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

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2023

OR

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

For the transition period from to

Commission file number: 001-37941

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

Delaware	**20-2079805**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
23460 N. 19th Ave, Suite 110 Phoenix, AZ	**85027**
(Address of principal executive offices)	(Zip Code)

(928) 779-4143
(Registrant's telephone number, including area code)

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

Title of each class	**Trading symbol**	**Name of each exchange on which registered**
Common Stock, $0.001 par value	SNES	The Nasdaq Stock Market LLC (Nasdaq Capital Market)

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

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

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

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

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

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

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

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

The aggregate market value of the registrant's common stock held by non-affiliates on June 30, 2023 (the last business day of the registrant's most recently completed second fiscal quarter) as reported by the Nasdaq Capital Market on such date was approximately $3,320,000. There were 247,040 shares of the registrant's common stock outstanding on June 30, 2023.

As of February 20, 2024, there were 5,144,632 shares of common stock outstanding.

Documents Incorporated by Reference

Portions of the registrant's definitive proxy statement for the 2024 Annual Meeting of Stockholders are incorporated by reference into Part III of this Form 10-K.

SENESTECH, INC.
FORM 10-K
FOR THE YEAR ENDED DECEMBER 31, 2023

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Definitions

The abbreviations or acronym defined below are used throughout this Annual Report on Form 10-K:

Abbreviation or Acronym	Definition
ASC	Accounting Standards Codification
CARES Act	Coronavirus Aid, Relief, and Economic Security Act
COVID-19	Coronavirus
EPA	Environmental Protection Agency
Exchange Act	Securities Exchange Act of 1934, as amended
FCPA	Foreign Corrupt Practices Act
FIFRA	Federal Insecticide Fungicide and Rodenticide Act
GAAP	Generally accepted accounting principles in the United States
GRAS	Generally recognized as safe
IPM	Integrated pest management
IRC	Internal Revenue Code
Nasdaq	Nasdaq Capital Market
PCAOB	Public Company Accounting Oversight Board
PMP	Pest Management Provider
PPP	Paycheck Protection Program
ROU	Right-of-use
RUP	Restricted use product
SEC	Securities and Exchange Commission
VCD	Vinylcyclohexene diepoxide

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

The statements contained in this Annual Report on Form 10-K that are not historical are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act. All statements other than statements of historical facts contained or incorporated herein by reference in this Annual Report on Form 10-K, including statements regarding our future operating results, future financial position, business strategy, objectives, goals, plans, prospects, markets, and plans and objectives for future operations, are forward-looking statements. In some cases, you can identify forward-looking statements by terms such as “anticipates,” “believes,” “estimates,” “expects,” “intends,” “suggests,” “targets,” “contemplates,” “projects,” “predicts,” “may,” “might,” “plan,” “would,” “should,” “could,” “can,” “potential,” “continue,” “objective,” or the negative of those terms, or similar expressions intended to identify forward-looking statements. However, not all forward-looking statements contain these identifying words. Specific forward-looking statements in this Annual Report on Form 10-K include statements regarding:

- our belief the most effective, long-term way to manage rats is by using a combination of tools that work together to magnify the efficacy of the pest management protocol; integrated pest management (“IPM”) is based upon this concept;
- our belief that our field research indicates the addition of fertility control to an IPM program has demonstrated improved efficacy of more than 90% with sustained population suppression;
- our belief that we can achieve our goal for fertility control to be standard tool utilized in pest management in IPM programs across all verticals;
- our belief that maintaining a fertility control program reduces the reproduction and therefore the risk of future population spikes of rodent populations, known as the rebound effect;
- our belief that the size of the rat control market is sufficient for our near-term focus;
- our belief that ContraPest® or Evolve™ are novel in the pest control industry;
- our belief that first and second generation anti-coagulants will come under increased scrutiny for bioaccumulation and impact on non-target species as they travel up the food chain and their use is being restricted or banned in select areas across the United States and globally;
- our belief that the pest industry in the United States has demonstrated a reluctance to adopt new technologies;
- our belief that three core sales channels drive revenue allowing SenesTech to reach a wider customer base and target different segments of the market;
- our belief that e-commerce provides a hub to push end-users for further education as well as providing 24/7 availability for purchasing products and managing subscriptions;
- our belief that field sales allow for personal interaction, consultation, and development of potential customers;
- our belief that distributors and resellers increase our reach by leveraging the established networks and connections of third-party businesses;
- our belief that the logistics and marketing support offered through distributors and resellers reduces cost and effort required to expand our sales;
- our belief that Evolve qualifies for exemption from registration as a minimum risk pesticide under the United States Environmental Protection Agency’s (the “EPA’s”) Federal Insecticide, Fungicide, and Rodenticide Act (“FIFRA”), Section 25(b);
- our belief that our internal production capabilities allow us to meet our current and anticipated demand through 2024;
- our expectation that we will introduce an additional product during 2024;

