As filed with the Securities and Exchange Commission on June 23, 2025

Registration No. 333-[ ]

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

FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ORAGENICS, INC.
(Exact name of registrant as specified in its charter)

Florida	**59-3410522**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

1990 Main Street, Suite 750
Sarasota, Florida 34236
(813) 286-7900
(Address, including zip code, and telephone number, including area code, of principal executive offices)

Janet Huffman, Chief Executive Officer and Chief Financial Officer
Oragenics, Inc.
1990 Main Street, Suite 750
Sarasota, Florida 34236
(813) 286-7900
(Name, address, including zip code, and telephone number, including area code, of agent for service)

With copies to:

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Approximate date of commencement of proposed sale to the public: From time to time after this registration statement becomes 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, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box. ☒

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

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

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

Indicate by 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	☐	Accelerated filer	☐
Non-accelerated filer	☒	Smaller reporting company	☒
		Emerging growth company	☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided 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 the Registration Statement shall thereafter become effective in accordance with Section 8(A) of the Securities Act of 1933, or until this registration statement shall become effective on such date as the Commission, acting pursuant to section 8(a), may determine.

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

PRELIMINARY PROSPECTUS **SUBJECT TO COMPLETION** **DATED, JUNE 23, 2025**

Up to 800,000 Shares of Series H Convertible Preferred Stock
Up to 800,000 Warrants to Purchase 800,000 Shares of Series H Convertible Preferred Stock
Up to 800,000 shares of Series H Convertible Preferred Stock issuable upon exercise of the Warrants
and
Up to 17,095,822 Shares of Common Stock Underlying (i) the Series H Convertible Preferred Stock Sold Hereunder and (ii) the Series H Convertible Preferred Stock to Be Issued Upon Exercise of the Warrants

We are offering up to 800,000 shares of our Series H Non-Voting Convertible Preferred Stock (the "Preferred Stock") and warrants to purchase up to 800,000 shares of our Series H Convertible Preferred Stock (the "Warrants") (and up to 17,095,822 shares of Common Stock, which represents our reasonable good-faith estimate of how many shares of Common Stock may be issuable from time to time upon conversion of the Preferred Stock (including the conversion of the Preferred Stock underlying the Warrants) and payment of dividends accrued on the Preferred Stock in shares of Common Stock upon conversion of the Preferred Stock). Each share of Preferred Stock we sell in this offering will be accompanied by a Warrant to purchase one share of Series H Convertible Preferred Stock at an exercise price of $25.00 per share of Series H Convertible Preferred Stock. The shares of Preferred Stock and Warrants will be issued separately but can only be purchased together in this offering. Each Warrant will be immediately exercisable and will expire on the five-year anniversary of the date of issuance.

The combined public offering price for each share of Preferred Stock and accompanying Warrant is $25.00 (the "Offering Price"). The Offering Price, as well as the exercise price and other terms of the Warrants, was determined by our the Company on an arbitrary basis and may not be indicative of the price at which Preferred Stock or Warrants would trade if they were listed on an exchange or were actively traded by brokers and may not bear any relationship to the assets, book value, historical earnings or net worth of the Company. See, "Risk Factors" for more information.

The Conversion Price of the Preferred Stock (the "Conversion Price") is expected to be set by us, with input from our Placement Agent, at the time of pricing the offering and is expected to be based upon the closing price of our Common Stock immediately prior to such pricing but may be at a discount to the then current market price of our Common Stock. The number of shares of Common Stock into which each share of Preferred Stock is convertible into is determined by dividing the Offering Price by the Conversion Price. Thus, if the Conversion Price is $3.60, each share of Preferred Stock, exclusive of dividends, is convertible into approximately 6.94 shares of Common Stock. As to any fraction of a share which a holder would otherwise be entitled to receive upon such conversion, at our election, we may either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round to the nearest whole number. If the Conversion Price is set lower, or it is adjusted pursuant to the anti-dilution provision discussed below, the number of shares of Common Stock to be issued upon conversion will increase. For example, if the Conversion Price is lowered to $2.50, each share of Preferred Stock that has not previously been converted, exclusive of dividends, we be convertible into approximately 10 shares of Common Stock.

The Certificate of Designation for our Preferred Stock contains anti-dilution provisions, which provisions require the lowering of the Conversion Price on any unconverted Preferred Stock to the purchase price of future offerings by us (subject to certain exclusions). If in the future we issue securities for less than the Conversion Price of our Preferred Stock, we will be required to reduce the relevant Conversion Price of any unconverted Preferred Stock, which will result in a greater number of shares of Common Stock being issuable upon conversion, which in turn will have a greater dilutive effect on our shareholders. In addition, as there is no floor price on the Conversion Price, we cannot determine the total number of shares issuable upon conversion. As such, it is possible that we will not have sufficient available shares to satisfy the conversion of the Preferred Stock if we enter into a future transaction that results in the reduction of the Conversion Price. If we do not have sufficient available shares for any Preferred Stock conversions, we will be required to increase our authorized shares, which may not be possible and will be time consuming and expensive. The potential for such Conversion Price adjustments may depress the price of our Common Stock regardless of our business performance, and, as a result, we may find it more difficult to raise additional equity capital while our Preferred Stock is outstanding. See, "Risk Factors" for additional information.

We have retained Dawson James Securities, Inc. to act as placement agent in connection with this offering and to use its "best efforts" to solicit offers to purchase the Preferred Stock and the Warrants. We have agreed to pay the placement agent a cash fee equal to 7.0% of the gross proceeds of the offering. There are no minimum purchase requirements. We may not sell the entire amount of the securities being offered pursuant to this prospectus. The placement agent is not purchasing or selling any securities pursuant to this offering, nor are we requiring any minimum purchase or sale of any specific number of securities. Because there is no minimum offering amount required as a condition to the closing of this offering, the actual public offering amount, placement agent fees and proceeds to us are not presently determinable and may be substantially less than the maximum amounts set forth below. See "Plan of Distribution" beginning on page 30 of this prospectus for more information regarding these arrangements.

The Offering Price will be fixed for the duration of this offering. Because there is no minimum offering amount required as a condition to closing this offering, 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 pursue the business goals outlined in this prospectus. In addition, because there is no escrow account and no minimum offering amount in this offering, investors could be in a position where they have invested in our company, but we are unable to fulfill our objectives due to a lack of interest in this offering. Also, any proceeds from the sale of securities offered by us will be available for our immediate use, despite uncertainty about whether we would be able to use such funds to effectively implement our business plan. The offering will be terminated by July 31, 2025, and may not be extended. See "Risk Factors" for more information.

Our Common Stock is listed on the NYSE American under the symbol "OGEN". On June 18, 2025, the closing price for our Common Stock, as reported on the NYSE American, was $4.37 per share. The recent market price used throughout this prospectus may not be indicative of the actual market price at the time of the closing of this offering. There is no established public trading market for the Preferred Stock or the Warrants, and we do not expect a market to develop. We do not intend to apply for listing of the Preferred Stock or the Warrants on any securities exchange or other nationally recognized trading system. Without an active trading market, the liquidity of the Preferred Stock and Warrants will be limited.

On June 3, 2025 we effectuated a one-for-thirty reverse stock split of our issued and outstanding Common Stock (the "Reverse Stock Split"). Except where the context otherwise requires, share numbers in this prospectus reflect the Reverse Stock Split.

We have received deficiency letters from the NYSE American that we are not in compliance with the continued listing standards set forth in Sections 1003(a)(i), (ii) and (iii) of the NYSE American Company Guide (the "Company Guide"). Section 1003(a)(i) requires stockholders' equity of no less than $2,000,000 if the Company has sustained losses

from continuing operations and/or net losses in two of its three most recent fiscal years. Section 1003(a)(ii) requires a listed company to have stockholders' equity of $4 million or more if the listed company has reported losses from continuing operations and/or net losses in three of its four most recent fiscal years. Section 1003(a)(iii) requires a listed company to have stockholders' equity of $6 million or more if the listed company has reported losses from continuing operations and/or net losses in our five most recent fiscal years. On May 17, 2024, we submitted a plan of compliance (the "Plan") to the NYSE American. On June 18, 2024, the NYSE American accepted our Plan and, as such, we will be able to continue our listing during the Plan period and will be subject to continued periodic review by the NYSE American staff. If we are not in compliance with the continued listing standards by October 18, 2025 or if the Company does not make progress consistent with the Plan during the Plan period, the Company will be subject to delisting procedures as set forth in the Company Guide. The Company is committed to undertaking a transaction or transactions in the future to achieve compliance with the NYSE American's requirements. However, there can be no assurance that the Company will be able to achieve compliance with the NYSE American's continued listing standards within the required timeframe. See "Risk Factors".

We have agreed to pay the Placement Agent a fee based on the aggregate proceeds raised in this offering as set forth in the table below:

	Per Share and Accompanying Warrant (1)	Total(3)
Public offering price	$ 25.00	$ 20,000,000
Placement Agent Fees (2)	$ 1.75	$ 1,400,000
Proceeds to us, before expenses, to us(4)	$ 23.25	$ 18,600,000

(1) Per share price represents the offering price for one share of Preferred Stock and a Warrant to purchase one share of Preferred Stock. The price of a share of Preferred Stock and accompanying Warrant in this prospectus assumes a combined public offering price of $25 per share and accompanying Warrant. The Offering Price, as well as the exercise price of the Warrants, was determined by our the Company on an arbitrary basis and may not be indicative of the price at which Preferred Stock or Warrants would trade if they were listed on an exchange or were actively traded by brokers, and may not bear any relationship to the assets, book value, historical earnings or net worth of the Company.

(2) We will pay the Placement Agent a cash fee equal to seven percent (7%) of the aggregate gross proceeds raised in this offering. In addition, we have agreed to reimburse the Placement Agent for certain offering-related expenses. We refer you to "Plan of Distribution" beginning on page 30 for additional information regarding compensation to be received by the Placement Agent.

(3) Assuming the maximum offering amount is sold in this offering.

(4) Because there is no minimum number of securities or amount of proceeds required as a condition to closing in this offering, the actual public offering amount, placement agent fees, and proceeds to us, if any, are not presently determinable and may be substantially less than the total maximum offering amounts set forth above. We estimate the total expenses of this offering payable by us, excluding the placement agent fee, will be approximately $350,000.

Investing in our securities involves a high degree of risk. You should review carefully the disclosures described under the heading "Risk Factors" beginning on page 13 of this prospectus and in documents that are incorporated by reference into this prospectus for a discussion of the risks and uncertainties that should be considered in connection with an investment in our securities.

We may amend or supplement this prospectus from time to time by filing amendments or supplements as required. You should read the entire prospectus and any amendments or supplements carefully before you make your investment decision.

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

The delivery to the purchasers of the shares of Preferred Stock and Warrants in this offering is expected to be made on or about [___], 2025, subject to satisfaction of certain customary closing conditions.

Sole Book-Running Manager

Dawson James Securities, Inc.

The date of this prospectus is , 2025.

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ABOUT THIS PROSPECTUS

We incorporate by reference important information into this prospectus. You may obtain the information incorporated by reference without charge by following the instructions under "Where You Can Find More Information." You should carefully read this prospectus as well as additional information described under "Incorporation of Certain Information by Reference," before deciding to invest in our securities.

To the extent there is a conflict between the information contained in this prospectus, on the one hand, and the information contained in any document incorporated by reference filed with the Securities and Exchange Commission, or the SEC, before the date of this prospectus, on the other hand, you should rely on the information in this prospectus. If any statement in a document incorporated by reference is inconsistent with a statement in another document incorporated by reference having a later date, the statement in the document having the late date modifies or supersedes the earlier statement.

You should rely only on the information contained in this prospectus. We have not, and Dawson James has not, authorized anyone to provide any information or to make any representations other than those contained in this prospectus or in any free writing prospectuses prepared by or on behalf of us or to which we have referred you, and we take no responsibility for any other information others may give you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you.

This prospectus is an offer to sell only the securities offered hereby, and only under circumstances and in jurisdictions where it is lawful to do so. We are not making an offer to sell these securities in any jurisdiction where an offer or sale is not permitted. The information contained in this prospectus or in any applicable free writing prospectus is current only as of its date, regardless of its time of delivery or any sale of our securities. Our business, financial condition, results of operations and prospects may have changed since that date.

The information incorporated by reference or provided in this prospectus contains statistical data and estimates, including those relating to market size and competitive position of the markets in which we participate, that we obtained from our own internal estimates and research, as well as from industry and general publications and research, surveys and studies conducted by third parties. Industry publications, studies and surveys generally state that they have been obtained from sources believed to be reliable. While we believe our internal company research is reliable and the definitions of our market and industry are appropriate, neither this research nor these definitions have been verified by any independent source.

For investors outside the United States: We have not, and Dawson James has 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 must inform themselves about, and observe any restrictions relating to, the offering of the securities and the distribution of this prospectus outside the United States.

This prospectus and the information incorporated by reference into this prospectus contain references to our trademarks and to trademarks belonging to other entities. Solely for convenience, trademarks and trade names referred to in this prospectus and the information incorporated by reference into this prospectus, including logos, artwork, and other visual displays, may appear without the ® or TM symbols, but such references are not intended to indicate, in any way, that we will not assert, to the fullest extent under applicable law, our rights or the rights of the applicable licensor to these trademarks and trade names. We do not intend our use or display of other companies' trade names or trademarks to imply a relationship with, or endorsement or sponsorship of us by, any other company.

We may also provide a prospectus supplement or post-effective amendment to the registration statement to add information to, or update or change information contained in, this prospectus. You should read both this prospectus and any applicable prospectus supplement or post-effective amendment to the registration statement together with the additional information to which we refer you in the sections of this prospectus entitled "Where you Can Find More Information".

The representations, warranties and covenants made by us in any agreement that is filed as an exhibit to any document that is incorporated by reference herein were made solely for the benefit of the parties to such agreement, including, in some cases, for the purpose of allocating risk among the parties to such agreements, and should not be deemed to be a representation, warranty or covenant to you. Moreover, such representations, warranties or covenants were accurate only as of the date when made. Accordingly, such representations, warranties and covenants should not be relied on as accurately representing the current state of our affairs.

As used in this prospectus, unless the context indicates or otherwise requires, "the Company," "our Company," "we," "us," and "our" refer to Oragenics, Inc., a Florida corporation, and its consolidated subsidiaries.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein contain forward-looking statements. These are based on our management's current beliefs, expectations and assumptions about future events, conditions and results and on information currently available to us. Discussions containing these forward-looking statements may be found, among other places, in the sections entitled "Business," "Risk Factors" and "Management's Discussion and Analysis of Financial Condition and Results of Operations" contained in the documents incorporated by reference herein.

Any statements in this prospectus, or incorporated herein, about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and are forward-looking statements. Within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act, these forward-looking statements include statements regarding:

- Our need to raise additional capital to continue to implement our business strategy;
- Our financial capacity and performance, including our ability to obtain funding, non-dilutive or otherwise, necessary to do the research, development, manufacture, and commercialization of any one or all of our product candidates;
- Our ability to maintain our listing on the NYSE American and the trading market of our Common Stock;
- Our ability to commence clinical trials and enroll patients, including in New Zealand, and the conditions, timing, progress and results of clinical trials of our product candidates;
- Uncertainties regarding submission, approval and scope of filings for regulatory approval of our product candidates and our ability to obtain and maintain regulatory approvals for our product candidates for any indication;
- Uncertainties regarding the potential benefits, activity, effectiveness and safety of our product candidates including as to administration, distribution and storage;
- Uncertainties regarding the size of the patient populations, market acceptance and opportunity for and clinical utility of our product candidates, if approved for commercial use;
- Our manufacturing capabilities and strategy, including the scalability and commercial viability of our manufacturing methods and processes, and those of our contractual partners;
- Our ability to successfully commercialize our product candidates;

- The potential benefits of, and our ability to maintain, our relationships and collaborations with the NIAID, the NIH, the NRC and other potential collaboration or strategic relationships;
- Uncertainties regarding our expenses, ongoing losses, future revenue, capital requirements;
- Our ability to identify, recruit and retain key personnel and consultants;
- Our ability to obtain, retain, protect, and enforce our intellectual property position for our product candidates, and the scope of such protection;
- Our ability to advance the development of our new and existing product candidate under the timelines and in accord with the milestones projected;
- Our need to comply with extensive and costly regulation by worldwide health authorities, who must approve our product candidates prior to substantial research and development and could restrict or delay the future commercialization of certain of our product candidates;
- Our ability to successfully complete pre-clinical and clinical development of, and obtain regulatory approval of our product candidates and commercialize any approved products on our expected timeframes or at all;
- The safety, efficacy, and benefits of our product candidates;
- The effects of government regulation and regulatory developments, and our ability and the ability of the third parties with whom we engage to comply with applicable regulatory requirements;
- The capacities and performance of our suppliers and manufacturers and other third parties over whom we have limited control; and
- Our competitive position and the development of and projections relating to our competitors or our industry.

In some cases, you can identify forward-looking statements by the words "may," "might," "can," "will," "to be," "could," "would," "should," "expect," "intend," "plan," "objective," "anticipate," "believe," "estimate," "predict," "project," "potential," "likely," "continue" and "ongoing," or the negative of these terms, or other comparable terminology intended to identify statements about the future, although not all forward-looking statements contain these words. These statements involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from the information expressed or implied by these forward-looking statements.

You should refer to the "Risk Factors" section contained in this prospectus and any related free writing prospectus, and under similar headings in the other documents that are incorporated by reference into this prospectus, for a discussion of important factors that may cause our actual results to differ materially from those expressed or implied by our forward-looking statements. Given these risks, uncertainties and other factors, many of which are beyond our control, we cannot assure you that the forward-looking statements in this prospectus will prove to be accurate, and you should not place undue reliance on these forward-looking statements. Furthermore, if our forward-looking statements prove to be inaccurate, the inaccuracy may be material. In light of the significant uncertainties in these forward-looking statements, you should not regard these statements as a representation or warranty by us or any other person that we will achieve our objectives and plans in any specified time frame, or at all.

Except as required by law, we assume no obligation to update these forward-looking statements publicly, or to revise any forward-looking statements to reflect events or developments occurring after the date of this prospectus, even if new information becomes available in the future.

PROSPECTUS SUMMARY

This summary highlights certain information appearing elsewhere in this prospectus. Because it is only a summary, it does not contain all of the information that you should consider before investing in our Common Stock and it is qualified in its entirety by, and should be read in conjunction with, the more detailed information appearing elsewhere in this prospectus. Before you decide to invest in our Common Stock, you should read the entire prospectus carefully, including "Risk Factors" beginning on page 13 and the financial statements and related notes incorporated by reference to this prospectus.

Our Company

We are a development-stage company dedicated to the research and development of nasal delivery pharmaceutical medications in neurology and fighting infectious diseases. Our lead product, ONP-002, is a fully synthetic, non-naturally occurring neurosteroid, is lipophilic, and we believe can cross the blood-brain barrier with the goal of rapidly eliminating swelling, oxidative stress and inflammation while restoring proper blood flow through gene amplification.

Our ONP-002 Neurology Asset for Brain Related Illness and Injury

Our lead product and focus is on the development and commercialization of ONP-002 for the treatment of mild traumatic brain injury ("mTBI" or "Concussion").

ONP-002, together with our other neurology assets are referred to herein as the Neurology Assets. To date, ONP-002 has been shown to be stable up to 104 degrees for 18 months. The drug candidate is manufactured into a powder and filled into a novel intranasal device. The drug is then administered through the nasal passage from the device. The novel intranasal device is lightweight and easy to use in the field.

We believe the proprietary powder formulation and intranasal administration allows for rapid and direct accessibility to the brain. The device is breath propelled and is designed to allow patients to blow into the device which closes the soft palate in the back of the nasopharynx, preventing the flow of drug to the lungs or esophagus, minimizes system exposure and side effects, and effectively crosses the blood brain barrier. This mechanism is designed to trap ONP-002 in the nasal cavity allowing for more abundant and faster drug availability in the traumatized brain.

Expected ONP-002 Product Development Timeline:

Pre-clinical Animal Studies	Phase 1	Phase 2a	Phase 2b	Phase 3
Complete	Complete	Estimated Q2 2025 start	Estimated Q2 2026 start	Estimated Q2 2027 start

This product development plan is an estimate and is subject to change based on funding, technical risks and regulatory approvals.

Validation and Stability of ONP-002

A Certificate of Analysis ("COA") was issued by the manufacturer of the drug, indicating that testing methods were standard and include appearance, identification by 1H NMR, identification by Mass Spectroscopy (MS), optical purity by HPLC, residual solvent analysis, elemental impurities, percent water, and residue on ignition. The

manufacturer has shown both the specifications and the results, indicating that the material supplied passes all criteria. The ONP-002 drug is supplied in essentially pure form. As such, no excipients are believed to be present. Stability studies were performed by storing the ONP-002 drug samples under carefully controlled conditions with respect to temperature and humidity. The stability testing protocol included storage at about 25 °C± 2 °C at about 60% relative humidity ± 5% relative humidity for about 24 months and at about 40 °C± 2 °C at about 75% relative humidity ± 5% for about 18 months. The ONP-002 drug samples were pulled at essentially the scheduled time and analyzed for appearance, purity, assay, optical purity, and water content. No changes in ONP-002 were observed.

Intellectual Property

Domestic and foreign patents applications on the ONP-002 compound have been filed and to date, several have been issued. Domestic and foreign patent applications have also been filed on the novel breath-powered intranasal delivery device as follows:

- New chemical entity patent filings concerning the C-20 steroid compounds haves been filed with the USPTO and are pending in the U.S. To date, national patents in 9 different countries have been granted, including European countries and Canada. A bundle of patents under the European Patent Convention have also been granted.
    - C-20 steroid compounds, composition and uses thereof to treat traumatic brain injury (TBI), including concussion.
    - Inventions relate to, inter alia, ONP-002 compositions, methods of use to treat, minimize and/or prevent traumatic brain injury (TBI), including severe TBI, moderate TBI, and mild TBI, including concussions, methods of manufacture and/or synthesis, products by process, and intermediates.
    - An issued U.S. patent expiration with 5-year maximum patent term extension - 9/17/2040.
    - An issued U.S. patent expiration without patent term extension - 9/17/2035.
- Multiple nasal delivery device patent applications concerning the Breath-Powered Nasal Devices and Uses Thereof haves been filed in the U.S. with the USPTO as utility patent applications. In addition, multiple nationalized patent applications drawn to the Breath-Powered Nasal Devices and Uses Thereof have been filed in over 60 countries.
    - Breath-Powered Nasal Devices and Uses Thereof for Treatment of TBI, Including Concussion, and Methods.
    - Inventions relate to, inter alia, breath-powered nasal devices, single-directional breath-powered nasal devices for providing dual airflow for propelling a drug substance into a nasal cavity for targeted delivery to the olfactory region in high drug substance concentration for rapid diffusion into the brain for the treatment of local or systemic and/or central nervous system (“CNS”) injury, disease or disorder, and methods of treating local or systemic and/or CNS injury, disease or disorder with such devices.
    - An exemplary issued U.S. patent expiration - 10/19/2042.

ONP-002 Pre-Clinical Trials

The ONP-002 drug has completed toxicology studies in rats and dogs. Those studies show that ONP-002 has a large safety margin for its predicted efficacious dose. In preclinical animal studies, the drug demonstrated rapid and broad biodistribution throughout the brain while simultaneously reducing swelling, inflammation, and oxidative stress, along with an excellent safety profile.

Results from the preclinical studies suggest that ONP-002 has an equivalent, and potentially superior, neuroprotective effect compared to related neurosteroids. The animals treated with the drug post-concussion showed positive behavioral outcomes using various testing platforms including improved memory and sensory-motor performance, and reduced depression and anxiety-like behaviors.

ONP-002 Drug Induction of PXR

The induction of the human CYP450 enzymes, CYP2B6, and CYP3A4 by ONP-002, as measured by mRNA expression, was tested in human hepatocytes from 3 donors at 3 concentrations: about 1 μM, about 10 μM and about 100 μM. Results reflected that the ONP-002 drug through the known PXR-mechanism produced a modest induction of CYP3A4, up to about 17% of the positive control, and a greater induction of CYP2B6, of up to about 59% of the positive control, both at a concentration of about 100 μM. Past data reflected that the ONP-001 drug candidate (*ent*-Progesterone) and Progesterone induce the PXR receptor. Receptor binding studies have been performed showing neither the ONP-001 drug candidate or the ONP-002 drug activate the classical Progesterone Receptor.

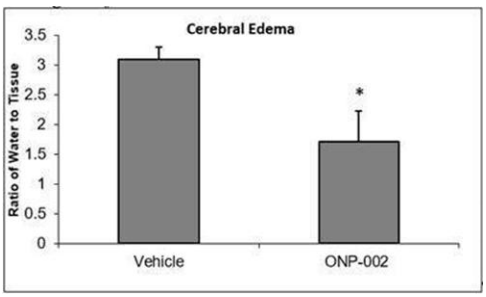
ONP-002 Drug Animal Studies

All surgical animals (male Sprague-Dawley rats approx. 250 grams) were anesthetized with an initial isoflurane induction for about 4 min-the minimum time necessary to sedate the animal. The scalp was shaved and cleaned with isopropanol and betadine. During the stereotaxic surgery, anesthesia was maintained with isoflurane. A medial incision was made, and the scalp was pulled back over the medial frontal cortex. An approximate 6-mm diameter craniotomy was performed exposing the brain tissue. An electrically controlled injury device using a 5 mm metal impactor was positioned over the exposed brain. An impact speed of about 1.6 m/s at about a 90-degree angle from vertical was used to produce an open head injury at a depth of 1mm to create a milder TBI. All treatments were given intranasal (IN) as a liquid solution with a micro atomizer. Vehicle for all administrations was about 22.5% Hydroxy-Propyl-β-cyclodextrin (HPβCD).

Molecular Studies - Brain tissue was taken from the penumbral region of injury.

Cerebral Edema

In Figure 2, we show that the ONP-002 drug reduces swelling in rats compared to vehicle-treated at 24-hrs after brain injury by measure of brain water content through speed-vacuum dehydration and tissue weight comparisons. The ONP-002 drug-treated (about 4mg/kg) and vehicle-treated were compared to sham which was set at zero. Local edema can occur after mTBI. Severe cerebral edema is associated with poor outcomes including increased mortality after mTBI with Second Impact Syndrome (2). ***Denotes significance at p<0.05, n=6**



Inflammation

mTBI causes vascular and neuronal stress. Microglia and reactive astrocytes infiltrate the areas of injury and release inflammatory mediators, like TNF-alpha. We show that the ONP-002 drug (about 4mg/kg) reduces TNF-alpha-mediated neuroinflammation in brain tissue of rats compared to vehicle at approximately 24-hrs after mTBI (ELISA).

Pharmacokinetics and Safety of IN ONP-002 Drug in Dog

This pivotal GLP 14-day study used repeat dosing of the ONP-002 drug, 3X a day, approximately about 4 hours apart, for approximately 14 consecutive days at concentrations of about 0, 3, 10 or 23 mg/mL at a volume of about 1 mL/nostril to beagle dogs (both nostrils had drug administered). The intranasal treatment was given as a liquid solution using a micro atomizer using about 22.5% HPβCD as the vehicle. Intranasal ONP-002 drug dosing revealed that the ONP-002 drug was well tolerated up to the highest dose of about 23 mg/ml or about 46mg in total per dosing. Clinical observations were limited to increased salivation in dogs which occurred in a dose-dependent manner. There were no effects on body weight, food consumption, ophthalmic parameters, clinical chemistry, haematology, or organ weights at any of the doses tested. Microscopic analysis revealed purulent exudates in the nasal turbinate and evidence of inflammatory infiltrates and fibrin deposition in the lungs. All of these events were classified as mild, reversed during the recovery period, and did not appear to show any dose dependency. Similar findings were evident in vehicle control treated dogs indicating the findings were vehicle related. The highest dose of about 23 mg/ml was thus determined to be the NOAEL which is equivalent to a ONP-002 dose of about 1.5mg/kg and about 2.3mg/kg in male and female dogs, respectively. Testing shows the dose-dependent increase in plasma exposure of the ONP-002 drug in male and female dogs following IN administration. Plasma exposure levels were similar in males and females and there did not appear to be any evidence of drug accumulation following multiple doses.

Cardiopulmonary Safety Pharmacology

The effect of the ONP-002 drug on the human ether-a-go-go related gene (hERG) tail currents was assessed in a non-Good Laboratory Practice (GLP) study using manual whole-cell patch clamp. The ONP-002 drug tested at a single concentration of about 10 μM inhibited hERG tail currents by about 42.6% (n=3). In order to achieve a safety factor of about 30-fold between in vitro hERG IC50 and free plasma levels of the ONP-002 drug in clinical studies, the Cmax (maximum concentration) should not exceed a free drug concentration of about 0.33 μM (about 99 ng/ml). The ONP-002 drug is about 97.2% human plasma protein bound and is estimated to reach a plasma Cmax of about 12.5 nM, the highest dose of about 0.533 mg/kg to be administered in the planned first in human (FIH) study, which provides a safety factor of about 800-fold. A GLP study has been conducted at Charles River, Inc. and will be incorporated into the IND submission.

ONP-002 Drug Clinical Trials

The ONP-002 drug has completed a Phase 1 clinical trial in healthy human subjects showing it is safe and well tolerated.

Safety studies have established a dosing regimen of 2X/day for fourteen days. The Phase 1 clinical trial was performed in Melbourne, Australia with a Contract Research Organization (CRO), Avance Clinical Pty Ltd and Nucleus Network Pty Ltd. The country of Australia provides a currency exchange advantage and a tax rebate at the end of our fiscal year from the Australian government on all Research and Development performed in Australia.

The Phase 1 study was double-blinded, randomized and placebo controlled (3:1, drug:placebo). Phase 1 used a Single Ascending/Multiple Ascending (SAD/MAD) drug administration design. The SAD component was a 1X treatment (low, medium, or high dose) and the MAD component was a 1X/day treatment for five consecutive days (low and medium dose). Blood and urine samples were collected at multiple time points for safety pharmacokinetics. Standard safety monitoring was provided for each body system.

Forty human subjects (31 males, 9 females) were successfully enrolled in Phase 1. The Safety Review Board, made up of medical doctors, has reviewed the trial data and has determined the drug is safe and well tolerated at all dosing levels.

We anticipate preparing for Phase 2 clinical trials to further evaluate the ONP-002 drug's safety and efficacy, but our ability to do so is uncertain. Based on the Phase 1 data, we plan to apply for an Investigational New Drug application with the FDA and conduct a Phase 2 trial in the United States. In connection therewith, in April, 2025, we submitted a clinical trial protocol for regulatory review to the Health and Disability Ethics Committee (HDEC) in New Zealand, Pending approval, of which there can be no certainty, we expect to initiate patient enrollment in New Zealand. The trial is expected to be conducted at Christchurch Hospital in New Zealand, the largest tertiary, teaching, and research hospital on the South Island. Christchurch Hospital provides a full range of emergency, acute, elective, and outpatient services, and its Emergency Department is one of the busiest in Australasia, treating more than 83,000 patients annually.

We anticipate a Phase 2 clinical trial will be performed administering the ONP-002 drug intranasally in concussed patients 2x a day for up to fourteen days. The Phase 2a feasibility study is expected to be performed in New Zealand with a target initiation date in the second or third quarter of 2025 to be followed closely by a Phase 2b proof of concept study in the US.

On July 10, 2024, we announced that we had developed a new proprietary formulation for the novel ONP-002 neurosteroid. We believe the nasal cavity provides access for our novel neurosteroid formulation to enter the brain in minutes. Given the difficulty of getting neurosteroids into solution, unique formulations must be developed to achieve therapeutic levels. We believe that our recent work has increased the final dose levels significantly while also providing for improved intranasal drug delivery and adhesion and, thus, longer absorption times. We further believe we have successfully completed an improved proprietary formulation of the ONP-002 drug that should significantly increase the bioavailability of the intranasal drug formulation. The enhanced drug percentages in this novel proprietary formulation have been developed as part of our platform for acute-field delivery of the drug. Our newly developed proprietary intranasal drug formulation is intended to reduce the duration of initial concussion symptoms and prevent long-lasting symptoms that can be debilitating after a concussion.

On August 8, 2024, we announced our candidate for treating concussion successfully completed a study that indicates the ONP-002 drug does not cause cardiotoxicity. Prior to conducting a clinical trial, the U.S. Food and Drug Administration (FDA) requires pharmaceuticals to be tested on cardiac receptors to ensure that they do not show any causes of electrical malformations. Further, on August 30, 2024, we announced we successfully completed a study that indicates the ONP-002 drug does not cause DNA damage and genotoxicity in an animal model. Prior to conducting a clinical trial, the U.S. Food and Drug Administration (FDA) requires that pharmaceuticals be tested on cells and animals to ensure they do not cause damage affecting cell division.

Key Milestones Ahead

The upcoming projected milestones include:

Milestone	Expected Timing
HDEC approval in New Zealand	Q2 2025
First patient enrolled in Phase IIa trial	Q2 2025
Completion of Phase IIa enrollment	Q4 2025

Interim safety and biomarker readout	Q4 2025 – Q1 2026
Initiation of Phase IIb (Part B)	Q2 2026
Topline Phase IIb results	Q1 2027
FDA End-of-Phase 2 Meeting	Q2 2027
FDA Accelerated Approval Filing (if eligible)	Q3 2027
First revenues from licensing or early access	2028 (projected)

Our Medical Advisors

Dr. James "Jim" Kelly, Neurologist, serves as our Chief Medical Officer, and oversees our upcoming Phase 2 clinical trial for treating concussion. In the recent past, Dr. Kelly served as the Executive Director of the Marcus Institute for Brain Health (MIBH) and Professor of Neurology at the University of Colorado Anschutz Medical Campus in Aurora, Colorado. The MIBH specialized treatment program is funded by the Marcus Foundation to care for US military veterans with persistent symptoms of TBI. Dr. Kelly was also National Director of the Avalon Action Alliance TBI Programs for which the MIBH serves as the clinical coordinating center. Prior to these recent positions, Dr. Kelly was the Director of the National Intrepid Center of Excellence (NICoE) at Walter Reed National Military Medical Center in Bethesda, MD. As its founding Director, he led the creation of an innovative interdisciplinary team of healthcare professionals who blended high-tech diagnosis and treatment with complementary and alternative medical interventions in a holistic, integrative approach to the care of US military personnel with the complex combination of TBI and psychological conditions, such as post-traumatic stress, depression, and anxiety. In this role, Dr. Kelly was frequently called upon by leaders of the Military Health System at the Pentagon, the US Congress, the Department of Veterans Affairs, and numerous military facilities in the continental US and abroad. Dr. Kelly has interacted with the FDA and clinical trials for brain injury throughout his esteemed career. He is a strong advocate for treatments in the acute phase of brain injury and understands the value of protecting the brain early on from inflammation, swelling and oxidative stress to gain better clinical outcomes.

Dr. William "Frank" Peacock serves as our Chief Clinical Officer, and will conduct our anticipated Phase 2 clinical trial for treating concussion in emergency departments. Dr. Peacock is currently the Vice Chair for Emergency Medicine Research at Baylor College of Medicine and a past Professor at the Cleveland Clinic Lerner College of Medicine. He is also the Principal Investigator of a trial for a company developing blood biomarkers for the identification of concussion in the emergency department, which is analyzing acute blood markers that are elevated after concussion to not only ensure concussion is identified but also as a predictor of potential severity and longer-term complications. Dr. Peacock is a world-renowned speaker and researcher. He has been instrumental in the approval and use of high sensitivity blood troponins for acute coronary syndrome failure in emergency settings, which can be seen in the *JAMA* Cardiology publication, *Efficacy of High-Sensitivity Troponin T in Identifying Very-Low-Risk Patients with Possible Acute Coronary Syndrome*, and he is the editor of the first book of "Biomarkers of Traumatic Brain Injury".

Our Business Development Strategy

Success in the biopharmaceutical and product development industry relies on the continuous development of novel product candidates. Most product candidates do not make it past the clinical development stage, which forces companies to look externally for innovation. Accordingly, we expect, from time to time, to seek strategic opportunities through various forms of business development, which can include strategic alliances, licensing deals, joint ventures, collaborations, equity or debt-based investments, dispositions, mergers, and acquisitions. We view these business development activities as a necessary component of our strategies, and we seek to enhance shareholder value by evaluating business development opportunities both within and complementary to our current business, as well as opportunities that may be new and separate from the development of our existing product candidates.

Our current focus is on advancing our ONP-002 product candidate to treat concussion. Work on our other project candidates currently is not active.

Recent Developments

Reverse Stock Split

On June 3, 2025 we effectuated a one-for-thirty reverse stock split of our issued and outstanding Common Stock (the "Reverse Stock Split"). Except where the context otherwise requires, share numbers in this prospectus reflect the Reverse Stock Split.

Human Research Ethics Committee Approval

On May 13, 2025 we announced that we had received approval from the Human Research Ethics Committee (HREC) in Australia to initiate a Phase II clinical trial evaluating ONP-002, our proprietary neuroprotective therapy, for the treatment of mild traumatic brain injury (mTBI), aka concussion.

This approval marked a significant milestone in expanding Oragenics' clinical development efforts internationally. With this clearance, we can initiate clinical trials in Australia and could begin patient enrollment as early as the second quarter of 2025. Once we are prepared to commence enrollment, enrollment and treatment administration is expected occur in a level 1 trauma emergency departments where concussed patients are often seen following motor vehicle accidents, falls, and contact sports related injuries.

Strategic Partnership

In February 2025, we entered into a strategic partnership with BRAINBox Solutions, a leader in multi-modality diagnostics for traumatic brain injury (TBI), that is anticipated to create a comprehensive trigger-to-treat platform by combining BRAINBox's advanced multimarker/ multimodality diagnostic capabilities with the our novel therapeutic developments. The partnership intends to integrate BRAINBox's proprietary diagnostic product platform—which utilizes a combination of neurological biomarkers, neuropsychological assessments, and AI-driven analytics to provide early and accurate TBI assessments—with our intranasal therapeutic candidate, ONP-002. Together, these technologies aim to transform the standard of care for concussion patients by providing rapid diagnosis, predictive prognosis, and timely, targeted treatment.

