformed in all material respects to the requirements of the Exchange Act and the applicable Rules and Regulations promulgated thereunder, and none of such documents, when they were filed with the Commission, contained any untrue statement of a material fact or omitted to state a material fact necessary to make the statements therein (with respect to Incorporated Documents incorporated by reference in the Final Prospectus), in light of the circumstances under which they were made not misleading. No post-effective amendment to the Registration Statement reflecting any facts or events arising after the date thereof which represent, individually or in the aggregate, a fundamental change in the information set forth therein is required to be filed with the Commission. Except for this Agreement and the Transaction Documents, there are no documents required to be filed with the Commission in connection with the transaction contemplated hereby that (x) have not been filed as required pursuant to the Securities Act or (y) will not be filed within the requisite time period. Except for this Agreement and the Transaction Documents, there are no contracts or other documents required to be described in the Final Prospectus, or to be filed as exhibits or schedules to the Registration Statement, which have not been described or filed as required.

(c) Offering Materials. Neither the Company nor any of its directors and officers has distributed and none of them will distribute, prior to each Closing Date, any offering material in connection with the offering and sale of the Securities other than the Time of Sale Disclosure Package.

(d) Authorization; Enforcement. The Company has the requisite corporate power and authority to enter into and to consummate the transactions contemplated by this Agreement and the Time of Sale Disclosure Package and otherwise to carry out its obligations hereunder and thereunder. The execution and delivery of each of this Agreement by the Company and the consummation by it of the transactions contemplated hereby and thereby have been duly authorized by all necessary action on the part of the Company and no further action is required by the Company, the Company's Board of Directors (the "Board of Directors") or the Company's shareholders in connection therewith other than in connection with the Required Approvals (as defined below). This Agreement has been duly executed by the Company and, when delivered in accordance with the terms hereof, will constitute the valid and binding obligation of the Company enforceable against the Company in accordance with its terms, except (i) as limited by general equitable principles and applicable bankruptcy, insolvency, reorganization, moratorium and other laws of general application affecting enforcement of creditors' rights generally, (ii) as limited by laws relating to the availability of specific performance, injunctive relief or other equitable remedies and (iii) insofar as indemnification and contribution provisions may be limited by applicable law.

(e) No Conflicts. The execution, delivery and performance by the Company of this Agreement and the transactions contemplated pursuant to the Time of Sale Disclosure Package, the issuance and sale of the Securities and the consummation by it of the transactions contemplated hereby and thereby to which it is a party do not and will not (i) conflict with or violate any provision of the Company's or any Subsidiary's certificate or articles of incorporation, bylaws or other organizational or charter documents, or (ii) conflict with, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, result in the creation of any Lien upon any of the properties or assets of the Company or any Subsidiary, or give to others any rights of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) of, any agreement, credit facility, debt or other instrument (evidencing a Company or Subsidiary debt or otherwise) or other understanding to which the Company or any Subsidiary is a party or by which any property or asset of the Company or any Subsidiary is bound or affected, or (iii) subject to the Required Approvals, conflict with or result in a violation of any law, rule, regulation, order, judgment, injunction, decree or other restriction of any court or governmental authority to which the Company or a Subsidiary is subject (including federal and state securities laws and regulations), or by which any property or asset of the Company or a Subsidiary is bound or affected; except in the case of each of clauses (ii) and (iii), such as could not have or reasonably be expected to result in a Material Adverse Effect.

(f) Certificates. Any certificate signed by an officer of the Company and delivered to the Placement Agent or to counsel for the Placement Agent shall be deemed to be a representation and warranty by the Company to the Placement Agent as to the matters set forth therein.

(g) Reliance. The Company acknowledges that the Placement Agent will rely upon the accuracy and truthfulness of the foregoing representations and warranties and hereby consents to such reliance.

(h) Forward-Looking Statements. No forward-looking statements (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained in the Time of Sale Disclosure Package has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

(i) Statistical or Market-Related Data. Any statistical, industry-related and market-related data included or incorporated by reference in the Time of Sale Disclosure Package, are based on or derived from sources that the Company reasonably and in good faith believes to be reliable and accurate, and such data agree with the sources from which they are derived.

(j) Certain Fees; FINRA Affiliations. Except as set forth in the Registration Statement and Prospectus, no brokerage or finder's fees or commissions are or will be payable by the Company, any Subsidiary or Affiliate of the Company to any broker, financial advisor or consultant, finder, placement agent, investment banker, bank or other Person with respect to the transactions contemplated by the Transaction Documents. There are no other arrangements, agreements or understandings of the Company or, to the Company's knowledge, any of its shareholders that may affect the Placement Agent's compensation, as determined by FINRA. Other than payments to the Placement Agent for this Offering, the Company has not made and has no agreements, arrangements or understanding to make any direct or indirect payments (in cash, securities or otherwise) to: (i) any person, as a finder's fee, consulting fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who raised or provided capital to the Company; (ii) any FINRA member participating in the offering as defined in FINRA Rule 5110 (a "Participating Member"); or (iii) any person or entity that has any direct or indirect affiliation or association with any Participating Member, within the 180-day period preceding the initial filing of the Registration Statement through the 60-day period after the Effective Date. None of the net proceeds of the Offering will be paid by the Company to any Participating Member or its affiliates, except as specifically authorized herein. To the Company's knowledge, no officer, director or any beneficial owner of 10% or more of the Company's Common Stock or Common Stock Equivalents has any direct or indirect affiliation or association with any Participating Member in the Offering. Except for securities purchased on the open market, no Company Affiliate is an owner of stock or other securities of any Participating Member. No Company Affiliate has made a subordinated loan to any Participating Member. No proceeds from the sale of the Securities (excluding placement agent compensation as disclosed in the Registration Statement and the Prospectus) will be paid to any Participating Member, any persons associated with a Participating Member or an affiliate of a Participating Member. Except as disclosed in the Prospectus, the Company has not issued any warrants or other securities or granted any options, directly or indirectly, to the Placement Agent within the 180-day period prior to the initial filing date of the Prospectus. Except for securities issued to the Placement Agent as disclosed in the Prospectus, no person to whom securities of the Company have been privately issued within the 180-day period prior to the initial filing date of the Prospectus is a Participating Member, is a person associated with a Participating Member or is an affiliate of a Participating Member. No Participating Member in the Offering has a conflict of interest with the Company. For this purpose, a "conflict of interest" exists when a Participating Member, the parent or affiliate of a Participating Member or any person associated with a Participating Member in the aggregate beneficially own 5% or more of the Company's outstanding subordinated debt or common equity, or 5% or more of the Company's preferred equity. "FINRA member participating in the Offering" includes any associated person of a Participating Member in the Offering, any member of such associated person's immediate family and any affiliate of a Participating Member in the Offering. When used in this Section 2(j) the term "affiliate of a FINRA member" or "affiliated with a FINRA member" means an entity that controls, is controlled by or is under common control with a FINRA member. The Company will advise the Placement Agent if it learns that any officer, director or owner of 10% or more of the Company's outstanding Common Stock or Common Stock Equivalents is or becomes an affiliate or associated person of a Participating Member. "Common Stock Equivalents" means any securities of the Company or the Subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred shares, right, option, warrant or other instrument that is at any time convertible into or exercisable or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