- our belief that ContraPest or Evolve consumption should not cause rats to become ill or change their behavior, which reduces risks of non-target species exposure;
- our belief that non-registered products being sold online that claims to control rodent reproduction are not competitive products;
- our plan to continue to utilize various forms of stock-based awards to hire, retain, and motivate talented employees consultants, and directors;
- our expectation that our expenses may continue or increase in connection with our ongoing activities, particularly as we advance our commercialization activities;
- our ability to maintain and obtain regulatory approval for our product and product candidates;
- our ability to gain market acceptance, commercial viability and profitability of ContraPest, Evolve, and other products;
- our ability to market our products and establish an effective sales force and marketing infrastructure to generate significant revenue;
- the success of our research and development;
- our ability to retain and attract key personnel to develop, operate, and grow our business;
- our ability to meet our working capital needs;
- our estimates or expectations related to our revenue, cash flow, expenses, capital requirements and need for additional financing;
- our plans for our business, including for research and development;
- our financial performance, including our ability to fund operations; and
- developments and projections relating to our projects, competitors and our industry, including legislative developments and impacts from those developments.

These forward-looking statements are not guarantees of future performance and involve known and unknown risks, uncertainties and situations that are difficult to predict and that may cause our own, or our industry's, actual results to be materially different from the future results that are expressed or implied by these statements. Accordingly, actual results may differ materially from those anticipated or expressed in such statements as a result of a variety of factors, including those discussed in Item 1A-"Risk Factors" of Part II of in this Annual Report on Form 10-K. A number of factors could cause our actual results to differ materially from those indicated by the forward-looking statements. Such factors include, among others, the following:

- the successful commercialization of our products;
- market acceptance of our products;
- our financial performance, including our ability to fund operations;
- our ability to regain and maintain compliance with Nasdaq's continued listing requirements;
- regulatory approval and regulation of our products; and
- other factors and risks identified from time to time in our filings with the Securities and Exchange Commission (the "SEC"), including this Annual Report on Form 10-K.

All forward-looking statements included herein are based on information available to us as of the date hereof and speak only as of such date. Except as required by law, we undertake no obligation to update any forward-looking statements to reflect events or circumstances after the date of such statements. The forward-looking statements contained in or incorporated by reference into this Annual Report on Form 10-K reflect our views as of the date of this Annual Report on Form 10-K about future events and are subject to risks, uncertainties, assumptions, and changes in circumstances that may cause our actual results, performance, or achievements to differ significantly from those expressed or implied in any forward-looking statement. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future events, results, performance, or achievements.

We are subject to the information requirements of the Exchange Act, and we file or furnish reports, proxy statements and other information with the SEC. Such reports and other information we file with the SEC are available free of charge at www.senestech.com as soon as practicable after such reports are available on the SEC's website at www.sec.gov. The SEC's website contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

PART I

ITEM 1. BUSINESS.

Overview

We have developed and are commercializing products for managing animal pest populations, initially rat populations, through fertility control. We currently have two product lines of fertility control products: ContraPest and Evolve.

As far back as we can trace, rats have been foe to mankind. Posing threats to human and animal health, food security, and infrastructure around the world, we have spent centuries trying to solve the problem. Rats carry or can spread at least 35 diseases, globally posing a dangerous risk to public health and safety and agriculture. Through consumption and contamination, rats destroy at least 20% of the global stored food supply every year. Additionally, rats cause over $27 billion in damage to public and private infrastructure annually in the United States alone by burrowing beneath foundations, as well as gnawing on electrical wiring, insulation, fire proofing systems, electronics and computer equipment.