ATM Funding

On October 11, 2024, we entered into an At-the-Market Sales Agreement (the "ATM Agreement") with Dawson James pursuant to which are allowed to issue and sell, from time to time, shares of our Common Stock by any method permitted by law as an "at the market offering" as defined in Rule 415(a)(4) of the Securities Act of 1933, including, without limitation, sales made directly on or through the NYSE American. In February 2025, we sold approximately 260,000 shares of Common Stock from our ATM program. The gross proceeds before commission and expenses from the February 2025 ATM sales were approximately $2.75 million.

Bridge Note

On March 13, 2025, we entered into and consummated a note securities purchase agreement (the "Purchase Agreement") with a single investor (the "Purchaser") pursuant to which we sold, in a private placement (the "Bridge Financing"), to the Purchaser a promissory note with an aggregate principal amount of $3,000,000 (the "Bridge Note") and 1,000,000 shares of Series G Mirroring Preferred Stock (the "Series G Preferred Stock"). The aggregate gross proceeds to the Company are expected to be $2,500,000 million, before deducting placement agent fees and expenses. We intend to use the net proceeds from the Bridge Financing for working capital and other general corporate purposes. Dawson James Securities, Inc. served as the placement agent in the Bridge Financing pursuant to the terms of a placement agent agreement dated February 26, 2024 and received 6% of the gross proceeds of the private placement and reimbursement of the legal fees of its counsel. The Bridge Note and Series G Preferred Stock sold in the Offering were issued in a Bridge Financing under Section 4(a)(2) of the Securities Act of 1933, as amended (the "Act"), and Regulation D promulgated thereunder and, have not been registered under the Act, or applicable state securities laws. Pursuant to the terms of the Series G Certificate of Designation, upon effectiveness of an amendment

to the Amended and Restated Articles of Incorporation of the Company to effect the Reverse Stock Split, each share of Series G Preferred Stock was automatically transferred to the Company and cancelled for no consideration with no action on behalf of the holders of Series E Preferred Stock. The Company effectuated the Reverse Stock Split on June 3, 2025, and accordingly, all of the shares of Series G Preferred Stock resumed the status of authorized but unissued preferred stock and are no longer designated as Series G Preferred Stock.

The Bridge Note was issued with an original issue discount of 20%. No interest accrues on the Bridge Note unless and until an Event of Default (as defined in the Bridge Note) has occurred, upon which interest shall accrue at a rate of twenty percent (20.0%) per annum and shall be computed on the basis of a three hundred sixty (360)-day year and twelve (12) thirty (30)-day months and shall be payable on the maturity date. The Bridge Note matures upon the earlier of 120 days from the issuance date or the closing of any subsequent offering by the Company with net proceeds equal to or in excess of all amounts due under the Bridge Note. The Bridge Note contains certain Events of Default, including (i) the Company's failure to pay any amount of principal, interest, redemption price or other amounts due under the Notes or any other transaction document, (ii) any default under, redemption of, or acceleration prior to maturity of any indebtedness of the Company, as such term is defined in the transaction documents, (iii) bankruptcy of the Company or its subsidiaries, (iv) a final judgement or judgements for the payment of money in excess of $250,000, which is not discharged or stayed pending appeal within 60 days, and (v) any breach or failure to comply with any provision of the Note or any other transaction document. Upon the occurrence of any Event of Default and at any time thereafter, the Purchaser shall have the right to exercise all of the remedies under the Note.

Corporate and Other Information

We were incorporated in November 1996 and commenced operations in 1999. We consummated our initial public offering in June 2003. Our executive office is located at, 1990 Main Street, Suite 750, Sarasota, Florida 34236. Our telephone number is (813) 286-7900 and our website is http://www.oragenics.com. We make available free of charge on our website our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to those reports as soon as reasonably practicable after we electronically file or furnish such materials to the Securities and Exchange Commission (the "SEC"). The reports are also available at www.sec.gov.

Implications of Being a Smaller Reporting Company

We are a "smaller reporting company" as defined in Rule 10(f)(1) of Regulation S-K. We will remain a smaller reporting company until the last day of the fiscal year in which (1) the market value of our shares of Common Stock held by non-affiliates exceeds $250 million or (2) our annual revenues exceeded $100 million during such completed fiscal year and the market value of our shares of Common Stock held by non-affiliates exceeds $700 million, each as determined on an annual basis. A smaller reporting company may take advantage of relief from some of the reporting requirements and other burdens that are otherwise applicable generally to public companies. These provisions include:

- being permitted to provide only two years of audited financial statements, in addition to any required unaudited interim financial statements, with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- not being required to comply with the auditor attestation requirements in the assessment of our internal control over financial reporting; and
- reduced disclosure obligations regarding executive compensation in our periodic reports, proxy statements and registration statements.

We have taken advantage of the reduced reporting requirements in this prospectus and in the documents incorporated by reference into this prospectus. Accordingly, the information contained herein may be different from the information you receive from other public companies that are not small reporting companies.

SUMMARY OF RISK FACTORS

Our business is subject to a number of risks of which you should be aware of before making an investment decision. These risks are discussed more fully in the "*Risk Factors*" section of this prospectus immediately following this prospectus summary. Some of these risks include the following:

- We have incurred significant losses since our inception, have limited financial resources, do not generate any revenues and will need to raise additional capital in the future.
- We may not be able to secure additional funding.
- Our auditor has expressed substantial doubt about our ability to continue as a going concern.
- We may not be able to satisfy the continued listing standards of the NYSE American and may be delisted from the NYSE American.
- We may not receive approval to commence our clinical trials in New Zealand.
- We have limited neurology-specific research, development, manufacturing, testing, regulatory, commercialization, sales, distribution, and marketing experience, and we may need to invest significant financial and management resources to establish these capabilities.
- None of our product candidates have been approved for sale and if we are unable to successfully develop our product candidates, we may not be able to continue as a going concern.
- Our product candidates, if approved, will face significant competition; many of our competitors have significantly greater resources and experience.
- Our ONP-002 concussion candidate may face competition from biosimilars approved through an abbreviated regulatory pathway.
- The market opportunities for our neurology product candidates may be smaller than we believe them to be and we cannot assure you that the market and consumers will accept our products or product candidates.
- If our manufacturers and suppliers fail to meet our requirements and the requirements of regulatory authorities, our research and development may be materially adversely affected.
- We rely on the significant experience and specialized expertise of our senior management and scientific team and the loss of any of our key personnel or our inability to successfully hire their successors could harm our business.
- If any of our product candidates are shown to be ineffective or harmful in humans, we will be unable to generate revenues from these product candidates.

- We might not be successful at acquiring, investing in or integrating businesses, entering into joint ventures or divesting businesses.
- Our concussion and neurology related research and development efforts are to a large extent dependent upon our intellectual property and biologicals materials licenses.
- We may not be able to protect our intellectual property and if we are unable to protect our trademarks or other intellectual property from infringement, our business prospects may be harmed.
- We may be subject to claims challenging the inventorship of our patents and other intellectual property rights.
- If we are sued for infringing intellectual property rights of third parties, it will be costly and time-consuming and an unfavorable outcome in that litigation could have a material adverse effect on our business.
- Our success will depend on our ability to partner or sub-license our product candidates.
- Security breaches and other disruptions to our information technology systems or those of the vendors on whom we rely on could compromise our information and expose us to liability, reputational damage, or other costs.
- Our product candidates are subject to substantial government regulation and will be subject to ongoing and continued regulatory review and we may also be subject to healthcare laws, regulation and enforcement.
- We may be unable to obtain regulatory approval for our product candidates under applicable regulatory requirements.
- Delays or difficulties in the enrollment of patients in clinical trials may result in additional costs and delays.
- Our product candidates may cause serious or undesirable side effects.
- Our employees, independent contractors, principal investigators, consultants, vendors and CROs may engage in misconduct or other improper activities, including noncompliance with regulatory standards and requirements.
- Even if our current product candidates or any future product candidates obtain regulatory approval, they may fail to achieve the broad degree of health care payers, physician and patient adoption and use necessary for commercial success.
- The issuance of additional equity securities by us in the future will result in dilution and the conversion of our outstanding preferred stock will result in significant dilution.
- Our Series F Convertible preferred stock, if not converted into Common Stock, has a distribution and liquidation preference senior to our Common Stock in liquidation which could negatively affect the value of our Common Stock and impair our ability to raise additional capital.
- Certain provisions of our articles of incorporation, bylaws, executive employment agreements and stock option plan may prevent a change of control of our company that a shareholder may consider favorable.
- The price and volume of our Common Stock has been volatile and fluctuates substantially.
- The requirements of being a public company may strain our resources, divert management's attention and affect our ability to attract and retain qualified members for our Board of Directors.
- If we fail to maintain an effective system of internal controls, we may not be able to accurately report our financial results or prevent fraud.

THE OFFERING

Securities Offered by us:	Up to 800,000 shares of our Series H Convertible Preferred Stock (the "Preferred Stock") and Warrants to purchase up to 800,000 shares of our Series H Convertible Preferred Stock (the "Warrants") (and up to 8,547,911 the shares of Common Stock issuable from time to time upon conversion of the Preferred Stock at an assumed Conversion Price of $3.60 and payment of dividends accrued on the Preferred Stock in shares of Common Stock upon conversion of the Preferred Stock). Each share of Preferred Stock and accompanying Warrant is being offered at an offering price of $25.00 (the "Offering Price"). The Offering Price, as well as the exercise price and other terms of the Warrants, was determined by our the Company on an arbitrary basis and may not be indicative of the price at which Preferred Stock or Warrants would trade if they were listed on an exchange or were actively traded by brokers and may not bear any relationship to the assets, book value, historical earnings or net worth of the Company. See, "Risk Factors" for more information. The shares of Preferred Stock and Warrants will be issued separately but can only be purchased together in this offering. Each warrant will be immediately exercisable and will expire on the five-year anniversary of the date of issuance. This prospectus also relates to the offering of up to 800,000 shares of Preferred Stock issuable upon exercise of the Warrants (and up to an additional 8,547,911 shares of Common Stock issuable from time to time upon conversion of the Preferred Stock purchased upon exercise of the Warrants at an assumed Conversion Price of $3.60 and payment of dividends accrued on such Preferred Stock in shares of Common Stock upon conversion of the Preferred Stock, assuming the Warrants are immediately exercised). Altogether we are registering 17,095,822 shares of Common Stock, which represents our reasonable good-faith estimate of how many shares of Common Stock may be issuable from time to time upon conversion of the Preferred Stock (including the conversion of the Preferred Stock underlying the Warrants) and payment of dividends accrued on the Preferred Stock in shares of Common Stock upon conversion of the Preferred Stock (assuming the immediately conversion of all of the Warrants).
Common stock outstanding immediately before this offering:	822,927 shares

Common stock outstanding immediately after this offering:	9,370,838 shares (assuming conversion of 800,000 shares of Preferred Stock and payment of all dividends accrued on the Preferred Stock in shares of Common Stock upon conversion of the Preferred Stock at an assumed Conversion Price of $3.60 per share and no exercise of any of the Warrants offered hereby, and excluding any shares issuable upon exercise of the Warrants).
Conversion:	The Stated Value of each share of our Preferred Stock is $25.00. Our Preferred Stock, based on its Stated Value, is convertible into shares of our Common Stock at the Conversion Price, subject to adjustment as provided in the Certificate of Designation, at any time at the option of the holder prior to [**], 2025 (the fifth anniversary of the closing of the offering), at which time all shares of outstanding Preferred Stock shall automatically and without any further action by the holder be converted into shares of our Common Stock at the then effective Conversion Price, provided that the holder will be prohibited from converting Preferred Stock into shares of our Common Stock if, as a result of such conversion, the holder, together with its affiliates, would own more than 4.99% of the total number of shares of our Common Stock then issued and outstanding. However, any holder may increase or decrease such percentage to any other percentage not in excess of 9.99%, provided that any increase in such percentage shall not be effective until 61 days after such notice to us. The Conversion Price of the Preferred Stock (the "Conversion Price"), subject to adjustment pursuant to the Preferred Stock Certificate of Designation, as discussed further below, is expected to be set by us, with input from our Placement Agent, at the time of pricing the offering and is expected to be based upon the closing price of our Common Stock immediately prior to such pricing but may be at a discount to the then current market price of our Common Stock. The number of shares of Common Stock into which each share of Preferred Stock is convertible into is determined by dividing the Offering Price by the Conversion Price. Thus, if the Conversion Price is $3.60, each share of Preferred Stock, exclusive of dividends, is convertible into approximately 6.94 shares of Common Stock. As to any fraction of a share which a holder would otherwise be entitled to receive upon such conversion, at our election, we may either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round to the nearest whole number. If the Conversion Price is set lower, or it is adjusted pursuant to the anti-dilution provision discussed below, the number of shares of Common Stock to be issued upon conversion will increase. For example, if the Conversion Price is lowered to $2.50, each share of Preferred Stock that has not previously been converted, exclusive of dividends, we be convertible into approximately 10 shares of Common Stock. The Certificate of Designation for our Preferred Stock contains anti-dilution provisions, which provisions require the lowering of the Conversion Price on any unconverted Preferred Stock to the purchase price of future offerings by us (subject to certain exclusions). If in the future we issue securities for less than the Conversion Price of our Preferred Stock, we will be required to reduce the relevant Conversion Price of any unconverted Preferred Stock, which will result in a greater number of shares of Common Stock being issuable upon conversion, which in turn will have a greater dilutive effect on our shareholders. In addition, as there is no floor price on the Conversion Price, we cannot determine the total number of shares issuable upon conversion. As such, it is possible that we will not have sufficient available shares to satisfy the conversion of the Preferred Stock if we enter into a future transaction that results in the reduction of the Conversion Price. If we do not have sufficient available shares for any Preferred Stock conversions, we will be required to increase our authorized shares, which may not be possible and will be time consuming and expensive. The potential for such Conversion Price adjustments may depress the price of our Common Stock regardless of our business performance, and, as a result, we may find it more difficult to raise additional equity capital while our Preferred Stock is outstanding. See, "Risk Factors" for additional information.
Liquidation Preference:	In the event of our liquidation, dissolution, or winding up, holders of our Preferred Stock will be entitled to receive the amount of cash, securities or other property to which such holder would be entitled to receive with respect to such shares of Preferred Stock if such shares had been converted to Common Stock immediately prior to such event (without giving effect for such purposes to any beneficial ownership limitation), subject to the preferential rights of holders of any class or series of our capital stock specifically ranking by its terms senior to the Preferred Stock as to distributions of assets upon such event, whether voluntarily or involuntarily.
Dividends:	The holders of Preferred Stock will be entitled to receive cumulative dividends, payable in shares of Common Stock, at the rate per share of 9% per annum of the Stated Value per share from the date of issuance of such Preferred Stock until [**], 2030 (the fifth anniversary of the date of closing of this offering). The dividends become payable in shares of Common Stock, (i) upon any conversion of the Preferred Stock, (ii) on each such other date as our board of directors may determine, subject to written consent of the holders of Preferred Stock holding a majority of the then issued and outstanding Preferred Stock, (iii) upon our liquidation, dissolution or winding up, and (iv) upon occurrence of a fundamental transaction, including any merger or consolidation, sale of all or substantially all of our assets, exchange or conversion of all of our Common Stock by tender offer, exchange offer or reclassification; provided, however, that if Preferred Stock is converted into shares of Common Stock at any time prior to [**], 2025 (the fifth anniversary of the closing of the offering)of the Preferred Stock, the holder will receive a make-whole payment in an amount equal to all of the dividends that, but for the early conversion, would have otherwise accrued on the applicable shares of Preferred Stock being converted for the period commencing on the conversion date and ending on [**], 2030 (the fifth anniversary of the date of closing of this offering), less the amount of all prior dividends paid on such converted Preferred Stock before the date of conversion. Make-whole payments are payable in shares of Common Stock. With respect to any dividends and make-whole payments paid in shares of Common Stock, the number of shares of Common Stock to be issued to a holder of Preferred Stock will be an amount equal to the quotient of (i) the amount of the dividend payable to such holder divided by (ii) the Conversion Price then in effect.

Voting Rights:	The holders of the Preferred Stock have no voting rights, except as required by law. Any amendment to our articles of incorporation, bylaws or Certificate of Designation that adversely affects the powers, preferences and rights of the Preferred Stock requires the approval of the holders of a majority of the shares of Preferred Stock then outstanding.

Use of Proceeds:	We estimate that the net proceeds from this offering, after deducting placement agent fees and estimated offering expenses payable by us, will be approximately will be approximately $18.25 million, assuming no exercise of the Warrants. We will receive additional proceeds from the Warrants to the extent such Warrants are exercised. We intend to use the net proceeds from this offering, along with our existing cash and cash equivalents, to fund our ongoing ONP-2 concussion clinical trials, along with other related research and development activities, to repay the Bridge Note, as well as for working capital and other general corporate purposes. See "*Use of Proceeds*" in this prospectus for a more complete description of the intended use of proceeds from this offering.
Trading market and symbol:	Our Common Stock is listed on NYSE American, or the "NYSE American," under the symbol "OGEN." Neither the Preferred Stock nor the Warrants will be listed on the NYSE American or any other exchange or trading market. There is no established trading market for the Preferred Stock or Warrants. We do not expect any such trading market to develop for the Preferred Stock or the Warrants.
Risk Factors:	Investing in our Common Stock involves a high degree of risk. See "Risk Factors" beginning on page 13 and the other information in this prospectus for a discussion of the factors you should consider carefully before you decide to invest in our common
Lock-Up:	We, and each of our officers and directors have agreed, subject to certain exceptions, not to sell, offer, agree to sell, contract to sell, hypothecate, pledge, grant any option to purchase, make any short sale of, or otherwise dispose of or hedge, directly or indirectly, any shares of our capital stock or any securities convertible into or exercisable or exchangeable for shares of capital stock, for a period of one hundred 180 (180) days after the closing of the Offering, without the prior written consent of Dawson James Securities, Inc. See "Plan of Distribution" for additional information.

The number of shares of our Common Stock to be outstanding after this offering is based on 822,927 shares of our Common Stock outstanding as of March 31, 2025, and excludes the following:

- 25,683 shares of our Common Stock issuable upon the exercise of outstanding options under our equity incentive plans at a weighted average exercise price of $146.04 per share;
- 24,569 shares of Common Stock reserved for issuance under outstanding warrants with a weighted average exercise price of $983.10 post-split per share;
- 3,140,984 additional shares of Common Stock reserved for future issuance under our 2021 equity incentive plan; and
- 249,624 additional shares of Common Stock reserved for issuance under conversion of 7,488,692 outstanding shares of Series F Non-Voting, Convertible Preferred Stock.

Unless we indicate otherwise or unless the context otherwise requires, all information in this prospectus assumes the following:

- no exercise of outstanding options or warrants; and
- assumes no exercise of the Warrants issued in this offering.

RISK FACTORS

An investment in our securities involves a high degree of risk. Before deciding whether to purchase our securities, including the shares of Common Stock offered by this prospectus, you should carefully consider the risks and uncertainties described under "Risk Factors" in our Annual Report on Form 10-K for the fiscal year ended December 31, 2024, any subsequent Quarterly Report on Form 10-Q and our other filings with the SEC, all of which are incorporated by reference herein. If any of these risks actually occur, our business, financial condition and results of operations could be materially and adversely affected and we may not be able to achieve our goals, the value of our securities could decline and you could lose some or all of your investment. Additional risks not presently known to us or that we currently believe are immaterial may also significantly impair our business operations. If any of these risks occur, our business, results of operations or financial condition and prospects could be harmed. In that event, the market price of our Common Stock and the value of the warrants could decline, and you could lose all or part of your investment.

Risks Relating to this Offering

Because there is no minimum required for the offering to close, investors in this offering will not receive a refund in the event that we do not sell an amount of securities sufficient to pursue the business goals outlined in this prospectus.

We have not specified a minimum offering amount nor have or will we establish an escrow account in connection with this offering. Because there is no escrow account and no minimum offering amount, investors could be in a position where they have invested in our company, but we are unable to fulfill our objectives due to a lack of interest in this offering. Further, because there is no escrow account in operation and no minimum investment amount, any proceeds from the sale of securities offered by us will be available for our immediate use, despite uncertainty about whether we would be able to use such funds to effectively implement our business plan. Investor funds will not be returned under any circumstances whether during or after the offering.

Because our offering will be conducted on a best efforts basis, there can be no assurance that we can raise the money we need.

The placement agent is offering the securities on a "best efforts" basis with no minimum, and the placement agent is under no obligation to purchase any securities for their own account. The placement agent is not required to sell any specific number or dollar amount of securities in this offering but will use its best efforts to sell the securities offered in this prospectus. As a "best efforts" offering, there can be no assurance that the offering contemplated hereby will ultimately be consummated. If the offering is not consummated or we receive less than the maximum proceeds, our business plans and prospects for the current fiscal year could be adversely affected.

The amount we raise in this offering may not be sufficient to pursue our business goals or to repay our outstanding Bridge Note.

Our outstanding Bridge Note has an aggregate principal amount of $3,000,000 and was issued with an original issue discount of 20%. No interest accrues on the Bridge Note unless and until an Event of Default (as defined in the Bridge Note) has occurred, upon which interest shall accrue at a rate of twenty percent (20.0%) per annum and shall be computed on the basis of a three hundred sixty (360)-day year and twelve (12) thirty (30)-day months and shall be payable on the maturity date. The Bridge Note matures on the earlier of July 14, 2025 or the closing of any subsequent offering by the Company with net proceeds equal to or in excess of all amounts due under the Bridge Note. The Bridge Note contains certain Events of Default, including (i) the Company's failure to pay any amount of principal, interest, redemption price or other amounts due under the Notes or any other transaction document, (ii) any default under, redemption of, or acceleration prior to maturity of any indebtedness of the Company, as such term is defined in the transaction documents, (iii) bankruptcy of the Company or its subsidiaries, (iv) a final judgement or judgements for the payment of money in excess of $250,000, which is not discharged or stayed pending appeal within 60 days, and (v) any breach or failure to comply with any provision of the Note or any other transaction document.

If the net amount raised in this offering is less than the amount required to repay the Bridge Note in full and we are unable to use other funds or obtain other financing to pay the Bridge Note in full, will be in in default of the Bridge Note. Upon the occurrence of any Event of Default and at any time thereafter, the holder of the Bridge Note has the right to exercise all of the remedies under the Bridge Note. We likely will not be able to continue as a going concern if we do not raise sufficient funds in this offering to repay the Bridge Note. Even if we are able to pay our Bridge Note using our other cash and cash equivalents on hand as of the maturity date of the Bridge Note, the use of such cash for purposes of repaying the Bridge Note will result in our inability to pursue our business goals, in which event we likely will be unable to continue as a going concern, unless we obtain other financing, of which there can be no assurances.

The Offering Price, as well as the exercise price and other terms of the Warrants, in this offering was determined by our the Company on an arbitrary basis and may not be indicative of the price at which the shares would trade if they were listed on an exchange or were actively traded by brokers.

The Offering Price per share of Preferred Stock and the accompanying Warrant, as well as the exercise price and other terms of the Warrants, were determined by our the Company on an arbitrary basis and may not be indicative of the price at which Preferred Stock or Warrants would trade if they were listed on an exchange or were actively traded by brokers and may not bear any relationship to the assets, book value, historical earnings or net worth of the Company. Furthermore, while the Conversion Price of the Preferred Stock is expected to be set by us, with input from our Placement Agent, at the time of pricing the offering and is expected to be based upon the closing price of our Common Stock immediately prior to such pricing, it may be at a discount to the then current market price of our Common Stock. There is no established public trading market for the Preferred Stock or the Warrants, and we do not expect a market to develop, but even if a public trading market develops for the Preferred Stock or Warrants, there can be no assurance that the value of the Preferred Shares and Warrants will attain market values commensurate with the Offering Price.

If you purchase the Preferred Stock sold in this offering and assuming its conversion into shares of our Common Stock, you will experience immediate and substantial dilution in your investment.

Since the Conversion Price per share of our Preferred Stock being offered in this offering exceeds the net tangible book value per share of our Common Stock outstanding prior to this offering, you will suffer immediate and substantial dilution with respect to the net tangible book value of the Common Stock underlying your Preferred Stock you purchase in this offering, assuming conversion of the Preferred Stock into shares of our Common Stock. After giving effect to (i) the sale of 800,000 shares of Preferred Stock issued by us at an assumed combined public offering price of $25 per share of Preferred Stock and Warrant and after deducting commissions and estimated offering expenses payable by us, our pro forma as-adjusted net tangible book value as of March 31, 2025 would have been approximately $18,387,688 million, or $1.98 per share (assuming conversion of 800,000 shares of Preferred Stock into 8,055,556 shares of Common Stock, including the payment of all dividends accrued on the Preferred Stock in shares of Common Stock upon conversion of the Preferred Stock at an assumed Conversion Price of $3.60 per share and the Stated Value per share of $25 and no exercise of any of the Warrants offered hereby) and (ii) the repayment of the Bridge Note in full. This represents an immediate increase in pro forma as adjusted net tangible book value of $1.90 per share to our existing stockholders and an immediate dilution of $1.56 per share to new investors participating in this offering, If any outstanding options or warrants are exercised, you could experience further dilution. For the purpose of this calculation, the entire purchase price for the shares of Preferred Stock and accompanying Warrants is being allocated to the shares of Preferred Stock, and shares issuable upon exercise of the Warrants have not been included. Furthermore, the exercise of outstanding Warrants and options and conversion of out outstanding Series F Preferred Stock will result in further dilution of your investment. See the section entitled “Dilution” on page 22 below for a more detailed illustration of the dilution you will incur if you participate in this offering.

The Certificate of Designation for our Preferred Stock contains anti-dilution provisions that may result in the reduction of the Conversion Price for the Preferred Stock in the future. This feature may result in an indeterminate number of shares of Common Stock being issued upon conversion.

The Certificate of Designation for our Preferred Stock contains anti-dilution provisions, which provisions require the lowering of the Conversion Price on any unconverted Preferred Stock to the purchase price of future offerings by us (subject to certain exclusions). If in the future we issue securities for less than the Conversion Price of our Preferred Stock, we will be required to reduce the relevant Conversion Price of any unconverted Preferred Stock, which will result in a greater number of shares of Common Stock being issuable upon conversion, which in turn will have a greater dilutive effect on our shareholders. In addition, as there is no floor price on the Conversion Price, we cannot determine the total number of shares issuable upon conversion. As such, it is possible that we will not have sufficient available shares to satisfy the conversion of the Preferred Stock if we enter into a future transaction that results in the reduction of the Conversion Price. If we do not have sufficient available shares for any Preferred Stock conversions, we will be required to increase our authorized shares, which may not be possible and will be time consuming and expensive. The potential for such Conversion Price adjustments may depress the price of our Common Stock regardless of our business performance, and, as a result, we may find it more difficult to raise additional equity capital while our Preferred Stock is outstanding.

We will need to raise additional capital in the future to complete the development and commercialization of our product candidates and operate our business.

Developing and commercializing biopharmaceutical products, including Phase 2 work for our ONP-002 product candidate and conducting nonclinical studies and clinical trials and establishing manufacturing capabilities, and the progress of our efforts to develop and commercialize our product candidates, is expensive, and can cause us to use our limited, available capital resources faster than we currently anticipate. Our current cash, cash equivalents and short-term investments are not sufficient to fully implement our business strategy and sustain our operations. Our auditor has expressed substantial doubt about our ability to continue as a going concern and absent additional financing we may be unable to remain a going concern. Furthermore, the amount of net proceeds to be raised in this offering will be insufficient to allow us to fully implement our business strategy and sustain our operations. See, “Use of Proceeds”. Accordingly, we anticipate will need to raise additional capital in the future to complete the development and commercialization of our product candidates and operate our business. Until we can generate a sufficient amount of product revenue, if ever, we expect to finance future cash needs through public or private equity offerings, debt financings or corporate or government collaboration and licensing arrangements. However, this offering and the anti-dilution protection contained in the Preferred Stock’s Certificate of Designation, as well as our auditor’s substantial doubt about our ability to continue as a going concern, may depress the price of our Common Stock regardless of our business performance and may make it more difficult for us to raise or obtain additional financing. Furthermore, even if we are able to obtain additional financing, it may not be on favorable terms and, if such financing is undertaken at a price below the Conversion Price of our preferred stock, it will trigger the anti-dilution protection in our Preferred Stock’s Certificate of Designation, as discussed above, which in turn may result in a greater number of shares of Common Stock being issued upon conversion of our Preferred Stock, which in turn will have a greater dilutive effect on our shareholders and may make it more difficult to raise additional capital. If we do not succeed in raising additional funds on acceptable terms, we may be unable to complete existing nonclinical and planned clinical trials or obtain approval of our product candidates from the FDA and other regulatory authorities, and, absent sufficient additional financing, we may be unable to remain a going concern.

The market price of our Common Stock has been, and may continue to be volatile and fluctuate significantly, which could result in substantial losses for investors.

The trading price for our Common Stock has been, and we expect it to continue to be, volatile. The price at which our Common Stock trades depends upon a number of factors, including our historical and anticipated operating results, our financial situation, announcements by us or our competitors, our ability or inability to raise the additional capital we may need and the terms on which we raise it, and general market and economic conditions. Some of these factors are beyond our control. Broad market fluctuations may lower the market price of our Common Stock and affect the volume of trading in our stock, regardless of our financial condition, results of operations, business or prospects. The closing price of our Common Stock as reported on the NYSE American had a high price of $205.20 and a low price of $8.10 in the 52-week period ended December 31, 2024. Furthermore, our stock traded within a range of a high volume of 15,238,600 and a low volume of 4,400 per share for the period of January 1, 2024 through December 31, 2024. As a result of this volatility, our shareholders could incur substantial losses. Among the factors that may cause the market price of our Common

Stock to fluctuate are the risks described in this "Risk Factors" section and other factors, including:

- results of preclinical and clinical studies of our product candidates or those of our competitors;
- regulatory or legal developments in the U.S. and other countries, especially changes in laws and regulations applicable to our product candidates;
- actions taken by regulatory agencies with respect to our product candidates, clinical studies, manufacturing process or sales and marketing terms;
- introductions and announcements of new products by us or our competitors, and the timing of these introductions or announcements;
- announcements by us or our competitors of significant acquisitions or other strategic transactions or capital commitments;
- fluctuations in our quarterly operating results or the operating results of our competitors;
- variance in our financial performance from the expectations of investors;
- changes in the estimation of the future size and growth rate of our markets;
- changes in accounting principles or changes in interpretations of existing principles, which could affect our financial results;
- failure of our products to achieve or maintain market acceptance or commercial success;
- conditions and trends in the markets we serve;

- changes in general economic, industry and market conditions;
- changes in legislation or regulatory policies, practices or actions;
- the commencement or outcome of litigation involving our company, our general industry or both;
- recruitment or departure of key personnel;
- changes in our capital structure, such as future issuances of securities, redemption or conversion of preferred stock or the incurrence of additional debt;
- actual or expected sales of our Common Stock by our shareholders;
- acquisitions and financings; and
- the trading volume of our Common Stock.

In addition, the stock markets, in general, NYSE American and the market for biotech companies in particular, may experience a loss of investor confidence. Such loss of investor confidence may result in extreme price and volume fluctuations in our Common Stock that are unrelated or disproportionate to the operating performance of our business, financial condition or results of operations. These broad market and industry factors may materially harm the market price of our Common Stock and expose us to securities class action litigation. Such litigation, even if unsuccessful, could be costly to defend and divert management's attention and resources, which could further materially harm our financial condition and results of operations.

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

The 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 assure you that we will continue to be listed on the NYSE American.

Our Common Stock commenced trading on the NYSE American (formerly the NYSE MKT) on April 10, 2013, and we are subject to certain NYSE American continued listing requirements and standards. On April 18, 2024, we received notification (the "Notice") from the NYSE American that we were no longer in compliance with NYSE American's continued listing standards. Specifically, the letter stated that the Company was not in compliance with the continued listing standards set forth in Sections 1003(a)(ii) and 1003(a)(iii) of the NYSE American Company Guide (the "Company Guide"). Section 1003(a)(ii) requires a listed company to have shareholders' equity of $4 million or more if the listed company has reported losses from continuing operations and/or net losses in three of its four most recent fiscal years. Section 1003(a)(iii) requires a listed company to have shareholders' equity of $6 million or more if the listed company has reported losses from continuing operations and/or net losses in our five most recent fiscal years. Subsequently, the NYSE American notified the Company that it also is not in compliance with subsection (i) Section 1003(a), which requires stockholders' equity of no less than $2,000,000 if the Company has sustained losses from continuing operations and/or net losses in two of its three most recent fiscal years. We reported shareholders' equity (deficit) of ($211,885) million as of December 31, 2024, and losses from continuing operations and/or net losses in its five most recent fiscal years ended December 31, 2024. On May 17, 2024, we submitted a plan of compliance (the "Plan") to the NYSE American. On June 18, 2024, the NYSE American accepted our Plan. The Company will be able to continue its listing during the Plan period and will be subject to continued periodic review by the NYSE American staff. If we are not in compliance with the continued listing standards by October 18, 2025 or if the Company does not make progress consistent with the Plan during the Plan period, the Company will be subject to delisting procedures as set forth in the NYSE American Company Guide. The Company is committed to undertaking a transaction or transactions in the future to achieve compliance with the NYSE American's requirements. However, there can be no assurance that the Company will be able to achieve compliance with the NYSE American's continued listing standards within the required timeframe.

Furthermore, the Company is subject to the NYSE American's other continued listing requirement and is subject to delisting if, among other things, its Common Stock is selling for a substantial period of time at a low price per share. In part because the Company was trading below $0.50 per share, on June 3, 2025, we effectuated a one-for-thirty reverse stock split of our issued and outstanding Common Stock (the "Reverse Stock Split"). Reverse stock splits typically increase the share price of a company's stock, at least initially, by consolidating the company's outstanding shares at a pre-determined ratio, with stockholders maintaining their respective ownership percentages in the company, subject to elimination of any resulting fractional share entitlements. While the Company's stock price has traded above $3.50 since the date of the Reverse Stock Split, there can be no assurances that the Company's stock price will not fall to a level that is below the NYSE American's requirements. This offering and the anti-dilution protection contained in the Preferred Stock's Certificate of Designation may depress the price of our Common Stock regardless of our business performance, and if our closing price sells for a substantial period of time at a low price per share, the Company may be subject to delisting.

In an effort to curtail the excessive use of reverse stock splits to regain compliance with the minimum stock price requirements, particularly by distressed companies that had often resorted to repeatedly effecting a number of successive reverse stock splits over a short period of time to avoid being delisted, both the NYSE and Nasdaq recently promulgated updated rules that limited the ability of companies to utilize such practices to remedy a minimum share price deficiency. The rules now provide that a listed

company is no longer eligible for a six month cure period to regain compliance with the minimum share price requirement, and the NYSE will immediately begin suspension and delisting procedures if: (1) a company has effectuated a reverse stock split within the past year, or (2) a company has effectuated one or more reverse stock splits over the past two years with a cumulative ratio of 200 shares or more to one. Further, listed companies may not effectuate a reverse stock split to regain compliance with the minimum share price requirement if doing so would result in non-compliance with any of the other NYSE American continued listing requirements. Accordingly, we will not be able to undertake another reverse stock split to regain compliance with the NYSE American's additional listing requirements until after June 3, 2026.

If the Common Stock ultimately were to be delisted for any reason, it could negatively impact the Company by (i) reducing the liquidity and market price of the Company's Common Stock; (ii) reducing the number of investors willing to hold or acquire the Common Stock, which could negatively impact the Company's ability to raise equity financing; (iii) limiting the Company's ability to use a registration statement to offer and sell freely tradable securities, thereby preventing the Company from accessing the public capital markets; and (iv) impairing the Company's ability to provide equity incentives to its employees.

Future sales 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, or the perception by the market that those sales could occur, could cause the market price of our Common Stock to decline or could make it more difficult for us to raise funds through the sale of equity in the future. Future issuances of Common Stock could further depress the market for our Common Stock. We expect to continue to incur drug development and selling, general and administrative costs, and to satisfy our funding requirements, we will need to sell additional equity securities, which may include sales of significant amounts of Common Stock to investors, and which Common Stock may be subject to registration rights and warrants with anti-dilutive protective provisions. The sale or the proposed sale of substantial amounts of our Common Stock or other equity securities in the public markets or in private transactions may adversely affect the market price of our Common Stock and our stock price may decline substantially. Our shareholders may experience substantial dilution and a reduction in the price that they are able to obtain upon sale of their shares. Also, new equity securities issued may have greater rights, preferences or privileges than our existing Common Stock. In addition, we have a significant number of shares of restricted stock, stock options and warrants outstanding. To the extent that outstanding stock options or warrants have been or may be exercised or other shares issued, investors purchasing our Common Stock in this offering may experience further dilution.

If we make one or more significant acquisitions in which the consideration includes stock or other securities, our shareholders' holdings may be significantly diluted. In addition, shareholders' holdings may also be diluted if we enter into arrangements with third parties permitting us to issue shares of Common Stock in lieu of certain cash payments upon the achievement of milestones.

The issuance of shares of our Common Stock under our 2021 Equity Incentive Plan is covered by Form S-8 registration statements we filed with the Securities and Exchange Commission, or SEC, and upon exercise of the options, such shares may be resold into the market. We have also issued shares of Common Stock and warrants in connection with previous private placements. Such shares are available for resale as well as certain of the shares of Common Stock issuable upon exercise of the warrants. We have also issued shares of our Common Stock in the private placement and financing transaction, which are deemed to be "restricted securities," as that term is defined in Rule 144 promulgated under the Securities Act of 1933, as amended, or Securities Act, and such shares may be resold pursuant to the provisions of Rule 144. The resale of shares acquired from us in private transactions could cause our stock price to decline significantly. In addition, the conversion of outstanding shares preferred stock into Common Stock and the subsequent sale of shares of Common Stock could also cause our stock price to decline significantly.

In addition, from time to time, certain of our shareholders may be eligible to sell all or some of their restricted shares of Common Stock by means of ordinary brokerage transactions in the open market pursuant to Rule 144, subject to certain limitations. In general, pursuant to Rule 144, after satisfying a six-month holding period: (i) affiliated shareholders, or shareholders whose shares are aggregated, may, under certain circumstances, sell within any three-month period a number of securities which does not exceed the greater of 1% of the then-outstanding shares of Common Stock or the average weekly trading volume of the class during the four calendar weeks prior to such sale and (ii) non-affiliated shareholders may sell without such limitations, in each case provided we are current in our public reporting obligations. Rule 144 also permits the sale of securities by non-affiliates that have satisfied a one-year holding period without any limitation or restriction.