(k) Board of Directors. The Board of Directors is comprised of the persons set forth under the heading of the Prospectus captioned "Management." The qualifications of the persons serving as board members and the overall composition of the Board of Directors comply with the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder applicable to the Company and the rules of the Trading Market. In addition, at least a majority of the persons serving on the Board of Directors qualify as "independent" as defined under the rules of the Trading Market.

(l) D&O Questionnaires. To the Company's knowledge, all information contained in the questionnaires most recently completed by each of the Company's directors and officers is true and correct in all respects and the Company has not become aware of any information which would cause the information disclosed in such questionnaires become inaccurate and incorrect.

(m) Representations and Warranties Incorporated by Reference. Each of the representations and warranties (together with any related disclosure schedules thereto) made to the Investors in the Purchase Agreement is hereby incorporated herein by reference (as though fully restated herein) and is hereby made to, and in favor of, the Placement Agent.

Section 3. Delivery and Payment. Each Closing shall occur at the offices of the Thompson Hine, 335 Madison Avenue, 12th Fl. New York, NY 10017 ("Placement Agent Counsel") (or at such other place as shall be agreed upon by the Placement Agent and the Company). Subject to the terms and conditions hereof, at each Closing payment of the purchase price for the Securities sold on such Closing Date shall be made by Federal Funds wire transfer, against delivery of such Securities, and such Securities shall be registered in such name or names and shall be in such denominations, as the Placement Agent may request at least one business day before the time of purchase (as defined below).

Deliveries of the documents with respect to the purchase of the Securities, if any, shall be made at the offices of Placement Agent Counsel. All actions taken at a Closing shall be deemed to have occurred simultaneously.

Section 4. Covenants and Agreements of the Company. The Company further covenants and agrees with the Placement Agent as follows:

(a) Registration Statement Matters. The Company will advise the Placement Agent promptly after it receives notice thereof of the time when any amendment to the Registration Statement has been filed or becomes effective or any supplement to the Final Prospectus has been filed and will furnish the Placement Agent with copies thereof. The Company will file promptly all reports and any definitive proxy or information statements required to be filed by the Company with the Commission pursuant to Section 13(a), 14 or 15(d) of the Exchange Act subsequent to the date of any Prospectus and for so long as the delivery of a prospectus is required in connection with the Offering. The Company will advise the Placement Agent, promptly after it receives notice thereof (i) of any request by the Commission to amend the Registration Statement or to amend or supplement any Prospectus or for additional information, (ii) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto or any order directed at any Incorporated Document, if any, or any amendment or supplement thereto or any order preventing or suspending the use of the Preliminary Prospectus or the Final Prospectus or any prospectus supplement or any amendment or supplement thereto or any post-effective amendment to the Registration Statement, of the suspension of the qualification of the Securities for offering or sale in any jurisdiction, of the institution or threatened institution of any proceeding for any such purpose, or of any request by the Commission for the amending or supplementing of the Registration Statement or a Prospectus or for additional information, (iii) of the issuance by any state securities commission of any proceedings for the suspension of the qualification of the Securities for offering or sale in any jurisdiction or of the initiation, or the threatening, of any proceeding for that purpose; (iv) of the mailing and delivery to the Commission for filing of any amendment or supplement to the Registration Statement or Prospectus; (v) of the receipt of any comments or request for any additional information from the Commission; and (vi) of the happening of any event during the period described in this Section 4(a) that, in the judgment of the Company, makes any statement of a material fact made in the Registration Statement or the Prospectus untrue or that requires the making of any changes in the Registration Statement or the Prospectus in order to make the statements therein, in light of the circumstances under which they were made, not misleading. The Company shall use its best efforts to prevent the issuance of any such stop order or prevention or suspension of such use. If the Commission shall enter any such stop order or order or notice of prevention or suspension at any time, the Company will use its best efforts to obtain the lifting of such order at the earliest possible moment, or will file a new registration statement and use its best efforts to have such new registration statement declared effective as soon as practicable. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b), 430A, 430B and 430C, as applicable, under the Securities Act, including with respect to the timely filing of documents thereunder, and will use its reasonable efforts to confirm that any filings made by the Company under such Rule 424(b) are received in a timely manner by the Commission.