Over the centuries, the most prevalent response to rat infestations has been to try to eliminate them through the use of lethal tools such as traps and rodenticides. However, there are growing concerns about secondary exposure and bioaccumulation of rodenticides. While some of these challenges are of recent concern, the efficacy of the response to rat infestations has always been limited by the rat's extraordinary reproductive rate.

ContraPest®, our initial product, is a novel liquid bait in the pest control industry, containing the active ingredients 4-vinylcyclohexene diepoxide ("VCD") and triptolide. ContraPest targets the reproductive systems of both male and female Norway and roof rats beginning with the first breeding cycle following consumption, which can lead to sustained reductions of the rat population. ContraPest is a highly palatable liquid formulation that reduces fertility in both male and female rats. The high fat content and sweet taste of ContraPest promotes sustained consumption even when other sought-after food sources are present. In both field and laboratory settings, consumption of ContraPest occurs even in the presence of abundant water sources and plentiful food choices, including animal feed, trash and other options. Additionally, ContraPest does not cause illness in rats, and, therefore, it does not change behavior or result in bait aversion. Accordingly, ContraPest offers a new tool used in coordination with rodenticides as part of an integrated pest management program. Additionally, ContraPest can be successfully used as an alternative to traditional rodenticides altogether, an important option in the increasing number of jurisdictions that are restricting the use of second-generation anti-coagulant products.

The registration process with the EPA for ContraPest began on August 23, 2015. On August 2, 2016, the EPA granted an unconditional registration for ContraPest as a Restricted Use Product ("RUP"), due to the need for applicator expertise for deployment. On October 18, 2018, the EPA approved the removal of the RUP designation and was reclassified as a general-use pesticide. ContraPest is registered in all 50 states, 49 of which have approved the removal of the RUP designation, as well as the District of Columbia and five major U.S. territories. In certain cases, our registrations are conditional and require completion of testing. We continue to actively seek to comply with these requirements. On March 10, 2022, the EPA granted a sub-label for ContraPest allowing for an alternative delivery system in a hanging bait station designed to target roof rat habitats and infestations, currently marketed as Elevate Bait System™.

We are continuously enhancing ContraPest to align with the unique needs and environments of our customers in our target verticals while simultaneously pursuing regulatory approvals and amendments to the existing U.S. registration to broaden its use and marketability. When regulatory and financial conditions permit, we will seek regulatory approval for additional jurisdictions beyond the United States.

Evolve, our second product, is a novel soft bait product in the pest control industry. Evolve targets the reproductive systems of both male and female rats, which can lead to sustained reductions of the rat population. Evolve is a soft bait containing the active ingredient cottonseed oil. Evolve limits the reproduction of male and female rats within one to two breeding cycles following consumption.

Evolve has not been registered by the EPA. Evolve qualifies for exemption from registration as a minimum risk pesticide under FIFRA Section 25(b). All applicable requirements for registration, manufacturing, selling, or distributing into designated states and territories have been met. There are 10 states that accept the federal exemption for pesticide registration with the respective state. For those states that do not accept the federal exemption, we began the registration process for those states in October 2023. To date, we are authorized to sell Evolve in 30 states.

We were incorporated in the state of Nevada in July 2004. On November 12, 2015, we reincorporated in the state of Delaware. Our corporate headquarters and manufacturing site are in Phoenix, Arizona. On December 8, 2016, we went public and are currently traded on the Nasdaq Capital Market ("Nasdaq") under the symbol SNES.

In November 2023, we amended our amended and restated certificate of incorporation to effect a 1-for-12 reverse split of our issued and outstanding shares of common stock. The accompanying financial statements and notes thereto give retrospective effect to the reverse stock split for all periods presented. All issued and outstanding common stock, options and warrants exercisable for common stock, restricted stock units, and per share amounts contained in our financial statements have been retrospectively adjusted.