We are unable to estimate the number of shares that may be sold because this will depend on the market price for our Common Stock, the personal or business circumstances of sellers and other factors.

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

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

The issuance of additional equity securities by us in the future would result in dilution to our existing common shareholders.

Our Board of Directors has authority, without action or vote of our shareholders, to issue all or a part of our authorized but unissued shares, except where shareholder approval is required by law or the rules of any exchange on which our shares are listed. Any issuance of additional equity securities by us in the future could result in dilution to our existing common shareholders. Such issuances could be made at a price that reflects a discount or a premium to the then-current trading price of our Common Stock. In addition, our business strategy may include expansion through internal growth by acquiring complementary businesses, acquiring or licensing additional products or brands, or establishing strategic relationships with targeted customers and suppliers. In order to do so, or to finance the cost of our other activities, we may issue additional equity securities that could result in further dilution to our existing common shareholders. These issuances would dilute the percentage ownership interest of our existing common shareholders, which would have the effect of reducing their influence on matters on which our shareholders vote and might dilute the book value of our Common Stock. For example, our outstanding shares of Common Stock at March 10, 2025, were 822,927. Furthermore, if holders of our outstanding preferred stock convert their preferred shares into Common Stock, an additional 249,624 shares of Common Stock could be issued resulting in dilution to our existing common shareholders.

Our management team may invest or spend the proceeds of this offering in ways with which you may not agree or in ways which may not yield a significant return.

Our management will have broad discretion over the use of proceeds from this offering. We intend to use the net proceeds from this offering to fund a portion of our ONP-002 research and clinical trials, to repay the Bridge Note and for working capital and general corporate purposes. Our management will have considerable discretion in the application of the net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. The net proceeds may be used for corporate purposes that do not increase our operating results or enhance the value of our Common Stock.

The precise amount and timing of the application of these proceeds will depend upon a number of factors, such as the timing and progress of our research and development efforts, our funding requirements and the availability and costs of other funds. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Depending on the outcome of our efforts and other unforeseen events, our plans and priorities may change and we may apply the net proceeds of this offering in different manners than we currently anticipated.

The failure by our management to apply these funds effectively could harm our business, financial condition and results of operations. Pending their use, we may invest the net proceeds from this offering in short-term, interest-bearing instruments. These investments may not yield a favorable return to our shareholders.

We do not intend to pay cash dividends.

We have not declared or paid any cash dividends on our Common Stock, and we do not anticipate declaring or paying cash dividends for the foreseeable future. Any future determination as to the payment of cash dividends on our Common Stock will be at our Board of Directors' discretion and will depend on our financial condition, operating results, capital requirements and other factors that our Board of Directors considers to be relevant.

There is no public market for the Preferred Stock or Warrants being offered by us in this offering.

There is no established public trading market for the Preferred Stock or Warrants, and we do not expect a market to develop. In addition, we do not intend to apply to list the Warrants or Preferred Stock on any national securities exchange or other nationally recognized trading system. Without an active market, the liquidity of the Warrants and Preferred Stock will be limited. Purchasers of the Preferred Stock and Warrants may be unable to resell the Preferred Stock or Warrants or sell them only at an unfavorable price for an extended period of time, if at all.

The market price of our Common Stock may never exceed the Conversion Price of the Preferred Stock.

The Warrants being issued in connection with this offering become exercisable upon issuance and will expire five years from the date of issuance. The exercise price of the Warrants is $25 per share of Preferred Stock. Upon exercise, a holder will be required to pay us the exercise price per share in cash and in exchange will receive shares of our Preferred Stock with a stated value of $25. Such shares of Preferred Stock are convertible into shares of Common Stock at the Conversion Price. The Conversion Price of the Preferred Stock is expected to be set at the time of pricing this offering by our board of directors, with input from our Placement Agent, and is expected to be based upon the closing price of our Common Stock immediately prior to such pricing but may be at a discount to the then current market price of our Common Stock. The number of shares of Common Stock into which each share of Preferred Stock is convertible into is determined by dividing the Offering Price by the Conversion Price. Thus, if the Conversion Price is $4.00, each share of Preferred Stock, exclusive of dividends, is convertible into approximately 6.94 shares of Common Stock. If the market price of our Common Stock is below the Conversion Price, the holder of the Warrant may elect not to exercise the Warrant until the market price of our Common Stock increases. However, the market price of our Common Stock may never exceed the Conversion Price prior to the expiration of the Warrants. As a result, the holders of our Warrants may elect not to ever exercise their Warrants. We will not receive any additional proceeds in connection with unexercised Warrants, which likely will result in our needing to raise additional capital sooner than if some or all of the Warrants are exercised, of which there can be no assurances. Any Warrants not exercised by their date of expiration will expire worthless and we will be under no further obligation to the Warrant holder.

Certain provisions in our existing warrants could discourage an acquisition of us by a third party.

Certain provisions of our existing warrants could make it more difficult or expensive for a third party to acquire us. Our warrants prohibit us from engaging in certain transactions constituting "fundamental transactions" unless, among other things, the surviving entity assumes our obligations under the Warrants. Further, the warrants provide that, in the event of certain transactions constituting "fundamental transactions," with some exception, holders of such warrants will have the right, at their option, to require us to repurchase such warrants at a price described in such warrants. These and other provisions of the warrants offered by this prospectus could prevent or deter a third party from acquiring us even where the acquisition could be beneficial to you.

USE OF PROCEEDS

We estimate that the net proceeds of this offering based upon an assumed combined public offering price of $25.00 per share of Preferred Stock and accompanying Warrant, after deducting all placement agent fees and estimated offering expenses payable by us, will be approximately $18.25 million, assuming no exercise of the Warrants. We will receive additional proceeds from the Warrants to the extent such Warrants are exercised, based upon an assumed exercise price of $25 per share of Preferred Stock. It is possible that the Warrants may expire and may never be exercised for cash, in which event will not receive any further proceeds in connection with this offering. See, "Risk Factors".

We intend to use the net proceeds from this offering, along with our existing cash and cash equivalents, to fund our ongoing ONP-2 concussion clinical trials, along with other related research and development activities, to repay the $3 million Bridge Notes, as well as for working capital and other general corporate purposes.

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The net proceeds from this offering, together with our cash, will not be sufficient for us to fund our ONP-002 product candidate through regulatory approval, and we will need to raise additional capital to complete the development and commercialization of our ONP-002 product candidate. If we raise net proceeds of $18.25 million in this offering, we will first apply the net proceeds to repay the Bridge Note, including all interest thereon, and will use the balance of any net proceeds raised, along with our existing cash and cash equivalents, to fund our ongoing ONP-2 concussion clinical trials, along with other related research and development activities, as well as for working capital and other general corporate purpose. In such event, we anticipate being able to complete our Phase 2a trials and to commence our Phase 2b clinical trials on our ONP-002 product candidate, but we anticipate needing to raise additional capital or to obtain alternative financing to complete our Phase 2b trials. If, in addition to net proceeds of $18.25 million in this offering, all of the Warrants are exercised, of which there can be no assurances, we expect such aggregate proceeds will allow us to complete both our Phase 2a and Phase 2b clinical trials on our ONP-002 product candidate. However, there can be no assurances will be able to raise net proceeds of $18.25 million in this offering or that any of the Warrants will be exercised. See, "Risk Factors".

If we raise less than net proceeds of $18.25 million in this offering, and assuming no exercise of the Warrants, we will first apply the net proceeds to repay the Bridge Note, including all interest thereon. We will use the balance of any net proceeds raised, along with our existing cash and cash equivalents, to fund our ongoing ONP-2 concussion clinical trials, along with other related research and development activities, as well as for working capital and other general corporate purposes, but, in such event, we may not be able to complete even our Phase 2a trials, which will require us to raise additional capital sooner than expected, of which there can be no assurance. We anticipate that we will need to raise at least $10 million in this offering to repay the Bridge Note and complete our Phase 2a trials, of which there can be no assurances. See, "Risk Factors".

The Bridge Note has an aggregate principal amount of $3,000,000 and was issued with an original issue discount of 20%. No interest accrues on the Bridge Note unless and until an Event of Default (as defined in the Bridge Note) has occurred, upon which interest shall accrue at a rate of twenty percent (20.0%) per annum and shall be computed on the basis of a three hundred sixty (360)-day year and twelve (12) thirty (30)-day months and shall be payable on the maturity date. The Bridge Note matures on the earlier of July 14, 2025 or the closing of any subsequent offering by the Company with net proceeds equal to or in excess of all amounts due under the Bridge Note. The Bridge Note contains certain Events of Default, including (i) the Company's failure to pay any amount of principal, interest, redemption price or other amounts due under the Notes or any other transaction document, (ii) any default under, redemption of, or acceleration prior to maturity of any indebtedness of the Company, as such term is defined in the transaction documents, (iii) bankruptcy of the Company or its subsidiaries, (iv) a final judgement or judgements for the payment of money in excess of $250,000, which is not discharged or stayed pending appeal within 60 days, and (v) any breach or failure to comply with any provision of the Note or any other transaction document. If the net amount raised in this offering is less than the amount required to repay the Bridge Note in full and we are unable to use other funds or obtain other financing to pay the Bridge Note in full, we will be in in default of the Bridge Note. Upon the occurrence of any Event of Default and at any time thereafter, the holder of the Bridge Note has the right to exercise all of the remedies under the Bridge Note. We likely will not be able to continue as a going concern if we do not raise sufficient funds in this offering to repay the Bridge Note.

This is a best efforts offering. Because there is no minimum offering amount required as a condition to closing this offering, 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 pursue the business goals outlined in this prospectus. In addition, because there is no escrow account and no minimum offering amount in this offering, investors could be in a position where they have invested in our company, but we are unable to fulfill our objectives due to a lack of interest in this offering. Also, any proceeds from the sale of securities offered by us will be available for our immediate use, despite uncertainty about whether we would be able to use such funds to effectively implement our business plan.

We may satisfy our future cash needs through the sale of equity securities, debt financings, working capital lines of credit, corporate collaborations or license agreements, grant funding, interest income earned on invested cash balances or a combination of one or more of these sources, but there can be no assurances that such future sources will be available to us. This expected use of the net proceeds from this offering represents our intentions based upon our current plans and business conditions. As of the date of this prospectus, other than with regard to the repayment of the Bridge Note, we cannot predict with certainty all of the particular uses for the net proceeds to be received upon the closing of this offering or the amounts that we will actually spend. The amounts and timing of our actual expenditures and the extent of clinical development may vary significantly depending on numerous factors, including the progress of our development efforts, the clinical trials we may commence in the future, as well as any collaborations that we may enter with third parties for our product candidates and any unforeseen cash needs. As a result, our management will have significant discretion in the use of any net proceeds and Investors will be relying on the judgment of our management regarding the application of the proceeds. See, “Risk Factors.”

DIVIDEND POLICY

We have never paid cash dividends on our Common Stock. Moreover, we do not anticipate paying periodic cash dividends on our Common Stock for the foreseeable future. We intend to use all available cash and liquid assets in the operation and growth of our business. Any future determination about the payment of dividends will be made at the discretion of our board of directors and will depend upon our earnings, if any, capital requirements, operating and financial conditions and on such other factors as our board of directors deems relevant.

CAPITALIZATION

The following table sets forth our cash and capitalization as of March 31, 2025, as adjusted to give effect to the one-for-thirty Reverse Stock Split of our issued and outstanding Common Stock on June 3, 2025:

- on an actual basis;
- on an as adjusted basis to give effect to the sale of 800,000 shares of Preferred Stock in this offering at an assumed offering price of $25.00 per share, after deducting the placement agent fees and estimated offering expenses payable by us, and assuming no exercise of any Warrants.

The information below is illustrative only, and our capitalization following the completion of this offering will be adjusted based on the actual offering price and other terms of this offering determined at pricing. You should read the information in this table together with our financial statements and accompanying notes incorporated by reference to this prospectus and the “*Description of Capital Stock*” section of this prospectus.

	March 31, 2025	
	Actual	As adjusted
	(Unaudited)	
Assets		
Current assets:		
Cash and cash equivalents	$ 3,421,078	$ 19,021,078
Prepaid expenses and other current assets	448,033	448,033
Total current assets	3,869,111	19,469,111
Prepaid research and development expense		
Total assets	$ 3,869,111	$ 19,469,111
Liabilities and Shareholders’ Equity		
Current liabilities:		
Accounts payable and accrued expenses	$ 1,177,038	$ 1,177,038
Short-term notes payable	2,554,385	54,385
Total liabilities	3,731,423	1,231,423
Shareholders’ equity:		
Preferred stock, no par value; 50,000,000 shares authorized; -0- Series A shares, -0- Series B shares, -0- Series C shares, and 7,488,692 Series F shares outstanding at December 31, 2024	-	80
Common stock, $0.001 par value; 350,000,000 shares authorized and 12,570,100 actual shares issued and outstanding at December, 2024	21,475	21,475
Additional paid-in capital	219,119,378	237,719,298
Accumulated Deficit	(219,003,165)	(219,503,165)
Total shareholders’ (deficit) equity	(137,688)	18,237,688
Total liabilities and shareholders’ equity	$ 3,869,111	19,469,111

The number of shares of our Common Stock to be outstanding after this offering is based on 822,927 shares of our Common Stock outstanding as of March 31, 2025, and excludes the following:

- 25,683 shares of our Common Stock issuable upon the exercise of outstanding options under our equity incentive plans at a weighted average exercise price of $146.04 per share;
- 24,569 shares of Common Stock reserved for issuance under outstanding warrants with a weighted average exercise price of $983.10 per share;
- 3,140,984 additional shares of Common Stock reserved for future issuance under our 2021 equity incentive plan; and
- 249,624 additional shares of Common Stock reserved for issuance under conversion of 7,488,692 outstanding shares of Series F Non-Voting, Convertible Preferred Stock.

Unless we indicate otherwise or unless the context otherwise requires, all information in this prospectus assumes the following:

- no exercise of outstanding options or warrants; and
- assumes no exercise of the Warrants issued in this offering;

DILUTION

If you invest in our Preferred Stock, your interest will be diluted to the extent of the difference between the price per share of Preferred Stock you pay in this offering and the as adjusted net tangible book value per share of our Common Stock immediately after this offering (assuming the conversion of all of the Preferred Stock into shares of Common Stock). For the purpose of such calculation, the entire purchase price for the shares of Preferred Stock and accompanying Warrants is being allocated to the shares of Preferred Stock, and the shares issuable upon exercise of the accompanying Warrants have not been included.

Our net tangible book value as of March 31, 2025, assuming the completion of the Reverse Stock Split had been completed as of such date, was $137,688, or $0.17 per share, based upon 822,927 shares of Common Stock outstanding as of March 31, 2025. Net tangible book value per share of our Common Stock represents our total tangible assets (total assets less intangible assets) less total liabilities divided by the number of shares of Common Stock outstanding as of that date. Dilution in net tangible book value per share represents the difference between the amount per share paid by purchasers of shares of Common Stock in this offering and the net tangible book value per share of Common Stock immediately after this offering.

After giving effect to (i) the sale of 800,000 shares of Preferred Stock issued by us at an assumed combined public offering price of $25 per share of Preferred Stock and accompanying Warrant and after deducting commissions and estimated offering expenses payable by us, our pro forma as-adjusted net tangible book value as of March 31, 2025 would have been approximately $18,387,688 million, or $2.07 per share (assuming conversion of 800,000 shares of Preferred Stock and the payment of all dividends accrued on the Preferred Stock in shares of Common Stock upon conversion of the Preferred Stock at an assumed Conversion Price of $3.60 per share and the Stated Value per share of $25 and no exercise of any of the Warrants offered hereby) and (ii) the repayment of the Bridge Note in full. This represents an immediate increase in pro forma as adjusted net tangible book value of $1.90 per share to our existing stockholders and an immediate dilution of $1.53 per share to new investors participating in this offering, as illustrated by the following table (which assumes no exercise of the Warrants).

Assumed Conversion Price	$	3.60
Historical net tangible book value per share as of March 31, 2025	$	0.17
As adjusted, pro forma net tangible book value per share after giving effect to this offering	$	2.07
Increase in adjusted, pro forma net tangible book value per share attributable to new investors	$	1.90
As adjusted, pro forma dilution per share to investors in this offering	$	1.53

Each $0.10 increase in the assumed Conversion Price of $3.60 would increase the pro forma as-adjusted net tangible book value to $2.12 per share and the dilution per share to new investors to $1.58 per share, assuming the number of shares offered by us, as set forth on the cover page of this prospectus, remains the same and assuming no exercise of the Warrants being offered in this offering, that no value is attributed to such Warrants and that such Warrants are classified as and accounted for as equity, and after deducting commissions and estimated offering expenses payable by us.

We may also increase or decrease the number of shares we are offering. Each increase of 1,000 shares of Preferred Stock we are offering would increase our pro forma as-adjusted net tangible book value to approximately $18,637,688 million, or $2.10 per share, and decrease the dilution per share to new investors participating in this offering to $1.50 per share, assuming that the assumed Conversion Price remains the same, and after deducting commissions and estimated offering expenses payable by us. The as-adjusted information discussed above is illustrative only and will change based on the actual public offering price, number of shares and other terms determined at pricing.

The information discussed above is illustrative only and will adjust based on the actual Conversion Price, the actual number of securities that we offer in this offering, and other terms of this offering determined at pricing. The foregoing discussion does not take into account further dilution to investors in this offering that could occur upon the exercise of outstanding options and warrants having a per share exercise price less than the combined public offering price per share, the conversion of out outstanding Series F Preferred Stock and Warrants in this offering. Importantly, the conversion of our outstanding preferred stock, and in particular our Series F Convertible Preferred Stock, will result in a material further dilution of your investment. See “Risk Factors”.

The number of shares of our Common Stock to be outstanding after this offering is based on 822,927 shares of our Common Stock outstanding as of March 31, 2025, and excludes the following:

- 25,683 shares of our Common Stock issuable upon the exercise of outstanding options under our equity incentive plans at a weighted average exercise price of $4.87 pre-split/$146.04. post-split per share;
- 24,569 shares of Common Stock reserved for issuance under outstanding warrants with a weighted average exercise price of $983.10 post-split per share;
- 3,140,984 additional shares of Common Stock reserved for future issuance under our 2021 equity incentive plan; and
- 249,624 additional shares of Common Stock reserved for issuance under conversion of 7,488,692 outstanding shares of Series F Non-Voting, Convertible Preferred Stock.

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 shareholders.

DESCRIPTION OF CAPITAL STOCK

The following descriptions are summaries of the material terms that are included in our amended and restated articles of incorporation (as amended) and our bylaws (as amended) as well as the specific agreements such descriptions relate to. This summary is qualified in its entirety by the specific terms and provisions contained in our restated articles of incorporation, bylaws and the specific agreements described herein, copies of which we have filed as exhibits to the registration statement of which this prospectus is a part, and by the provisions of applicable law.

Overview

Authorized Capital Stock

Our authorized capital stock consists of 350,000,000 shares of Common Stock, par value $0.001, and 50,000,000 shares of preferred stock, without par value.

Common Stock

Voting

Holders of our Common Stock are entitled to one vote for each share on all matters submitted to a shareholder vote. Holders of our Common Stock do not have cumulative voting rights. Therefore, holders of a majority of the shares of our Common Stock voting for the election of directors collectively hold the voting power to elect all of our directors. Holders of our Common Stock representing one third of the voting power of our capital stock issued, outstanding and entitled to vote, represented in person or by proxy, are necessary to constitute a quorum at any meeting of shareholders.

Dividends

Subject to preferences that may be applicable to any outstanding preferred stock, the holders of our Common Stock are entitled to receive ratably all dividends, if any, as may be declared from time to time by our Board of Directors out of the funds legally available.

Rights upon Liquidation

Upon our liquidation, dissolution or winding-up, after payment in full of our liabilities and the amounts required to be paid to holders of any outstanding shares of preferred stock, if any, all holders of our Common Stock, along with the holders of our Series A Convertible Preferred Stock and Series B Convertible Preferred Stock on an "as if" converted basis, will be entitled to receive a pro rata distribution of all of our assets and funds legally available for distribution.

Redemption and Pre-Emptive Rights

No shares of our Common Stock are subject to redemption or have preemptive rights to purchase additional shares of our Common Stock or any of our other securities.

Fully Paid and Nonassessable

All of our outstanding shares of Common Stock are, and the shares of Common Stock to be issued in this offering will be, fully paid and nonassessable.

Listing of Common Stock

Our Common Stock is currently listed on the NYSE American under the trading symbol "OGEN".

Preferred Stock

Our Board of Directors has the authority, without action by our shareholders, to designate and issue up to 50,000,000 shares of preferred stock in one or more series or classes and to designate the rights, preferences and privileges of each series or class, which may be greater than the rights of our Common Stock. These rights, preferences and privileges could include dividend rights, conversion rights, voting rights, redemption rights, liquidation preferences, the number of shares constituting any class or series and the designation of the class or series. Terms selected by our Board of Directors in the future could decrease the amount of earnings and assets available for distribution to holders of shares of Common Stock or adversely affect the rights and powers, including voting rights, of the holders of shares of Common Stock without any further vote or action by the shareholders. As a result, the rights of holders of our Common Stock will be subject to, and may be adversely affected by, the rights of the holders of the Series F Convertible Preferred Stock or any other preferred stock that may be issued by us in the future, which could have the effect of decreasing the market price of our Common Stock. The Company's previously issued shares of Series A, B, C, D and E Preferred Stock have all either been cancelled or converted and are no longer outstanding.

Series F Convertible Preferred Stock

On December 28, 2023, we issued 8,000,000 shares of convertible preferred stock, designated as the Series F Convertible Preferred Stock ("Series F Preferred Stock") pursuant to the Certificate of Designation and rights filed by the Company with the Secretary of State of the State of Florida ("Series F Certificate of Designation"), as partial consideration for the purchase of certain assets of Odyssey Health, Inc. On December 28, 2023 and pursuant to the Series F Certificate of Designation, 511,308 shares of Series F Preferred were converted to Common Stock and, as a result of such conversion, 7,488,692 shares of Series F Convertible Preferred Stock remain outstanding.

The following description is a summary of the material provisions of the Series F Convertible Preferred Stock.

Liquidation Preference

The Series F Preferred Stock is economically equivalent to the Company's Common Stock. Upon liquidation, it is at parity with the Common Stock and junior to any class or series of capital stock of the Corporation created specifically ranking by its terms senior to the Series F Preferred Stock.

Dividends

No dividends shall be paid on shares of the Series F Preferred Stock.

Voting

The Series F Preferred Stock has no voting rights, except as required by applicable law and except for limited protective voting rights specifically set forth in Certificate of Designation.

Conversion

The Series F Preferred Stock is convertible commencing with the date of its issuance into Common Stock initially on a 1-for-1 basis (subject to certain adjustments, including the Reverse Stock Split, as a result of which the Series F Preferred Stock is now convertible into our Common Stock on a thirty-to-one basis). However, pursuant to the Series F Certificate of Designation, the holder of the Series F Preferred Stock cannot convert shares of Series F Preferred Stock into more than 19.9% of the Company's Common Stock outstanding as of October 4, 2023 until (i) the Company shall have applied for and been approved for initial listing on the NYSE American or another national securities exchange or shall have been delisted from the NYSE American, and (ii) if required by the rules of the NYSE American, the Company's shareholders shall have approved any change of control that could be deemed to occur upon the conversion of the Series F Preferred Stock into Common Stock, based on the facts and circumstances existing at such time.

Preemptive Rights

No holders of Series F Preferred Stock will, as holders of Series F Preferred Stock, have any preemptive rights to purchase or subscribe for our Common Stock or any of our other securities.

Redemption

The Series F Preferred Stock is not redeemable by the Company.

Trading Market

There is no established trading market for any of the Series F Preferred Stock, and the Company does not expect a market to develop. The Company does not intend to apply for a listing for any of the Series F Preferred Stock on any securities exchange or other nationally recognized trading system.

The following descriptions are summaries of the material terms that are included in our amended and restated articles of incorporation (as amended) and our bylaws (as amended) as well as the specific agreements such descriptions relate to. This summary is qualified in its entirety by the specific terms and provisions contained in our restated articles of incorporation, bylaws and the specific agreements described herein, copies of which we have filed as exhibits to our Form 10-K.

Series A, B, C, D, E and G Preferred Stock

The Company's previously had issued shares of Series A, B, C, D, E and G Preferred Stock. All of the shares of the Series A and Series B Preferred Stock were converted into Common Stock. All of the shares of Series C Non-Voting, Non-Convertible Preferred Stock were redeemed by the Company in accordance with their terms and no shares of Series C Non-Voting, Non-Convertible Preferred Stock remain outstanding. All of the shares of Series D Preferred Stock-Converted to Common Stock were converted to Common Stock and as such, the Company no longer has any Series D Preferred Stock outstanding. Pursuant to the terms of the Series E Certificate of Designation, upon effectiveness of an amendment to the Amended and Restated Articles of Incorporation of the Company to effect an increase in the shares of Common Stock the Company was authorized to issue from 4,166,666 shares of Common Stock to 350,000,000 shares of Common Stock (the "Amendment"), each share of Series E Preferred Stock was automatically transferred to the Company and cancelled for no consideration with no action on behalf of the holders of Series E Preferred Stock. The Company's shareholders approved the Amendment on December 14, 2023, and accordingly, all of the shares of Series E Preferred Stock resumed the status of authorized but unissued preferred stock and are no longer designated as Series E Preferred Stock. Pursuant to the terms of the Series G Certificate of Designation, upon effectiveness of an amendment to the Amended and Restated Articles of Incorporation of the Company to effect the Reverse Stock Split, each share of Series G Preferred Stock was automatically transferred to the Company and cancelled for no consideration with no action on behalf of the holders of Series E Preferred Stock. The Company effectuated the Reverse Stock Split on June 3, 2025, and accordingly, all of the shares of Series G Preferred Stock resumed the status of authorized but unissued preferred stock and are no longer designated as Series G Preferred Stock.

Certain Anti-Takeover Provisions

Florida Law

We are not subject to the statutory anti-takeover provisions under Florida law because in our articles of incorporation we have specifically elected to opt out of both the "control-share acquisitions" (F.S. 607.0902) and the "affiliated transactions" (F.S. 607.0901) statutes. Since these anti-takeover statutes do not apply to a corporation that has specifically elected to opt out of such provisions, we would not be able to invoke the protection of such statutes in the event of a hostile takeover attempt.

Articles of Incorporation and Bylaw Provisions

Our articles of incorporation and bylaws contain provisions that could have an anti-takeover effect. These provisions include

- authorization of the issuance of "blank check" preferred stock that could be issued by our Board of Directors without shareholder approval and that may be substantially dilutive or contain preferences or rights objectionable to an acquiror;
- the ability of the Board of Directors to amend the bylaws without shareholder approval;
- vacancies on our board may only be filled by the remaining Directors and not our shareholders; and
- requirements that only our Board, our President or holders of more than 10% of our shares can call a special meeting of shareholders.

These provisions in our articles of incorporation and bylaws could delay or discourage transactions involving an actual or potential change in control of us, including transactions in which shareholders might otherwise receive a premium for their shares over their current prices. Such provisions could also limit the ability of shareholders to approve transactions that shareholders may deem to be in their best interests and could adversely affect the price of our Common Stock.

Transfer Agent and Registrar

The transfer agent and registrar of our Common Stock is Continental Stock Transfer & Trust Company, 1 State Street 30th Floor, New York, New York 10004, telephone: (212) 509-4000.

DESCRIPTION OF SECURITIES WE ARE OFFERING

Series H Convertible Preferred Stock Being Issued in this Offering

The following summary of certain terms and provisions of the Preferred Stock offered in this offering is subject to, and qualified in its entirety by reference to, the terms and provisions set forth in our Certificate of Designation of Preferences, Rights and Limitations of the Preferred Stock, which has been filed as an exhibit to the registration statement of which this prospectus is a part (the "Certificate of Designation").

Our Preferred Stock is convertible into shares of our Common Stock (subject to the beneficial ownership limitations as provided in the Certificate of Designation), based upon the Conversion Price per share of Common Stock, subject to adjustment as provided in the Certificate of Designation and discussed further below, at any time at the option of the holder prior to [**], 2025 (the fifth anniversary of the closing of the offering), at which time all shares of outstanding Preferred Stock shall automatically and without any further action by the holder be converted into shares of our Common Stock at the then effective Conversion Price, provided that the holder will be prohibited from converting Preferred Stock into shares of our Common Stock if, as a result of such conversion, the holder, together with its affiliates, would own more than 4.99% of the total number of shares of our Common Stock then issued and outstanding. However, any holder may increase or decrease such percentage to any other percentage not in excess of

9.99%, provided that any increase in such percentage shall not be effective until 61 days after such notice to us.

The Conversion Price of the Preferred Stock, subject to adjustment pursuant to the Preferred Stock Certificate of Designation, as discussed further below, is expected to be set by us, with input from our Placement Agent, at the time of pricing the offering and is expected to be based upon the closing price of our Common Stock immediately prior to such pricing but may be at a discount to the then current market price of our Common Stock. The number of shares of Common Stock into which each share of Preferred Stock is convertible into is determined by dividing the Offering Price by the Conversion Price. Thus, if the Conversion Price is $3.60, each share of Preferred Stock, exclusive of dividends, is convertible into approximately 6.94 shares of Common Stock. As to any fraction of a share which a holder would otherwise be entitled to receive upon such conversion, at our election, we may either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round to the nearest whole number. If the Conversion Price is set lower, or it is adjusted pursuant to the anti-dilution provision discussed below, the number of shares of Common Stock to be issued upon conversion will increase. For example, if the Conversion Price is lowered to $2.50, each share of Preferred Stock that has not previously been converted, exclusive of dividends, we be convertible into approximately 10 shares of Common Stock. As to any fraction of a share which a holder would otherwise be entitled to receive upon such conversion, at our election, we may either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or round to the nearest whole number.

The Certificate of Designation for our Preferred Stock contains anti-dilution provisions, which provisions require the lowering of the Conversion Price on any unconverted Preferred Stock to the purchase price of future offerings by us (subject to certain exclusions). If in the future we issue securities for less than the Conversion Price of our Preferred Stock, we will be required to reduce the relevant Conversion Price of any unconverted Preferred Stock, which will result in a greater number of shares of Common Stock being issuable upon conversion, which in turn will have a greater dilutive effect on our shareholders. More specifically, except in connection with certain exempt issuances stipulated in the Certificate of Designation, the Certificate of Designation stipulates that if, at any time while the Preferred Stock is outstanding, we sell or grant any option to purchase or sell or grant any right to reprice, or otherwise dispose of or issue (or announce any sale, grant or any option to purchase or other disposition) any Common Stock or any securities which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock ("Common Stock Equivalents") at an effective price per share that is lower than the then Conversion Price of the Preferred Stock (such lower price, the "Base Conversion Price") then the Conversion Price of the Preferred Stock then outstanding automatically will be reduced to equal the Base Conversion Price at the time such Common Stock or Common Stock Equivalents are issued.

As there is no floor price on the Base Conversion Price or other limit on the potential adjustment of the Conversion Price, if the Conversion Price is adjusted as indicated above, we cannot determine the total number of shares issuable upon conversion. As such, it is possible that we will not have sufficient available shares to satisfy the conversion of the Preferred Stock if we enter into a future transaction that results in the reduction of the Conversion Price. If we do not have sufficient available shares for any Preferred Stock conversions, we will be required to increase our authorized shares, which will require shareholder approval, which may not be possible and will be time consuming and expensive. The potential for such Conversion Price adjustments may depress the price of our Common Stock regardless of our business performance, and, as a result, we may find it more difficult to raise additional equity capital while our Preferred Stock is outstanding. See, "Risk Factors" for additional information.

The holders of Preferred Stock will be entitled to receive cumulative dividends at the rate per share of 9% per annum of the $25.00 Stated Value per share from the date of issuance of such share of Preferred Stock until [**], 2025 (the fifth anniversary of the closing of the offering). The dividends become payable in shares of Common Stock (i) upon any conversion of the Preferred Stock, (ii) on each such other date as our board of directors may determine, subject to written consent of the holders of Preferred Stock holding a majority of the then issued and outstanding Preferred Stock, (iii) upon our liquidation, dissolution or winding up, and (iv) upon occurrence of a fundamental transaction, including any merger or consolidation, sale of all or substantially all of our assets, exchange or conversion of all of our Common Stock by tender offer, exchange offer or reclassification; provided, however, that if Preferred Stock is converted into shares of Common Stock at any time prior to [**], 2025 (the fifth anniversary of the closing of the offering), the holder will receive a make-whole payment in an amount equal to all of the dividends that, but for the early conversion, would have otherwise accrued on the applicable shares of Preferred Stock being converted for the period commencing on the conversion date and ending on [**], 2025 (the fifth anniversary of the closing of the offering), less the amount of all prior dividends paid on such converted Preferred Stock before the date of conversion. Make-whole payments are payable in shares of Common Stock.

With respect to any dividend payments and make-whole payments paid in shares of Common Stock, the number of shares of Common Stock to be issued to a holder of Preferred Stock will be an amount equal to the quotient of (i) the amount of the dividend payable to such holder divided by (ii) the Conversion Price then in effect.

In the event of our liquidation, dissolution, or winding up, holders of our Preferred Stock will be entitled to receive the amount of cash, securities or other property to which such holder would be entitled to receive with respect to such shares of Preferred Stock if such shares had been converted to Common Stock immediately prior to such event (without giving effect for such purposes to the 4.99% or 9.99% beneficial ownership limitation, as applicable) subject to the preferential rights of holders of any class or series of our capital stock specifically ranking by its terms senior to the Preferred Stock as to distributions of assets upon such event, whether voluntarily or involuntarily.

The holders of the Preferred Stock have no voting rights, except as required by law. Any amendment to our articles of incorporation, bylaws or Certificate of Designation that adversely affects the powers, preferences and rights of the Preferred Stock requires the approval of the holders of a majority of the shares of Preferred Stock then outstanding.

The Preferred Stock will not be listed on the NYSE American or any other exchange or trading market. We do not plan on making an application to list the Preferred Stock on the NYSE American, any other national securities exchange or any other nationally recognized trading system. The Common Stock issuable upon conversion of the Preferred Stock is listed on the NYSE American under the symbol "OGEN."

Shares of Preferred Stock will be issued in book-entry form under a transfer agency and service agreement between Continental stock Transfer & Trust, as transfer agent, and us, and shall initially be represented by one or more book-entry certificates deposited with DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

The transfer agent and registrar for our Preferred Stock is Continental Stock Transfer & Trust. The transfer agent's address is 1 State Street 30th Floor, New York, NY 10004-1571.

You should review a copy of the certificate of designation of the Preferred Stock, which has been filed as an exhibit to the registration statement of which this prospectus is a part, for a complete description of the terms and conditions of the Preferred Stock.

This offering also relates to the shares of Common Stock issuable upon exercise of the Preferred Stock.

Warrants Being Issued in this Offering

The following is a brief summary of certain terms and conditions of the Warrants and is subject in all respects to the provisions contained in the Warrants being issued in this offering.

Form. The Warrants will be issued in book-entry form under a Warrant Agent Agreement between Continental Stock Transfer & Trust Company, a New York corporation, as Warrant agent, and us, and shall initially be represented by one or more book-entry certificates deposited with DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC. You should review a copy of the form of Warrant, which is attached as an exhibit to the registration statement of which this prospectus forms a part, for a complete description of the terms and conditions of the Warrants.

Exercisability. The Warrants are exercisable into shares of Preferred Stock at any time after the date of issuance up to [**], 2025 (the fifth anniversary of the closing of the offering), at which time any unexercised Warrants will expire and cease to be exercisable. The Warrants will be exercisable, at the option of each holder, in whole or in part by delivering to us a duly executed exercise notice and by payment in full in immediately available funds for the number of shares of Preferred Stock purchased upon such exercise. No fractional shares of Preferred Stock will be issued in connection with the exercise of a Warrant. In lieu of fractional shares, we will either pay the holder an amount in cash equal to the fractional amount multiplied by the exercise price or round up to the next whole share.

Exercise Price; Anti-Dilution. The initial exercise price per share of Preferred Stock purchasable upon exercise of the Warrants is $25.00 per share. 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 Preferred Stock.

Transferability. Subject to applicable laws, the Warrants may be offered for sale, sold, transferred or assigned without our consent. There is currently no trading market for the Warrants and a trading market is not expected to develop.

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

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

We, with the consent of the Warrant holders holding all of the then outstanding Warrants, may increase the exercise price, shorten the expiration date and amend all other Warrant terms. We may lower the exercise price or extend the expiration date without the consent of investors.

You should review a copy of the Warrant agent agreement and the form of Warrant, each of which has been filed as an exhibit to the registration statement of which this prospectus is a part, for a complete description of the terms and conditions of the Warrants and the Warrant agent agreement.

This prospectus also relates to the offering of the placement agent's Warrants and of the shares of our Common Stock issuable upon exercise, if any, of such Warrants. See "Plan of Distribution" section below for more information.

Listing of Common Stock

Our Common Stock is currently listed on the NYSE American under the trading symbol "OGEN".

Transfer Agent and Registrar

The transfer agent and registrar of our Common Stock is Continental Stock Transfer & Trust Company, 1 State Street 30th Floor, New York, New York 10004, telephone: (212) 509-4000.

Lock-up agreements

Each of our officers and directors and five percent (5%) shareholders have agreed to be subject to a lock-up period of 180 days following the date of this prospectus. This means that, during the applicable lock-up period, they may not offer for sale, contract to sell, or sell any shares of our Common Stock or any securities convertible into, or exercisable or exchangeable for, shares of our Common Stock subject to certain customary exceptions. In addition, provided that the Company receives at least $10 million in gross proceeds in this offering, we have agreed to not issue any shares of Common Stock or securities exercisable or convertible into shares of Common Stock or file any registration statement with the Commission relating to the offering of any of our securities, subject to certain exceptions, for a period of 180 days following the closing date of this offering; provided that following the closing date of this offering we will be permitted to enter into an agreement in connection with an "at the market" offering under Rule 415(a)(4) under the Securities Act and make sales thereunder. Dawson James Securities, Inc. in their sole discretion may release any of the securities subject to these lock-up agreements at any time. If the restrictions under the lock-up agreements are waived, shares of our Common Stock may become available for resale into the market, subject to applicable law, which could reduce the market price for our Common Stock. See "Plan of Distribution."