(b) Blue Sky Compliance. The Company will cooperate with the Placement Agent and the Investors in endeavoring to qualify the Securities for sale under the securities laws of such jurisdictions (United States and foreign) as the Placement Agent and the Investors may reasonably request and will make such applications, file such documents, and furnish such information as may be reasonably required for that purpose, provided the Company shall not be required to qualify as a foreign corporation or to file a general consent to service of process in any jurisdiction where it is not now so qualified or required to file such a consent, and provided further that the Company shall not be required to produce any new disclosure document. The Company will, from time to time, prepare and file such statements, reports and other documents as are or may be required to continue such qualifications in effect for so long a period as the Placement Agent may reasonably request for distribution of the Securities. The Company will advise the Placement Agent promptly of the suspension of the qualification or registration of (or any such exemption relating to) the Securities for offering, sale or trading in any jurisdiction or any initiation or threat of any proceeding for any such purpose, and in the event of the issuance of any order suspending such qualification, registration or exemption, the Company shall use its best efforts to obtain the withdrawal thereof at the earliest possible moment.

(c) Amendments and Supplements to a Prospectus and Other Matters. The Company will comply with the Securities Act and the Exchange Act, and the rules and regulations of the Commission thereunder, so as to permit the completion of the distribution of the Securities as contemplated in this Agreement, the Incorporated Documents and any Prospectus. If during the period in which a prospectus is required by law to be delivered in connection with the distribution of Securities contemplated by the Incorporated Documents or any Prospectus (the “Prospectus Delivery Period”), any event shall occur as a result of which, in the judgment of the Company or in the opinion of the Placement Agent or counsel for the Placement Agent, it becomes necessary to amend or supplement the Incorporated Documents or any Prospectus in order to make the statements therein, in the light of the circumstances under which they were made, as the case may be, not misleading, or if it is necessary at any time to amend or supplement the Incorporated Documents or any Prospectus or to file under the Exchange Act any Incorporated Document to comply with any law, the Company will promptly prepare and file with the Commission, and furnish at its own expense to the Placement Agent and to dealers, an appropriate amendment to the Registration Statement or supplement to the Registration Statement, the Incorporated Documents or any Prospectus that is necessary in order to make the statements in the Incorporated Documents and any Prospectus as so amended or supplemented, in the light of the circumstances under which they were made, as the case may be, not misleading, or so that the Registration Statement, the Incorporated Documents or any Prospectus, as so amended or supplemented, will comply with law. Before amending the Registration Statement or supplementing the Incorporated Documents or any Prospectus in connection with the Offering, the Company will furnish the Placement Agent with a copy of such proposed amendment or supplement and will not file any such amendment or supplement to which the Placement Agent reasonably objects.

(d) Copies of any Amendments and Supplements to a Prospectus. The Company will furnish the Placement Agent, without charge, during the period beginning on the date hereof and ending on the later of the last Closing Date of the Offering, as many copies of any Prospectus or prospectus supplement and any amendments and supplements thereto, as the Placement Agent may reasonably request.

(e) Free Writing Prospectus. The Company covenants that it will not, unless it obtains the prior written consent of the Placement Agent, make any offer relating to the Securities that would constitute a Company Free Writing Prospectus or that would otherwise constitute a “free writing prospectus” (as defined in Rule 405 of the Securities Act) required to be filed by the Company with the Commission or retained by the Company under Rule 433 of the Securities Act. In the event that the Placement Agent expressly consents in writing to any such free writing prospectus (a “Permitted Free Writing Prospectus”), the Company covenants that it shall (i) treat each Permitted Free Writing Prospectus as a Company Free Writing Prospectus, and (ii) comply with the requirements of Rule 164 and 433 of the Securities Act applicable to such Permitted Free Writing Prospectus, including in respect of timely filing with the Commission, legending and record keeping.

(f) Transfer Agent. The Company will maintain, at its expense, a registrar and transfer agent for the Common Stock.

(g) Earnings Statement. As soon as practicable and in accordance with applicable requirements under the Securities Act, but in any event not later than 18 months after the last Closing Date, the Company will make generally available to its security holders and to the Placement Agent an earnings statement, covering a period of at least 12 consecutive months beginning after the last Closing Date, that satisfies the provisions of Section 11(a) and Rule 158 under the Securities Act.

(h) Periodic Reporting Obligations. During the Prospectus Delivery Period, the Company will duly file, on a timely basis, with the Commission and the Trading Market all reports and documents required to be filed under the Exchange Act within the time periods and in the manner required by the Exchange Act.

(i) Additional Documents. The Company will enter into any subscription, purchase or other customary agreements as the Placement Agent or the Investors deem necessary or appropriate to consummate the Offering, all of which will be in form and substance reasonably acceptable to the Placement Agent and the Investors. The Company agrees that the Placement Agent may rely upon, and each is a third party beneficiary of, the representations and warranties, and applicable covenants, set forth in any such purchase, subscription or other agreement with Investors in the Offering.

(j) No Manipulation of Price. Neither the Company, nor, to its knowledge, any of its employees, directors or shareholders, has taken or will take, directly or indirectly, any action designed to or that has constituted or that might reasonably be expected to cause or result in, under the Exchange Act, or otherwise, stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(k) Acknowledgment. The Company acknowledges that any advice given by the Placement Agent to the Company is solely for the benefit and use of the Board of Directors of the Company and may not be used, reproduced, disseminated, quoted or referred to, without the Placement Agent’s prior written consent.

(l) Publicity. The Company acknowledges and agrees that the Placement Agent may, subsequent to the Closing, make public its involvement with the Offering. The Company agrees that, until 45 days after the final Closing Date, it will not issue press releases or engage in any other publicity, without Maxim’s prior written consent (not to be unreasonably withheld), other than normal and customary releases issued in the ordinary course of the Company’s business.

(m) Announcement of Offering. The Company acknowledges and agrees that the Placement Agent may, subsequent to the Closing, make public its involvement with the Offering.

(n) Reliance on Others. The Company confirms that it will rely on its own counsel and accountants for legal and accounting advice.