Current Challenges in Pest Control Methodologies

Two base rats, a male and female, can produce 15,000 descendants in approximately 12 months. Lethal control measures such as traps and rodenticides are often at the forefront of rat control programs, but this reproduction rate, intelligence, and genetic resistance to the active ingredients in rodenticides can negatively impact results of traditional mitigation efforts.

Rats reach sexual maturity at approximately nine weeks of age. Females can give birth to six litters per year, an average of five to ten offspring each. This rapid reproduction rate can cause populations to rebound quickly after implementing a lethal control program.

Rat behavior, either learned or innate, can negatively affect pest control efforts. Neophobia, or the fear and avoidance of new objects, is an innate behavior that often impacts control efforts. Rats avoid bait stations, loose bait, or traps until they are confident that these new objects pose no danger. Over time rats will begin to sample new foods to determine if there are any negative side effects. If the food or rodenticide causes illness in rats but they do not die, they will avoid that food or rodenticide in the future.

Resistance to traditional rodenticides creates challenges for rodent control programs. Rats, like all animals, are hard-wired to survive and some rats can be born with a genetic mutation making them resistant to certain rodenticides. Studies show that resistance is increasing in rat species. This resistance is passed onto their offspring who will then carry this resistant trait into future generations.

Because of the above factors, traditional rodenticide producers are continually challenged to develop new, more lethal chemicals to control future rat populations.

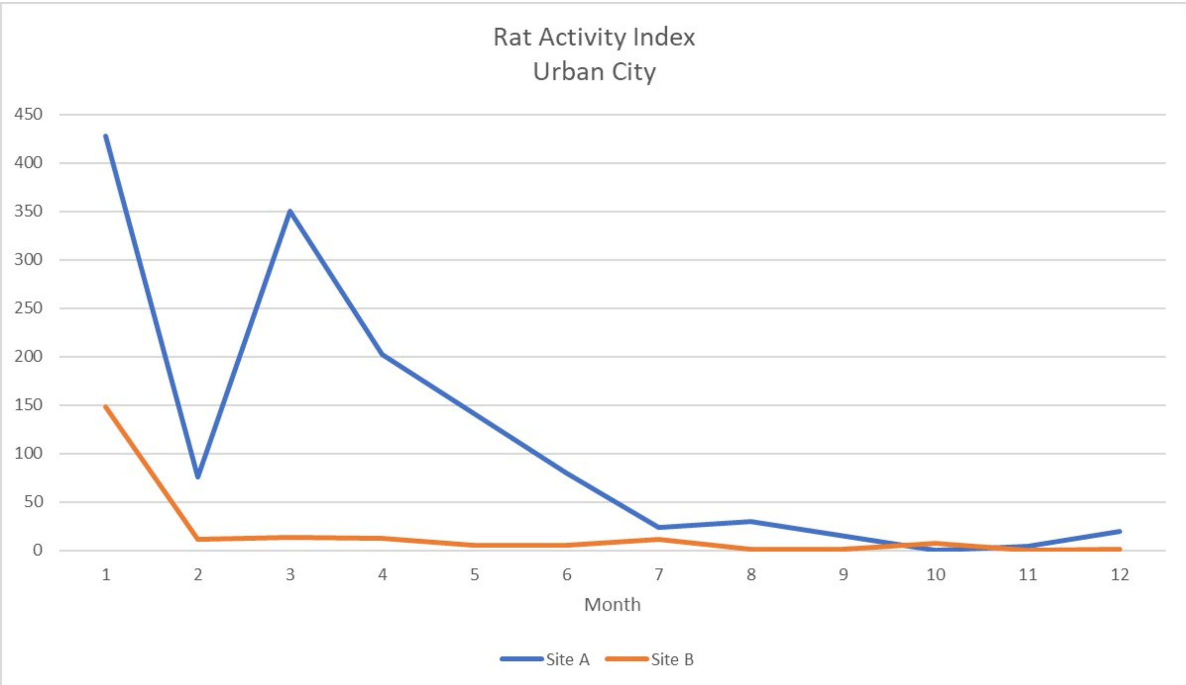
Rodenticides may affect other species within the food chain. It has been reported that animals that prey on rats such as raptors, large cats, foxes, and other mammals of concern have significant levels of rodenticide present in their bodies due to persistence of the rodenticide in the rat tissue, which may also result in contamination of the food supply. Additionally, there is growing concern about the rise in reported cases of adverse effects that rodenticides have on children and pets due to accidental, direct exposure.