PLAN OF DISTRIBUTION

In connection with this offering, we will enter into a placement agency agreement with Dawson James Securities, Inc., pursuant to which Dawson James Securities, Inc. will agree to act as our exclusive placement agent on a best efforts basis in connection with the sale of our securities. The placement agent has no obligation to purchase or sell any securities offered by us under this prospectus for its own account or to arrange the purchase or sale of any specific number or dollar amount of the securities, but the placement agent will agree to act as our agent and to use its reasonable best efforts to arrange for the sale of all of the securities in this offering. Affiliates and associated persons of Dawson James Securities, Inc. may invest in this offering on the same terms and conditions as the public investors participating in this offering.

Indemnification

We have agreed to indemnify the Placement Agent against certain liabilities, including liabilities under the Securities Act, or to contribute to payments that the Placement Agent or such other indemnified parties may be required to make in respect of those liabilities.

Placement Agent Fees and Expenses

The following table shows the per unit (consisting of one Preferred Share and one Warrant) and total placement agent fees we will pay in connection with the sale of the securities in this offering.

	Per Share and Accompanying Warrant	Total

Public offering price [1]	$ 3.60	$ 20,000,000
Placement Agent fees [2]	$ 1.75	$ 1,400.000
Proceeds to us, before expenses[3]	$ 23.25	$ 18,600,000

1. The price of a share of Preferred Stock and accompanying Warrant in this prospectus assumes a combined public offering price of $25 per share and accompanying Warrant and an assumed Conversion Price per share of Preferred Stock of $3.60 per share, as the case may be, which was the last reported sales price of our Common Stock on the NYSE American on May 30, 2025. The Offering Price, as well as the exercise price of the Warrants, was determined by our the Company on an arbitrary basis and may not be indicative of the price at which Preferred Stock or Warrants would trade if they were listed on an exchange or were actively traded by brokers, and may not bear any relationship to the assets, book value, historical earnings or net worth of the Company.

2. We have agreed to pay to the placement agent a cash fee equal to 7% of the aggregate gross proceeds raised in this offering. Because there is no minimum offering amount required as a condition to closing in this offering, the actual aggregate cash placement fee, if any, is not presently determinable and may be substantially less than the maximum amount set forth above.

3. We have also agreed to reimburse the Placement Agent at closing for legal and other expenses incurred by the placement agent in connection with this offering in an amount up to $125,000; provided that if the that if the Offering does not result in the Company receiving at least $10 million in gross proceeds, the cap on such expenses shall be $75,000.

We estimate that the total expenses of the offering, including registration, filing and listing fees, printing fees and legal and accounting expenses, but excluding placement agent fees, will be approximately $350,000, all of which are payable by us. 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 up to an aggregate expense reimbursement of $125,000, assuming we receive at least $10 million of gross proceeds in the offering. If we receive less than $10 million in gross proceeds in the offering, the cap on expense reimbursements will be $75,000.

Determination of Offering Price

The assumed combined public offering price for each share of Preferred Stock and accompanying Warrant is $25.00 (the "Offering Price"). The Offering Price, as well as the exercise price and other terms of the Warrants, was determined by our the Company on an arbitrary basis and may not be indicative of the price at which Preferred Stock or Warrants would trade if they were listed on an exchange or were actively traded by brokers and may not bear any relationship to the assets, book value, historical earnings or net worth of the Company. However, when determining the Offering Price and the exercise price of the Warrants our board of directors considered, among other factors, the trading of our Common Stock prior to this offering, the history and prospects of our company, 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, general conditions of the securities markets at the time of the offering and such other factors as were deemed relevant.

For purposes of determining the number of shares to be registered in connection with this Offering, we are assuming that the Preferred Stock will have a Conversion Price of $3.60 per share, which was the closing price of our Common Stock on May 30, 2025. The actual Conversion Price of the Preferred Stock is expected to be set at the time of pricing the offering and is expected to be based upon the closing price of our Common Stock immediately prior to such pricing, but will be determined by our board of directions, with input from the Placement Agent and may be at a discount to the then current market price of our Common Stock. See, "Risk Factors" for more information.

There is no established public trading market for the Preferred Stock or Warrants, and we do not expect such markets to develop. In addition, we do not intend to apply for a listing of the Preferred Stock or Warrants on any national securities exchange or other nationally recognized trading system.

We estimate that the total expenses of the offering, including registration, filing, and listing fees, printing fees and legal and accounting expenses, but excluding the placement agent fees, will be approximately $350,000, all of which are payable by us. This figure includes the Placement Agent's accountable expenses, including, but not limited to, legal fees for the Placement Agent' legal counsel, that we have agreed to pay at the closing of the offering up to an aggregate expense reimbursement of $125,000, assuming we receive at least $10 million of gross proceeds in the offering. If we receive less than $10 million in gross proceeds in the offering, the cap on expense reimbursements will be $75,000.

Lock-Up Agreements

We have agreed not to (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company; (ii) file or cause to be filed any registration statement with the Commission relating to the offering of any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company, other than pursuant to a registration statement on Form S-8 for employee benefit plans;, whether any such transaction described in clause (i), (ii) or (iii) above is to be settled by delivery of shares of capital stock of the Company or such other securities, in cash or otherwise; or (iv) publicly announce an intention to effect any transaction specified in clause (i), (ii) or (iii), for a period of 180 days following the Shareholder Approval Date (the "Lock-up Period"). These restrictions on future issuances are subject to exceptions for (i) the issuance of shares of our Common Stock sold in this offering and the issuance of the Warrants and shares of Common Stock issuable upon exercise of those Warrants, (ii) the issuance by the Company of Common Stock upon the exercise of stock options, warrants or the conversion of a security, in each case, that is outstanding on the date hereof, (iii) the grant by the Company of stock options or other stock-based awards, or the issuance of shares of capital stock of the Company under any stock compensation plan of the Company in effect on the date hereof. The foregoing restrictions shall not apply to an at-the-market offering of Common Stock conducted by the Company.

In addition, each of our directors and executive officers has entered into a lock-up agreement with the Placement Agent. Under the lock-up agreements, the directors and executive officers may not, during the period commencing on the date of the final prospectus relating to the offering and ending 180 days thereafter, (1) offer, pledge, sell, contract to sell, grant, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of capital stock or any securities convertible into or exercisable or exchangeable for shares of capital stock, whether currently owned or thereafter acquired or with respect to which the director or executive officer has or thereafter acquires the power of disposition (collectively, the "Lock-Up Securities"); (2) enter into any swap or other arrangement that transfers to another, in whole or in part, any of the economic consequences of ownership of the Lock-Up Securities; (3) establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Exchange Act and the rules and regulations of the SEC promulgated thereunder with respect to any Common Stock owned directly by the director or executive officer (including holding as a custodian) or with respect to which the director or executive officer has beneficial ownership within the rules and regulations of the SEC, whether any such transaction described in clause (1) or (2) above is to be settled by delivery of Lock-Up Securities, in cash or otherwise; (4) make any demand for or exercise any right with respect to the registration of any Lock-Up Securities; or (5) publicly disclose the intention to make any offer, sale, pledge or disposition, or to enter into any transaction, swap, hedge or other arrangement relating to any Lock-Up Securities.

Tail

We have also agreed to pay the Placement Agent a tail fee in an amount equal to 7% of the aggregate gross proceeds raised in any public or private offering or other financing consummated by the Company in the nine month period following the expiration or termination of our engagement of the Placement Agent to the extent that such financing or capital is provided to the Company by investors introduced to this offering by the Placement Agent.

Electronic Distribution

This prospectus in electronic format may be made available on websites or through other online services maintained by the Company, the Placement Agent, or by its affiliates. Other than this prospectus in electronic format, the information on the Company's and/or placement agent's website and any information contained in any other website maintained by the Company or the Placement Agent is not part of this 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, and should not be relied upon by investors.

Stabilization and Other Transactions

The Placement Agent pursuant to Regulation M under the Securities Exchange Act of 1934 may engage in short sale transactions, stabilizing transactions, syndicate covering transactions or the imposition of penalty bids in connection with this offering. These activities may have the effect of stabilizing or maintaining the market price of the units at a level above that which might otherwise prevail in the open market. Establishing short sales positions may involve either "covered" short sales or "naked" short sales. "Covered" short sales are sales made in an amount not greater than the Placement Agents' option to purchase additional units in this offering. The Placement Agent may close out any covered short position by purchasing our units in the open market or from market participants. "Naked" short sales are sales in excess of the option to purchase additional units. The Placement Agents must close out any naked short position by purchasing units in the open market. A naked short position is more likely to be created if the Placement Agents are concerned that there may be downward pressure on the price of the units in the open market after pricing that could adversely affect investors who purchase in this offering. A stabilizing bid is a bid for the purchase of Common Stock on behalf of the Placement Agent for the purpose of fixing or maintaining the price of the Common Stock. A syndicate covering transaction is the bid for or the purchase of Common Stock on behalf of the Placement Agents to reduce a short position incurred by the Placement Agents in connection with the offering. Similar to other purchase transactions, the Placement Agents' purchases to cover the syndicate short sales may have the effect of raising or maintaining the market price of our Common Stock or preventing or retarding a decline in the market price of our Common Stock. As a result, the price of our Common Stock may be higher than the price that might otherwise exist in the open market. A penalty bid is an arrangement permitting the Placement Agents to reclaim the selling concession otherwise accruing to a syndicate member in connection with the offering if the securities originally sold by such syndicate member are purchased in a syndicate covering transaction and therefore have not been effectively placed by such syndicate member. Neither we, nor the Placement Agent make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our securities. The Placement Agent is not obligated to engage in these activities and, if commenced, may end any of these activities at any time. These transactions may be effected on Nasdaq, in the over-the-counter market or otherwise.

Listing & Transfer Agent

Our Common Stock is listed on the NYSE American under the symbol "OGEN." On May 30, 2025, the reported closing price per share of our Common Stock was $0.12. The final public offering price will be determined between us and the Placement Agent 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. There is no established public trading market for the Warrants, and we do not expect such markets to develop. In addition, we do not intend to apply for a listing of the Warrants on any national securities exchange or other nationally recognized trading system.

The transfer agent and registrar for our Common Stock is Continental Stock Transfer & Trust Company, 1 State Street 30th Floor, New York, New York 10004, telephone: (212) 509-4000.

Other

Dawson James served as the placement agent in our best efforts private placement of a promissory note with an aggregate principal amount of $3,000,000 and 1,000,000 shares of Series G Mirroring Preferred Stock of the Company, which closed on March 14, 2025. In connection with this offering, Dawson James received placement agent fees and the reimbursement of expenses.

Other Relationships

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

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

Offer and Sale Restrictions Outside the United States

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

EXPERTS

The consolidated financial statements for the years ended December 31, 2024 and December 31, 2023, appearing in the Company's Annual Report on Form 10-K for the year ended December 31, 2024, filed with the SEC on March 14, 2025, have been audited by Cherry Bekaert LLP, Tampa, Florida independent registered public accounting

firm, as set forth in their report, which report includes an explanatory paragraph about the existence of substantial doubt concerning the Company's ability to continue as a going concern, and have been incorporated herein by reference in reliance upon such report given on the authority of such firm as experts in accounting and auditing, in giving said reports.

LEGAL MATTERS

The validity of the issuance of the securities offered hereby has been passed upon for us by Shumaker, Loop & Kendrick, LLP, Tampa, Florida. ArentFox Schiff LLP, Washington, D.C., has acted as counsel for Dawson James.

INFORMATION INCORPORATED BY REFERENCE

In this document, we "incorporate by reference" certain information we file with the SEC, which means that we can disclose important information to you by referring to that information. The information incorporated by reference is considered to be a part of this prospectus. Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for all purposes to the extent that a statement contained in this prospectus or in any other subsequently filed document that is also incorporated or deemed to be incorporated by reference, modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus. We incorporate by reference the documents listed below (other than, in each case, documents or information deemed to be furnished and not filed in accordance with SEC rules):

- Our Annual Report on Form 10-K for the year ended December 31, 2024, filed with the SEC on March 14, 2054;
- Our Current Report on Form 10-Q for the quarter ended March 31, 2025, as filed on May 9, 2025;
- Our Definitive Proxy Statement on Schedule 14A, filed with the SEC on April 1, 2025;
- Our Current Reports on Form 8-K filed January 17, 2025, January 21, 2025, February 5, 2025, February 18, 2025, March 6, 2025, March 27, 2025, April 9, 2025, May 2, 2025, May 20, 2025 and May 27, 2025.
- The description of our Common Stock set forth in Exhibit 4.2 of our Current Report on Form 8-K filed March 1, 2024.

We also incorporate by reference into this prospectus and the accompanying prospectus all documents (other than current reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits filed on such form that are related to such items) that are filed by us with the SEC pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended, or the Exchange Act, after the date of this prospectus until we sell all of the securities covered by this prospectus and the accompanying prospectus or the sale of securities by us pursuant to this prospectus and the accompanying prospectus is terminated.

A statement contained in a document incorporated by reference into this prospectus shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or in any other subsequently filed document which is also incorporated by reference in this prospectus modifies or replaces such statement. Any statements so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We hereby undertake to provide without charge to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon written or oral request of any such person, a copy of any and all of the information that has been or may be incorporated by reference in this prospectus, including any exhibits that are specifically incorporated by reference in such documents. Requests for such copies should be directed as follows: Oragenics, Inc., 1990 Main St Suite 750 Sarasota, Florida 34236, Attention: Investor Relations, Phone: (813) 276-7900.

This prospectus is part of a registration statement we filed with the SEC. That registration statement and the exhibits filed along with the registration statement contain more information about us and the shares in this offering. Because information about documents referred to in this prospectus is not always complete, you should read the full documents which are filed as exhibits to the registration statement. You may read and copy the full registration statement and its exhibits at the SEC's website.

WHERE YOU CAN FIND MORE INFORMATION

We are a public company and file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission ("SEC"). You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Our SEC filings are also available to the public at the SEC's web site at http://www.sec.gov.

In addition, we maintain a web site that contains information regarding our company, including copies of reports, proxy statements and other information we file with the SEC. The address of our web site is www.oragenics.com. Except for the documents specifically incorporated by reference into this prospectus, information contained on our website or that can be accessed through our website does not constitute a part of this prospectus. We have included our website address only as an inactive textual reference and do not intend it to be an active link to our website.

Up to 800,000 Shares of Series H Convertible Preferred Stock
Up to 800,000 Warrants to Purchase 800,000 Shares of Series H Convertible Preferred Stock
Up to 800,000 shares of Series H Convertible Preferred Stock issuable upon conversion of the Warrants
and
Up to 17,095,822 Shares of Common Stock Underlying (i) the Series H Convertible Preferred Stock Sold Hereunder and (ii) the Series H Convertible Preferred Stock to Be Issued Upon Exercise of the Warrants

PRELIMINARY PROSPECTUS

Dawson James Securities, Inc.

[***], 2025

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth an estimate of the fees and expenses payable by the registrant in connection with the issuance and distribution of the securities being registered. All amounts are estimated except the SEC registration filing fee. All of the expenses below will be paid by us.

SEC registration fee	$
FINRA filing fee	$
Accounting fees and expenses	$
Legal fees and expenses	$
Transfer agent and registrar fees	$
Printing and engraving expenses	$
Miscellaneous	$
Total	$

Item 14. Indemnification of Directors and Officers.

Under our Bylaws, each of our directors has the right to be indemnified by us to the maximum extent permitted by law against (i) reasonable expenses incurred in connection with any threatened, pending or completed civil, criminal, administrative, investigative or arbitrative action, suit or proceeding seeking to hold the director liable by reason of his or her actions in such capacity and (ii) reasonable payments made by the director in satisfaction of any judgment, money decree, fine, penalty or settlement for which he or she became liable in such action, suit or proceeding. This right to indemnification includes the right to the advancement of reasonable expenses by us, to the maximum extent permitted by law. Under our Bylaws, each of our officers who are not directors is entitled to the same indemnification rights, including the right to the advancement of reasonable expenses, which are provided to our directors.

Pursuant to the Florida Business Corporation Act, a Florida corporation has the power to indemnify its directors and officers provided that they act in good faith and reasonably believe that their conduct was lawful and in the corporate interest (or not opposed thereto), as set forth in the Business Corporation Act. Under the Business Corporation Act, unless limited by its articles of incorporation, a corporation must indemnify a director or officer who is wholly successful, on the merits or otherwise, in the defense of any proceeding to which he or she was a party because he or she is or was a director or officer, against reasonable expenses incurred by the director or officer in connection with the proceeding. Our Articles of Incorporation do not contain any such limitations. The Business Corporation Act permits a corporation to pay for or reimburse reasonable expenses in advance of final disposition of an action, suit or proceeding only upon (i) the director's certification that he or she acted in good faith and in the corporate interest (or not opposed thereto), (ii) the director furnishing a written undertaking to repay the advance if it is ultimately determined that he or she did not meet this standard of conduct, and (iii) a determination is made that the facts then known to those making the determination would not preclude indemnification under the Business Corporation Act.

Under our Articles of Incorporation, no director will be liable to us or our shareholders for monetary damages for breach of his or her fiduciary duty as a director, to the maximum extent permitted by law.

The Florida Business Corporation Act also empowers a corporation to provide insurance for directors and officers against liability arising out of their positions, even though the insurance coverage may be broader than the corporation's power to indemnify. We maintain directors' and officers' liability insurance for the benefit of our directors and officers.

In our employment agreements with Janet Huffman, our Chief Executive Officer and Chief Financial Officer, and our former president, we agreed to indemnify them for all claims arising out of performance of their duties, other than those arising out of their breach of the agreement or their gross negligence or willful misconduct.

At present, there is no pending litigation or proceeding involving any of the registrant's directors or executive officers as to which indemnification is being sought nor is the registrant aware of any threatened litigation that may result in claims for indemnification by any executive officer or director.

Item 15. Recent Sales of Unregistered Securities.

During the three-year period preceding the date of filing of this registration statement, we have issued securities in the transactions described below without registration under the Securities Act.

On March 13, 2025, we entered into and consummated a note securities purchase agreement (the "Purchase Agreement") with a single investor (the "Purchaser") pursuant to which we sold, in a private placement (the "Bridge Financing"), to the Purchaser a promissory note with an aggregate principal amount of $3,000,000 (the "Bridge Note") and 1,000,000 shares of Series G Mirroring Preferred Stock (the "Series G Preferred Stock"). The aggregate gross proceeds to the Company were $2,500,000 million, before deducting placement agent fees and expenses. We intend to use the net proceeds from the Bridge Financing for working capital and other general corporate purposes. Dawson James Securities, Inc. served as the placement agent in the private placement, pursuant to the terms of a placement agent agreement dated February 26, 2024 and received 6% of the gross proceeds of the private placement and reimbursement of the legal fees of its counsel. The Bridge Note and Series G Preferred Stock were issued in a private placement under Section 4(a)(2) of the Securities Act of 1933, as amended (the "Act"), and Regulation D promulgated thereunder and, have not been registered under the Act, or applicable state securities laws.

Pursuant to the terms of the Series Certificate of Designation, upon the earlier of the effectiveness of the Reverse Stock Split, each share of Series G Preferred Stock was automatically transferred to the Company and cancelled for no consideration with no action on behalf of the holders of Series G Preferred Stock.

Item 16. Exhibits and Financial Statement Schedules.

(a) Exhibit Index

Exhibit number	Exhibit description	Incorporated by Reference				Filed herewith
		Form	File no.	Exhibit	Filing date	

1.1	Form of Placement Agent Agreement					X
3.1	Amended and Restated Articles of Incorporation as amended prior to December 29, 2017 (including certificates of designation of Series A, B and C Preferred Stock).	8-K	001-32188	3.1	12/29/17	
3.2	Articles of Amendment to Amended and Restated Articles of Incorporation dated effective December 29, 2017.	8-K	001-32188	3.2	12/29/17	
3.3	Articles of Amendment to Amended and Restated Articles of Incorporation effective January 19, 2018.	8-K	001-32188	3.1	1/19/18	
3.4	Articles of Amendment to Amended and Restated Articles of Incorporation.	8-K	001-32188	3.4	6/26/18	
3.5	Articles of Amendment to Amended and Restated Articles of Incorporation	8-K	001-32188	3.5	2/28/22	
3.6	Articles of Amendment to Amended and Restated Articles of Incorporation	8-K	001-32188	3.1	1/23/23	
3.7	Amendment to Articles of Incorporation for Certificate of Designation of Series F Convertible Preferred Stock	8-K	001-32188	3.1	12/8/23	
3.8	Amendment to Articles of Incorporation to Increase Common Stock	8-K	001-32188	3.1	12/15/23	
3.9	Amendment to Articles of Incorporation to Effectuate Reverse stock Split	8-K	001-32188	3.1	5/28/25	
3.10	Form of Certificate of Designation of Preferences, Rights and Designations of Series H Convertible Preferred Stock					X
3.11	Bylaws	SB-2	333-100568	3.2	10/16/02	
3.12	First Amendment to Bylaws	8-K	001-32188	3.1	6/9/10	
3.13	Second Amendment to Bylaws	8-K	001-32188	3.1	8/24/10	

3.14	Third Amendment to Bylaws	8-K	001-32188	3.9	2/28/22	
4.1	Specimen Stock Certificate	8-K	001-32188	4.1	1/23/23	
4.2	Form of Common Stock Warrant	8-K	001-32118	4.1	11/9/17	
4.3	Form of Warrant to purchase shares of Common Stock.	S-1/A	333-224950	4.2	7/9/18	
4.4	Warrant Agency Agreement	8-K	001-32188	4.2	7/17/18	
4.5	Warrant dated May 1, 2020	8-K	001-32188	4.1	5/4/20	
4.6	Form of Placement Agent Warrant.	8-K	001-32188	4.1	6/26/24	
4.7	Description of the Registrant's Securities Registered Pursuant to Section 12 of the Securities Exchange Act of 1934	10-K	001-32188	4.8	3/29/24	
4.8	Form of Series H Warrant					X
4.9	Form of Warrant Agent Agreement					X
5.1	Opinion of Shumaker, Loop & Kendrick, LLP					X
10.1	Non-exclusive intellectual property and biological materials license agreement with the National Institute of Allergy and Infectious Diseases, an institute within the National Institutes of Health.*	10-Q	001-32188	10.2	8/14/20	
10.2	National Research Council (NRC) Canada Technology License Agreement (dated July 26, 2021) and Amendment One (dated September 2, 2021).*	10-Q	001-32188	10.0	11/15/21	
10.3	NRC Technology License Amendment 2	10-K	001-32188	10.6	3/24/22	
10.4	NRC Technology License Amendment 3	10-K	001-32188	10.7	3/24/22	
10.5	2012 Equity Incentive Plan. +	8-K	001-32188	4.1	10/25/12	
10.6	First Amendment to 2012 Equity Incentive Plan. +	8-K	001-32188	4.2	5/5/17	

10.7	Second Amendment to 2012 Equity Incentive Plan. +	8-K	001-32188	4.3	12/29/17	
10.8	Third Amendment to 2012 Equity Incentive Plan. +	8-K	001-32188	4.4	6/26/18	
10.9	Fourth Amendment to 2012 Equity Incentive Plan. +	8-K	001-32188	4.5	6/21/19	

10.10	Form of Employee Stock Option Agreement. +	10-K	001-32188	10.26	3/26/13	
10.11	Form of Consultant Stock Option Agreement. +	10-K	001-32188	10.27	3/26/13	
10.12	Form of Notice of Grant of Stock Options and Stock Option Award Agreement (Employee). +	8-K	001-32188	10.1	3/18/15	
10.13	Form of Notice of Grant of Stock Options and Stock Option Award Agreement (Directors). +	10-K	001-32188	10.23	3/4/20	
10.14	Form of Director Restricted Stock Award Agreement. +	8-K	001-32188	10.3	3/18/15	
10.17	2021 Equity Incentive Plan+	8-K	001-32188	10.1	2/28/22	
10.18	First Amendment to 2021 Equity Incentive Plan	8-K	001-32188	4.2	12/15/23	
10.19	Second Amendment to 2021 Equity Incentive Plan	8-K	001-32188	4.3	12/13/24	
10.20	Form Stock Option Award Agreement (Directors)+	8-K	001-32188	10.2	2/28/22	
10.21	Form Stock Option Award Agreement (Employees)+	8-K	001-32188	10.3	2/28/22	
10.22	Form Stock Option Award Agreement (Consultants)+	8-K	001-32188	10.4	2/28/22	
10.25	At-the-Market Sales Agreement between the Company and Dawson James Securities dated October 11, 2024	8-K	001-32188	1.1	10/15/24	
10.26	Janet Huffman Employment Agreement	8-K	001-32188	10.1	5/2/25	
21.1	Subsidiaries of Registrant	10-K	001-3288	21.1	3/24/22	
23.1	Consent of Cherry Bekaert LLP, an Independent Public Accounting Firm					**X**

23.2	Consent of Shumaker, Loop & Kendrick, LLP (included in Exhibit 5.1)	**X**
24.1	Powers of Attorney (included on signature page).	**X**
107	Filing Fee Table	**X**

* Confidential treatment has been granted as to certain portions of this exhibit pursuant to Rule 406 of the Securities Act of 1933, as amended, or Rule 24b-2 of the Securities Exchange Act of 1934, as amended.

\+ Executive management contract or compensatory plan or arrangement.

** Furnished herewith and not deemed to be "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933, as amended, or the Exchange Act (whether made before or after the date of the Form 10-Q), irrespective of any general incorporation language contained in such filing.

Item 17. Undertakings.

(1) The undersigned registrant hereby undertakes:

a. 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 SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

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;

provided, however, that paragraphs (1)(i), (1)(ii) and (1)(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 Securities and Exchange Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

b. That, for the purpose of determining any liability under the Securities Act, 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.

c. 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.

d. That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration

statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

e. That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant hereby 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 (§ 230.424 of this chapter);

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.

(2) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act, each filing of the registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the registration statement 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) The undersigned registrant hereby undertakes that:

a. For purposes of determining any liability under the Securities Act, the information omitted from the form of prospectus filed as part of this registration statement in reliance on Rule 430A and contained in a form of prospectus filed by the undersigned 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; and

b. For the purpose of determining any liability under the Securities Act, 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.

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

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Sarasota, State of Florida on June 23, 2025.

ORAGENICS, INC.

By: */s/ Janet Huffman*
Janet Huffman
President, Chief Executive (Principal Executive Officer) and Chief Financial Officer (Principal Financial Officer)

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Janet Huffman as his or her true and lawful attorney-in-fact and agent, with full power of substitution and re-substitution, for him or her and in his or her name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement, and to sign any registration statement for the same offering covered by the Registration Statement that is to be effective upon filing pursuant to Rule 462(b) promulgated under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in connection therewith and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their, his or her 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 has been signed below by the following persons in the capacities indicated and on June 23, 2025.

Signature	Title
/s/ Janet Huffman Janet Huffman	President Chief Executive Officer (Principal Executive Officer) and Chief Financial Officer (Principal Financial Officer)
/s/ Charles L. Pope Charles L. Pope	Executive Chairman and Director
/s/ Robert C. Koski Robert C. Koski	Director

/s/ Frederick W. Telling Frederick W. Telling	Director
/s/ Alan W. Dunton Alan W. Dunton	Director
/s/ John Gandolfo John Gandolfo	Director

Exhibit 1.1

Execution Version

PLACEMENT AGENCY AGREEMENT

Dawson James Securities, Inc.
101 North Federal Highway
Suite 600
Boca Raton, FL 33432

June [__], 2025

Ladies and Gentlemen:

This letter (this "Agreement") constitutes the agreement between Oragenics, Inc., a Florida corporation (the "Company"), and Dawson James Securities, Inc. ("Dawson") pursuant to which Dawson shall serve as the placement agent (the "Placement Agent"), for the Company, on a reasonable "best efforts" basis, in connection with the proposed offer and placement (the "Offering") by the Company of its Securities (as defined Section 3 of this Agreement) under the Registration Statement (as defined below). The Company expressly acknowledges and agrees that Dawson's obligations hereunder are on a reasonable "best efforts" basis only and that the execution of this Agreement does not constitute a commitment by Dawson to purchase the Securities and does not ensure the successful placement of the Securities or any portion thereof or the success of Dawson placing the Securities. The terms of the Offering and the Securities shall be mutually agreed upon by the Company and the Purchasers and nothing herein constitutes that the Placement Agent would have the power or authority to bind the Company or any Purchaser or an obligation for the Company to issue any Securities or complete the Offering. This Agreement and the documents, if any, executed and delivered by the Company and the Purchasers in connection with the Offering shall be collectively referred to herein as the "Transaction Documents."

1. Appointment of Dawson James Securities, Inc. as Exclusive Placement Agent.

On the basis of the representations, warranties, covenants and agreements of the Company herein contained, and subject to all the terms and conditions of this Agreement, the Company hereby appoints the Placement Agent as its exclusive placement agent in connection with a distribution of its Securities to be offered and sold by the Company pursuant to a registration statement (the "Registration Statement") filed under the Securities Act of 1933, as amended (the "Securities Act") on Form S-1 (File No. 333-[_____]), and Dawson agrees to act as the Company's exclusive Placement Agent (the "Services"). Pursuant to this appointment, the Placement Agent will solicit offers for the purchase of or attempt to place all or part of the Securities of the Company in the proposed Offering. Until the final Closing (as defined below) or earlier upon termination of this Agreement pursuant to Section 5 hereof, the Company shall not, without the prior written consent of the Placement Agent, solicit or accept offers to purchase the Securities other than (a) through the Placement Agent or (b) in connection with an At-the-Market Offering. The Company acknowledges that the Placement Agent will act as an agent of the Company and use its reasonable "best efforts" to solicit offers to purchase the Securities from the Company on the terms, and subject to the conditions, set forth in the Prospectus (as defined below). The Placement Agent shall use commercially reasonable efforts to assist the Company in obtaining performance by each Purchaser whose offer to purchase Securities has been solicited by the Placement Agent, but the Placement Agent shall not, except as otherwise provided in this Agreement, be obligated to disclose the identity of any potential purchaser or have any liability to the Company in the event any such purchase is not consummated for any reason. Under no circumstances will the Placement Agent be obligated to underwrite or purchase any Securities for its own account and, in soliciting purchases of the Securities, the Placement Agent shall act solely as an agent of the Company. The Services provided pursuant to this Agreement shall be on an "agency" basis and not on a "principal" basis.

The Placement Agent will solicit offers for the purchase of the Securities in the Offering at such times and in such amounts as the Placement Agent deems advisable. The Company shall have the sole right to accept offers to purchase Securities and may reject any such offer, in whole or in part. The Placement Agent may retain other brokers or dealers to act as sub-agents on its behalf in connection with the Offering and may pay any sub-agent a solicitation fee with respect to any Securities placed by it. The Company and Placement Agent shall negotiate the timing and terms of the Offering and acknowledge that the Offering and the provision of Placement Agent services related to the Offering are subject to market conditions and the receipt of all required related clearances and approvals.

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2. Fees; Expenses; Other Arrangements.

A. Placement Agent's Fee. As compensation for services rendered, the Company shall pay to the Placement Agent in cash by wire transfer in immediately available funds to an account or accounts designated by the Placement Agent an amount (the "Placement Fee") equal to seven percent (7.0%) of the aggregate gross proceeds received by the Company from the sale of the Securities in the Offering, at the closing (the "Closing" and the date on which the Closing occurs, the "Closing Date"). The Placement Agent may deduct from the net proceeds of the Offering payable to the Company on the Closing Date the Placement Fee set forth herein to be paid by the Company to the Placement Agent. For the avoidance of doubt there will be no fee owed to Placement Agent associated with any exercises of the Warrants issued in the financing.

B. Reserved.

C. Offering Expenses. The Company will be responsible for and will pay all expenses relating to the Offering, including, without limitation, (1) all filing fees and expenses relating to the registration of the Securities with the Commission; (2) all FINRA Public Offering filing fees; (3) all fees and expenses relating to the listing of the Company's common stock on the Nasdaq Stock Market or the NYSE American or on such other stock exchanges as the Company and Placement Agent together determine; (4) all fees, expenses and disbursements relating to the registration or qualification of the Securities under the "blue sky" securities laws of such states and other jurisdictions as Placement Agent may reasonably designate (including, without limitation, all filing and registration fees, and the reasonable fees and disbursements of "blue sky" counsel, which will be Placement Agent's counsel, it being agreed that such fees and expenses will be limited to: (a) the NYSE American or Nasdaq Stock Market, the Company will make a payment of $10,000 to such counsel at Closing and (b) if the Offering is not conducted on a national securities exchange, the Company will make a payment of $25,000 to such counsel at Closing; (5) all fees, expenses and disbursements relating to the registration, qualification or exemption of the Securities under the securities laws of such foreign jurisdictions as Dawson may reasonably designate; (6) the costs of all mailing and printing of the placement agent documents and Offering documents; (7) transfer and/or stamp taxes, if any, payable upon the transfer of Securities from the Company to Dawson; (8) the fees and expenses of the Company's accountants; (9) the fees and expenses of the Company's legal counsel and other agents and representatives; (10) up to $10,000 to cover Placement Agent's actual "road show" expenses for the Offering; and (11) up to $125,000 of Dawson's legal and additional diligence expenses not covered by the provisions and terms of this Section 2.C.; provided, however, that in the event that the Offering is terminated, the Company agrees to reimburse the Placement Agent to the extent required by Section 5 hereof; provided, that if the Offering does not result in the Company receiving at least $10,000,000 in gross proceeds, the cap on such expenses shall be $75,000.

D. Tail Financing. The Placement Agent shall be entitled to fees per Section 2.A. of this Agreement with respect to any public or private offering or other financing or capital-raising transaction of any kind ("Tail Financing") to the extent that (i) such Tail Financing is provided to the Company by any investors that the Placement Agent has contacted or introduced to the Company during the term of the Placement Agent's engagement for this Offering and (ii) such Tail Financing is consummated at any time within the nine month period following the Closing Date. The Tail Financing excludes any sales of common stock by the Company in any At-the-Market (ATM) offering.

3. Description of the Offering.

The Securities to be offered directly to various investors (each, an "Investor" or "Purchaser" and, collectively, the "Investors" or the "Purchasers") in the Offering shall

consist of shares of Series H Convertible Preferred Stock ("Preferred Stock" or "Shares"), with each Share accompanied by a warrant to purchase a share of Preferred Stock ("Warrants" and together with the Shares, the "Securities"). The purchase price shall be $[___] per Share (the "Purchase Price"). If the Company shall default in its obligations to deliver Securities to a Purchaser whose offer it has accepted and who has tendered payment, the Company shall indemnify and hold the Placement Agent harmless against any loss, claim, damage or expense arising from or as a result of such default by the Company under this Agreement.

4. Delivery and Payment; Closing.

Unless otherwise agreed in writing by the Placement Agent and the Company, settlement of the Securities purchased by an Investor shall be made by 5:00 p.m. on the Closing Date by wire transfer from the Placement Agent in federal (same day) funds, payable to the order of the Company after electronic delivery of the Shares via the DWAC system (or such other method agreed to by the parties) in accordance with the Placement Agent's instructions as requested in writing prior to the Closing Date. The term "Business Day" means any day other than a Saturday, a Sunday or a legal holiday or a day on which banking institutions are authorized or obligated by law to close in New York, New York.

The Closing shall occur at such place as shall be agreed upon by the Placement Agent and the Company. In the absence of an agreement to the contrary, each Closing shall take place at the offices of ArentFox Schiff LLP, 1717 K Street, NW, Washington, DC 20006. Deliveries of the documents with respect to the purchase of the Securities, if any, shall be made at the offices of ArentFox Schiff LLP, 1717 K Street, NW, Washington, DC 20006 on the Closing Date. All actions taken at a Closing shall be deemed to have occurred simultaneously.

5. Term and Termination of Agreement.

The term of this Agreement will commence upon the execution of this Agreement and will automatically terminate at the earlier of the Closing of the Offering or 11:59 p.m. (New York Time) on [____], 2025. Notwithstanding anything to the contrary contained herein, any provision in this Agreement concerning or relating to confidentiality, indemnification, contribution, advancement, the Company's representations and warranties and the Company's obligations to pay fees and reimburse expenses will survive any expiration or termination of this Agreement. If any condition specified in Section 8 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 those portions of this Agreement specified in Section 19 shall at all times be effective and shall survive such termination. Notwithstanding anything to the contrary in this Agreement, in the event that this Agreement shall not be carried out for any reason whatsoever, within the time specified herein or any extensions thereof pursuant to the terms herein, the Company shall be obligated to pay to the Placement Agent the expenses provided for in Section 2.B. above and upon demand the Company shall pay the full amount thereof to the Placement Agent.

6. Permitted Acts.

Nothing in this Agreement shall be construed to limit the ability of the Placement Agent, its officers, directors, employees, agents, associated persons and any individual or entity "controlling," controlled by," or "under common control" with the Placement Agent (as those terms are defined in Rule 405 under the Securities Act) to conduct its business including without limitation the ability to pursue, investigate, analyze, invest in, or engage in investment banking, financial advisory or any other business relationship with any 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.