(o) Research Matters. By entering into this Agreement, the Placement Agent does not provide any promise, either explicitly or implicitly, of favorable or continued research coverage of the Company and the Company hereby acknowledges and agrees that the Placement Agent’s selection as a placement agent for the Offering was in no way conditioned, explicitly or implicitly, on the Placement Agent providing favorable or any research coverage of the Company. In accordance with FINRA Rule 2711(e), the parties acknowledge and agree that the Placement Agent has not directly or indirectly offered favorable research, a specific rating or a specific price target, or threatened to change research, a rating or a price target, to the Company or inducement for the receipt of business or compensation. The Company hereby waives and releases, to the fullest extent permitted by law, any claims that the Company may have against the Placement Agent with respect to any conflict of interest that may arise from the fact that the views expressed by their independent research analysts and research departments may be different from or inconsistent with the views or advice communicated to the Company by the Placement Agent’s investment banking divisions. The Company acknowledges that the Placement Agent is a full service securities firm and as such from time to time, subject to applicable securities laws, may effect transactions for its own account or the account of its customers and hold long or short position in debt or equity securities of the Company.

(p) Subsequent Equity Sales.

(i) From the date hereof until ninety (90) days after the Closing Date, neither the Company nor any Subsidiary shall (i) issue, enter into any agreement to issue or announce the issuance or proposed issuance of any Common Stock or Common Stock Equivalents or (ii) file any registration statement or amendment or supplement thereto, other than the Prospectus or the filing of a registration statement on Form S-8 in connection with any employee benefit plan.

(ii) From the date hereof until ninety (90) days after the Closing Date, the Company shall be prohibited from effecting or entering into an agreement to effect any issuance by the Company or any of its Subsidiaries of Common Stock or Common Stock Equivalents (or a combination of units thereof) involving a Variable Rate Transaction. “Variable Rate Transaction” means a transaction in which the Company (i) issues or sells any debt or equity securities that are convertible into, exchangeable or exercisable for, or include the right to receive additional Common Stock either (A) at a conversion price, exercise price or exchange rate or other price that is based upon and/or varies with the trading prices of or quotations for the Common Stock at any time after the initial issuance of such debt or equity securities, or (B) with a conversion, exercise or exchange price that is subject to being reset at some future date after the initial issuance of such debt or equity security or upon the occurrence of specified or contingent events directly or indirectly related to the business of the Company or the market for the Common Stock or (ii) enters into, or effects a transaction under, any agreement, including, but not limited to, an equity line of credit or an “at-the-market offering”, whereby the Company may issue securities at a future determined price. The Placement Agent shall be entitled to obtain injunctive relief against the Company to preclude any such issuance, which remedy shall be in addition to any right to collect damages.

(iii) Notwithstanding the foregoing, this Section 4(o) shall not apply in respect of an Exempt Issuance, except that no Variable Rate Transaction shall be an Exempt Issuance. An “Exempt Issuance” means the issuance of (a) Common Stock or equity awards to employees, officers or directors of the Company pursuant to any stock or option plan duly adopted for such purpose, by a majority of the non-employee members of the Board of Directors or a majority of the members of a committee of non-employee directors established for such purpose for services rendered to the Company, (b) securities upon the exercise or exchange of or conversion of any Securities issued hereunder and/or other securities exercisable or exchangeable for or convertible into Common Stock issued and outstanding on the date of this Agreement, provided that such securities have not been amended since the date of this Agreement to increase the number of such securities or to decrease the exercise price, exchange price or conversion price of such securities (other than in connection with automatic price resets, stock splits, adjustments or combinations as set forth in such securities) or to extend the term of such securities, (c) securities issued pursuant to acquisitions or strategic transactions approved by a majority of the disinterested directors of the Company, provided that such securities are issued as “restricted securities” (as defined in Rule 144) and carry no registration rights that require or permit the filing of any registration statement in connection therewith during the ninety day period following the Closing Date, and provided that any such issuance shall only be to a Person (or to the equityholders of a Person) which is, itself or through its subsidiaries, an operating company or an owner of an asset in a business synergistic with the business of the Company and shall provide to the Company additional benefits in addition to the investment of funds, but shall not include a transaction in which the Company is issuing securities primarily for the purpose of raising capital or to an entity whose primary business is investing in securities.

(iv) If within twelve (12) months of the Closing, the Company completes any financing of equity, equity-linked, convertible or debt or other capital-raising activity of the Company for which the Placement Agent is not acting as underwriter or placement agent (other than the exercise by any person or entity of any options, warrants or other convertible securities) with any of the investors that were contacted or introduced directly by the Placement Agent to the Company or participated in the Offering (excluding any investors that either held Common Stock of the Company prior to the Closing or that were introduced by the Company to the Placement Agent), then the Company shall pay to the Placement Agent a commission as described in Section 1(a) herein, in each case only with respect to the portion of such financing received from such investors.

(q) Capital Changes. Until one hundred fifty (150) days after the Closing Date, the Company shall not undertake a reverse or forward stock split or reclassification of the Common Stock without the prior written consent of the Placement Agent.

(r) Lock-Up Agreements. The Company shall not amend, modify, waive or terminate any provision of any of the Lock-Up Agreements except to extend the term of the lock-up period and shall enforce the provisions of each Lock-Up Agreement in accordance with its terms. If any party to a Lock-Up Agreement breaches any provision of a Lock-Up Agreement, the Company shall promptly use its best efforts to seek specific performance of the terms of such Lock-Up Agreement.

(s) FINRA. The Company shall advise the Placement Agent (who shall make an appropriate filing with FINRA) if it is aware that any officer, director, 10% or greater shareholder of the Company or Person that received the Company's unregistered equity securities in the past 180 days is or becomes an affiliate or associated person of a FINRA member firm prior to the earlier of the termination of this Agreement or the 60-day period after the Effective Date.