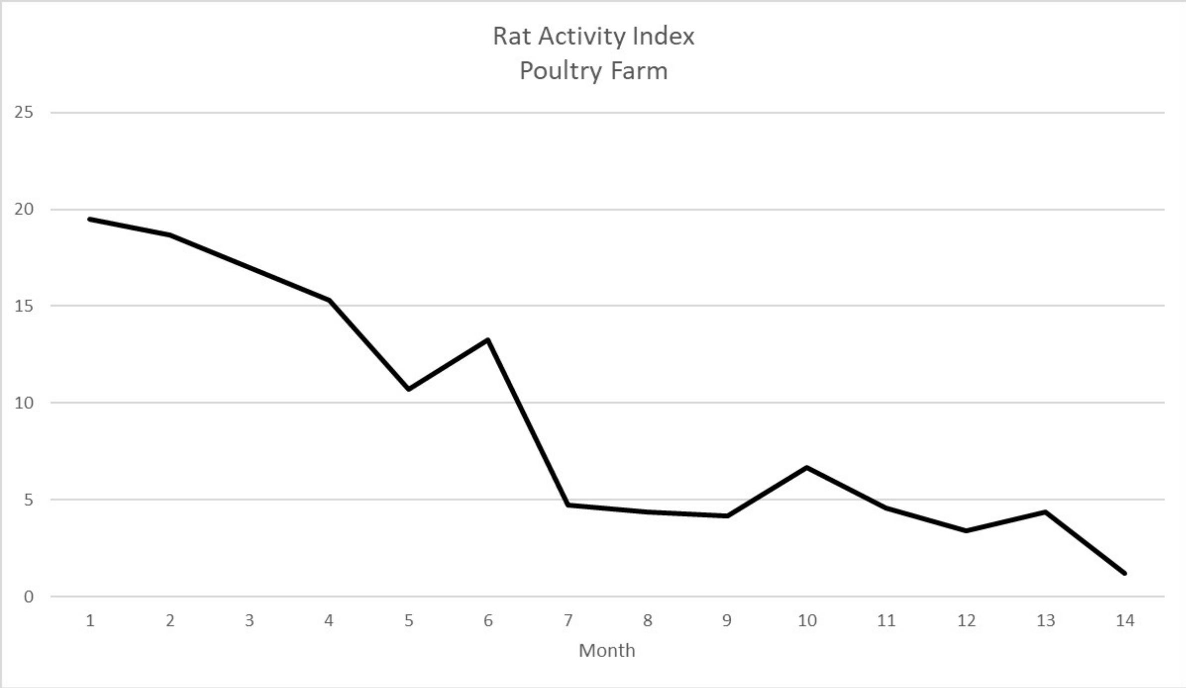
In November 2022, the EPA released an update to its Endangered Species Act workplan which intends to expand the mitigation efforts for 90 species potentially affected by rodenticides. The EPA will perform biological evaluations to analyze the potential effects of the rodenticides on listed species and their designated critical habitats and will identify mitigation measures for these species and critical habitats to avoid or minimize exposure from the rodenticides. When the plan is described, they will consider it the Rodenticide Strategy.

A portion of the draft plan includes a focus on addressing effects to primary consumers of rodenticide bait (mammals and birds) and to secondary consumers that consume primary consumers (mammals, birds, and reptiles). These changes to the EPA's review and registration policies could affect filings with the agency due to expanded test requirements for mammals, birds, reptiles, and critical habitats. Even though ContraPest is not a traditional rodenticide, these requirements (or a subset) may impact our registration in the future since it is classified in the rodenticide category with the EPA. We will maintain close contact with the EPA as their final guidance with respect to this policy was released in December 2023 with an intended final biological evaluation due November 2024.