7. Representations, Warranties and Covenants of the Company.

As of the date and time of the execution of this Agreement, the Closing Date and the Initial Sale Time (as defined herein), the Company represents, warrants and covenants to the Placement Agent, other than as disclosed in any of its filings with the Securities and Exchange Commission (the "Commission"), that:

A. Registration Matters.

i. The Company has filed the Registration Statement with the Commission, including a prospectus, for the registration of the Securities under the Securities Act and the rules and regulations thereunder (the "Securities Act Regulations"). The registration statement has been declared effective under the Securities Act by the Commission. The "Registration Statement," as of any time, means such registration statement as amended by any post-effective amendments thereto to such time, including the exhibits and any schedules thereto at such time, the documents incorporated or deemed to be incorporated by reference therein at such time pursuant to Form S-1 under the Securities Act and the documents otherwise deemed to be a part thereof as of such time pursuant to Rule 430B under the Securities Act Regulations ("Rule 430B"); provided, however, that the "Registration Statement" without reference to a time means such registration statement as amended by any post-effective amendments thereto as of the time of the first contract of sale for the Securities, which time shall be considered the "new effective date" of such registration statement with respect to the Securities within the meaning of paragraph (f)(2) of Rule 430B, including the exhibits and schedules thereto as of such time, the documents incorporated or deemed incorporated by reference therein at such time pursuant to Form S-1 under the Securities Act and the documents otherwise deemed to be a part thereof as of such time pursuant to Rule 430B. The term "Preliminary Prospectus" means any preliminary form of the Prospectus, including any preliminary prospectus supplement specifically related to the Securities filed with the Commission by the Company with the consent of the Placement Agent.

ii. All references in this Agreement to financial statements and schedules and other information which is "contained," "included" or "stated" (or other references of like import) in the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to include all such financial statements and schedules and other information incorporated or deemed incorporated by reference in the Registration Statement, such Preliminary Prospectus or the Prospectus, as the case may be, prior to the execution and delivery of this Agreement; and all references in this Agreement to amendments or supplements to the Registration Statement, any Preliminary Prospectus or the Prospectus shall be deemed to include the filing of any document under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and the rules and regulations thereunder (the "Exchange Act Regulations"), incorporated or deemed to be incorporated by reference in the Registration Statement, such Preliminary Prospectus or the Prospectus, as the case may be, at or after the execution and delivery of this Agreement.

iii. The term "Disclosure Package" means (i) the Preliminary Prospectus, as most recently amended or supplemented immediately prior to the Initial Sale Time (as defined herein), and (ii) the Issuer Free Writing Prospectuses (as defined below), if any, identified in Schedule I hereto.

iv. The term "Issuer Free Writing Prospectus" means any issuer free writing prospectus, as defined in Rule 433 of the Securities Act Regulations. The term "Free Writing Prospectus" means any free writing prospectus, as defined in Rule 405 of the Securities Act Regulations.

v. Any Preliminary Prospectus when filed with the Commission, and the Registration Statement as of each effective date and as of the date hereof, complied or will comply, and the Prospectus and any further amendments or supplements to the Registration Statement, any Preliminary Prospectus or the Prospectus will, when they become effective or are filed with the Commission, as the case may be, comply, in all material respects, with the requirements of the Securities Act and the Securities Act Regulations; and the documents incorporated by reference in the Registration Statement, any Preliminary Prospectus or the Prospectus complied, and any further documents so incorporated will comply, when filed with the Commission, in all material respects to the requirements of the Exchange Act and Exchange Act Regulations.

vi. The issuance by the Company of the Securities has been registered under the Securities Act. The Securities will be issued pursuant to the Registration Statement and each of the Securities will be freely transferable and freely tradable by each of the Investors without restriction, unless otherwise restricted by applicable law or regulation.

B. Stock Exchange Listing. The Common Stock is approved for listing on the NYSE American (the "Exchange") and the Company has taken no action designed to, or likely to have the effect of, delisting the shares of Common Stock from the Exchange, nor has the Company, except as otherwise disclosed in the Disclosure Package, received any notification that the Exchange is contemplating terminating such listing.

C. No Stop Orders, etc. Neither the Commission nor, to the Company's knowledge, any state regulatory authority has issued any order preventing or suspending the use of the Registration Statement, any Preliminary Prospectus or the Prospectus or has instituted or, to the Company's knowledge, threatened to institute, any proceedings with respect to such an order. The Company has complied with each request (if any) from the Commission for additional information.

D. Subsidiaries. The Company's subsidiaries have been duly incorporated and are validly existing as entities in good standing under the laws of jurisdictions of their respective organization, with power and authority to own, lease and operate their respective properties and conduct their respective businesses as described in the Preliminary Prospectus, and have been duly qualified as foreign corporations for the transaction of business and are in good standing under the laws of each other jurisdictions in which they own or lease properties or conduct any business so as to require such qualification, except where the failure so to qualify or be in good standing would not have a Material Adverse Change (as defined below); all of the issued and outstanding capital stock (or other ownership interests) of such subsidiaries has been duly and validly authorized and issued, is fully paid and non-assessable and is owned, directly and indirectly, by the Company free and clear of any security interest, mortgage, pledge, lien, encumbrance, claim or equity. Unless otherwise set forth, all references in this Section 7 to the "Company" shall include references to all such subsidiaries.

E. Disclosures in Registration Statement.

i. Compliance with Securities Act and 10b-5 Representation.

(a) Each of the Registration Statement and any post-effective amendment thereto, at the time it became effective, complied in all material respects with the requirements of the Securities Act and the Securities Act Regulations. The Preliminary Prospectus and the Prospectus, at the time each was or will be filed with the Commission, complied or will comply in all material respects with the requirements of the Securities Act and the Securities Act Regulations. The Preliminary Prospectus delivered to the Placement Agent for use in connection with this Offering and the Prospectus was or will be identical to the electronically transmitted copies thereof filed with the Commission pursuant to EDGAR, except to the extent permitted by Regulation S-T.

(b) None of the Registration Statement, any amendment thereto, or the Preliminary Prospectus, as of [___] p.m. (Eastern time) on June [__], 2025 (the "Initial Sale Time"), and at the Closing Date, contained, contains or will contain an untrue statement of a material fact or omitted, omits or will omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading; provided, however, that this representation and warranty shall not apply to statements made or statements omitted in reliance upon and in conformity with written information furnished to the Company with respect to the Placement Agent by the Placement Agent expressly for use in the Registration Statement or any amendment thereof or supplement thereto. The parties acknowledge and agree that such information provided by or on behalf of any Placement Agent consists solely of the following disclosure contained in the following paragraphs in the "Plan of Distribution" section of the Prospectus: (i) the name of the Placement Agent, and (ii) the information under the subsection "Fees and Expenses" (the "Placement Agent's Information").

(c) The Disclosure Package, as of the Initial Sale Time and at the Closing Date, did not, does not and will not include 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; and each Issuer Free Writing Prospectus does not conflict with the information contained in the Registration Statement, any Preliminary Prospectus, or the Prospectus, and each such Issuer Free Writing Prospectus, as supplemented by and taken together with the Preliminary Prospectus as of the Initial Sale Time, did not include an 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; provided, however, that this representation and warranty shall not apply to statements made or statements omitted in reliance upon and in conformity with written information furnished to the Company with respect to the Placement Agent by the Placement Agent expressly for use in the Registration Statement, the Preliminary Prospectus or the Prospectus or any amendment thereof or supplement thereto. The parties acknowledge and agree that such information provided by or on behalf of any Placement Agent consists solely of the Placement Agent's Information; and

(d) Neither the Prospectus nor any amendment or supplement thereto, as of its issue date, at the time of any filing with the Commission pursuant to Rule 424(b), or at the Closing Date, included, includes or will include an untrue statement of a material fact or omitted, omits or will 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; provided, however, that this representation and warranty shall not apply to the Placement Agent's Information.

ii. Disclosure of Agreements. The agreements and documents described in the Registration Statement, the Disclosure Package and the Prospectus 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 Securities Act Regulations to be described in the Registration Statement, the Disclosure Package and the Prospectus 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 Disclosure Package and the Prospectus, and (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 therefor may be brought. None of such agreements or instruments has been assigned by the Company, and neither the Company nor, to the Company's knowledge, any other party is in default thereunder and, to 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, except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus. To 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, rule, regulation, judgment, order or decree of any governmental agency or court, domestic or foreign, having jurisdiction over the Company or any of its assets or businesses (each, a "Governmental Entity"), including, without limitation, those relating to environmental laws and regulations.

iii. Prior Securities Transactions. For the past three completed fiscal years through the date hereof, no securities of the Company have been sold by the Company or, to the Company's knowledge, by or on behalf of, or for the benefit of, any person or persons controlling, controlled by or under common control with the Company, except as disclosed in the Registration Statement, the Disclosure Package and the Preliminary Prospectus or, with respect to parties other than the Company, other filings by such other persons with the Commission.

iv. Regulations. The disclosures in the Registration Statement, the Disclosure Package and the Prospectus concerning the effects of federal, state, local and all foreign regulation on the Offering and the Company's business as currently contemplated are correct in all material respects and no other such regulations are required to be disclosed in the Registration Statement, the Disclosure Package and the Prospectus which are not so disclosed.

v. Changes After Dates in Registration Statement.

(a) No Material Adverse Change. Since the respective dates as of which information is given in the Registration Statement, the Disclosure Package and the Prospectus, except as otherwise specifically stated therein: (i) there has been no material adverse change in the financial position or results of operations of the Company, nor any change or development that, singularly or in the aggregate, would involve a material adverse change, in or affecting the condition (financial or otherwise), results of operations, business, assets or prospects of the Company (a "Material Adverse Change"); (ii) there have been no material transactions entered into by the Company, other than as contemplated pursuant to this Agreement; and (iii) no officer or director of the Company has resigned from any position with the Company.

(b) Recent Securities Transactions, etc. Subsequent to the respective dates as of which information is given in the Registration Statement, the Disclosure Package and the Prospectus, and except as may otherwise be indicated or contemplated herein or disclosed in the Registration Statement, the Disclosure Package and the Prospectus, the Company has not: (i) issued any securities (other than (a) grants under any stock compensation plan and (b) shares of common stock issued upon exercise or conversion of options, warrants or convertible securities described in the Registration Statement, the Disclosure Package and the Prospectus) 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.

F. Independent Accountants. To the knowledge of the Company, Cherry Bekaert, LLP, during such time as it was engaged by the Company (the "Auditors"), has been an independent registered public accounting firm as required by the Securities Act and the Securities Act Regulations and the Public Company Accounting Oversight Board. During such time period in which the Auditors served as the Company's independent registered public accounting firm the Auditors did not or have not, during the periods covered by the financial statements included in the Registration Statement, the Disclosure Package and the Prospectus, provided to the Company any non-audit services, as such term is used in Section 10A(g) of the Exchange Act.

G. SEC Reports; Financial Statements, etc. The Company has complied in all material respects with requirements to file all reports, schedules, forms, statements and other documents required to be filed by it under the Securities Act and the Exchange Act, including pursuant to Section 13(a) or 15(d) thereof (the foregoing materials, including the exhibits thereto and documents incorporated by reference therein, 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 and the rules and regulations of the Commission promulgated thereunder, 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 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 year-end audit adjustments that are not expected to be material in the aggregate. The financial statements, including the notes thereto and supporting schedules included in the Registration Statement, the Disclosure Package and the Prospectus, fairly present in all material respects the financial position and the results of operations of the Company at the dates and for the periods to which they apply; and such financial statements have been prepared in conformity with GAAP, consistently applied throughout the periods involved (provided that unaudited interim financial statements are subject to year-end audit adjustments that are not expected to be material in the aggregate and do not contain all footnotes required by GAAP); and the supporting schedules included in the Registration Statement present fairly in all material respects the information required to be stated therein. Except as included therein, no historical or pro forma financial statements are required to be included in the Registration Statement, the Disclosure Package or the Prospectus under the Securities Act or the Securities Act Regulations. The pro forma and pro forma as adjusted financial information and the related notes, if any, included in the Registration Statement, the Disclosure Package and the Prospectus have been properly compiled and prepared in all material respects in accordance with the applicable requirements of the Securities Act and the Securities Act Regulations and present fairly in all material respects the information shown therein, and the assumptions used in the preparation thereof are reasonable and the adjustments used therein are appropriate to give effect to the transactions and circumstances referred to therein. All disclosures contained in the Registration Statement, the Disclosure Package or the Prospectus regarding "non-GAAP financial measures" (as such term is defined by the rules and regulations of the Commission), if any, comply with Regulation G of the Exchange Act and Item 10 of Regulation S-K of the Securities Act, to the extent applicable. Each of the Registration Statement, the Disclosure Package and the Prospectus discloses all material off-balance sheet transactions, arrangements, obligations (including contingent obligations), and other relationships of the Company with unconsolidated entities or other persons that may have a material current or future effect on the Company's financial condition, changes in financial condition, results of operations, liquidity, capital expenditures, capital resources, or significant components of revenues or expenses. Except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, (a) the Company has not incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions other than in the ordinary course of business, (b) the Company has not declared or paid any dividends or made any distribution of any kind with respect to its capital stock, (c) there has not been any change in the capital stock of the Company (other than (i) grants under any stock compensation plan and (ii) shares of common stock issued upon exercise or conversion of option, warrants or convertible securities described in the Registration Statement, the Disclosure Package and the Prospectus), and (d) there has not been any Material Adverse Change in the Company's long-term or short-term debt.

H. Authorized Capital; Options, etc. The Company had, at the date or dates indicated in the Registration Statement, the Disclosure Package and the Prospectus, the duly authorized, issued and outstanding capitalization as set forth therein. Based on the assumptions stated in the Registration Statement, the Disclosure Package and the Prospectus, the Company will have on the Closing Date the adjusted stock capitalization set forth therein. Except as set forth in, or contemplated by, the Registration Statement, the Disclosure Package and the Prospectus, on the Effective Date, as of the Initial Sale Time, on the Closing Date, there will be no stock options, warrants, or other rights to purchase or otherwise acquire any authorized, but unissued shares of Common Stock of the Company or any security convertible or exercisable into shares of Common Stock of the Company, or any contracts or commitments to issue or sell shares of Common Stock or any such options, warrants, rights or convertible securities.

I. Valid Issuance of Securities, etc.

i. Outstanding Securities. All issued and outstanding securities of the Company issued prior to the transactions contemplated by this Agreement have been duly authorized and validly issued and are fully paid and non-assessable; the holders thereof have no rights of rescission with respect thereto, and are not subject to personal liability by reason of being such holders; and except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, none of such securities were issued in violation of the preemptive rights of any holders of any security of the Company or similar contractual rights granted by the Company. The authorized shares of Common Stock, Company preferred stock and other outstanding securities conform in all material respects to all statements relating thereto contained in the Registration Statement, the Disclosure Package and the Prospectus. The offers and sales of the outstanding shares of Common Stock 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 of such shares, exempt from such registration requirements.

ii. Securities Sold Pursuant to this Agreement. The Preferred Stock sold in the Offering has been duly authorized for issuance and sale and, when issued and paid for, will be validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders; and the Preferred Stock is 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 Preferred Stock and the Warrants has been duly and validly taken. The Preferred Stock underlying the Warrants has been duly authorized and reserved for issuance by all necessary corporate action on the part of the Company and when issued in accordance with the terms of the Warrant, as applicable, such Preferred Stock will be validly issued, fully paid and non-assessable; the holders thereof are not and will not be subject to personal liability by reason of being such holders; and such shares of Preferred Stock 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. The Securities conform in all material respects to all statements with respect thereto contained in the Registration Statement, the Disclosure Package and the Prospectus.

J. Reserved.

K. Validity and Binding Effect of Agreements. This Agreement and the Transaction Documents have been duly and validly authorized by the Company, and, when executed and delivered, will constitute, the valid and binding agreements of the Company, enforceable against the Company in accordance with its respective terms, except: (i) as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting creditors' rights generally; (ii) as enforceability of any indemnification or contribution provision may be limited under the federal and state securities laws; and (iii) that the remedy of specific performance and injunctive and other forms of equitable relief may be subject to the equitable defenses and to the discretion of the court before which any proceeding therefor may be brought.

L. No Conflicts, etc. The execution, delivery and performance by the Company of this Agreement, the Transaction Documents and all ancillary documents, the consummation by the Company of the transactions herein and therein contemplated and the compliance by the Company with the terms hereof and thereof do not and will not, with or without the giving of notice or the lapse of time or both: (i) result in a material breach of, or conflict with any of the terms and provisions of, or constitute a material default under, or result in the creation, modification, termination or imposition of any lien, charge or encumbrance upon any property or assets of the Company pursuant to the terms of any agreement or instrument to which the Company is a party; (ii) result in any violation of the provisions of the Company's Certificate of Incorporation (as the same may be amended or restated from time to time, the "Charter") or the by-laws of the Company (as the same may be amended or restated from time to time, the "Bylaws"); or (iii) violate any existing applicable law, rule, regulation, judgment, order or decree of any Governmental Entity as of the date hereof.

M. Reserved.

N. No Defaults; Violations. No material default exists in the due performance and observance of any term, covenant or condition of any material license, contract, indenture, mortgage, deed of trust, note, loan or credit agreement, or any other agreement or instrument evidencing an obligation for borrowed money, or any other material agreement or instrument to which the Company is a party or by which the Company may be bound or to which any of the properties or assets of the Company is subject. The Company is not (i) in violation of any term or provision of its Charter or Bylaws, or (ii) in violation of any franchise, license, permit, applicable law, rule, regulation, judgment or decree of any Governmental Entity applicable to the Company.

O. Corporate Power; Licenses; Consents.

i. Except as described in the Registration Statement, the Disclosure Package and the Prospectus, the Company has all requisite corporate power and authority, and, except as would not reasonably be expected to result in a Material Adverse Change, has all necessary authorizations, approvals, orders, licenses, certificates and permits of and from all governmental regulatory officials and bodies that it needs as of the date hereof to conduct its business purpose as described in the Registration Statement, the Disclosure Package and the Prospectus.

ii. The Company has all corporate power and authority to enter into this Agreement and to carry out the provisions and conditions hereof, and all consents, authorizations, approvals and orders required in connection therewith have been obtained. No consent, authorization or order of, and no filing with, any court, government agency or other body is required for the valid issuance, sale and delivery of the Preferred Stock, and the shares of Preferred Stock underlying the Warrants, and the consummation of the transactions and agreements contemplated by this Agreement and as contemplated by the Registration Statement, the Disclosure Package and the Prospectus, except with respect to applicable federal and state securities laws and the rules and regulations of the Financial Industry Regulatory Authority, Inc. ("FINRA").

P. Litigation; Governmental Proceedings. There is no material action, suit, proceeding, inquiry, arbitration, investigation, litigation or governmental proceeding pending or, to the Company's knowledge, threatened against, or involving the Company or, to the Company's knowledge, any executive officer or director which has not been disclosed in the Registration Statement, the Disclosure Package and the Prospectus or in connection with the Company's listing application for the additional listing of the Common Stock on the Exchange.

Q. Good Standing. The Company has been duly organized and is validly existing as a corporation and is in good standing under the laws of the State of Florida as of the date hereof, and is duly qualified to do business and is in good standing in each other jurisdiction in which its ownership or lease of property or the conduct of business requires such qualification, except where the failure to qualify, singularly or in the aggregate, would not have or reasonably be expected to result in a Material Adverse Change.

R. Insurance. The Company carries or is entitled to the benefits of insurance, with, to the Company's knowledge, reputable insurers, and in such amounts and covering such risks which the Company believes are reasonably adequate, and all such insurance is in full force and effect. The Company has no reason to believe that it will not be able (i) to renew its existing insurance coverage as and when such policies expire or (ii) to obtain comparable coverage from similar institutions as may be necessary or appropriate to conduct its business as now conducted and at a cost that would not result in a Material Adverse Change.

S. Transactions Affecting Disclosure to FINRA.

i. Finder's Fees. Except as described in the Registration Statement, the Disclosure Package and the Prospectus, there are no claims, payments, arrangements, agreements or understandings relating to the payment of a finder's, consulting or origination fee by the Company or any executive officer or director of the Company (each an, "Insider") with respect to the sale of the Securities hereunder or any other arrangements, agreements or understandings of the Company or, to the Company's knowledge, any of its stockholders that may affect the Placement Agent's compensation, as determined by FINRA.

ii. Payments Within Twelve (12) Months. Except as described in the Registration Statement, the Disclosure Package and the Prospectus, the Company has not made 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; or (iii) any person or entity that has any direct or indirect affiliation or association with any FINRA member, within the twelve (12) months prior to the date hereof, other than (A) the payment to the Placement Agent as provided hereunder in connection with the Offering, and (B) other payments to the Placement Agent under other engagement letters.

iii. Use of Proceeds. None of the net proceeds of the Offering will be paid by the Company to any participating FINRA member or its affiliates, except as specifically authorized herein.

iv. FINRA Affiliation. There is no (i) officer or director of the Company, (ii) to the Company's knowledge, beneficial owner of 5% or more of any class of the Company's securities or (iii) to the Company's knowledge, beneficial owner of the Company's unregistered equity securities which were acquired during the 180-day period immediately preceding the filing of the Registration Statement that is an affiliate or associated person of a FINRA member participating in the Offering (as determined in accordance with the rules and regulations of FINRA).

v. Information. To the Company's knowledge, all information provided by the Company's officers and directors in their FINRA Questionnaires to counsel to the Placement Agent specifically for use by counsel to the Placement Agent in connection with its Public Offering System filings (and related disclosure) with FINRA is true, correct and complete in all material respects.

T. Foreign Corrupt Practices Act. Neither the Company nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company or any other person acting on behalf of the Company, has, directly or indirectly, given or agreed to give any money, gift or similar benefit (other than legal price concessions to customers in the ordinary course of business) to any customer, supplier, employee or agent of a customer or supplier, or official or employee of any Governmental Entity or any political party or candidate for office (domestic or foreign) or other person who was, is, or may be in a position to help or hinder the business of the Company (or assist it in connection with any actual or proposed transaction) that (i) would subject the Company to any damage or penalty in any civil, criminal or governmental litigation or proceeding, (ii) if not given in the past, would have had a Material Adverse Change or (iii) if not continued in the future, would adversely affect the assets, business, operations or prospects of the Company. 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 Foreign Corrupt Practices Act of 1977, as amended.

U. Compliance with OFAC. Neither of the Company nor, to the Company's knowledge, any director, officer, agent, employee or affiliate of the Company or any other person acting on behalf of the Company, is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Department of the Treasury ("OFAC"), and the Company will not knowingly, directly or indirectly, use the proceeds of the Offering hereunder, or lend, contribute or otherwise make available such proceeds to any subsidiary, joint venture partner or other person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

V. Money Laundering Laws. The operations of the Company are and have been conducted at all times in compliance in all material respects with applicable financial recordkeeping and reporting requirements of the Currency and Foreign Transactions Reporting Act of 1970, as amended, the money laundering statutes of all applicable jurisdictions, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any Governmental Entity (collectively, the "Money Laundering Laws"); and no action, suit or proceeding by or before any Governmental Entity involving the Company with respect to the Money Laundering Laws is pending or, to the knowledge of the Company, threatened.

W. Officers' Certificate. Any certificate signed by any duly authorized officer of the Company and delivered to you or to Placement Agent Counsel shall be deemed a representation and warranty by the Company to the Placement Agent as to the matters covered thereby.

X. Related Party Transactions. There are no business relationships or related party transactions involving the Company or any other person required to be described in the Registration Statement, the Disclosure Package and the Prospectus that have not been described as required.

Y. Board of Directors. The qualifications of the persons serving as board members and the overall composition of the board comply with the Exchange Act, the Exchange Act Regulations, the Sarbanes-Oxley Act of 2002 and the rules promulgated thereunder (the "Sarbanes-Oxley Act") applicable to the Company and the listing rules of the Exchange. At least one member of the Audit Committee of the Board of Directors of the Company qualifies as an "audit committee financial expert," as such term is defined under Regulation S-K and the listing rules of the Exchange. In addition, at least a majority of the persons serving on the Board of Directors qualify as "independent," as defined under the listing rules of the Exchange.

Z. Sarbanes-Oxley Compliance.

i. The Company has developed and currently maintains disclosure controls and procedures that will comply with Rule 13a-15 or 15d-15 under the Exchange Act Regulations applicable to it, and such controls and procedures are effective to ensure that all material information concerning the Company will be made known on a timely basis to the individuals responsible for the preparation of the Company's Exchange Act filings and other public disclosure documents.

ii. The Company is, or at the Initial Sale Time and on the Closing Date will be, in material compliance with the provisions of the Sarbanes-Oxley Act applicable to it, and has implemented or will implement such programs and taken reasonable steps to ensure the Company's future compliance (not later than the relevant statutory and regulatory deadlines therefor) with all of the material provisions of the Sarbanes-Oxley Act.

AA. Accounting Controls. The Company maintains systems of "internal control over financial reporting" (as defined under Rules 13a-15 and 15d-15 under the Exchange Act Regulations) that comply in all material respects with the requirements of the Exchange Act and have been designed by, or under the supervision of, its principal executive and principal financial officers, or persons performing similar functions, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with GAAP, including, but not limited to, internal accounting controls sufficient to provide reasonable assurance that (i) transactions are executed in accordance with management's general or specific authorizations; (ii) transactions are recorded as necessary to permit preparation of financial statements in conformity with GAAP and to maintain asset accountability; (iii) access to assets is permitted only in accordance with management's general or specific authorization; and (iv) the recorded accountability for assets is compared with the existing assets at reasonable intervals and appropriate action is taken with respect to any differences. Except as disclosed in the Registration Statement, the Disclosure Package and the Prospectus, the Company is not aware of any material weaknesses in its internal controls. The Auditors and the Audit Committee of the Board of Directors of the Company have been advised of: (i) all significant deficiencies and material weaknesses, if any, in the design or operation of internal controls over financial reporting which are known to the Company's management and that have adversely affected or are reasonably likely to adversely affect the Company' ability to record, process, summarize and report financial information; and (ii) any fraud, if any, known to the Company's management, whether or not material, that involves management or other employees who have a significant role in the Company's internal controls over financial reporting.

BB. No Investment Company Status. The Company is not and, after giving effect to the Offering and the application of the proceeds thereof as described in the Registration Statement, the Disclosure Package and the Prospectus, will not be, required to register as an "investment company," as defined in the Investment Company Act of 1940, as amended.

CC. No Labor Disputes. No labor dispute with the employees of the Company exists or, to the knowledge of the Company, is imminent, except where such dispute would not be expected to have a Material Adverse Change.

DD. Intellectual Property Rights. To the Company's knowledge, the Company has, or can acquire on reasonable terms, ownership of and/or license to, or otherwise has the right to use, all inventions, know-how (including trade secrets and other unpatented and/or unpatentable proprietary or confidential information, systems or procedures), patents and patent rights trademarks, service marks and trade names, copyrights, (collectively "Intellectual Property") material to carrying on its business as described in the Prospectus. The Company has not received any correspondence relating to (A) infringement or misappropriation of, or conflict with, any Intellectual Property of a third party; (B) asserted rights of others with respect to any Intellectual Property of the Company; or (C) assertions that any Intellectual Property of the Company is invalid or otherwise inadequate to protect the interest of the Company, that in each case (if the subject of any unfavorable decision, ruling or finding), individually or in the aggregate, would have or would reasonably be expected to have a Material Adverse Change. There are no third parties who have been able to establish any material rights to any Intellectual Property, except for the retained rights of the owners or licensors of any Intellectual Property that is licensed to the Company. There is no pending or, to the Company's knowledge, threatened action, suit, proceeding or claim by others: (A) challenging the validity, enforceability or scope of any Intellectual Property of the Company or (B) challenging the Company's rights in or to any Intellectual Property or (C) that the Company materially infringes, misappropriates or otherwise violates or conflicts with any Intellectual Property or other proprietary rights of others. The Company has complied in all material respects with the terms of each agreement described in the Registration Statement, Disclosure Package or Prospectus pursuant to which any Intellectual Property is licensed to the Company, and all such agreements related to products currently made or sold by the Company, or to product candidates currently under development, are in full force and effect. All patents issued in the name of, or assigned to, the Company, and all patent applications made by or on behalf of the Company (collectively, the "Company Patents") have been duly and properly filed. The Company is not aware of any material information that was required to be disclosed to the United States Patent and Trademark Office (the "PTO") but that was not disclosed to the PTO with respect to any issued Company Patent, or that is required to be disclosed and has not yet been disclosed in any pending application in the Company Patents and that would preclude the grant of a patent on such application. To the Company's knowledge, the Company is the sole owner of the Company Patents.

EE. Taxes. The Company has filed all returns (as hereinafter defined) required to be filed with taxing authorities prior to the date hereof or has duly obtained extensions of time for the filing thereof. The Company has paid all taxes (as hereinafter defined) shown as due on such returns that were filed and has paid all taxes imposed on or assessed against the Company, except for such exceptions as could not be expected, individually or in the aggregate, to have a Material Adverse Change. 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. Except as disclosed in writing to the Placement Agent, (i) no issues have been raised (and are currently pending) by any taxing authority in connection with any of the returns or taxes asserted as due from the Company, and (ii) no waivers of statutes of limitation with respect to the returns or collection of taxes have been given by or requested from the Company. The term "taxes" mean all federal, state, local, foreign and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments or charges of any kind whatever, together with any interest and any penalties, additions to tax or additional amounts with respect thereto. The term "returns" means all returns, declarations, reports, statements and other documents required to be filed in respect to taxes.

FF. Employee Benefit Laws. To the extent applicable, the operations of the Company and its subsidiaries are and have been conducted at all times in material compliance with the Employee Retirement Income Security Act of 1974, as amended, the rules and regulations thereunder and any applicable related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "Employee Benefit Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company or its subsidiaries with respect to the Employee Benefit Laws is pending or, to the knowledge of the Company, threatened.

GG. Compliance with Laws. The Company: (A) is and at all times has been in compliance with all Applicable Laws, except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Change; (B) has not received any correspondence from any Governmental Entity alleging or asserting noncompliance with any Applicable Laws or any Authorizations; (C) possesses all material Authorizations and such Authorizations are valid and in full force and effect and the Company is not in material violation of any term of any such Authorizations, in each case except as would not, individually or in the aggregate, reasonably be expected to have a Material Adverse Change; (D) has not received written notice of any claim, action, suit, proceeding, hearing, enforcement, investigation, arbitration or other action from any Governmental Entity or third party alleging that any product operation or activity is in violation of any Applicable Laws or Authorizations and has no knowledge that any such Governmental Entity or third party is considering any such claim, litigation, arbitration, action, suit, investigation or proceeding; (E) has not received written notice that any Governmental Entity has taken, is taking or intends to take action to limit, suspend, modify or revoke any Authorizations; (F) has filed, obtained, maintained or submitted all material reports, documents, forms, notices, applications, records, claims, submissions and supplements or amendments as required by any Applicable Laws or 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); and (G) has not, either voluntarily or involuntarily, initiated, conducted, or issued or caused to be initiated, conducted or issued, any recall, market withdrawal or replacement, safety alert, post-sale warning, "dear doctor" letter, or other notice or action relating to the alleged lack of safety or efficacy of any product or any alleged product defect or violation and, to the Company's knowledge, no third party has initiated, conducted or intends to initiate any such notice or action.

HH. FDA. As to each product subject to the jurisdiction of the U.S. Food and Drug Administration ("FDA") under the Federal Food, Drug and Cosmetic Act, as amended, and the regulations thereunder ("FDCA") that is manufactured, packaged, labeled, tested, distributed, sold, and/or marketed by the Company or any of its subsidiaries (each such product, a "Pharmaceutical Product"), such Pharmaceutical Product is being manufactured, packaged, labeled, tested, distributed, sold and/or marketed by the Company in compliance with all applicable requirements under FDCA and similar laws, rules and regulations relating to registration, investigational use, premarket clearance, licensure, or application approval, good manufacturing practices, good laboratory practices, good clinical practices, product listing, quotas, labeling, advertising, record keeping and filing of reports, except where the failure to be in compliance would not have a Material Adverse Effect. There is no pending, completed or, to the Company's knowledge, threatened, action (including any lawsuit, arbitration, or legal or administrative or regulatory proceeding, charge, complaint, or investigation) against the Company or any of its subsidiaries, and none of the Company or any of its subsidiaries has received any notice, warning letter or other communication from the FDA or any other governmental entity, which (i) contests the premarket clearance, licensure, registration, or approval of, the uses of, the distribution of, the manufacturing or packaging of, the testing of, the

sale of, or the labeling and promotion of any Pharmaceutical Product, (ii) withdraws its approval of, requests the recall, suspension, or seizure of, or withdraws or orders the withdrawal of advertising or sales promotional materials relating to, any Pharmaceutical Product, (iii) imposes a clinical hold on any clinical investigation by the Company or any of its subsidiaries, (iv) enjoins production at any facility of the Company or any of its subsidiaries, (v) enters or proposes to enter into a consent decree of permanent injunction with the Company or any of its subsidiaries, or (vi) otherwise alleges any violation of any laws, rules or regulations by the Company or any of its subsidiaries, and which, either individually or in the aggregate, would have a Material Adverse Effect. The properties, business and operations of the Company have been and are being conducted in all material respects in accordance with all applicable laws, rules and regulations of the FDA. The Company has not been informed by the FDA that the FDA will prohibit the marketing, sale, license or use in the United States of any product proposed to be developed, produced or marketed by the Company nor has the FDA expressed any concern as to approving or clearing for marketing any product being developed or proposed to be developed by the Company.

II. Industry Data. The statistical and market-related data included in each of the Registration Statement, the Disclosure Package and the Prospectus are based on or derived from sources that the Company reasonably and in good faith believes are reliable and accurate or represent the Company's good faith estimates that are made on the basis of data derived from such sources.

JJ. Forward-Looking Statements. No forward-looking statement (within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act) contained in the Registration Statement, the Disclosure Package or the Prospectus has been made or reaffirmed without a reasonable basis or has been disclosed other than in good faith.

KK. Margin Securities. The Company owns no "margin securities" as that term is defined in Regulation U of the Board of Governors of the Federal Reserve System (the "Federal Reserve Board"), and none of the proceeds of Offering will be used, directly or indirectly, for the purpose of purchasing or carrying any margin security, for the purpose of reducing or retiring any indebtedness which was originally incurred to purchase or carry any margin security or for any other purpose which might cause any of the shares of Common Stock to be considered a "purpose credit" within the meanings of Regulation T, U or X of the Federal Reserve Board.

LL. Integration. 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 the Offering to be integrated with prior offerings by the Company for purposes of the Securities Act that would require the registration of any such securities under the Securities Act.

MM. Confidentiality and Non-Competition. To the Company's knowledge, no director, officer, key employee or consultant of the Company is subject to any confidentiality, non-disclosure, non-competition agreement or non-solicitation agreement with any employer or prior employer that could reasonably be expected to materially affect his ability to be and act in his respective capacity of the Company or be expected to result in a Material Adverse Change.

NN. Restriction on Sales of Capital Stock. The Company, on behalf of itself and any successor entity, agrees that it will not, for a period of 180 days after the date of this Agreement, without the prior written consent of the Placement Agent (i) offer, pledge, sell, contract to sell, sell any option or contract to purchase, purchase any option or contract to sell, grant any option, right or warrant to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company; (ii) file or cause to be filed any registration statement with the Commission relating to the offering of any shares of capital stock of the Company or any securities convertible into or exercisable or exchangeable for shares of capital stock of the Company, other than pursuant to a registration statement on Form S-8 for employee benefit plans, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of shares of capital stock of the Company or such other securities, in cash or otherwise; or (iii) publicly announce an intention to effect any transaction specified in clause (i) or (ii). The restrictions contained in this section shall not apply to (i) the issuance by the Company of Common Stock upon the exercise of stock options, warrants or the conversion of a security, in each case, that is outstanding on the date hereof, (ii) the grant by the Company of stock options or other stock-based awards, or the issuance of shares of capital stock of the Company under any stock compensation plan of the Company in effect on the date hereof, or (iii) the utilization or undertaking of any At-the-Market (ATM) offering or registration statement.

OO. Reserved.

PP. Lock-Up Agreements. The Company has caused each of its officers and directors to deliver to the Placement Agent an executed Lock-Up Agreement, in such form as approved by the Placement Agent (the "Lock-Up Agreement"), prior to the execution of this Agreement.

8. 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 7 hereof, in each case as of the date hereof and as of the 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. Regulatory Matters.

i. Effectiveness of Registration Statement; Rule 424 Information. The Registration Statement is effective on the date of this Agreement, and, on the Closing Date no stop order suspending the effectiveness of the Registration Statement or any post-effective amendment thereto has been issued under the Securities Act, no order preventing or suspending the use of any Preliminary Prospectus or the Prospectus has been issued and no proceedings for any of those purposes have been instituted or are pending or, to the Company's knowledge, contemplated by the Commission. The Company has complied with each request (if any) from the Commission for additional information. All filings with the Commission required by Rule 424 under the Securities Act to have been filed by the Closing Date, shall have been made within the applicable time period prescribed for such filing by Rule 424.

ii. FINRA Clearance. If and to the extent required under applicable FINRA rules, on or before the Closing Date of this Agreement, the Placement Agent shall have received clearance from FINRA as to the amount of compensation allowable or payable to the Placement Agent as described in the Registration Statement.

iii. Listing of Additional Shares. On or before the Closing Date of this Agreement, the Company shall have submitted to NYSE American the Company's application for the additional listing of the securities sold in the Offering.

B. Company Counsel Matters.

i. On the Closing Date, the Placement Agent shall have received the favorable opinion of Shumaker, Loop & Kendrick, LLP, outside counsel for the Company, dated the Closing Date and addressed to the Placement Agent, substantially in form and substance reasonably satisfactory to the Placement Agent.

C. Comfort Letter. At the Closing Date, a cold comfort letter, addressed to the Placement Agent and in form and substance satisfactory in all respects to the Placement Agent from the Company's Auditor dated as of the date of this Agreement accompanied by a bring-down letter dated as of the Closing Date.

D. Officers' Certificates.

i. Officers' Certificate. The Company shall have furnished to the Placement Agent a certificate, dated the Closing Date, of its Chief Executive Officer and its Chief Financial Officer stating that (i) such officers have carefully examined the Registration Statement, the Disclosure Package, any Issuer Free Writing Prospectus and the Prospectus and, in their opinion, the Registration Statement and each amendment thereto, as of the Initial Sale Time and through the Closing Date did not include any untrue statement of a material fact and did not omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading, and the Disclosure Package, as of the Initial Sale Time through the Closing Date, any Issuer Free Writing Prospectus as of its date and as of the Closing Date, the Prospectus and each amendment or supplement thereto, as of the respective date thereof and as of the Closing Date, did not include any untrue statement of a material fact and did not omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances in which they were made, not misleading, (ii) since the filing of the most recent Form 10-Q, no event has occurred which should have been set forth in a supplement or amendment to the Registration Statement, the Disclosure Package or the Prospectus, other than those events set forth in the Company's Current Reports on Form 8-K filed after the date of the most recent Form 10-Q, (iii) to their knowledge after reasonable investigation, as of the Closing Date, the representations and warranties of the Company in this Agreement are true and correct, and the Company has complied with all agreements and satisfied all conditions on its part to be performed or satisfied hereunder at or prior to the Closing Date, and (iv) there has not been, subsequent to the date of the most recent audited financial statements included in the Disclosure Package, any Material Adverse Change in the financial position or results of operations of the Company, or any change or development that, singularly or in the aggregate, would involve a Material Adverse Change or a prospective Material Adverse Change, in or affecting the condition (financial or otherwise), results of operations, business, assets or prospects of the Company, except as set forth in the Prospectus.

ii. Secretary's Certificate. As of the Closing Date the Placement Agent shall have received a certificate of the Company signed by the Secretary of the Company, dated the Closing Date, certifying: (i) that each of the Company's Charter and Bylaws is true and complete, has not been modified and is in full force and effect; (ii) that the resolutions of the Company's Board of Directors relating to the Offering are in full force and effect and have not been modified; and (iii) the good standing of the Company and its U.S. subsidiaries. The documents referred to in such certificate shall be attached to such certificate.