Section 5. Conditions of the Obligations of the Placement Agent The obligations of the Placement Agent hereunder shall be subject to the accuracy of the representations and warranties on the part of the Company set forth in Section 2 hereof, in each case as of the date hereof and as of each Closing Date as though then made, to the timely performance by each of the Company of its covenants and other obligations hereunder on and as of such dates, and to each of the following additional conditions:

(a) Accountants' Comfort Letter. On the date hereof, the Placement Agent shall have received, and the Company shall have caused to be delivered to the Placement Agent, a letter from BDO USA, LLP (the independent registered public accounting firm of the Company), addressed to the Placement Agent, dated as of the date hereof, in form and substance satisfactory to the Placement Agent. The letter shall not disclose any change in the condition (financial or other), earnings, operations, business or prospects of the Company from that set forth in the Incorporated Documents or the applicable Prospectus or prospectus supplement, which, in the Placement Agent's sole judgment, is material and adverse and that makes it, in the Placement Agent's sole judgment, impracticable or inadvisable to proceed with the Offering of the Securities as contemplated by such Prospectus.

(b) Compliance with Registration Requirements; No Stop Order; No Objection from the FINRA. Each Prospectus (in accordance with Rule 424(b)) and "free writing prospectus" (as defined in Rule 405 of the Securities Act), if any, shall have been duly filed with the Commission, as appropriate; no stop order suspending the effectiveness of the Registration Statement or any part thereof shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission; no order preventing or suspending the use of any Prospectus shall have been issued and no proceeding for that purpose shall have been initiated or threatened by the Commission; no order having the effect of ceasing or suspending the distribution of the Securities or any other securities of the Company shall have been issued by any securities commission, securities regulatory authority or stock exchange and no proceedings for that purpose shall have been instituted or shall be pending or, to the knowledge of the Company, contemplated by any securities commission, securities regulatory authority or stock exchange; all requests for additional information on the part of the Commission shall have been complied with; and the FINRA shall have raised no objection to the fairness and reasonableness of the placement terms and arrangements.

(c) Corporate Proceedings. All corporate proceedings and other legal matters in connection with this Agreement, the Registration Statement and each Prospectus, and the registration, sale and delivery of the Securities, shall have been completed or resolved in a manner reasonably satisfactory to the Placement Agent's counsel, and such counsel shall have been furnished with such papers and information as it may reasonably have requested to enable such counsel to pass upon the matters referred to in this Section 5.

(d) No Material Adverse Change. Subsequent to the execution and delivery of this Agreement and prior to each Closing Date, in the Placement Agent's sole judgment after consultation with the Company, there shall not have occurred any Material Adverse Effect or any material adverse change or development involving a prospective material adverse change in the condition or the business activities, financial or otherwise, of the Company from the latest dates as of which such condition is set forth in the Registration Statement and Prospectus ("Material Adverse Change").

(e) Opinion of Counsel for the Company. The Placement Agent shall have received on each Closing Date the favorable opinion of U.S. legal counsel to the Company, dated as of such Closing Date, including, without limitation, a negative assurance letter addressed to the Placement Agent and in form and substance satisfactory to the Placement Agent and the favorable opinions of foreign legal counsel to the Company, including, without limitation, a negative assurance letter, addressed to the Placement Agent and in form and substance satisfactory to the Placement Agent.

(f) Officers' Certificate. The Placement Agent shall have received on each Closing Date a certificate of the Company, dated as of such Closing Date, signed by the Chief Executive Officer and Chief Financial Officer of the Company, to the effect that, and the Placement Agent shall be satisfied that, the signers of such certificate have reviewed the Registration Statement, the Incorporated Documents, the Prospectus, and this Agreement and to the further effect that:

(i) The representations and warranties of the Company in this Agreement are true and correct, as if made on and as of such Closing Date, and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to such Closing Date;

(ii) No stop order suspending the effectiveness of the Registration Statement or the use of the Prospectus has been issued and no proceedings for that purpose have been instituted or are pending or, to the Company's knowledge, threatened under the Securities Act; no order having the effect of ceasing or suspending the distribution of the Securities or any other securities of the Company has been issued by any securities commission, securities regulatory authority or stock exchange in the United States and no proceedings for that purpose have been instituted or are pending or, to the knowledge of the Company, contemplated by any securities commission, securities regulatory authority or stock exchange in the United States;

(iii) When the Registration Statement became effective, at the time of sale, and at all times subsequent thereto up to the delivery of such certificate, the Registration Statement and the Incorporated Documents, if any, when such documents became effective or were filed with the Commission, and any Prospectus, contained all material information required to be included therein by the Securities Act and the Exchange Act and the applicable rules and regulations of the Commission thereunder, as the case may be, and in all material respects conformed to the requirements of the Securities Act and the Exchange Act and the applicable rules and regulations of the Commission thereunder, as the case may be, and the Registration Statement and the Incorporated Documents, if any, and any Prospectus, did not and do not include any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading (provided, however, that the preceding representations and warranties contained in this paragraph (iii) shall not apply to any statements or omissions made in reliance upon and in conformity with information furnished in writing to the Company by the Placement Agent expressly for use therein) and, since the effective date of the Registration Statement, there has occurred no event required by the Securities Act and the rules and regulations of the Commission thereunder to be set forth in the Incorporated Documents which has not been so set forth; and

(iv) Subsequent to the respective dates as of which information is given in the Registration Statement, the Incorporated Documents and any Prospectus, there has not been: (a) any Material Adverse Change; (b) any transaction that is material to the Company and the Subsidiaries taken as a whole, except transactions entered into in the ordinary course of business; (c) any obligation, direct or contingent, that is material to the Company and the Subsidiaries taken as a whole, incurred by the Company or any Subsidiary, except obligations incurred in the ordinary course of business; (d) any material change in the capital stock (except changes thereto resulting from the exercise of outstanding stock options or warrants) or outstanding indebtedness of the Company or any Subsidiary; (e) any dividend or distribution of any kind declared, paid or made on the capital stock of the Company; or (f) any loss or damage (whether or not insured) to the property of the Company or any Subsidiary which has been sustained or will have been sustained which has a Material Adverse Effect.