E. No Material Changes. Prior to and on the Closing Date: (i) there shall have been no Material Adverse Change or development involving a prospective Material Adverse Change in the condition or prospects 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, the Disclosure Package and the Prospectus; (ii) no action, suit or proceeding, at law or in equity, shall have been pending or threatened against the Company or any affiliates of the Company before or by any court or federal or state commission, board or other administrative agency wherein an unfavorable decision, ruling or finding may materially adversely affect the business, operations, prospects or financial condition or income of the Company, except as set forth in the Registration Statement, the Disclosure Package and the Prospectus; (iii) no stop order shall have been issued under the Securities Act and no proceedings therefor shall have been initiated or threatened by the Commission; and (iv) the Registration Statement, the Disclosure Package and the Prospectus and any amendments or supplements thereto shall contain all material statements which are required to be stated therein in accordance with the Securities Act and the Securities Act Regulations and shall conform in all material respects to the requirements of the Securities Act and the Securities Act Regulations, and neither the Registration Statement, the Disclosure Package nor the Prospectus nor any amendment or supplement thereto shall 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, in light of the circumstances under which they were made, not misleading.

F. Reservation of Common Stock. So long as any Shares or Warrants remain outstanding, the Company shall take all action necessary to at all times have authorized, and reserved for the purpose of issuance, no less than 100% of the maximum number of shares of the Company's common stock issuable upon conversion of the Preferred Stock, including the Preferred Stock issuable upon exercise of the Warrants.

G. Delivery of Agreements.

(i) Lock-Up Agreements. On or before the date of this Agreement, the Company shall have delivered to the Placement Agent executed copies of the Lock-Up Agreements from each of the Company and its officers and directors.

H. Additional Documents. At the Closing Date, Placement Agent Counsel shall have been furnished with such documents and opinions as they may reasonably require in order to evidence the accuracy of any of the representations or warranties, or the fulfillment of any of the conditions, herein contained; and all proceedings taken by the Company in connection with the issuance and sale of the Securities as herein contemplated shall be satisfactory in form and substance to the Placement Agent and Placement Agent Counsel.

9. Indemnification and Contribution; Procedures.

A. Indemnification of the Placement Agent. The Company agrees to indemnify and hold harmless the Placement Agent, its affiliates and each person controlling such 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 hereafter is referred to as 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 counsel for the Indemnified Persons, except as otherwise expressly provided in this Agreement) (collectively, the "Expenses") and agrees to advance payment of such 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, arising out of or based upon any untrue statement or alleged untrue statement of a material fact contained in (i) the Registration Statement, the Disclosure Package, the Preliminary Prospectus, the Prospectus or in any Issuer Free Writing Prospectus (as from time to time each may be amended and supplemented); (ii) any materials or information provided to investors by, or with the approval of, the Company in connection with the marketing of the Offering, including any "road show" or investor presentations made to investors by the Company (whether in person or electronically); or (iii) any application or other document or written communication (in this Section 9, collectively called "application") executed by the Company or based upon written information furnished by the Company in any jurisdiction in order to qualify the Securities under the securities laws thereof or filed with the Commission, any state securities commission or agency, any national securities exchange; or the omission or alleged omission therefrom of 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, unless such statement or omission was made in reliance upon, and in conformity with, the Placement Agent's information. The Company also agrees to reimburse each Indemnified Person for all Expenses as they are reasonably incurred in connection with such Indemnified Person's enforcement of his or its rights under this Agreement. Each Indemnified Person is an intended third party beneficiary with the same rights to enforce the indemnification that each Indemnified Person would have if he was a party to this Agreement.

B. Procedure. Upon receipt by an Indemnified Person of actual notice of an action against such Indemnified Person with respect to which indemnity, contribution or advancement of expenses may reasonably be expected to 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 obligation or liability which the Company may have on account of this Section 9 or otherwise to such Indemnified Person, except to the extent (and only to the extent) that its ability to assume the defense is actually impaired by such failure or delay. The Company shall, if requested by the Placement Agent, assume the defense of any such action (including the employment of counsel and reasonably satisfactory to the Placement Agent). 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 for the benefit of the

Placement Agent and the other Indemnified Persons or (ii) such Indemnified Person shall have been advised that in the opinion of counsel that there is an actual or potential conflict of interest that prevents (or makes it imprudent for) the counsel engaged by the Company for the purpose of representing the Indemnified Person, to represent both such Indemnified Person and any other person represented or proposed to be represented by such counsel, it being understood, however, that the Company shall not be liable for the expenses of more than one separate counsel (together with local counsel), representing the Placement Agent and all Indemnified persons who are parties to such action. 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, 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 advancement, reimbursement, indemnification or contribution may be sought hereunder (whether or not such Indemnified Person is a party thereto) unless such settlement, compromise, consent or termination (i) includes an unconditional release of each Indemnified Person, acceptable to such Indemnified Party, from all Liabilities arising out of such action for which indemnification or contribution may be sought hereunder and (ii) does not include a statement as to or an admission of fault, culpability or a failure to act, by or on behalf of any Indemnified Person. The advancement, reimbursement, indemnification and contribution obligations of the Company required hereby shall be made by periodic payments of the amount thereof during the course of the investigation or defense, as every Liability and Expense is incurred and is due and payable, and in such amounts as fully satisfy each and every Liability and Expense as it is incurred (and in no event later than 30 days following the date of any invoice therefor).

C. Indemnification of the Company. The Placement Agent agrees to indemnify and hold harmless the Company, its directors, its officers who signed the Registration Statement and persons who control the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act against any and all Liabilities, but only with respect to untrue statements or omissions, or alleged untrue statements or omissions made in the Registration Statement, any Preliminary Prospectus, the Disclosure Package or Prospectus or any amendment or supplement thereto, in reliance upon, and in strict conformity with, the Placement Agent's Information. In case any action shall be brought against the Company or any other person so indemnified based on any Preliminary Prospectus, the Registration Statement, the Disclosure Package or Prospectus or any amendment or supplement thereto, and in respect of which indemnity may be sought against the Placement Agent, the Placement Agent shall have the rights and duties given to the Company, and the Company and each other person so indemnified shall have the rights and duties given to the Placement Agent by the provisions of Section 9.B. The Company agrees promptly to notify the Placement Agent of the commencement of any litigation or proceedings against the Company or any of its officers, directors or any person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, in connection with the issuance and sale of the Securities or in connection with the Registration Statement, the Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, provided, that failure by the Company so to notify the Placement Agent shall not relieve the Placement Agent from any obligation or liability which the Placement Agent may have on account of this Section 9.C. or otherwise to the Company, except to the extent the Placement Agent is materially prejudiced as a proximate result of such failure..

D. Contribution. In the event that a court of competent jurisdiction makes a finding that indemnity is unavailable to any indemnified person, then each indemnifying party 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 commissions actually received by the Placement Agent pursuant to this Agreement. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company on the one hand or the Placement Agent on the other and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such statement or omission. The Company and the Placement Agent agree that it would not be just and equitable if contributions pursuant to this subsection (D) were determined by pro rata allocation or by any other method of allocation which does not take account of the equitable considerations referred to above in this subsection (D). 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 received by the Company in the Offering, whether or not such Offering is consummated, bears to (b) the commissions 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 shall be entitled to contribution from a party who was not guilty of fraudulent misrepresentation.

E. Limitation. 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 to the extent that a court of competent jurisdiction has made a finding that Liabilities (and related Expenses) of the Company have resulted primarily from such Indemnified Person's gross negligence or willful misconduct in connection with any such advice, actions, inactions or services.

F. Survival. The advancement, reimbursement, indemnity and contribution obligations set forth in this Section 9 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. Each Indemnified Person is an intended third-party beneficiary of this Section 9, and has the right to enforce the provisions of Section 9 as if he/she/it was a party to this Agreement.

10. Limitation of the Placement Agent's Liability to the Company.

The Placement Agent and the Company further agree that neither the Placement Agent nor any of its affiliates or any of their respective officers, directors, controlling persons (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act), employees or agents shall have any liability to the Company, its security holders or creditors, or any person asserting claims on behalf of or in the right of the Company (whether direct or indirect, in contract or tort, for an act of negligence or otherwise) for any losses, fees, damages, liabilities, costs, expenses or equitable relief arising out of or relating to this Agreement or the Services rendered hereunder, except for losses, fees, damages, liabilities, costs or expenses that arise out of or are based on any action of or failure to act by the Placement Agent and that are finally judicially determined to have resulted solely from the gross negligence or willful misconduct of the Placement Agent.

11. Limitation of Engagement to the Company.

The Company acknowledges that the Placement Agent has been retained only by the Company, that the Placement Agent is providing services hereunder as an independent contractor (and not in any fiduciary or agency capacity) and that the Company's engagement of the Placement Agent is not deemed to be on behalf of, and is not intended to confer rights upon, any shareholder, owner or partner of the Company or any other person not a party hereto as against the Placement Agent or any of its affiliates, or any of its or their respective officers, directors, controlling persons (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act), employees or agents. Unless otherwise expressly agreed in writing by the Placement Agent, no one other than the Company is authorized to rely upon any statement or conduct of the Placement Agent in connection with this Agreement. The Company acknowledges that any recommendation or advice, written or oral, given by the Placement Agent to the Company in connection with the Placement Agent's engagement is intended solely for the benefit and use of the Company's management and directors in considering a possible Offering, and any such recommendation or advice is not on behalf of, and shall not confer any rights or remedies upon, any other person or be used or relied upon for any other purpose. The Placement Agent shall not have the authority to make any commitment binding on the Company. The Company, in its sole discretion, shall have the right to reject any investor introduced to it by the Placement Agent. If any purchase agreement and/or related transaction documents are entered into between the Company and the investors in the Offering, the Placement Agent will be entitled to rely on the representations, warranties, agreements and covenants of the Company contained in any such purchase agreement and related transaction documents as if such representations, warranties, agreements and covenants were made directly to the Placement Agent by the Company.

12. Amendments and Waivers.

No supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the party to be bound thereby. The failure of a party to exercise any right or remedy shall not be deemed or constitute a waiver of such right or remedy in the future. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (regardless of whether similar), nor shall any such waiver be deemed or constitute a continuing waiver unless otherwise expressly provided.

13. Confidentiality.

In the event of the consummation or public announcement of any Offering, the Placement Agent shall have the right to disclose its participation in such Offering, including, without limitation, the placement at its cost of "tombstone" advertisements in financial and other newspapers and journals. the Placement Agent agrees not to use any confidential information concerning the Company provided to the Placement Agent by the Company for any purposes other than those contemplated under this Agreement.

14. Headings.

The headings of the various sections of this Agreement have been inserted for convenience of reference only and will not be deemed to be part of this Agreement.

15. Counterparts.

This Agreement may be executed in one or more counterparts and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original and all such counterparts shall together constitute one and the same instrument.

16. Severability.

In case any provision contained in this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein will not in any way be affected or impaired thereby.

17. Use of Information.

The Company will furnish the Placement Agent such written information as the Placement Agent reasonably requests in connection with the performance of its services hereunder. The Company understands, acknowledges and agrees that, in performing its services hereunder, the Placement Agent will use and rely entirely upon such information as well as publicly available information regarding the Company and other potential parties to an Offering and that the Placement Agent does not assume responsibility for independent verification of the accuracy or completeness of any information, whether publicly available or otherwise furnished to it, concerning the Company or otherwise relevant to an Offering, including, without limitation, any financial information, forecasts or projections considered by the Placement Agent in connection with the provision of its services.

18. Absence of Fiduciary Relationship.

The Company acknowledges and agrees that: (a) the Placement Agent has been retained solely to act as Placement Agent in connection with the sale of the Securities and that no fiduciary, advisory or agency relationship between the Company and the Placement Agent has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Placement Agent has advised or is advising the Company on other matters; (b) the Purchase Price and other terms of the Securities set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Placement Agent and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement; (c) it has been advised that the Placement Agent and its affiliates are engaged in a broad range of transactions that may involve interests that differ from those of the Company and that the Placement Agent has no obligation to disclose such interest and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; and (d) it has been advised that the Placement Agent is acting, in respect of the transactions contemplated by this Agreement, solely for the benefit of the Placement Agent, and not on behalf of the Company and that the Placement Agents may have interests that differ from those of the Company. The Company waives to the full extent permitted by applicable law any claims it may have against the Placement Agent arising from an alleged breach of fiduciary duty in connection with the Offering.

19. Survival Of Indemnities, Representations, Warranties, Etc.

The respective indemnities, covenants, agreements, representations, warranties and other statements of the Company and Placement Agent, as set forth in this Agreement or made by them respectively, pursuant to this Agreement, shall remain in full force and effect, regardless of any investigation made by or on behalf of the Placement Agent, the Company, the Purchasers or any person controlling any of them and shall survive delivery of and payment for the Securities. Notwithstanding any termination of this Agreement, including without limitation any termination pursuant to Section 5, the payment, reimbursement, indemnity, contribution and advancement agreements contained in Sections 2, 9, 10, and 11, respectively, and the Company's covenants, representations, and warranties set forth in this Agreement shall not terminate and shall remain in full force and effect at all times. The indemnity and contribution provisions contained in Section 9 and the covenants, warranties and representations of the Company contained in this Agreement shall remain operative and in full force and effect regardless of (i) any termination of this Agreement, (ii) any investigation made by or on behalf of any Placement Agent, any person who controls any Placement Agent within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act or any affiliate of any Placement Agent, or by or on behalf of the Company, its directors or officers or any person who controls the Company within the meaning of either Section 15 of the Securities Act or Section 20 of the Exchange Act, and (iii) the issuance and delivery of the Securities.

20. Governing Law.

This Agreement shall be governed by and construed in accordance with the laws of the State of New York applicable to agreements made and to be fully performed therein. Any disputes that arise under this Agreement, even after the termination of this Agreement, will be heard only in the state or federal courts located in the City of New York, State of New York. The parties hereto expressly agree to submit themselves to the jurisdiction of the foregoing courts in the City of New York, State of New York. The parties hereto expressly waive any rights they may have to contest the jurisdiction, venue or authority of any court sitting in the City and State of New York.

21. Notices.

All communications hereunder shall be in writing and shall be mailed or hand delivered and confirmed to the parties hereto as follows:

If to the Company:

Oragenics, Inc.

1990 Main Street, Suite 750
Sarasota, FL 34236
Attention: Chief Executive Officer

If to the Placement Agent:

Dawson James Securities, Inc.
101 North Federal Highway
Suite 600
Boca Raton, FL 33432
Attention: Chief Executive Officer

Any party hereto may change the address for receipt of communications by giving written notice to the others.

22. Miscellaneous.

This Agreement shall not be modified or amended except in writing signed by the Placement Agent and the Company. This Agreement constitutes the entire agreement of the Placement Agent and the Company, and supersedes any prior agreements, with respect to the subject matter hereof. If any provision of this Agreement is determined to be invalid or unenforceable in any respect, such determination will not affect such provision in any other respect, and the remainder of this Agreement shall remain in full force and effect. This Agreement may be executed in counterparts (including facsimile or .pdf counterparts), each of which shall be deemed an original but all of which together shall constitute one and the same instrument.

23. 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 9 hereof, and to their respective successors, and personal representative, and, except as set forth in Section 9 of this Agreement, no other person will have any right or obligation hereunder.

24. 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.

[SIGNATURE PAGE TO FOLLOW]

In acknowledgment that the foregoing correctly sets forth the understanding reached by the Placement Agent and the Company, and intending to be legally bound, please sign in the space provided below, whereupon this letter shall constitute a binding Agreement as of the date executed.

Very truly yours,
ORAGENICS, INC.

By: _____
Name:
Title:

Confirmed as of the date first written above:

DAWSON JAMES SECURITIES, INC.

By: _____
Name:
Title:

SCHEDULE I

Issuer General Use Free Writing Prospectuses

None.

Exhibit 3.10

ARTICLES OF AMENDMENT

TO

ARTICLES OF INCORPORATION

OF

ORAGENICS, INC.

CERTIFICATE OF DESIGNATION AND RIGHTS OF SERIES H CONVERTIBLE PREFERRED STOCK

Pursuant to Section 607.0602 of the Florida Business Corporation Act

Oragenics, Inc., a corporation organized and existing under the laws of the State of Florida (the "Corporation"), does hereby certify:

FIRST: That pursuant to authority conferred upon the Board of Directors of the Corporation (the "Board of Directors") by the Articles of Incorporation of the Corporation, as amended, the Board of Directors adopted the following resolutions on _____, 2025 pursuant to the Corporation's Articles of Incorporation, as amended, and Sections 607.0602, 607.1002 and 607.1006 of the Florida Business Corporation Act, authorizing a new series of the Corporation's previously authorized Preferred Stock, no par value, designated as Series H Convertible Preferred Stock. Shareholder action was not required.

SECOND: The Series H Convertible Preferred Stock shall have the designation, number of shares, rights, qualifications, limitations and other terms and conditions as described herein.

THIRD: The Corporation is authorized to issue 50,000,000 shares of preferred stock, of which 7,488,692 shares of Series F Preferred have been designated, issued and outstanding.

FOURTH: The following resolutions were duly adopted by the Board of Directors of the Corporation:

WHEREAS, the Amended and Restated Articles of Incorporation of the Corporation, as amended, provide for a class of its authorized stock known as preferred stock, consisting of 50,000,000 shares, no par value, issuable from time to time in one or more series;

WHEREAS, the Board of Directors is authorized to fix the dividend rights, dividend rate, voting rights, conversion rights, rights and terms of redemption and liquidation preferences of any wholly unissued series of preferred stock and the number of shares constituting any series and the designation thereof, of any of them; and

WHEREAS, it is the desire of the Board of Directors, pursuant to its authority as aforesaid, to fix the rights, preferences, restrictions and other matters relating to a series of the preferred stock, which shall consist of [_____] shares of the preferred stock which the Corporation has the authority to issue, as follows:

NOW, THEREFORE, BE IT RESOLVED, that the Board of Directors does hereby provide for the issuance of a series of preferred stock for cash or exchange of other securities, rights or property and does hereby fix and determine the rights, preferences, restrictions and other matters relating to such series of preferred stock as follows:

SERIES H CONVERTIBLE PREFERRED STOCK

Section 1. Definitions. For the purposes hereof, the following terms shall have the following meanings:

"***Affiliate***" means any person or entity that, directly or indirectly through one or more intermediaries, controls or is controlled by or is under common control with a person or entity, as such terms are used in and construed under Rule 144 under the Securities Act. With respect to a Holder, any investment fund or managed account that is managed on a discretionary basis by the same investment manager as such Holder will be deemed to be an Affiliate of such Holder.

"***Alternate Consideration***" shall have the meaning set forth in Section 7(b).

"Base Conversion Price" shall have the meaning set forth in Section 7(c).

"***Beneficial Ownership Limitation***" shall have the meaning set forth in Section 6(d)(iv).

"***Business Day***" means any day except Saturday, Sunday, any day which shall be a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"***Certificate of Designation***" means this Certificate of Designation of Preferences, Rights and Limitations of Series H Convertible Preferred Stock filed by the Corporation.

"***Closing Sale Price***" means, for any security as of any date, the last closing trade price for such security prior to 4:00 p.m., New York City time, on the principal securities exchange or trading market where such security is listed or traded, as reported by Bloomberg, L.P. (or an equivalent, reliable reporting service mutually acceptable to and hereafter designated by Holders of a majority of the then-outstanding Series Convertible H Preferred Stock and the Corporation), or if the foregoing do not apply, the last trade price of such security in the over-the-counter market on the electronic bulletin board for such security as reported by Bloomberg, L.P., or, if no last trade price is reported for such security by Bloomberg, L.P., the average of the bid prices of any market makers for such security as reported on the any over the counter market operated by OTC Markets Group, Inc. If the Closing Sale Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Closing Sale Price of such security on such date shall be the fair market value as determined in good faith by the Board of Directors of the Corporation.

"***Commission***" means the Securities and Exchange Commission.

"***Common Stock***" means the Corporation's Common Stock, par value $0.001 per share, and stock of any other class of securities into which such securities may hereafter be reclassified or changed into.

"***Common Stock Equivalents***" means any securities of the Corporation or its subsidiaries which would entitle the holder thereof to acquire at any time Common Stock, including, without limitation, any debt, preferred stock, rights, options, warrants or other instrument that is at any time convertible into or exchangeable for, or otherwise entitles the holder thereof to receive, Common Stock.

"***Conversion Date***" shall have the meaning set forth in Section 6(a).

"***Conversion Price***" shall mean $[***], as adjusted pursuant to Section 7 hereof.

"***Conversion Ratio***" shall have the meaning set forth in Section 6(c).

"***Conversion Shares***" means, collectively, the shares of Common Stock issuable upon conversion of the shares of Series H Convertible Preferred Stock in accordance with the terms hereof.

"***Dilutive Issuance"*** shall have the meaning set forth in Section 7(c).

"***Dividend Payment Date***" shall have the meaning set forth in Section 3(b).

"***Dividend Share Amount Payment***" shall have the meaning set forth in Section 3(b).

"***FBCA***" shall mean the Florida Business Corporation Act.

"***DWAC Delivery***" shall have the meaning set forth in Section 6(a).

"***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) shares of Common Stock or options to employees, officers or directors of the Corporation pursuant to any stock or option plan duly adopted by a majority of the non-employee members of the Board of Directors of the Corporation or a majority of the members of a committee of non-employee directors established for such purpose, (b) securities exercisable or exchangeable for or convertible into shares of Common Stock issued and outstanding on the Issuance Date, provided that such securities have not been amended since the Issuance Date to increase the number of such securities or to decrease the exercise price, exchange price or Conversion Price of any such securities, (c) securities issued pursuant to (i) a merger, consolidation, acquisition, strategic alliance or similar business combination, (ii) any equipment loan or leasing arrangement, real property leasing arrangement or debt financing from a bank or similar financial institution or (iii) any strategic transactions involving the Corporation and other entities, including joint ventures, manufacturing, marketing or distribution arrangements, (d) shares of Series H Convertible Stock issued upon the exercise of the Warrants and (e) securities issued in at the market offerings.

"***Fundamental Transaction***" shall have the meaning set forth in Section 7(b).

"***Holder***" means any holder of Series H Convertible Preferred Stock.

"***Issuance Date***" means the date of the "Closing" as defined in that certain Placement Agent Agreement related to the Series H Convertible Preferred Stock, dated June __, 2025, by and among the Corporation and Dawson James Securities, Inc., as representative of the several placement agents named therein.

"***Make-Whole Amount***" means, with respect to the applicable date of determination, an amount in cash equal to all of the dividends that, but for the applicable conversion prior the Mandatory Conversion Date, would have otherwise accrued pursuant to Section 3 with respect to the applicable shares of Series H Convertible Preferred Stock being so converted for the period commencing on the applicable Conversion Date and ending on the Mandatory Conversion Date.

"***Make-Whole Payment***" shall have the meaning set forth in Section 3(b).

"***Mandatory Conversion Date***" means the date that is the five (5) year anniversary of the Issuance Date, or if such day is not a Business Day, on the next succeeding Business Day.

"***Notice of Conversion***" shall have the meaning set forth in Section 6(a).

"***Person***" means any 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.

"***Securities Act***" means the Securities Act of 1933, as amended, and the rules and regulations promulgated thereunder.

"***Series H Convertible Preferred Stock***" shall have the meaning set forth in Section 2(a).

"***Series H Convertible Preferred Stock Register***" shall have the meaning set forth in Section 2(b).

"***Share Delivery Date***" shall have the meaning set forth in Section 6(e).

"***Stated Value***" shall mean $25.00.

"***Trading Day***" means a day on which the Common Stock is traded for any period on the principal securities exchange or if the Common Stock is not traded on a principal securities exchange, on a day that the Common Stock is traded on another securities market on which the Common Stock is then being traded.

"***Warrant***" or "***Warrants***" means each of the Warrants to Purchase Series H Convertible Preferred Stock issued to the Holders of Series H Convertible Preferred Stock on the Issuance Date.

Section 2. Designation, Amount and Par Value; Assignment.

(a) The series of preferred stock designated by this Certificate of Designation shall be designated as the Corporation's Series H Convertible Preferred Stock (the "***Series H Convertible Preferred Stock***") and the number of shares so designated shall be [●] (which shall not be subject to increase without the written consent of the Holders holding a majority of the then issued and outstanding Series H Convertible Preferred Stock). Each share of Series H Convertible Preferred Stock shall have no par value.

(b) The Corporation shall register shares of the Series H Convertible Preferred Stock, upon records to be maintained by the Corporation for that purpose (the "***Series H Convertible Preferred Stock Register***"), in the name of the Holders thereof from time to time. The Corporation may deem and treat the registered Holder of shares of Series H Convertible Preferred Stock as the absolute owner thereof for the purpose of any conversion thereof and for all other purposes. The Corporation shall register the transfer of any shares of Series H Convertible Preferred Stock in the Series H Convertible Preferred Stock Register, upon surrender of the certificates evidencing such shares to be

transferred, duly endorsed by the Holder thereof, to the Corporation at its address specified herein. Upon any such registration or transfer, a new certificate evidencing the shares of Series H Convertible Preferred Stock so transferred shall be issued to the transferee and a new certificate evidencing the remaining portion of the shares not so transferred, if any, shall be issued to the transferring Holder, in each case, within three (3) Business Days. The provisions of this Certificate of Designation are intended to be for the benefit of all Holders from time to time and shall be enforceable by any such Holder.

Section 3. Dividends.

(a) Series H Preferred Stock Dividends. Holders shall be entitled to receive, and the Corporation shall pay, annual non-compounding dividends payable as provided in Section 3(b) below at the rate per share (as a percentage of the Stated Value per share of Series H Convertible Preferred Stock) of 9% per annum. Dividends on shares of Series H Convertible Preferred Stock shall accrue and be cumulative from the Issuance Date and shall accrue from day to day thereafter for so long as Series H Convertible Preferred Stock is outstanding; *provided, however*, that dividends on shares of Series H Convertible Preferred Stock issued pursuant to the exercise of a Warrants shall accrue and be cumulative from the date of the exercise of such Warrant. Dividends may be declared and paid on Series H Convertible Preferred Stock when and as determined by the Board of Directors of the Corporation

(b) Payment of Dividends in Kind; Make-Whole Payment Dividends are payable on each Conversion Date (with respect only to Series H Convertible Preferred Stock being converted) and on each such other date as the Board of Directors of the Corporation may determine (each such date, a "***Dividend Payment Date***"), in duly authorized, validly issued, fully paid and non-assessable shares of Common Stock as set forth in this Section 3(b) (the amount to be paid in shares of Common Stock, the "***Dividend Share Amount Payment***"); *provided, however*, that upon the conversion of Series H Convertible Preferred Stock prior to the Mandatory Conversion Date, the Corporation shall also pay to the Holders of Series H Convertible Preferred Stocks so converted, an amount equal to the Make-Whole Amount, less the amount of all prior dividends made on such converted Series H Convertible Preferred Stock before the relevant Conversion Date (the "***Make-Whole Payment***"), payable in duly authorized, validly issued, fully paid and non-assessable shares of Common Stock. With respect to any Dividend Share Amount Payments and Make-Whole Payments paid in shares of Common Stock, the number of shares of Common Stock to be issued to a Holder pursuant to this Section 3(b) shall be an amount equal to the quotient of (i) the amount of the dividend payable to such Holder divided by (ii) the Conversion Price then in effect.

(c) Dividend Calculations. Dividends on the Series H Convertible Preferred Stock shall be calculated on the basis of a 365-day year, and shall accrue daily commencing on the Issuance Date (or on the date of the exercise of a Warrant, as the case may be), and shall be deemed to accrue from such date whether or not earned or declared and whether or not there are profits, surplus or other funds of the Corporation legally available for the payment of dividends. Payment of dividends and Make-Whole Payments in shares of Common Stock shall otherwise occur pursuant to Section 6(d)(i) herein and, solely for purposes of the payment of dividends in shares, the Dividend Payment Date shall be deemed the Conversion Date. Dividends shall cease to accrue with respect to any Series H Convertible Preferred Stock converted, provided that, the Corporation actually delivers the Conversion Shares and Make-Whole Payment within the time period required by Sections 6(e)(i) and 3(b), respectively herein.

Section 4. Voting Rights . Except as set provided herein or as otherwise required by the FBCA, until the Conversion Date, the Series H Convertible Preferred Stock shall have no voting rights including without limitation with regard to the conversion of the Corporation's outstanding Series F Preferred Stock.

Section 5. Rank; Liquidation. Upon liquidation, dissolution or winding up of the Corporation (a "***Liquidation***"), whether voluntary or involuntary, each Holder shall be entitled to receive the amount of cash, securities or other property to which such Holder would be entitled to receive with respect to such shares of Series H Convertible Preferred Stock if such shares had been converted to Common Stock immediately prior to such Liquidation (without giving effect for such purposes to the Beneficial Ownership Limitation set forth in Section 6(d)) subject to the preferential rights of holders of any class or series of Capital Stock of the Corporation specifically ranking by its terms senior to the Series H Convertible Preferred Stock as to distributions of assets upon liquidation, dissolution or winding up of the Corporation, whether voluntarily or involuntarily.

Section 6. Conversion.

(a) Automatic Conversion. On the Mandatory Conversion Date, all outstanding shares of Series H Convertible Preferred Stock and all accrued but unpaid dividends thereon through and including the Mandatory Conversion Date shall be automatically converted into shares of Common Stock at a price at the Conversion Price (as adjusted pursuant to Section 7 hereof). The outstanding shares of Series H Convertible Preferred Stock shall be converted automatically without any further action by the Holders of such shares and whether or not the certificates representing such shares are surrendered to the Corporation or its transfer agent; provided, however, that the Corporation shall not be obligated to issue certificates evidencing shares of Common Stock issuable upon such conversion unless the certificates evidencing such shares of Series H Convertible Preferred Stock are either delivered to the Corporation or its transfer agent, or the holder notifies the Corporation or its transfer agent that such certificates have been lost, stolen or destroyed and executes an agreement satisfactory to the Corporation to indemnify the Corporation from any loss incurred by it in connection with such certificates. Upon the occurrence of such automatic conversion of the Series H Convertible Preferred Stock, the Holders of such shares shall surrender the certificates representing the Series H Convertible Preferred Stock at the office of the Corporation or any transfer agent for the Series H Convertible Preferred Stock. Thereupon, there shall be issued and delivered to such Holder promptly at such office and in its name as shown on such surrendered certificate or certificates, a certificate or certificates for the number of shares of Common Stock issuable.

(b) Conversions at Option of Holder. Each share of Series H Convertible Preferred Stock shall be convertible, at any time and from time to time from and after the Issuance Date through the Mandatory Conversion Date, at the option of the Holder thereof, into a number of shares of Common Stock (subject to the limitations set forth in Section 6(d)) equal to the quotient of (i) the sum of the aggregate Stated Value of those shares being converted and, to the extent that the Corporation elects to pay dividends pursuant to Section 3 hereof in duly authorized, validly issued, fully paid and non-assessable shares of Common Stock, all accrued but unpaid dividends thereon, divided by (ii) the Conversion Ratio. Holders shall effect conversions by providing the Corporation with the form of Notice of Conversion attached hereto as Annex A (a " ***Notice of Conversion***"), duly completed and executed. Other than a conversion following a Fundamental Transaction or following a notice provided for under Section 7(e)(ii) hereof, the Notice of Conversion must specify at least (i) a number of shares of Series H Convertible Preferred Stock to be converted equal to the lesser of (x) 100 shares (such number subject to appropriate adjustment following the occurrence of an event specified in Section 7(a) hereof) and (y) the number of shares of Series H Convertible Preferred Stock then held by the Holder, (ii) the number of shares of Series H Convertible Preferred Stock owned prior to the conversion at issue and (iii) the number of shares of Series H Convertible Preferred Stock owned subsequent to the conversion at issue. Provided the Corporation's transfer agent is participating in the Depository Trust Company ("***DTC***") Fast Automated Securities Transfer program and the applicable Conversion Shares are either registered for resale or eligible for resale without restriction pursuant to Rule 144 of the Securities Act, the Notice of Conversion may specify, at the Holder's election, whether the applicable Conversion Shares shall be credited to the account of the Holder's prime broker with DTC through its Deposit Withdrawal Agent Commission system (a " ***DWAC Delivery***"). The "***Conversion Date***", or the date on which a conversion shall be deemed effective, shall be defined as the Trading Day that the Notice of Conversion, completed and executed, is sent by facsimile to, and received during regular business hours by, the Corporation; provided that the original certificate(s) representing such shares of Series H Convertible Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation within two (2) Trading Days thereafter. In all other cases, the Conversion Date shall be defined as the Trading Day on which the original shares of Series H Convertible Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion, are received by the Corporation. The calculations set forth in the Notice of Conversion shall control in the absence of manifest or mathematical error.

(c) Conversion Ratio. The "***Conversion Ratio***" for each share of Series H Convertible Preferred Stock shall be equal to the Stated Value divided by the Conversion Price.

(d) Beneficial Ownership Limitation.

i. Notwithstanding anything herein to the contrary, the Corporation shall not effect any conversion of the Series H Convertible Preferred Stock, and a Holder shall not have the right to convert any portion of its Series H Convertible Preferred Stock, to the extent that, after giving effect to an attempted conversion, such Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act and the applicable rules and regulations of the Commission, including any "group" of which the Holder is a member) would beneficially own a number of shares of Common Stock in excess of the Beneficial Ownership Limitation (as defined below).

ii. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by such Holder and its Affiliates shall include the number of shares of Common Stock issuable upon conversion of the Series H Convertible Preferred Stock subject to conversion with respect to which the determination of such sentence is being made, but shall exclude the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted shares of Series H Convertible Preferred Stock beneficially owned by such Holder or any of its Affiliates, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation beneficially owned by such Holder or any of its Affiliates (including, without limitation, any convertible notes, convertible stock or warrants) that are subject to a limitation on conversion or exercise analogous to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this Section, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable rules and regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable rules and regulations of the Commission.

iii. To the extent that the limitation contained in this Section 6(d) applies, the determination of whether the Series H Convertible Preferred Stock may be converted (in relation to other securities owned by the Holder together with any Affiliates) and of which portion of its Series H Convertible Preferred Stock may be converted shall be in the sole discretion of the Holder and the submission of a Notice of Conversion shall be deemed to be such Holder's determination of whether the shares of Series H Convertible Preferred Stock may be converted (in relation to other securities owned by such Holder together with any Affiliates) and how many shares of the Series H Convertible Preferred Stock are convertible, in each case subject to the Beneficial Ownership Limitation. For purposes of this Section, in determining the number of outstanding shares of Common Stock, a Holder may rely on the number of outstanding shares of Common Stock as reflected in (A) the Corporation's most recent public filing with the Commission, as the case may be, (B) a more recent public announcement by the Corporation or (C) a more recent notice by the Corporation or the Corporation's transfer agent to the Holder setting forth the number of shares of Common Stock then outstanding. For any reason at any time, upon the written or oral request of a Holder (which may be by email), the Corporation shall, within two (2) Business Days of such request, confirm orally and in writing to such Holder (which may be via email) the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to any actual conversion or exercise of securities of the Corporation, including shares of Series H Convertible Preferred Stock, by such Holder or its Affiliates since the date as of which such number of outstanding shares of Common Stock was last publicly reported or confirmed to the Holder.

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iv. The "***Beneficial Ownership Limitation***" shall be 4.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock pursuant to such conversion of Series H Convertible Preferred Stock held by the applicable Holder (to the extent permitted pursuant to this Section). The Holder, upon not less than 61 days' prior notice to the Corporation, may increase or decrease the Beneficial Ownership Limitation provisions of this Section applicable to its Series H Convertible Preferred Stock provided that the Beneficial Ownership Limitation in no event exceeds 9.99% of the number of shares of the Common Stock outstanding immediately after giving effect to the issuance of shares of Common Stock upon the conversion the Series H Convertible Preferred Stock held by the Holder and the provisions of this Section shall continue to apply. Any such increase or decrease will not be effective until the 61st day after such notice is delivered to the Corporation and shall only be effective with respect to such Holder. The provisions of this Section shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 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.

(e) Mechanics of Conversion

i. Delivery of Certificate or Electronic Issuance Upon Conversion. Not later than three (3) Trading Days after the applicable Conversion Date, or if the Holder requests the issuance of physical certificate(s), two (2) Trading Days after receipt by the Corporation of the original certificate(s) representing such shares of Series H Convertible Preferred Stock being converted, duly endorsed, and the accompanying Notice of Conversion (the "***Share Delivery Date***"), the Corporation shall (a) deliver, or cause to be delivered, to the converting Holder a physical certificate or certificates representing the number of Conversion Shares being acquired upon the conversion of shares of Series H Convertible Preferred Stock (including shares of Common Stock representing the payment of accrued dividends otherwise determined pursuant to Section 3) or (b) in the case of a DWAC Delivery, electronically transfer such Conversion Shares by crediting the account of the Holder's prime broker with DTC through its DWAC system. If in the case of any Notice of Conversion such certificate or certificates are not delivered to or as directed by or, in the case of a DWAC Delivery, such shares are not electronically delivered to or as directed by, the applicable Holder by the Share Delivery Date, the applicable Holder shall be entitled to elect to rescind such Notice of Conversion by written notice to the Corporation at any time on or before its receipt of such certificate or certificates for Conversion Shares or electronic receipt of such shares, as applicable, in which event the Corporation shall promptly return to such Holder any original Series H Convertible Preferred Stock certificate delivered to the Corporation and such Holder shall promptly return to the Corporation any Common Stock certificates or otherwise direct the return of any shares of Common Stock delivered to the Holder through the DWAC system, representing the shares of Series H Convertible Preferred Stock unsuccessfully tendered for conversion to the Corporation.