(g) Bring-down Comfort Letter. On each Closing Date, the Placement Agent shall have received from BDO USA, LLP, or such other independent registered public accounting firm of the Company, a letter dated as of such Closing Date, in form and substance satisfactory to the Placement Agent, to the effect that they reaffirm the statements made in the letter furnished pursuant to subsection (a) of this Section 5, except that the specified date referred to therein for the carrying out of procedures shall be no more than three business days prior to such Closing Date.

(h) Lock-Up Agreements. On the date hereof, the Placement Agent shall have received the executed lock-up agreement for a period of three (3) months after the Offering is completed, in the form attached hereto as Exhibit A, from each of the Company's directors and officers and any holders of 5% or more of the Company's Common Stock as of the date hereof.

(i) Stock Exchange Listing. The Common Stock shall be registered under the Exchange Act and shall be listed on the Trading Market, and the Company shall not have taken any action designed to terminate, or likely to have the effect of terminating, the registration of the Common Stock under the Exchange Act or delisting or suspending from trading the Common Stock from the Trading Market, nor shall the Company have received any information suggesting that the Commission or the Trading Market is contemplating terminating such registration or listing.

(j) Warrant Agency Agreement. On the Closing Date, the duly executed warrant agency agreement executed by and between the Company and the transfer agent.

(k) Additional Documents. On or before each Closing Date, the Placement Agent and counsel for the Placement Agent shall have received such information and documents as they may reasonably require for the purposes of enabling them to pass upon the issuance and sale of the Securities as contemplated herein, or in order to evidence the accuracy of any of the representations and warranties, or the satisfaction of any of the conditions or agreements, herein contained.

If any condition specified in this Section 5 is not satisfied when and as required to be satisfied, this Agreement may be terminated by the Placement Agent by notice to the Company at any time on or prior to a Closing Date, which termination shall be without liability on the part of any party to any other party, except that Section 6 (Payment of Expenses), Section 7 (Indemnification and Contribution) and Section 8 (Representations and Indemnities to Survive Delivery) shall at all times be effective and shall survive such termination.

Section 6. Payment of Expenses. The Company agrees to pay all costs, fees and expenses incurred by the Company in connection with the performance of its obligations hereunder and in connection with the transactions contemplated hereby, including, without limitation: (i) all expenses incident to the issuance, delivery and qualification of the Securities (including all printing and engraving costs); (ii) all fees and expenses of the registrar and transfer agent of the Common Stock; (iii) all necessary issue, transfer and other stamp taxes in connection with the issuance and sale of the Securities; (iv) all fees and expenses of the Company's counsel, independent public or certified public accountants and other advisors; (v) all costs and expenses incurred in connection with the preparation, printing, filing, shipping and distribution of the Registration Statement (including financial statements, exhibits, schedules, consents and certificates of experts), the Preliminary Prospectus, the Final Prospectus and each prospectus supplement, if any, and all amendments and supplements thereto, and this Agreement; (vi) all filing fees, reasonable attorneys' fees and expenses incurred by the Company or the Placement Agent in connection with qualifying or registering (or obtaining exemptions from the qualification or registration of) all or any part of the Securities for offer and sale under the state securities or blue sky laws or the securities laws of any other country, and, if requested by the Placement Agent, preparing and printing a "Blue Sky Survey," an "International Blue Sky Survey" or other memorandum, and any supplements thereto, advising the Placement Agent of such qualifications, registrations and exemptions; (vii) if applicable, the filing fees incident to the review and approval by the FINRA of the Placement Agent's participation in the offering and distribution of the Securities; (viii) the fees and expenses associated with including the Shares and Warrant Shares on the Trading Market; (ix) all costs and expenses incident to the travel and accommodation of the Company's and the Placement Agent's employees on the "roadshow," if any; and (x) all other fees, costs and expenses referred to in Part II of the Registration Statement.

Section 7. Indemnification and Contribution.

(a) The Company agrees to indemnify and hold harmless the Placement Agent, its affiliates and each person controlling the Placement Agent (within the meaning of Section 15 of the Securities Act), and the directors, officers, agents and employees of the Placement Agent, its affiliates and each such controlling person (the Placement Agent, and each such entity or person, an “Indemnified Person”) from and against any losses, claims, damages, judgments, assessments, costs and other liabilities (collectively, the “Liabilities”), and shall reimburse each Indemnified Person for all fees and expenses (including the reasonable fees and expenses of one counsel for all Indemnified Persons, except as otherwise expressly provided herein) (collectively, the “Expenses”) as they are incurred by an Indemnified Person in investigating, preparing, pursuing or defending any actions, whether or not any Indemnified Person is a party thereto, (i) caused by, or arising out of or in connection with, any untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, any Incorporated Document, or any Prospectus or by any omission or alleged omission to state therein a material fact necessary to make the statements therein, in light of the circumstances under which they were made, not misleading (other than untrue statements or alleged untrue statements in, or omissions or alleged omissions from, information relating to an Indemnified Person furnished in writing by or on behalf of such Indemnified Person expressly for use in the Incorporated Documents) or (ii) otherwise arising out of or in connection with advice or services rendered or to be rendered by any Indemnified Person pursuant to this Agreement, the transactions contemplated thereby or any Indemnified Person’s actions or inactions in connection with any such advice, services or transactions; provided, however, that, in the case of clause (ii) only, the Company shall not be responsible for any Liabilities or Expenses of any Indemnified Person that are finally judicially determined to have resulted solely from such Indemnified Person’s (x) gross negligence or willful misconduct in connection with any of the advice, actions, inactions or services referred to above or (y) use of any offering materials or information concerning the Company in connection with the offer or sale of the Securities in the Offering which were not authorized for such use by the Company and which use constitutes gross negligence or willful misconduct. The Company also agrees to reimburse each Indemnified Person for all Expenses as they are incurred in connection with enforcing such Indemnified Person’s rights under this Agreement.

(b) Upon receipt by an Indemnified Person of actual notice of an action against such Indemnified Person with respect to which indemnity may be sought under this Agreement, such Indemnified Person shall promptly notify the Company in writing; provided that failure by any Indemnified Person so to notify the Company shall not relieve the Company from any liability which the Company may have on account of this indemnity or otherwise to such Indemnified Person, except to the extent the Company shall have been prejudiced by such failure. The Company shall, if requested by the Placement Agent, assume the defense of any such action including the employment of counsel reasonably satisfactory to the Placement Agent, which counsel may also be counsel to the Company. Any Indemnified Person shall have the right to employ separate counsel in any such action and participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Person unless: (i) the Company has failed promptly to assume the defense and employ counsel or (ii) the named parties to any such action (including any impeded parties) include such Indemnified Person and the Company, and such Indemnified Person shall have been advised in the reasonable opinion of counsel that there is an actual conflict of interest that prevents the counsel selected by the Company from representing both the Company (or another client of such counsel) and any Indemnified Person; provided that the Company shall not in such event be responsible hereunder for the fees and expenses of more than one firm of separate counsel for all Indemnified Persons in connection with any action or related actions, in addition to any local counsel. The Company shall not be liable for any settlement of any action effected without its written consent (which shall not be unreasonably withheld). In addition, the Company shall not, without the prior written consent of the Placement Agent (which shall not be unreasonably withheld), settle, compromise or consent to the entry of any judgment in or otherwise seek to terminate any pending or threatened action in respect of which indemnification or contribution may be sought hereunder (whether or not such Indemnified Person is a party thereto) unless such settlement, compromise, consent or termination includes an unconditional release of each Indemnified Person from all Liabilities arising out of such action for which indemnification or contribution may be sought hereunder. The indemnification required hereby shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as such expense, loss, damage or liability is incurred and is due and payable.

(c) In the event that the foregoing indemnity is unavailable to an Indemnified Person other than in accordance with this Agreement, the Company shall contribute to the Liabilities and Expenses paid or payable by such Indemnified Person in such proportion as is appropriate to reflect (i) the relative benefits to the Company, on the one hand, and to the Placement Agent and any other Indemnified Person, on the other hand, of the matters contemplated by this Agreement or (ii) if the allocation provided by the immediately preceding clause is not permitted by applicable law, not only such relative benefits but also the relative fault of the Company, on the one hand, and the Placement Agent and any other Indemnified Person, on the other hand, in connection with the matters as to which such Liabilities or Expenses relate, as well as any other relevant equitable considerations; provided that in no event shall the Company contribute less than the amount necessary to ensure that all Indemnified Persons, in the aggregate, are not liable for any Liabilities and Expenses in excess of the amount of fees actually received by the Placement Agent pursuant to this Agreement. For purposes of this paragraph, the relative benefits to the Company, on the one hand, and to the Placement Agent on the other hand, of the matters contemplated by this Agreement shall be deemed to be in the same proportion as (a) the total value paid or contemplated to be paid to or received or contemplated to be received by the Company in the transaction or transactions that are within the scope of this Agreement, whether or not any such transaction is consummated, bears to (b) the fees paid to the Placement Agent under this Agreement. Notwithstanding the above, no person guilty of fraudulent misrepresentation within the meaning of Section 11(f) of the Securities Act, as amended, shall be entitled to contribution from a party who was not guilty of fraudulent misrepresentation.

(d) The Company also agrees that no Indemnified Person shall have any liability (whether direct or indirect, in contract or tort or otherwise) to the Company for or in connection with advice or services rendered or to be rendered by any Indemnified Person pursuant to this Agreement, the transactions contemplated thereby or any Indemnified Person's actions or inactions in connection with any such advice, services or transactions except for Liabilities (and related Expenses) of the Company that are finally judicially determined to have resulted solely from such Indemnified Person's gross negligence or willful misconduct in connection with any such advice, actions, inactions or services.

(e) The reimbursement, indemnity and contribution obligations of the Company set forth herein shall apply to any modification of this Agreement and shall remain in full force and effect regardless of any termination of, or the completion of any Indemnified Person's services under or in connection with, this Agreement.

Section 8. Representations and Indemnities to Survive Delivery. The respective indemnities, agreements, representations, warranties and other statements of the Company or any person controlling the Company, of its officers, and of the Placement Agent set forth in or made pursuant to this Agreement will remain in full force and effect, regardless of any investigation made by or on behalf of the Placement Agent, the Company, or any of its or their partners, officers or directors or any controlling person, as the case may be, and will survive delivery of and payment for the Securities sold hereunder and any termination of this Agreement. A successor to a Placement Agent, or to the Company, its directors or officers or any person controlling the Company, shall be entitled to the benefits of the indemnity, contribution and reimbursement agreements contained in this Agreement.

Section 9. Notices. All communications hereunder shall be in writing and shall be mailed, hand delivered or e-mailed and confirmed to the parties hereto as follows:

If to the Placement Agent to the address set forth above, attention: James Siegel, General Counsel, email: jsiegel@maximgroup.com

With a copy to:

Thompson Hine LLP
335 Madison Avenue, 12th Floor
New York, New York 10017
E-mail: [●]
Attention: Faith L. Charles

If to the Company:

Zivo Bioscience, Inc.
21 East Long Lake Road, Suite 100
Bloomfield Hills, Michigan 48304
E-mail: jpayne@zivobioscience.com
Attention: Chief Executive Officer

With a copy to:

Honigman LLP
2290 First National Building
600 Woodward Avenue
Detroit, MI 48226-3506
E-mail: [●]
Attention: Jeffrey Kuras, Esq

Any party hereto may change the address for receipt of communications by giving written notice to the others.

Section 10. Successors. This Agreement will inure to the benefit of and be binding upon the parties hereto, and to the benefit of the employees, officers and directors and controlling persons referred to in Section 7 hereof, and to their respective successors, and personal representative, and no other person will have any right or obligation hereunder.

Section 11. Partial Unenforceability. The invalidity or unenforceability of any section, paragraph or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph or provision hereof. If any Section, paragraph or provision of this Agreement is for any reason determined to be invalid or unenforceable, there shall be deemed to be made such minor changes (and only such minor changes) as are necessary to make it valid and enforceable.