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ii. Obligation Absolute. Subject to Section 6(d) hereof and subject to Holder's right to rescind a Notice of Conversion pursuant to Section 6(e)(i) above, the Corporation's obligation to issue and deliver the Conversion Shares upon conversion of Series H Convertible Preferred Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by a Holder to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any Person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by such Holder or any other Person of any obligation to the Corporation or any violation or alleged violation of law by such Holder or any other Person, and irrespective of any other circumstance which might otherwise limit such obligation of the Corporation to such Holder in connection with the issuance of such Conversion Shares. Subject to Section 6(d) hereof and subject to Holder's right to rescind a Notice of Conversion pursuant to Section 6(e)(i) above, in the event a Holder shall elect to convert any or all of its Series H Convertible Preferred Stock, the Corporation may not refuse conversion based on any claim that such Holder or any one Person associated or affiliated with such Holder has been engaged in any violation of law, agreement or for any other reason, unless an injunction from a court, on notice to such Holder, restraining and/or enjoining conversion of all or part of the Series H Convertible Preferred Stock of such Holder shall have been sought and obtained by the Corporation, and the Corporation posts a surety bond for the benefit of such Holder in the amount of 150% of the value of the Conversion Shares into which would be converted the Series H Convertible Preferred Stock which is subject to such injunction, which bond shall remain in effect until the completion of arbitration/litigation of the underlying dispute and the proceeds of which shall be payable to such Holder to the extent it obtains judgment.

iii. Reservation of Shares Issuable Upon Conversion. The Corporation covenants that it will at all times reserve and keep available out of its authorized and unissued shares of Common Stock for the sole purpose of issuance upon conversion of the Series H Convertible Preferred Stock and payment of dividends on the Series H Convertible Preferred Stock each as herein provided, free from preemptive rights or any other actual contingent purchase rights of Persons other than the Holders of the Series H Convertible Preferred Stock, not less than such aggregate number of shares of the Common Stock as shall be issuable (taking into account the adjustments of Section 7) upon the conversion of all outstanding shares of Series H Convertible Preferred Stock and payment of dividends hereunder. The Corporation shall take all action required to increase the authorized number of shares of Common Stock (including, if necessary, seeking stockholder approval to authorize the issuance of

additional shares of Common Stock), or any other actions necessary or desirable, if at any time there shall be insufficient authorized but unissued shares of Common Stock to permit such reservation or to permit the conversion of all outstanding shares of the Series H Convertible Preferred Stock (including any dividends payable thereon). The Corporation covenants that all shares of Common Stock that shall be so issuable shall, upon issue, be duly authorized, validly issued, fully paid and nonassessable.

iv. Fractional Shares. No fractional shares of Common Stock shall be issued upon the conversion of the Series H Convertible Preferred Stock. As to any fraction of a share which a Holder would otherwise be entitled to receive upon such conversion, the Corporation shall at its election, either pay a cash adjustment in respect of such final fraction in an amount equal to such fraction multiplied by the Conversion Price or rounded to the nearest whole number (with one-half being rounded upward)..

v. Transfer Taxes and Expenses. The issuance of certificates for shares of the Common Stock upon conversion of the Series H Convertible Preferred Stock shall be made without charge to any Holder for any documentary stamp or similar taxes that may be payable in respect of the issue or delivery of such certificates, provided that the Corporation shall not be required to pay any tax that may be payable in respect of any transfer involved in the issuance and delivery of any such certificate upon conversion in a name other than that of the registered Holder(s) of such shares of Series H Convertible Preferred Stock and the Corporation shall not be required to issue or deliver such certificates unless or until the Person or Persons requesting the issuance thereof shall have paid to the Corporation the amount of such tax or shall have established to the satisfaction of the Corporation that such tax has been paid. The Corporation shall pay all transfer agent fees required for processing of any Notice of Conversion.

(f) Status as Stockholder. Upon each Conversion Date, (i) the shares of Series H Convertible Preferred Stock being converted shall be deemed converted into shares of Common Stock and (ii) the Holder's rights as a holder of such converted shares of Series H Convertible Preferred Stock shall cease and terminate, excepting only the right to receive certificates for such shares of Common Stock and to any remedies provided herein or otherwise available at law or in equity to such Holder because of a failure by the Corporation to comply with the terms of this Certificate of Designation. In all cases, the holder shall retain all of its rights and remedies for the Corporation's failure to convert Series H Convertible Preferred Stock.

Section 7. Certain Adjustments.

(a) Stock Dividends and Stock Splits. If the Corporation, at any time while this Series H Convertible Preferred Stock is outstanding: (A) pays a stock dividend or otherwise makes a distribution or distributions payable in shares of Common Stock (which, for avoidance of doubt, shall not include any shares of Common Stock issued by the Corporation upon conversion of, or payment of dividends on, this Series H Convertible Preferred Stock) with respect to the then outstanding shares of Common Stock; (B) subdivides outstanding shares of Common Stock into a larger number of shares; or (C) combines (including by way of a reverse stock split) outstanding shares of Common Stock into a smaller number of shares, then the Conversion Price shall be multiplied by a fraction of which the numerator shall be the number of shares of Common Stock (excluding any treasury shares of the Corporation) outstanding immediately before such event and of which the denominator shall be the number of shares of Common Stock outstanding immediately after such event (excluding any treasury shares of the Corporation). Any adjustment made pursuant to this Section 7(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 or combination.

(b) Fundamental Transaction. If, at any time while this Series H Convertible Preferred Stock is outstanding, (A) the Corporation effects any merger or consolidation of the Corporation with or into another Person (other than a merger in which the Corporation is the surviving or continuing entity and its Common Stock is not exchanged for or converted into other securities, cash or property), (B) the Corporation effects any sale of all or substantially all of its assets in one transaction or a series of related transactions, (C) any tender offer or exchange offer (whether by the Corporation or another Person) is completed pursuant to which all of the Common Stock is exchanged for or converted into other securities, cash or property, or (D) the Corporation effects any reclassification of the Common Stock or any compulsory share exchange pursuant (other than as a result of a dividend, subdivision or combination covered by Section 7(a) above) to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (in any such case, a "***Fundamental Transaction***"), then, upon any subsequent conversion of this Series H Convertible Preferred Stock the Holders shall have the right to receive, in lieu of the right to receive Conversion Shares, for each Conversion Share that would have been issuable upon such conversion immediately prior to the occurrence of such Fundamental Transaction, the same kind and amount of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of one share of Common Stock (the "***Alternate Consideration***"). For purposes of any such subsequent conversion, the determination of the Conversion Ratio shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Common Stock in such Fundamental Transaction, and the Corporation shall adjust the Conversion Ratio in a reasonable manner reflecting the relative value of any different components of the Alternate Consideration. If holders of Common Stock are given any choice as to the securities, cash or property to be received in a Fundamental Transaction, then the Holders shall be given the same choice as to the Alternate Consideration it receives upon any conversion of this Series H Convertible Preferred Stock following such Fundamental Transaction. To the extent necessary to effectuate the foregoing provisions, any successor to the Corporation or surviving entity in such Fundamental Transaction shall file a new Certificate of Designation with the same terms and conditions and issue to the Holders new preferred stock consistent with the foregoing provisions and evidencing the Holders' right to convert such preferred stock into Alternate Consideration. The terms of any agreement to which the Corporation is a party and pursuant to which a Fundamental Transaction is effected shall include terms requiring any such successor or surviving entity to comply with the provisions of this Section 7(b) and ensuring that this Series H Convertible Preferred Stock (or any such replacement security) will be similarly adjusted upon any subsequent transaction analogous to a Fundamental Transaction. The Corporation shall cause to be delivered to each Holder, at its last address as it shall appear upon the stock books of the Corporation, written notice of any Fundamental Transaction at least 20 calendar days prior to the date on which such Fundamental Transaction is expected to become effective or close.

(c) Subsequent Equity Sales. If, at any time while this Series H Convertible Preferred Stock is outstanding, the Corporation sells or grants any option to purchase or sells or grants any right to reprice, or otherwise disposes of or issues (or announces any sale, grant or any option to purchase or other disposition), any Common Stock or Common Stock Equivalents entitling any Person to acquire shares of Common Stock at an effective price per share that is lower than the then Conversion Price (such lower price, the "***Base Conversion Price***" and such issuances, collectively, a "***Dilutive Issuance***") (if the holder of the Common Stock or Common Stock Equivalents so issued shall at any time, whether by operation of purchase price adjustments, reset provisions, floating conversion, exercise or exchange prices or otherwise, or due to warrants, options or rights per share which are issued in connection with such issuance, be entitled to receive shares of Common Stock at an effective price per share that is lower than the Conversion Price, such issuance shall be deemed to have occurred for less than the Conversion Price on such date of the Dilutive Issuance), then the Conversion Price shall be reduced to equal the Base Conversion Price. Such adjustment shall be made whenever such Common Stock or Common Stock Equivalents are issued. Notwithstanding the foregoing, no adjustment will be made under this Section 7(c) in respect of an Exempt Issuance.

(d) Calculations. All calculations under this Section 7 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 7, the number of shares of Common Stock deemed to be issued and outstanding as of a given date shall be the sum of the number of shares of Common Stock (excluding any treasury shares of the Corporation) issued and outstanding.

(e) Notice to Holders.

i. Adjustment to Conversion Price. Whenever the Conversion Price is adjusted pursuant to any provision of this Section 7, the Corporation shall promptly

deliver to each Holder a notice setting forth the Conversion Ratio after such adjustment and setting forth a brief statement of the facts requiring such adjustment.

ii. Other Notices. If (A) the Corporation shall declare a dividend (or any other distribution in whatever form) on the Common Stock, (B) the Corporation shall declare a special nonrecurring cash dividend on or a redemption of the Common Stock, (C) the Corporation shall authorize the granting to all holders of the Common Stock of rights or warrants to subscribe for or purchase any shares of capital stock of any class or of any rights, (D) the approval of any stockholders of the Corporation shall be required in connection with any reclassification of the Common Stock, any consolidation or merger to which the Corporation is a party, any sale or transfer of all or substantially all of the assets of the Corporation, of any compulsory share exchange whereby the Common Stock is converted into other securities, cash or property or (E) the Corporation shall authorize the voluntary or involuntary dissolution, liquidation or winding up of the affairs of the Corporation, then, in each case, the Corporation shall cause to be filed at each office or agency maintained for the purpose of conversion of this Series H Convertible Preferred Stock, and shall cause to be delivered to each Holder at its last address as it shall appear upon the stock books of the Corporation, at least 20 calendar days prior to the applicable record or effective date hereinafter specified, a notice stating (x) the date on which a record is to be taken for the purpose of such dividend, distribution, redemption, rights or warrants, or if a record is not to be taken, the date as of which the holders of the Common Stock of record to be entitled to such dividend, distributions, redemption, rights or warrants are to be determined or (y) the date on which such reclassification, consolidation, merger, sale, transfer or share exchange is expected to become effective or close, and the date as of which it is expected that holders of the Common Stock of record shall be entitled to exchange their shares of the Common Stock for securities, cash or other property deliverable upon such reclassification, consolidation, merger, sale, transfer or share exchange, provided that the failure to deliver such notice or any defect therein or in the delivery thereof shall not affect the validity of the corporate action required to be specified in such notice.

Section 8. Miscellaneous.

(a) Notices. Any and all notices or other communications or deliveries to be provided by the Holders hereunder including, without limitation, any Notice of Conversion, shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service, addressed to the Corporation, at 1990 Main Street, Suite 750 Sarasota, Florida 34236, Attention: Janet Huffman, Chief Executive Officer, facsimile number: (813) 286-7904, email address: jhuffman@oragenics.com, or such other facsimile number, email address or physical address as the Corporation may specify for such purposes by notice to the Holders delivered in accordance with this Section. Any and all notices or other communications or deliveries to be provided by the Corporation hereunder shall be in writing and delivered personally, by facsimile, or sent by a nationally recognized overnight courier service addressed to each Holder at the facsimile number or address of such Holder appearing on the books of the Corporation, or if no such facsimile number or address appears on the books of the Corporation, at the principal place of business of such Holder. Any notice or other communication or deliveries hereunder shall be deemed given and effective on the earliest of (i) the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the date immediately following the date of transmission, if such notice or communication is delivered via facsimile at the facsimile number specified in this Section between 5:30 p.m. and 11:59 p.m. (New York City time) on any date, (iii) the second Business Day following the date of mailing, if sent by nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given.

(b) Lost or Mutilated Series H Convertible Preferred Stock Certificate. If a Holder's Series H Convertible Preferred Stock certificate shall be mutilated, lost, stolen or destroyed, the Corporation shall execute and deliver, in exchange and substitution for and upon cancellation of a mutilated certificate, or in lieu of or in substitution for a lost, stolen or destroyed certificate, a new certificate for the shares of Series H Convertible Preferred Stock so mutilated, lost, stolen or destroyed, but only upon receipt of evidence of such loss, theft or destruction of such certificate, and of the ownership thereof, reasonably satisfactory to the Corporation and, in each case, customary and reasonable indemnity, if requested. Applicants for a new certificate under such circumstances shall also comply with such other reasonable regulations and procedures and pay such other reasonable third-party costs as the Corporation may prescribe.

(c) Waiver. Any waiver by the Corporation or a Holder of a breach of any provision of this Certificate of Designation shall not operate as or be construed to be a waiver of any other breach of such provision or of any breach of any other provision of this Certificate of Designation or a waiver by any other Holders. The failure of the Corporation or a Holder to insist upon strict adherence to any term of this Certificate of Designation on one or more occasions shall not be considered a waiver or deprive that party (or any other Holder) of the right thereafter to insist upon strict adherence to that term or any other term of this Certificate of Designation. Any waiver by the Corporation or a Holder must be in writing. Notwithstanding any provision in this Certificate of Designation to the contrary, any provision contained herein and any right of the Holders of Series H Convertible Preferred Stock granted hereunder may be waived as to all shares of Series H Convertible Preferred Stock (and the Holders thereof) upon the written consent of the Holders of not less than a majority of the shares of Series H Convertible Preferred Stock then outstanding, unless a higher percentage is required by the FBCA, in which case the written consent of the holders of not less than such higher percentage shall be required.

(d) Severability. If any provision of this Certificate of Designation is invalid, illegal or unenforceable, the balance of this Certificate of Designation shall remain in effect, and if any provision is inapplicable to any Person or circumstance, it shall nevertheless remain applicable to all other Persons and circumstances. If it shall be found that any amount deemed interest due hereunder violates the applicable law governing usury, the applicable rate of interest due hereunder shall automatically be lowered to equal the maximum rate of interest permitted under applicable law.

(e) Next Business Day. Whenever any payment or other obligation hereunder shall be due on a day other than a Business Day, such payment shall be made on the next succeeding Business Day.

(f) Headings. The headings contained herein are for convenience only, do not constitute a part of this Certificate of Designation and shall not be deemed to limit or affect any of the provisions hereof.

(g) Status of Converted Series H Convertible Preferred Stock. If any shares of Series H Convertible Preferred Stock shall be converted or reacquired by the Corporation, such shares shall resume the status of authorized but unissued shares of preferred stock and shall no longer be designated as Series H Convertible Preferred Stock.

[*Signature Page Follows*]

IN WITNESS WHEREOF, the undersigned has executed this Certificate of Designation this __ day of _____, 2025.

ORAGENICS, INC.

By: _____
Name: Janet Huffman
Title: Chief Executive Officer

ANNEX A

NOTICE OF CONVERSION

(TO BE EXECUTED BY THE REGISTERED HOLDER IN ORDER TO CONVERT SHARES OF SERIES H CONVERTIBLE PREFERRED STOCK)

The undersigned Holder hereby irrevocably elects to convert the number of shares of Series H Convertible Preferred Stock indicated below into shares of Common Stock, par value $0.001 per share (the "***Common Stock***"), of Oragenics, Inc., a Florida corporation (the "***Corporation***"), according to the conditions hereof, as of the date written below. If securities are to be issued in the name of a person other than the undersigned, the undersigned will pay all transfer taxes payable with respect thereto. Capitalized terms utilized but not defined herein shall have the meaning ascribed to such terms in that certain Certificate of Designation of Preferences, Rights and Limitations of Series H Convertible Preferred Stock (the "***Certificate of Designation***") filed by the Corporation on _____, 2025.

As of the date hereof, the number of shares of Common Stock beneficially owned by the undersigned Holder (together with such Holder's Affiliates, and any other Person whose beneficial ownership of Common Stock would be aggregated with the Holder's for purposes of Section 13(d) of the Exchange Act and the applicable regulations of the Commission, including any "group" of which the Holder is a member), including the number of shares of Common Stock issuable upon conversion of the Series H Convertible Preferred Stock subject to this Notice of Conversion, but excluding the number of shares of Common Stock which are issuable upon (A) conversion of the remaining, unconverted Series H Convertible Preferred Stock beneficially owned by such Holder or any of its Affiliates, and (B) exercise or conversion of the unexercised or unconverted portion of any other securities of the Corporation (including any warrants) beneficially owned by such Holder or any of its Affiliates that are subject to a limitation on conversion or exercise similar to the limitation contained in Section 6(d) of the Certificate of Designation, is _____. For purposes hereof, beneficial ownership shall be calculated in accordance with Section 13(d) of the Exchange Act and the applicable regulations of the Commission. In addition, for purposes hereof, "group" has the meaning set forth in Section 13(d) of the Exchange Act and the applicable regulations of the Commission.

Conversion calculations:

Date to Effect Conversion: _____
Number of shares of Series H Convertible Preferred Stock owned prior to Conversion: _____
Number of shares of Series H Convertible Preferred Stock to be Converted: _____
Number of shares of Common Stock to be Issued: _____
Address for delivery of physical certificates: _____

or for DWAC Delivery:
DWAC Instructions:
Broker no: _____
Account no: _____

[HOLDER]

By: _____
Name: _____

Title:
Date:

Exhibit 4.8

FORM OF SERIES H PREFERRED PURCHASE WARRANT

ORAGENICS, INC.

Warrant Shares: _____ Initial Exercise Date: _____, 2025

THIS SERIES H PREFERRED 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 _____, 2030 (the "Initial Exercise Date") and on or prior to 5:00 p.m. (New York City time) on _____, 2025 (the "Termination Date") but not thereafter, to subscribe for and purchase from Oragenics, Inc., a Florida corporation (the "Company"), up to _____ shares (as subject to adjustment hereunder, the "Warrant Shares") of Series H Preferred. The purchase price of one share of Series H Preferred 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.

"Board of Directors" means the board of directors of the Company.

"Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which banking institutions in the State of New York are authorized or required by law or other governmental action to close.

"Commission" means the United States Securities and Exchange Commission.

"Series H Preferred" means the Series H Preferred of the Company, no par value, and any other class of securities into which such securities may hereafter be reclassified or changed.

"Series H Preferred Equivalents" means any securities of the Company or its subsidiaries which would entitle the holder thereof to acquire at any time Series H Preferred, 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, Series H Preferred.

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

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

"Registration Statement" means the Company's registration statement on Form S-1 (File No. 333-_____).

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

"Trading Day" means a day on which the Common Stock is traded on a Trading Market.

"Trading Market" means any of the following markets or exchanges on which the Company's Common Stock is listed or quoted for trading on the date in question: the NYSE American, the Nasdaq Capital Market, the Nasdaq Global Market, the Nasdaq Global Select Market, the New York Stock Exchange, OTCQB or OTCQX (or any successors to any of the foregoing.

"Transfer Agent" means Continental Stock Transfer & Trust Company, the current transfer agent of the Company, with a mailing address of 1 State Street, 30th Floor, New York, NY 10004-1561 and a facsimile number of (212) 616-7619, and any successor transfer agent of 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 and any successor warrant agent of the Company.

"Warrants" means this Warrant and other Series H Preferred 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 Warrant Agent of 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 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. 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 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 Warrant Agent for cancellation within three (3) Trading Days of the date on which the final Notice of Exercise is delivered to the Warrant Agent. Partial exercises of this Warrant resulting in purchases of a portion of the total number of Warrant Shares available hereunder shall have the effect of lowering the outstanding number of Warrant Shares purchasable hereunder in an amount equal to the applicable number of Warrant Shares purchased. The Holder and the Company shall maintain records showing the number of Warrant Shares purchased and the date of such purchases. The Company shall deliver any objection to any Notice of Exercise within one (1) Trading Day of receipt of such notice. **The Holder and any assignee, by acceptance of this Warrant, acknowledge and agree that, by reason of the provisions of this paragraph, following the purchase of a portion of the Warrant Shares hereunder, the number of Warrant Shares available for purchase hereunder at any given time may**

be less than the amount stated on the face hereof.

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

The Holder acknowledges and agrees that (i) neither this Warrant nor the Warrant Shares will be listed on the NYSE American or any other exchange or trading market and (ii) the Company does not plan on making an application to list the Warrant or the Warrant Shares on the NYSE American, any other national securities exchange or any other nationally recognized trading system.

b) Exercise Price. The exercise price per share of the Series H Preferred under this Warrant shall be $25.00 (the "Exercise Price").

c) 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 there is an effective registration statement permitting the issuance of the Warrant Shares to or resale of the Warrant Shares by Holder 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 Warrant Agent of the Notice of Exercise, (ii) one (1) Trading Day after delivery of the aggregate Exercise Price to the Warrant Agent and (iii) the number of Trading Days comprising the Standard Settlement Period after the delivery to 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 is received within the earlier of (i) two (2) Trading Days and (ii) the number of Trading Days comprising the Standard Settlement Period following delivery of the Notice of Exercise. If the Company fails for any reason to deliver to the Holder the Warrant Shares subject to a Notice of Exercise by the Warrant Share Delivery Date, the Company shall pay to the Holder, in cash, as liquidated damages and not as a penalty, for each $1,000 of Warrant Shares subject to such exercise (based on the VWAP of the Series H Preferred on the date of the applicable Notice of Exercise), $10 per Trading Day (increasing to $20 per Trading Day on the fifth Trading Day after such liquidated damages begin to accrue) for each Trading Day after such Warrant Share Delivery Date until such Warrant Shares are delivered or Holder rescinds such exercise. The Company agrees to maintain a transfer agent that is a participant in the FAST program so long as this Warrant remains outstanding and exercisable. As used herein, "Standard Settlement Period" means the standard settlement period, expressed in a number of Trading Days, on the Company's primary Trading Market with respect to the Series H Preferred 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 to the Holder a new Warrant evidencing the rights of the Holder to purchase the unpurchased Warrant Shares called for by this Warrant, which new Warrant shall in all other respects be identical with this Warrant.

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

iv. Compensation for Buy-In on Failure to Timely Deliver Warrant Shares Upon Exercise. In addition to any other rights available to the Holder, if the Company fails to cause the Transfer Agent to transmit to the Holder the Warrant Shares in accordance with the provisions of Section 2(d)(i) above pursuant to an exercise on or before the Warrant Share Delivery Date, and if after such date the Holder is required by its broker to purchase (in an open market transaction or otherwise) or the Holder's brokerage firm otherwise purchases, shares of Series H Preferred to deliver in satisfaction of a sale by the Holder of the Warrant Shares which the Holder anticipated receiving upon such exercise (a "Buy-In"), then the Company shall (A) pay in cash to the Holder the amount, if any, by which (x) the Holder's total purchase price (including brokerage commissions, if any) for the shares of Series H Preferred so purchased exceeds (y) the amount obtained by multiplying (1) the number of Warrant Shares that the Company was required to deliver to the Holder in connection with the exercise at issue times (2) the price at which the sell order giving rise to such purchase obligation was executed, and (B) at the option of the Holder, either reinstate the portion of the Warrant and equivalent number of Warrant Shares for which such exercise was not honored (in which case such exercise shall be deemed rescinded) or deliver to the Holder the number of shares of Series H Preferred that would have been issued had the Company timely complied with its exercise and delivery obligations hereunder. For example, if the Holder purchases Series H Preferred having a total purchase price of $11,000 to cover a Buy-In with respect to an attempted exercise of shares of Series H Preferred 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 with 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 Warrant Agent's failure to timely deliver shares of Series H Preferred 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.

Section 3. Fundamental Transaction. If, at any time while this Warrant is outstanding, (i) the Company, directly or indirectly, in one or more related transactions effects any merger or consolidation of the Company with or into another Person, (ii) the Company, directly or indirectly, effects any sale, lease, license, assignment, transfer, conveyance or other disposition of all or substantially all of its assets in one or a series of related transactions, (iii) any, direct or indirect, purchase offer, tender offer or exchange offer (whether by the Company or another Person) is completed pursuant to which holders of Series H Preferred 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 Series H Preferred, (iv) the Company, directly or indirectly, in one or more related transactions effects any reclassification, reorganization or recapitalization of the Series H Preferred or any compulsory share exchange pursuant to which the Series H Preferred is effectively converted into or exchanged for other securities, cash or property, or (v) the Company, directly or indirectly, in one or more related transactions consummates a stock or share purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person or group of Persons whereby such other Person or group acquires more than 50% of the outstanding shares of Series H Preferred (not including any shares of Series H Preferred held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock or share purchase agreement or other business combination) (each a "Fundamental Transaction"), then, upon any subsequent exercise of this Warrant, the Holder shall have the right to receive, for each Warrant Share that would have been issuable upon such exercise immediately prior to the occurrence of such Fundamental Transaction, at the option of the Holder (without regard to any limitation in Section 2(e) on the exercise of this Warrant), the number of shares of Series H Preferred of the successor or acquiring corporation or of the Company, if it is the surviving corporation, and any additional consideration (the "Alternate Consideration") receivable as a result of such Fundamental Transaction by a holder of the number of shares of Series H Preferred for which this Warrant is exercisable immediately prior to such Fundamental Transaction (without regard to any limitation in Section 2(e) on the exercise of this Warrant). For purposes of any such exercise, the determination of the Exercise Price shall be appropriately adjusted to apply to such Alternate Consideration based on the amount of Alternate Consideration issuable in respect of one share of Series H Preferred 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 Series H Preferred 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.

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 Warrant Agent unless the Holder has assigned this Warrant in full, in which case, the Holder shall surrender this Warrant to the Warrant Agent within three (3) Trading Days of the date on which the Holder delivers an assignment form to the Warrant Agent 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. 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 original issuance 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 Warrant in certificated form, the Company) shall register this Warrant, upon records to be maintained by the Company for that purpose (the "Warrant Register"), in the name of the record Holder hereof from time to time. The Warrant Agent and the Company may deem and treat the registered Holder of this Warrant as the absolute owner hereof for the purpose of any exercise hereof or any distribution to the Holder, and for all other purposes, absent actual notice to the contrary.

Section 5. Miscellaneous.

a) No Rights as Stockholder Until Exercise. This Warrant does not entitle the Holder to any voting rights, dividends or other rights as a stockholder of the Company prior to the exercise hereof as set forth in Section 2(d)(i).

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

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

d) Authorized Shares.

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

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

e) Governing Law. All questions concerning the construction, validity, enforcement and interpretation of this Warrant shall be governed by and construed and enforced in accordance with the internal laws of the State of New York, without regard to the principles of conflicts of law thereof. Each party agrees that all legal proceedings concerning the interpretations, enforcement and defense of the transactions contemplated by this Warrant (whether brought against a party hereto or their respective affiliates, directors, officers, shareholders, partners, members, employees or agents) shall be commenced exclusively in the state and federal courts sitting in the City of New York. Each party hereby irrevocably submits to the exclusive jurisdiction of the state and federal courts sitting in the City of New York, Borough of Manhattan for the adjudication of any dispute hereunder or in connection herewith or with any transaction contemplated hereby or discussed herein, and hereby irrevocably waives, and agrees not to assert in any suit, action or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action or proceeding is improper or is an inconvenient venue for such proceeding. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof via registered or certified mail or overnight delivery (with evidence of delivery) to such party at the address in effect for notices to it under this Warrant and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any other manner permitted by law. If either party shall commence an action, suit or proceeding to enforce any provisions of this Warrant, the prevailing party in such action, suit or proceeding shall be reimbursed by the other party for their reasonable attorneys' fees and other costs and expenses incurred with the investigation, preparation and prosecution of such action or proceeding.

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

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

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 or e-mail, or sent by a nationally recognized overnight courier service, addressed to the Warrant Agent, at 1990 Main Street, Suite 750 Sarasota, Florida 34236, Attention: Janet Huffman, Chief Executive Officer, facsimile number: (813) 286-7904, email address: jhuffman@oragenics.com, 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 (i) the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section prior to 5:30 p.m. (New York City time) on any date, (ii) the next Trading Day after the time of transmission, if such notice or communication is delivered via facsimile at the facsimile number or via e-mail at the e-mail address set forth in this Section on a day that is not a Trading Day or later than 5:30 p.m. (New York City time) on any Trading Day, (iii) the second Trading Day following the date of mailing, if sent by U.S. nationally recognized overnight courier service, or (iv) upon actual receipt by the party to whom such notice is required to be given. To the extent that any notice provided hereunder constitutes, or contains, material, non-public information regarding the Company or any subsidiaries, the Company shall simultaneously file such notice with the Commission pursuant to a Current Report on Form 8-K.

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

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

k) Successors and Assigns. Subject to applicable securities laws, this Warrant and the rights and obligations evidenced hereby shall inure to the benefit of and be binding upon the successors and permitted assigns of the Company and the successors and permitted assigns of Holder. The provisions of this Warrant are intended to be for the benefit of any Holder from time to time of this Warrant and shall be enforceable by the Holder or holder of Warrant Shares.

l) Amendment. This Warrant may be modified or amended or the provisions hereof waived with the written consent of the Company and the Holder.

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.

ORAGENICS, INC.

By: _____
Name: Janet Huffman
Title: Chief Executive Officer

NOTICE OF EXERCISE

TO: ORAGENICS, INC.

(1) The undersigned hereby elects to purchase _____ Warrant Shares of the Company pursuant to the terms of the attached Warrant (only if exercised in full), and tenders herewith payment of the exercise price in full, together with all applicable transfer taxes, if any.

(2) Payment shall take the form of lawful money of the United States.

(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: _____

EXHIBIT 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:_____

Oragenics, Inc.

and

Continental Stock Transfer & Trust Company, as
Warrant Agent

Warrant Agency Agreement

Dated as of June __, 2025

WARRANT AGENCY AGREEMENT

WARRANT AGENCY AGREEMENT, dated as of June __, 2025 ("Agreement"), between Oragenics, Inc., a Florida corporation (the "Company"), and Continental Stock Transfer & Trust Company, a New York corporation (the "Warrant Agent").

W I T N E S S E T H

WHEREAS, pursuant to a registered offering by the Company of shares of common stock, par value $0.001 per share (the "Common Stock"), warrants to purchase shares of Common Stock (the "Warrants"), and Series H Convertible Preferred Stock (the "Series D Preferred Stock"), pursuant to an effective registration statement on Form S-1 (File No. 333-_____) (the "Registration Statement"), the Company wishes to issue the Warrants in book entry form entitling the respective holders of the Warrants (the "Holders", which term shall include a Holder's transferees, successors and assigns and "Holder" shall include, if the Warrants are held in "street name," a Participant (as defined below) or a designee appointed by such Participant) to purchase an aggregate of up to [_____] shares of Common Stock upon the terms and subject to the conditions hereinafter set forth (the "Offering");

WHEREAS, the shares of Common Stock, the Series H Preferred Stock and Warrants to be issued in connection with the Offering shall be immediately separable and will be issued separately, but will be purchased together in the Offering; and

WHEREAS, the Company wishes the Warrant Agent to act on behalf of the Company, and the Warrant Agent is willing so to act, in connection with the issuance, registration, transfer, exchange, exercise and replacement of the Warrants and, in the Warrant Agent's capacity as the Company's transfer agent, the delivery of the Warrant Shares (as defined below).

NOW, THEREFORE, in consideration of the premises and the mutual agreements herein set forth, the parties hereby agree as follows:

Section 1. Certain Definitions. For purposes of this Agreement, the following terms have the meanings indicated:

(a) "Business Day" means any day except any Saturday, any Sunday, any day which is a federal legal holiday in the United States or any day on which the New York Stock Exchange is authorized or required by law or other governmental action to close.

(b) "Close of Business" on any given date means 5:00 p.m., New York City time, on such date; provided, however, that if such date is not a Business Day it means 5:00 p.m., New York City time, on the next succeeding Business Day.

(c) "Person" means an individual, corporation, association, partnership, limited liability company, joint venture, trust, unincorporated organization, government or political subdivision thereof or governmental agency or other entity.

(d) "Warrant Certificate" means a certificate issued to a Holder, representing such number of Warrant Shares as is indicated therein.

(e) "Warrant Shares" means the shares of Common Stock underlying the Warrants and issuable upon exercise of the Warrants.

All other capitalized terms used but not otherwise defined herein shall have the meaning ascribed to such terms in the Warrant.

Section 2. Appointment of Warrant Agent. The Company hereby appoints the Warrant Agent to act as agent for the Company in accordance with the terms and conditions hereof, and the Warrant Agent hereby accepts such appointment. The Company may from time to time appoint a Co-Warrant Agent as it may, in its sole discretion, deem necessary or desirable. The Warrant Agent shall have no duty to supervise, and will in no event be liable for the acts or omissions of, any co-Warrant Agent.

Section 3. Global Warrants.

(a) The Warrants shall be issuable in book entry form (the "Global Warrants"). All of the Warrants shall initially be represented by one or more Global Warrants deposited with the Warrant Agent and registered in the name of Cede & Co., a nominee of The Depository Trust Company (the "Depositary"), or as otherwise directed by the Depositary. Ownership of beneficial interests in the Warrants shall be shown on, and the transfer of such ownership shall be effected through, records maintained by (i) the Depositary or its nominee for each Global Warrant or (ii) institutions that have accounts with the Depositary (such institution, with respect to a Warrant in its account, a "Participant").

(b) If the Depositary subsequently ceases to make its book-entry settlement system available for the Warrants, the Company may instruct the Warrant Agent regarding other arrangements for book-entry settlement. In the event that the Warrants are not eligible for, or it is no longer necessary to have the Warrants available in, book-entry form, the Warrant Agent shall provide written instructions to the Depositary to deliver to the Warrant Agent for cancellation each Global Warrant, and the Company shall instruct the Warrant Agent to deliver to each Holder a Warrant Certificate.

(c) 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 Warrant Certificate evidencing the same number of Warrants, which request shall be in the form attached hereto as Annex A (a "Warrant Certificate Request Notice" and the date of delivery of such Warrant Certificate Request Notice by the Holder, the "Warrant Certificate Request Notice Date" and the deemed surrender upon delivery by the Holder of a number of Global Warrants

for the same number of Warrants evidenced by a Warrant Certificate, a "Warrant Exchange"), the Warrant Agent shall promptly effect the Warrant Exchange and shall promptly issue and deliver to the Holder a Warrant Certificate for such number of Warrants in the name set forth in the Warrant Certificate Request Notice. Such Warrant Certificate shall be dated the original issue date of the Warrants and shall be manually executed by an authorized signatory of the Company. In connection with a Warrant Exchange, the Company agrees to deliver, or to direct the Warrant Agent to deliver, the Warrant Certificate to the Holder within three (3) Business 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 Warrant 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 Warrant Certificate (based on the VWAP (as defined in the Warrant) of the Common Stock on the Warrant Certificate Request Notice Date), $10 per Business Day (increasing to $20 per Business Day on the fifth Business Day after such liquidated damages begin to accrue) for each Business Day after such Warrant Certificate Delivery Date until such Warrant 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 Warrant Certificate and, notwithstanding anything to the contrary set forth herein, the Warrant 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 Section 3(c), which shall not apply to the Warrants evidenced by a Warrant Certificate. In the event a beneficial owner requests a Warrant Exchange, upon issuance of the paper Warrant Certificate, the Company shall act as warrant agent and the terms of the paper Warrant Certificate so issued shall exclusively govern in respect thereof. For purposes of clarity, if there is a conflict between the express terms of this Agreement and any Warrant Certificate with respect to the terms of the Warrants, the terms of such Warrant Certificate shall govern and control.

Section 4. Form of Warrant. The Warrants, together with the form of election to purchase Common Stock (the "Exercise Notice") and the form of assignment to be printed on the reverse thereof, whether a Warrant Certificate or a Global Warrant, shall be substantially in the form of Exhibit 1 hereto.

Section 5. Countersignature and Registration. The Warrants shall be executed on behalf of the Company by its Chief Executive Officer or Chief Financial Officer, either manually or by facsimile signature, and have affixed thereto the Company's seal or a facsimile thereof which shall be attested by the Secretary or an Assistant Secretary of the Company, either manually or by facsimile signature. The Warrants shall be countersigned by the Warrant Agent either manually or by facsimile signature and shall not be valid for any purpose unless so countersigned. In case any officer of the Company who shall have signed a Warrant shall cease to be such officer of the Company before countersignature by the Warrant Agent and issuance and delivery by the Company, such Warrant, 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 had not ceased to be such officer of the Company; and any Warrant may be signed on behalf of the Company by any person who, at the actual date of the execution of such Warrant, shall be a proper officer of the Company to sign such Warrant, although at the date of the execution of this Warrant Agreement any such person was not such an officer.

The Warrant Agent will keep or cause to be kept, at one of its offices, or at the office of one of its agents, books for registration and transfer of the Warrant Certificates issued hereunder. Such books shall show the names and addresses of the respective Holders of the Warrant Certificates, the number of warrants evidenced on the face of each of such Warrant Certificate and the date of each of such Warrant Certificate. The Warrant Agent will create a special account for the issuance of Warrant Certificates.