Section 12. Governing Law; Agent for Service of Process. This Agreement will be governed by, and construed in accordance with, the laws of the State of New York applicable to agreements made and to be performed entirely in such State, without regard to the conflicts of laws principles thereof. This Agreement may not be assigned by either party without the prior written consent of the other party. This Agreement shall be binding upon and inure to the benefit of the parties hereto, and their respective successors and permitted assigns. Any right to trial by jury with respect to any dispute arising under this Agreement or any transaction or conduct in connection herewith is waived. Any dispute arising under this Agreement may be brought into the courts of the State of New York or into the Federal Court located in New York, New York and, by execution and delivery of this Agreement, the Company hereby accepts for itself and in respect of its property, generally and unconditionally, the jurisdiction of aforesaid courts. Each party hereto hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by delivering a copy thereof via overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Agreement and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law. The Company agrees that a final judgment in any such action, proceeding or counterclaim brought in any such court shall be conclusive and binding upon the Company and may be enforced in any other courts to the jurisdiction of which the Company is or may be subject, by suit upon such judgment. If either party to this Agreement shall commence an action or proceeding to enforce any provisions of a Transaction Document, then the prevailing party in such action or proceeding shall be reimbursed by the other party for its attorney's fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

Section 13. General Provisions.

(a) This Agreement constitutes the entire agreement of the parties to this Agreement and supersedes all prior written or oral and all contemporaneous oral agreements, understandings and negotiations with respect to the subject matter hereof. Notwithstanding anything herein to the contrary, the Engagement Agreement, dated February 28, 2023 ("Engagement Agreement"), between the Company and the Placement Agent shall continue to be effective and the terms therein shall continue to survive and be enforceable by the Placement Agent in accordance with its terms, provided that, in the event of a conflict between the terms of the Engagement Agreement and this Agreement, the terms of this Agreement shall prevail. This Agreement may be executed in two or more counterparts, each one of which shall be an original, with the same effect as if the signatures thereto and hereto were upon the same instrument. This Agreement may not be amended or modified unless in writing by all of the parties hereto, and no condition herein (express or implied) may be waived unless waived in writing by each party whom the condition is meant to benefit. Section headings herein are for the convenience of the parties only and shall not affect the construction or interpretation of this Agreement.

(b) The Company acknowledges that in connection with the offering of the Securities: (i) the Placement Agent's responsibility to the Company is solely contractual and commercial in nature, (ii) the Placement Agent has acted at arms length, are not agents of, and owe no fiduciary duties to the Company or any other person, (iii) the Placement Agent owes the Company only those duties and obligations set forth in this Agreement and (iv) the Placement Agent may have interests that differ from those of the Company. The Company waives to the fullest extent permitted by applicable law any claims it may have against the Placement Agent arising from any breach or alleged breach of fiduciary duty in connection with the offering of the Securities

[The remainder of this page has been intentionally left blank]

If the foregoing is in accordance with your understanding of our agreement, please sign below whereupon this instrument, along with all counterparts hereof, shall become a binding agreement in accordance with its terms.

Very truly yours,

ZIVO BIOSCIENCE, INC.

By: _____
Name: _____
Title: _____

The foregoing Placement Agency Agreement is hereby confirmed and accepted as of the date first above written.

MAXIM GROUP LLC

By: _____
Name: _____
Title: _____

Consent of Independent Registered Public Accounting Firm

Zivo Bioscience, Inc.
Bloomfield Hills Michigan

We hereby consent to the use in the Prospectus constituting a part of this Registration Statement of our report dated March 14, 2023, relating to the consolidated financial statements of Zivo Bioscience, Inc., which is contained in that Prospectus. Our report contains an explanatory paragraph regarding the Company's ability to continue as a going concern.

We also consent to the reference to us under the caption "Experts" in the Prospectus.

/s/ BDO USA, LLP

Troy, Michigan

March 22, 2023

Calculation of Filing Fee Table

FORM S-1
(Form Type)

Zivo Bioscience, Inc.

(Exact Name of Registrant as Specified in its Charter)

Newly Registered Securities

Security Type	Security Class Title	Fee Calculation Rule	Maximum Aggregate Offering Price(1)(2)	Fee Rate	Amount of Registration Fee
Equity	Units Consisting of One Share of Common Stock and One Unit Warrant	Rule 457(o)	-	0.00011020	-
Equity	Common Stock(3)	Rule 457(o)	-	0.00011020	-
Equity	Unit Warrants(4)	Other	-	-	-
Equity	Shares of Common Stock issuable upon exercise of Unit Warrants	Rule 457(o)	-	0.00011020	-
Equity	Pre-funded warrants(3)(4)	Other	-	-	-
Equity	Shares of Common Stock issuable upon exercise of pre-funded warrants(3)	Rule 457(o)	-	0.00011020	-
Total Offering Amounts			\$30,000,000		\$3,306.00
Total Fee Offsets					-
Net Fee Due					\$3,306.00

- (1) Estimated solely for the purpose of calculating the registration fee pursuant Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act").
- (2) Pursuant to Rule 416(a) under the Securities Act, this registration statement shall also cover an indeterminate number of shares that may be issued and resold resulting from stock splits, stock dividends or similar transactions.
- (3) The proposed maximum aggregate offering price of the common stock will be reduced on a dollar-for-dollar basis based on the offering price of any pre-funded warrants issued in the offering, and the proposed maximum aggregate offering price of the pre-funded warrants to be issued in the offering will be reduced on a dollar-for-dollar basis based on the offering price of any common stock issued in the offering. Accordingly, the proposed maximum aggregate offering price of the common stock, pre-funded warrants and Unit Warrants (including the common stock issuable upon exercise of the pre-funded warrants), if any, is \$15,000,000.
- (4) No fee pursuant to Rule 457(g) of the Securities Act.