Section 6. Transfer, Split Up, Combination and Exchange of Warrant Certificates; Mutilated, Destroyed, Lost or Stolen Warrant Certificates Subject to the provisions of the Warrant and the last sentence of this first paragraph of Section 6 and subject to applicable law, rules or regulations, or any "stop transfer" instructions the Company may give to the Warrant Agent, at any time after the closing date of the Offering, and at or prior to the Close of Business on the Termination Date, any Warrant Certificate or Warrant Certificates or Global Warrant or Global Warrants may be transferred, split up, combined or exchanged for another Warrant Certificate or Warrant Certificates or Global Warrant or Global Warrants, entitling the Holder to purchase a like number of shares of Common Stock as the Warrant Certificate or Warrant Certificates or Global Warrant or Global Warrants surrendered then entitled such Holder to purchase. Any Holder desiring to transfer, split up, combine or exchange any Warrant Certificate or Global Warrant shall make such request in writing delivered to the Warrant Agent, and shall surrender the Warrant Certificate or Warrant Certificates to be transferred, split up, combined or exchanged at the principal office of the Warrant Agent, provided that no such surrender is applicable to the Holder of a Global Warrant. Any requested transfer of Warrants, whether a Global Warrant or a Warrant Certificate, shall be accompanied by reasonable evidence of authority of the party making such request that may be required by the Warrant Agent. Thereupon the Warrant Agent shall, subject to the last sentence of this first paragraph of Section 6, countersign and deliver to the Person entitled thereto any Warrant Certificate or Global Warrant, as the case may be, as so requested. The Company may require payment from the Holder of a sum sufficient to cover any tax or governmental charge that may be imposed in connection with any transfer, split up, combination or exchange of Warrants. The Company shall compensate the Warrant Agent per the fee schedule mutually agreed upon by the parties hereto and provided separately on the date hereof.

Upon receipt by the Warrant Agent of evidence reasonably satisfactory to it of the loss, theft, destruction or mutilation of a Warrant Certificate, which evidence shall include an affidavit of loss, or in the case of mutilated certificates, the certificate or portion thereof remaining, and, in case of loss, theft or destruction, of indemnity in customary form and amount, and satisfaction of any other reasonable requirements established by Section 8-405 of the Uniform Commercial Code as in effect in the State of Delaware, 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 Company will make and deliver a new Warrant Certificate of like tenor to the Warrant Agent for delivery to the Holder in lieu of the Warrant Certificate so lost, stolen, destroyed or mutilated.

Section 7. Exercise of Warrants; Exercise Price; Termination Date.

(a) The Warrants shall be exercisable commencing on the Initial Exercise Date. The Warrants shall cease to be exercisable and shall terminate and become void, and all rights thereunder and under this Agreement shall cease, at or prior to the Close of Business on the Termination Date. Subject to the foregoing and to Section 7(b) below, the Holder of a Warrant may exercise the Warrant in whole or in part upon providing the items required by Section 7(c) below to the Warrant Agent at the principal office of the Warrant Agent or to the office of one of its agents as may be designated by the Warrant Agent from time to time. In the case of the Holder of a Global Warrant, the Holder shall deliver the executed Exercise Notice and payment of the Exercise Price pursuant to Section 2(a) of the Warrant. Notwithstanding any other provision in this Agreement, a holder whose interest in a Global Warrant is a beneficial interest in a Global Warrant held in book-entry form through the Depositary (or another established clearing corporation performing similar functions), shall effect exercises by delivering to the Depositary (or such other clearing corporation, as applicable) the appropriate instruction form for exercise, complying with the procedures to effect exercise that are required by the Depositary (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.

(b) Upon receipt of an Exercise Notice for a cashless exercise pursuant to Section 2(c) of the Warrant (each, a "Cashless Exercise"), the Company will promptly calculate and transmit to the Warrant Agent the number of Warrant Shares issuable in connection with such Cashless Exercise and deliver a copy of the Exercise Notice to the Warrant Agent, which shall issue such number of Warrant Shares in connection with such Cashless Exercise.

(c) Upon the Warrant Agent's receipt, at or prior to the Close of Business on the Termination Date set forth in a Warrant, of the executed Exercise Notice, accompanied by payment of the Exercise Price pursuant to Section 2(a) of the Warrant, the shares to be purchased (other than in the case of a Cashless Exercise), an amount equal to any applicable tax, governmental charge or expense reimbursement referred to in Section 6 in cash, or by certified check or bank draft payable to the order of the Company and, in the case of an exercise of a Warrant in the form of a Warrant Certificate for all of the Warrant Shares represented thereby, the Warrant Certificate, the Warrant Agent shall cause the Warrant Shares underlying such Warrant to be delivered to or upon the order of the Holder of such Warrant, registered in such name or names as may be designated by such Holder, no later than the Warrant Share Delivery Date. If the Company is then a participant in the DWAC system of the Depositary 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) the Warrant is being exercised via Cashless Exercise, then the certificates for Warrant Shares shall be transmitted by the Warrant Agent to the Holder by crediting the account of the Holder's broker with the Depositary through its DWAC system. For the avoidance of doubt, if the Company becomes obligated to pay any amounts to any Holders pursuant to Section 2(d)(i) or 2(d)(iv) of the

Warrant, such obligation shall be solely that of the Company and not that of the Warrant Agent. Notwithstanding anything else to the contrary in this Agreement, except in the case of a Cashless Exercise, if any Holder fails to duly deliver payment to the Warrant Agent of an amount equal to the aggregate Exercise Price of the Warrant Shares to be purchased upon exercise of such Holder's Warrant as set forth in Section 7(a) hereof, the Warrant Agent will not obligated to deliver certificates representing any such Warrant Shares (via DWAC or otherwise) until following receipt of such payment, and the applicable Warrant Share Delivery Date shall be deemed extended by one day for each day (or part thereof) until such payment is delivered to the Warrant Agent.

(d) The Warrant Agent shall deposit all funds received by it in payment of the Exercise Price for all Warrants in the account of the Company maintained with the Warrant Agent for such purpose (or to such other account as directed by the Company in writing) and shall advise the Company via telephone at the end of each day on which funds for the exercise of any Warrant are received of the amount so deposited to its account. The Warrant Agent shall promptly confirm such telephonic advice to the Company in writing.

(e) In case the Holder of any Warrant Certificate exercises fewer than all Warrants evidenced thereby and surrenders such Warrant Certificate in connection with such partial exercise, a new Warrant Certificate evidencing the number of Warrant Shares equivalent to the number of Warrant Shares remaining unexercised may be issued by the Warrant Agent to the Holder of such Warrant Certificate or to his duly authorized assigns in accordance with Section 2(d)(ii) of the Warrant, subject to the provisions of Section 6 hereof.

Section 8. Cancellation and Destruction of Warrant Certificates. All Warrant Certificates surrendered for the purpose of exercise, transfer, split up, combination or exchange shall, if surrendered to the Company or to any of its agents, be delivered to the Warrant Agent for cancellation or in canceled form, or, if surrendered to the Warrant Agent, shall be canceled by it, and no Warrant Certificates shall be issued in lieu thereof except as expressly permitted by any of the provisions of this Agreement. The Company shall deliver to the Warrant Agent for cancellation and retirement, and the Warrant Agent shall so cancel and retire, any other Warrant Certificate purchased or acquired by the Company otherwise than upon the exercise thereof. The Warrant Agent shall deliver all canceled Warrant Certificates to the Company, or shall, at the written request of the Company, destroy such canceled Warrant Certificates, and in such case shall deliver a certificate of destruction thereof to the Company, subject to any applicable law, rule or regulation requiring the Warrant Agent to retain such canceled certificates.

Section 9. Certain Representations; Reservation and Availability of Shares of Common Stock or Cash.

(a) This Agreement has been duly authorized, executed and delivered by the Company and, assuming due authorization, execution and delivery hereof by the Warrant Agent, constitutes a valid and legally binding obligation of the Company enforceable against the Company in accordance with its terms, and the Warrants have been duly authorized, executed and issued by the Company and, assuming due authentication thereof by the Warrant Agent pursuant hereto and payment therefor by the Holders as provided in the Registration Statement, constitute valid and legally binding obligations of the Company enforceable against the Company in accordance with their terms and entitled to the benefits thereof; in each case except as enforceability may be limited by bankruptcy, insolvency, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally or by general equitable principles (regardless of whether such enforceability is considered in a proceeding in equity or at law).

(b) As of the date hereof and prior to the Offering, the authorized capital stock of the Company consists of (i) 200,000,000 shares of authorized Common Stock, of which 6,102,635 shares of Common Stock are issued and outstanding, and (ii) 50,000,000 shares of authorized preferred stock of which 9,417,000 are issued and outstanding designated as Series A Preferred; 6,600,000 shares are issued and outstanding designated as Series B Preferred; 101.733 shares are issued and outstanding designated as Series C Preferred; and 9,364,000 of which are designated as Series D Preferred Stock, par value $0.001 per share. As of the date hereof there are 13,800,000 shares of Common Stock reserved for issuance upon exercise of the Warrants inclusive of any Warrants the Underwriter may acquire upon exercise of its over-allotment option described in the Registration Statement. Except as disclosed in the Registration Statement, there are no other outstanding obligations, warrants, options or other rights to subscribe for or purchase from the Company any class of capital stock of the Company.

(c) The Company covenants and agrees that it will cause to be reserved and kept available out of its authorized and unissued shares of Common Stock or its authorized and issued shares of Common Stock held in its treasury, free from preemptive rights, the number of shares of Common Stock that will be sufficient to permit the exercise in full of all outstanding Warrants.

(d) The Warrant Agent will create a special account for the issuance of Common Stock upon the exercise of Warrants.

(e) The Company further covenants and agrees that it will pay when due and payable any and all federal and state transfer taxes and charges which may be payable in respect of the original issuance or delivery of the Warrant Certificates or certificates evidencing Common Stock upon exercise of the Warrants. The Company shall not, however, be required to pay any tax or governmental charge which may be payable in respect of any transfer involved in the transfer or delivery of Warrant Certificates or the issuance or delivery of certificates for Common Stock in a name other than that of the Holder of the Warrant Certificate evidencing Warrants surrendered for exercise or to issue or deliver any certificate for shares of Common Stock upon the exercise of any Warrants until any such tax or governmental charge shall have been paid (any such tax or governmental charge being payable by the Holder of such Warrant Certificate at the time of surrender) or until it has been established to the Company's reasonable satisfaction that no such tax or governmental charge is due.

Section 10. Common Stock Record Date. Each Holder shall be deemed to have become the holder of record for the Warrant Shares pursuant to Section 2(d)(i) of the Warrants.

Section 11. Adjustment of Exercise Price, Number of Shares of Common Stock or Number of the Company Warrants. The Exercise Price, the number of shares covered by each Warrant and the number of Warrants outstanding are subject to adjustment from time to time as provided in Section 3 of the Warrant. In the event that at any time, as a result of an adjustment made pursuant to Section 3 of the Warrant, the Holder of any Warrant thereafter exercised shall become entitled to receive any shares of capital stock of the Company other than shares of Common Stock, thereafter the number of such other shares so receivable upon exercise of any Warrant shall be subject to adjustment from time to time in a manner and on terms as nearly equivalent as practicable to the provisions with respect to the shares contained in Section 3 of the Warrant, and the provisions of Sections 7, 9 and 13 of this Agreement with respect to the shares of Common Stock shall apply on like terms to any such other shares. All Warrants originally issued by the Company subsequent to any adjustment made to the Exercise Price pursuant to the Warrant shall evidence the right to purchase, at the adjusted Exercise Price, the number of shares of Common Stock purchasable from time to time hereunder upon exercise of the Warrants, all subject to further adjustment as provided herein.

Section 12. Certification of Adjusted Exercise Price or Number of Shares of Common Stock. Whenever the Exercise Price or the number of shares of Common Stock issuable upon the exercise of each Warrant is adjusted as provided in Section 11 or 13, the Company shall (a) promptly prepare a certificate setting forth the Exercise Price of each Warrant as so adjusted, and a brief statement of the facts accounting for such adjustment, (b) promptly file with the Warrant Agent and with each transfer agent for the Common Stock a copy of such certificate and (c) instruct the Warrant Agent to send a brief summary thereof to each Holder of a Warrant.

Section 13. Fractional Shares of Common Stock.

(a) The Company 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 either up or down to the nearest whole Warrant.

(b) The Company shall not issue fractions of shares of Common Stock upon exercise of Warrants or distribute stock certificates that evidence fractional shares of Common Stock. Whenever any fraction of a share of Common Stock would otherwise be required to be issued or distributed, the actual issuance or distribution in respect thereof shall be made in accordance with Section 2(d)(v) of the Warrant.

Section 14. Conditions of the Warrant Agent's Obligations. The Warrant Agent accepts its obligations herein set forth upon the terms and conditions hereof, including the following to all of which the Company agrees and to all of which the rights hereunder of the Holders from time to time of the Warrant shall be subject:

(a) Compensation and Indemnification. The Company agrees promptly to pay the Warrant Agent the compensation detailed on Exhibit 2 hereto for all services rendered by the Warrant Agent and to reimburse the Warrant Agent for reasonable out-of-pocket expenses (including reasonable counsel fees) incurred without gross negligence, bad faith or willful misconduct by the Warrant Agent in connection with the services rendered hereunder by the Warrant Agent. The Company also agrees to indemnify the Warrant Agent for, and to hold it harmless against, any loss, liability or expense incurred without gross negligence, bad faith or willful misconduct on the part of the Warrant Agent, arising out of or in connection with its acting as Warrant Agent hereunder, including the reasonable costs and expenses of defending against any claim of such liability.

(b) Agent for the Company. In acting under this Warrant Agreement and in connection with the Warrant Certificates, the Warrant Agent is acting solely as agent of the Company and does not assume any obligations or relationship of agency or trust for or with any of the Holders of Warrant Certificates or beneficial owners of Warrants.

(c) Counsel. The Warrant Agent may consult with counsel satisfactory to it, which may include counsel for the Company, and the written 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.

(d) Documents. The Warrant Agent shall be protected and shall incur no liability for or in respect of any action taken or omitted by it in reliance upon any Warrant Certificate, notice, direction, consent, certificate, affidavit, statement or other paper or document reasonably believed by it to be genuine and to have been presented or signed by the proper parties.

(e) Certain Transactions. The Warrant Agent, and its officers, directors and employees, may become the owner of, or acquire any interest in, Warrants, with the same rights that it or they would have if it were not the Warrant Agent hereunder, and, to the extent permitted by applicable law, it or they may engage or be interested in any financial or other transaction with the Company and may act on, or as depositary, trustee or agent for, any committee or body of Holders of Warrant Securities or other obligations of the Company as freely as if it were not the Warrant Agent hereunder. Nothing in this Warrant Agreement shall be deemed to prevent the Warrant Agent from acting as trustee under any indenture to which the Company is a party.

(f) No Liability for Interest. Unless otherwise agreed with the Company, the Warrant Agent shall have no liability for interest on any monies at any time received by it pursuant to any of the provisions of this Agreement or of the Warrant Certificates.

(g) No Liability for Invalidity. The Warrant Agent shall have no liability with respect to any invalidity of this Agreement or any of the Warrant Certificates (except as to the Warrant Agent's countersignature thereon).

(h) No Responsibility for Representations. The Warrant Agent shall not be responsible for any of the recitals or representations herein or in the Warrant Certificates (except as to the Warrant Agent's countersignature thereon), all of which are made solely by the Company.

(i) No Implied Obligations. The Warrant Agent shall be obligated to perform only such duties as are herein and in the Warrants specifically set forth and no implied duties or obligations shall be read into this Agreement or the Warrants against the Warrant Agent. The Warrant Agent shall not be under any obligation to take any action hereunder which may tend to involve it in any expense or liability, the payment of which within a reasonable time is not, in its reasonable opinion, assured to it. The Warrant Agent shall not be accountable or under any duty or responsibility for the use by the Company of any of the Warrants authenticated by the Warrant Agent and delivered by it to the Company pursuant to this Agreement or for the application by the Company of the proceeds of the Warrants. The Warrant Agent shall have no duty or responsibility in case of any default by the Company in the performance of its covenants or agreements contained herein or in the Warrants or in the case of the receipt of any written demand from a Holder of a Warrant Certificate with respect to such default, including, without limiting the generality of the foregoing, any duty or responsibility to initiate or attempt to initiate any proceedings at law.

Section 15. Purchase or Consolidation or Change of Name of Warrant Agent. Any corporation into which the Warrant Agent or any successor Warrant Agent may be merged or with which it may be consolidated, or any corporation resulting from any merger or consolidation to which the Warrant Agent or any successor Warrant Agent shall be party, or any corporation succeeding to the corporate trust business of the Warrant Agent or any successor Warrant Agent, shall be the successor to the Warrant Agent under this Agreement without the execution or filing of any paper or any further act on the part of any of the parties hereto, provided that such corporation would be eligible for appointment as a successor Warrant Agent under the provisions of Section 17. In case at the time such successor Warrant Agent shall succeed to the agency created by this Agreement any of the Warrants shall have been countersigned but not delivered, any such successor Warrant Agent may adopt the countersignature of the predecessor Warrant Agent and deliver such Warrants so countersigned; and in case at that time any of the Warrants shall not have been countersigned, any successor Warrant Agent may countersign such Warrants either in the name of the predecessor Warrant Agent or in the name of the successor Warrant Agent; and in all such cases such Warrants shall have the full force provided in the Warrants and in this Agreement.

In case at any time the name of the Warrant Agent shall be changed and at such time any of the Warrants shall have been countersigned but not delivered, the Warrant Agent may adopt the countersignature under its prior name and deliver Warrants so countersigned; and in case at that time any of the Warrants shall not have been countersigned, the Warrant Agent may countersign such Warrants either in its prior name or in its changed name; and in all such cases such Warrants shall have the full force provided in the Warrants and in this Agreement.

Section 16. Duties of Warrant Agent. The Warrant Agent undertakes the duties and obligations imposed by this Agreement upon the following terms and conditions, all of which the Company, by its acceptance hereof, shall be bound:

(a) The Warrant Agent may consult with legal counsel reasonably acceptable to the Company (who may be legal counsel for the Company), and the opinion of such counsel shall be full and complete authorization and protection to the Warrant Agent as to any action taken or omitted by it in good faith and in accordance with such opinion.

(b) Whenever in the performance of its duties under this Agreement the Warrant Agent shall deem it necessary or desirable that any fact or matter be proved or established by the Company prior to taking or suffering any action hereunder, such fact or matter (unless other evidence in respect thereof be herein specifically prescribed) may be deemed to be conclusively proved and established by a certificate signed by the Chief Executive Officer or Chief Financial Officer of the Company; and such certificate shall be full authentication to the Warrant Agent for any action taken or suffered in good faith by it under the provisions of this Agreement in reliance upon such certificate.

(c) Subject to the limitation set forth in Section 14, the Warrant Agent shall be liable hereunder only for its own gross negligence, bad faith or willful misconduct, or

for a breach by it of this Agreement.

(d) The Warrant Agent shall not be liable for or by reason of any of the statements of fact or recitals contained in this Agreement or in the Warrants (except its countersignature thereof) by the Company or be required to verify the same, but all such statements and recitals are and shall be deemed to have been made by the Company only.

(e) The Warrant Agent shall not be under any responsibility in respect of the validity of this Agreement or the execution and delivery hereof (except the due execution hereof by the Warrant Agent) or in respect of the validity or execution of any Warrant (except its countersignature thereof); nor shall it be responsible for any breach by the Company of any covenant or condition contained in this Agreement or in any Warrant; nor shall it be responsible for the adjustment of the Exercise Price or the making of any change in the number of shares of Common Stock required under the provisions of Section 11 or 13 or responsible for the manner, method or amount of any such change or the ascertaining of the existence of facts that would require any such adjustment or change (except with respect to the exercise of Warrants evidenced by Warrant Certificates after actual notice of any adjustment of the Exercise Price); nor shall it by any act hereunder be deemed to make any representation or warranty as to the authorization or reservation of any shares of Common Stock to be issued pursuant to this Agreement or any Warrant or as to whether any shares of Common Stock will, when issued, be duly authorized, validly issued, fully paid and nonassessable.

(f) Each party hereto agrees that it will perform, execute, acknowledge and deliver or cause to be performed, executed, acknowledged and delivered all such further and other acts, instruments and assurances as may reasonably be required by the other party hereto for the carrying out or performing by any party of the provisions of this Agreement.

(g) The Warrant Agent is hereby authorized to accept instructions with respect to the performance of its duties hereunder from the Chief Executive Officer or Chief Financial Officer of the Company, and to apply to such officers for advice or instructions in connection with its duties, and it shall not be liable and shall be indemnified and held harmless for any action taken or suffered to be taken by it in good faith in accordance with instructions of any such officer, provided Warrant Agent carries out such instructions without gross negligence, bad faith or willful misconduct.

(h) The Warrant Agent and any shareholder, director, officer or employee of the Warrant Agent may buy, sell or deal in any of the Warrants or other securities of the Company or become pecuniarily interested in any transaction in which the Company may be interested, or contract with or lend money to the Company or otherwise act as fully and freely as though it were not Warrant Agent under this Agreement. Nothing herein shall preclude the Warrant Agent from acting in any other capacity for the Company or for any other legal entity.

(i) The Warrant Agent may execute and exercise any of the rights or powers hereby vested in it or perform any duty hereunder either itself or by or through its attorney or agents, and the Warrant Agent shall not be answerable or accountable for any act, default, neglect or misconduct of any such attorney or agents or for any loss to the Company resulting from any such act, default, neglect or misconduct, provided reasonable care was exercised in the selection and continued employment thereof.

Section 17. Change of Warrant Agent . The Warrant Agent may resign and be discharged from its duties under this Agreement upon 30 days' notice in writing sent to the Company and to each transfer agent of the Common Stock, and to the Holders of the Warrant Certificates. The Company may remove the Warrant Agent or any successor Warrant Agent upon 30 days' notice in writing, sent to the Warrant Agent or successor Warrant Agent, as the case may be, and to each transfer agent of the Common Stock, and to the Holders of the Warrant Certificates. If the Warrant Agent shall resign or be removed or shall otherwise become incapable of acting, the Company shall appoint a successor to the Warrant Agent. If the Company shall fail to make such appointment within a period of 30 days after such removal or after it has been notified in writing of such resignation or incapacity by the resigning or incapacitated Warrant Agent or by the Holder of a Warrant Certificate (who shall, with such notice, submit his Warrant Certificate for inspection by the Company), then the Holder of any Warrant Certificate may apply to any court of competent jurisdiction for the appointment of a new Warrant Agent. Any successor Warrant Agent, whether appointed by the Company or by such a court, shall be a corporation organized and doing business under the laws of the United States or of a state thereof, in good standing, which is authorized under such laws to exercise corporate trust powers and is subject to supervision or examination by federal or state authority and which has at the time of its appointment as Warrant Agent a combined capital and surplus of at least $50,000,000. After appointment, the successor Warrant Agent shall be vested with the same powers, rights, duties and responsibilities as if it had been originally named as Warrant Agent without further act or deed; but the predecessor Warrant Agent shall deliver and transfer to the successor Warrant Agent any property at the time held by it hereunder, and execute and deliver any further assurance, conveyance, act or deed necessary for the purpose. Not later than the effective date of any such appointment, the Company shall file notice thereof in writing with the predecessor Warrant Agent and each transfer agent of the Common Stock, and mail a notice thereof in writing to the Holders of the Warrant Certificates. However, failure to give any notice provided for in this Section 17, or any defect therein, shall not affect the legality or validity of the resignation or removal of the Warrant Agent or the appointment of the successor Warrant Agent, as the case may be.

Section 18. Issuance of New Warrants. Notwithstanding any of the provisions of this Agreement or of the Warrants to the contrary, the Company may, at its option, issue a new Global Warrant or Warrant Certificates, if any, evidencing Warrants in such form as may be approved by its Board of Directors to reflect any adjustment or change in the Exercise Price per share and the number or kind or class of shares of stock or other securities or property purchasable under the Global Warrant or Warrant Certificates, if any, made in accordance with the provisions of this Agreement.

Section 19. Notices. Notices or demands authorized by this Agreement to be given or made (i) by the Warrant Agent or by the Holder of any Warrant Certificate to or on the Company, (ii) subject to the provisions of Section 17, by the Company or by the Holder of any Warrant Certificate to or on the Warrant Agent or (iii) by the Company or the Warrant Agent to the Holder of any Warrant Certificate, shall be deemed given (a) on the date delivered, if delivered personally, (b) on the first Business Day following the deposit thereof with Federal Express or another recognized overnight courier, if sent by Federal Express or another recognized overnight courier, (c) on the fourth Business Day following the mailing thereof with postage prepaid, if mailed by registered or certified mail (return receipt requested), and (d) the date of transmission, if such notice or communication is delivered via facsimile or email attachment at or prior to 5:30 p.m. (New York City time) on a Business Day and (e) the next Business Day after the date of transmission, if such notice or communication is delivered via facsimile or email attachment on a day that is not a Business Day or later than 5:30 p.m. (New York City time) on any Business Day, in each case to the parties at the following addresses (or at such other address for a party as shall be specified by like notice):

(a) If to the Company, to:

Oragenics, Inc.
1990 Main St
Suite 750
Sarasota, FL 34236
Facsimile: 813-286-7904
Attention: Janet Huffman

(b) If to the Warrant Agent, to:

Continental Stock Transfer & Trust Company
1 State Street 30th Floor,
New York, NY 10004-1561

Attention: Compliance Department

For any notice delivered by email to be deemed given or made, such notice must be followed by notice sent by overnight courier service to be delivered on the next business day following such email, unless the recipient of such email has acknowledged via return email receipt of such email.

(c) If to the Holder of any Warrant Certificate, to the address of such Holder as shown on the registry books of the Company. Any notice required to be delivered by the Company to the Holder of any Warrant may be given by the Warrant Agent on behalf of the Company. Notwithstanding any other provision of this Agreement, where this Agreement provides for notice of any event to a Holder of any Warrant Certificate, for a Global Warrant, such notice shall be sufficiently given if given to the Depositary (or its designee) pursuant to the procedures of the Depositary or its designee.

Section 20. Supplements and Amendments.

(a) The Company and the Warrant Agent may from time to time supplement or amend this Agreement without the approval of any Holders of Warrant Certificates in order to cure any ambiguity, to correct or supplement any provision contained herein which may be defective or inconsistent with any other provisions herein, or to make any other provisions with regard to matters or questions arising hereunder which the Company and the Warrant Agent may deem necessary or desirable and which shall not adversely affect the interests of the Holders of the Warrants Certificates in any material respect.

(b) In addition to the foregoing, with the consent of Holders of Warrants, the Company and the Warrant Agent may modify this Agreement for the purpose of adding any provisions to or changing in any manner or eliminating any of the provisions of this Warrant Agreement or modifying in any manner the rights of the Holders of the Warrant Certificates; provided, however, that no modification of the terms (including but not limited to the adjustments described in Section 11) upon which the Warrants are exercisable or reducing the percentage required for consent to modification of this Agreement may be made without the consent of the Holder of each outstanding warrant certificate affected thereby. As a condition precedent to the Warrant Agent's execution of any amendment, the Company shall deliver to the Warrant Agent a certificate from a duly authorized officer of the Company that states that the proposed amendment complies with the terms of this Section 20.

Section 21. Successors. All covenants and provisions of this Agreement by or for the benefit of the Company or the Warrant Agent shall bind and inure to the benefit of their respective successors and assigns hereunder.

Section 22. Benefits of this Agreement. Nothing in this Agreement shall be construed to give any Person other than the Company, the Holders of Warrant Certificates and the Warrant Agent any legal or equitable right, remedy or claim under this Agreement; but this Agreement shall be for the sole and exclusive benefit of the Company, the Warrant Agent and the Holders of the Warrant Certificates.

Section 23. Governing Law. This Agreement and each Warrant issued hereunder shall be governed by, and construed in accordance with, the laws of the State of New York without giving effect to the conflicts of law principles thereof.

Section 24. Counterparts. This Agreement may be executed in any number of 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.

Section 25. Captions. The captions of the sections of this Agreement have been inserted for convenience only and shall not control or affect the meaning or construction of any of the provisions hereof.

Section 26. Information. The Company agrees to promptly provide to the Holders of the Warrants any information it provides to all holders of the Common Stock, except to the extent any such information is publicly available on the EDGAR system (or any successor thereof) of the Securities and Exchange Commission.

Section 27. Force Majeure. Notwithstanding anything to the contrary contained herein, Warrant Agent shall not be liable for any delays or failures in performance resulting from acts beyond its reasonable control including, without limitation, acts of God, terrorist acts, shortage of supply, breakdowns or malfunctions, interruptions or malfunction of computer facilities, or loss of data due to power failures or mechanical difficulties with information storage or retrieval systems, labor difficulties, war, or civil unrest, it being understood that the Warrant Agent shall use reasonable best efforts which are consistent with accepted practices in the banking industry to resume performance as soon as practicable under the circumstances.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed as of the day and year first above written.

ORAGENICS, INC.

By: _____
Name: Janet Huffman
Title: Chief Executive Officer

CONTINENTAL STOCK TRANSFER & TRUST COMPANY

By: _____
Name:
Title:

Annex A: Form of Warrant Certificate Request Notice

WARRANT CERTIFICATE REQUEST NOTICE

To: Continental Stock Transfer & Trust Company as Warrant Agent for Oragenics, 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 Warrant 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 Warrant 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 Warrant Certificate shall be issued: _____

5. Number of Warrants in name of Holder in form of Global Warrants after issuance of Warrant Certificate, if any: _____

6. Warrant 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 Warrant 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 Warrant Certificate.

[SIGNATURE OF HOLDER]

Name of Investing Entity: _____

Signature of Authorized Signatory of Investing Entity: _____

Name of Authorized Signatory: _____

Title of Authorized Signatory: _____

Date: _____

Exhibit 1: Form of Warrant

Exhibit 5.1

SHUMAKER
Shumaker, Loop & Kendrick, LLP

Bank of America Plaza
101 East Kennedy Boulevard
Suite 2800
Tampa, Florida 33602

813.229.7600
813.229.1660 fax

www.shumaker.com

June 23, 2025

Oragenics, Inc.
1990 Main Street, Suite 750
Sarasota, FL 34236

Re: Oragenics, Inc.

Ladies and Gentlemen:

We are acting as counsel to Oragenics, Inc., a Florida corporation (the "**Company**"), in connection with the filing, on or about the date of this letter, with the U.S. Securities and Exchange Commission (the "**Commission**"), pursuant to the Securities Act of 1933, as amended (the "**Securities Act**"), of the Registration Statement on Form S-1 of the Company (including all exhibits thereto, the "**Registration Statement**"), including a related prospectus contained therein (the "**Prospectus**"), relating to the proposed public offering (the "**Offering**") by the Company of up to an aggregate of: (i) $20.0 million units, with each unit consisting of one share of the Company's Series H Convertible Preferred Stock, no par value ("**Series H Preferred Stock**"), and a warrant to purchase one share of Series H Preferred Stock (the "**Warrants**"), (ii) shares of Series H Preferred Stock issuable upon exercise of the warrants (the "**Warrant Shares**") and (iii) shares of common stock ("**Common Stock**") issuable upon conversion of the shares of Series H Preferred Stock ((i) through (iii) collectively, the "**Securities**"). The Securities are to be sold by the Company pursuant to a placement agency agreement ("**Placement Agency Agreement**") to be entered into by and between the Company and Dawson James Securities, Inc. The Securities are to be offered and sold in the manner described in the Registration Statement and the Prospectus.

The terms "Series H Preferred Stock," "Warrants," "Warrant Shares," "Common Stock" "and "Securities" shall include any additional securities registered by the Company pursuant to Rule 462(b) under the Act in connection with the offering contemplated by the Registration Statement. This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or the Prospectus other than as expressly stated herein with respect to the issuance of the Securities.

As such counsel and for purposes of our opinions set forth herein, we have examined and relied upon originals or copies, certified or otherwise identified to our satisfaction, of such documents, resolutions, certificates and other instruments of the Company and corporate records furnished to us by the Company, and have reviewed certificates of public officials, statutes, records and such other instruments and documents as we have deemed necessary or appropriate as a basis for the opinion set forth below, including without limitation (i) the Amended and Restated Articles of Incorporation of the Company, as amended through the date hereof; (ii) the Amended and Restated Bylaws of the Company, as amended through the date hereof; (iii) the Certificate of Designation of Series H Convertible Preferred Stock to be filed with the Secretary of State of the State of Florida, (iv) certain resolutions of the Board of Directors of the Company (the "**Board**") relating to the issuance, sale and registration of the Securities; (v) the Registration Statement; (vi) the Prospectus and (vii) the Placement Agency Agreement. In addition, we have examined originals or copies, certified or otherwise identified to our satisfaction, of certain other corporate records, documents, instruments and certificates of public officials and of the Company, and we have made such inquiries of officers of the Company and public officials and considered such questions of law as we have deemed necessary for purposes of rendering the opinions set forth herein. Our opinions are limited to the matters stated herein and no opinion is implied or may be inferred beyond the matters expressly stated.

With respect to the Common Stock issuable upon conversion of the Series H Preferred Stock, we express no opinion to the extent that future issuances of Common Stock of the Company, adjustments to outstanding securities of the Company or other matters that cause the Series H Preferred Stock to be convertible into more shares of Common Stock than the number authorized for issuance by the Company. Further, we have assumed the conversion price of the Series H Preferred Stock will not be adjusted to an amount below the par value per share of the Common Stock.

Based upon and subject to the foregoing, we are of the opinion that:

1. The Series H Preferred Stock has been duly authorized by the Company and if, when and to the extent any Series H Preferred Stock is issued and sold in accordance with all applicable terms and conditions set forth in, and in the manner contemplated by and as described in the Registration Statement and Prospectus (including the payment in full of all consideration required for such Series H Preferred Stock, including without limitation, with regard to the Series H Preferred Stock underlying the Warrants, the payment in full of the exercise price for such shares in accordance with the Warrants), such Series H Preferred Stock will be validly issued, fully paid and nonassessable;

2. The Warrants have been duly authorized by the Company and if, when and to the extent any Warrants are issued and sold in accordance with all applicable terms and conditions set forth in, and in the manner contemplated by, and as described in the Registration Statement and Prospectus, the Warrants will be validly issued, fully paid and nonassessable; and

3. The Common Stock has been duly authorized by the Company and if, when and to the extent any Common Stock is issued in accordance with all applicable terms and conditions set forth in, and in the manner contemplated by and as described in the Registration Statement and Prospectus (including the terms and conditions of the Certificate of Designation), such Securities will be validly issued, fully paid and nonassessable.

We are admitted to practice in the State of Florida. This opinion letter is limited to the laws of the State of Florida, as such laws presently exist and to the facts as they presently exist. We express no opinion as to the effect of the law of any other jurisdiction. We assume no obligation to revise or supplement this opinion letter should the laws of such jurisdictions be changed after the date hereof by legislative action, judicial decision or otherwise. Without limiting the generality of the foregoing, we express no opinion with respect to (i) state securities or "Blue Sky" laws or (ii) state or federal antifraud laws.

We hereby consent to the inclusion of this opinion as Exhibit 5.1 to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act and to the references to our firm therein and in the Prospectus under the caption "Legal Matters." In giving this consent, we do not thereby admit that we are an "expert" within the meaning of the Securities Act of 1933, as amended.

Very truly yours,

/s/ Shumaker, Loop & Kendrick, LLP
SHUMAKER, LOOP & KENDRICK, LLP

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We consent to the incorporation in this Registration Statement on Form S-1 of Oragenics, Inc. (the "Company") of our report dated March 14, 2025, related to the consolidated financial statements of the Company as of and for the year ended December 31, 2024, and to the reference to us under the heading "Experts" in this Registration Statement.

/s/ Cherry Bekaert LLP

Tampa, Florida
June 23, 2025

Exhibit 107

Calculation of Filing Fee Tables
Form S-1
(Form Type)

Oragenics, Inc.
(Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered	Proposed Maximum Offering Price Per Unit	Maximum Aggregate Offering Price(1)(2)(3)	Fee Rate	Amount of Registration Fee
Fees to Be Paid	Equity	Shares of Series H Preferred Stock, no par value (1) (3)	457(o)	-	$ 25.00	$ 20,000,000	0.00015310	$ 3,062.00
Fees to Be Paid	Equity	Series H Preferred Stock warrants (3))	457(o)	-	-	Included above	-	-
Fees to Be Paid	Equity	Shares of Common Stock issuable upon exercise of Series H Preferred Stock (3)	457(o)	-	-	Included above	-	-
Fees to Be Paid	Equity	Shares of Series H Preferred Stock issuable upon exercise of Series H Warrants (4)	457(i)	-	$ 25.00	$ 20,000,000	0.00015310	$ 3,062.00
				Total Offering Amounts		$ 40,000,000		$ 6,124.00
				Total Fees Previously Paid		$		$ 0
				Total Fee Offsets		—		813.34(5)
				Net Fee Due				$ 5,310.66(5)

Table 2: Fee Offset Claims and Sources

	Registrant or Filer Name	Form or Filing Type	File Number	Initial Filing Date	Filing Date	Fee Offset Claimed	Security Type Associated with Fee Offset Claimed	Security Title Associated with Fee Offset Claimed	Unsold Securities Associated with Fee Offset Claimed	Unsold Aggregate Offering Amount Associated with Fee Offset Claimed	Fee Paid with Fee Offset Source
						Rule 457(p)					
Fee Offset Claims	Oragenics, Inc.	S-1	333-283927	December 18, 2024		$ 765.50	Equity	Shares of Common Stock issuable upon exercise of Representative Warrants, par value $0.001 per share	N/A	$ 5,000,000	
Fee Offset Claims	Oragenics, Inc.	S-1/A	333-283927	December 18, 2024	January 8, 2025	$ 47.84	Equity	Shares of Common Stock issuable upon exercise of Representative Warrants, par value $0.001 per share	N/A	$ 312,500	

(1) Estimated solely for purposes of calculating the registration fee in accordance with Rule 457(o) under the Securities Act of 1933, as amended (the "Securities Act").
(2) Pursuant to Rule 416 under the Securities Act, the securities registered hereby also include an indeterminate number of additional securities as may from time to time become issuable by reason of stock splits, stock dividends, recapitalizations, or other similar transactions.
(3) The proposed maximum aggregate offering price of the Units (consisting of Series H Preferred Stock and Series H Preferred Stock Warrants) is $20,000,000.
(4) The Series H Preferred Stock Warrants are exercisable at $25.00 per share.
(5) On December 18, 2024, the registrant filed a Registration Statement on Form S-3 (File No. 333-283927) (the "Prior Registration Statement"). The Prior Registration Statement was withdrawn on February 4, 2025 , and therefore all offerings thereunder have been terminated. As a result, the registrant has $5,312,500 of unsold securities and $813.34 in unused filing fees associated with the Prior Registration Statement. In accordance with Rule 457(p) under the Securities Act, the Registrant is using a portion of the unused filing fees associated with the Prior Registration Statement to offset the filing fee payable in connection with this filing.