Integrated Pest Management and Fertility Control

The most effective, long-term way to manage rats is by using a combination of tools that work together to magnify the efficacy of the pest management protocol; IPM is based upon this concept. An effective IPM program needs to reduce the existing rat population while preventing the population from rebounding. Based on company field research, the addition of a fertility control product to an IPM program has demonstrated improved efficacy of more than 90% with sustained population suppression. Maintaining a fertility control program reduces the reproduction and therefore the risk of future population spikes, known in the industry as the rebound effect.





(source: company studies)

Other Applications

While our proprietary technology is effective on rat species, our technology can be applied to other mammalian species. We have explored and continue to evaluate fertility control in mice, feral dogs, and other species. This preliminary data indicates potential for the continued development of fertility control technology in general. We believe that the size of the rat control market is sufficient for our near-term focus. We remain open to the potential to license our technology to other strategic partners to explore its applicability to other mammalian species.

Business Strategy

Our goal is for fertility control to be a standard tool utilized in pest management in IPM programs across all verticals. We will achieve this through the following:

End User Awareness and Adoption.

Our focus is educating end users on the rapid reproduction rate of rats, which draws attention to the complex issue of gaining control of an infestation if you do not have control of rat fertility. As more rodenticides come to market to address rat populations, attention will be drawn to the impact other rodenticides may have to other species due to bioaccumulation, and the benefit of ContraPest and Evolve having a low potential for bioaccumulation.

Tailored Value Propositions.

While the general desire to achieve and maintain control of rat populations is universal among end users, each vertical has a specific pain point which may be improved through the use of fertility control. By working with our existing customers and conducting field research, we are understanding and leveraging unique opportunities in our sales strategies across verticals. Our approaches include, but are not limited to the following:

- Product Development. The needs of customers in each vertical vary due to environment and limitations, requiring ongoing innovation, exploration of additional species, and the pursuit of additional regulatory approvals for ContraPest and Evolve both in the United States and globally.

- Strategic Partnerships. Alignment with industry leaders and organizations accelerate awareness, adoption, product innovation and development.

- Efficiencies. Through securing more reliable, affordable suppliers for our raw materials, and continuous development of our manufacturing process, we will be able to increase profits while scaling to meet rising product demand, and production of additional registered products.

Marketing and Sales Approach

ContraPest is differentiated in what is otherwise a very crowded pest control market. It is the only product registered with the EPA that restricts fertility in both male and female rats and is designed to be non-lethal. As first and second generation anti-coagulants come under increased scrutiny for non-target accidental consumption or for bioaccumulation with impact on non-target species as rodenticides travel up the food chain, their use is being restricted or even banned in select areas across the United States and globally. These increasing restrictions and bans create an opportunity for ContraPest, as industry professionals are looking for effective tools to serve their customers and gain control of rat populations through nontraditional means.

Like ContraPest, Evolve is also differentiated in the pest control market due to its unique approach to restrict fertility in rats as opposed to other lethal means. In addition, Evolve meets the EPA's FIFRA Section 25(b) minimum risk pesticide conditions. Evolve is exempt from federal registration because it poses little to no risk to human health and the environment and is made from food ingredients, within tolerances of exemption for both food and nonfood applications, which allows it to be used in agricultural applications.

Because the pest industry in the United States has demonstrated a reluctance to adopt new technologies, the marketing of fertility control has primarily been aimed at end-user awareness, creating pull through demand with Pest Management Providers ("PMP") by applying pressure for PMPs to use fertility control as part of their IPM. Additionally, within our target verticals, agribusiness, commercial, distributors, e-commerce, pest management, municipalities, and zoos and sanctuaries, many large targets employ internal pest management teams as opposed to contracting with service providers. For these reasons, the end-user is our primary target in order to grow market penetration for fertility control products. While pain points and benefits are unique to each vertical, they have shared core value propositions.

- Fertility control is effective. Lab tests and field research demonstrate more than 90% reduction in rat populations when added to an IPM with sustained population suppression;
- Our proprietary formulations and feeding systems optimize consumption and provides targeted delivery for maximum efficacy;
- ContraPest and Evolve are specifically designed to minimize exposure hazard for handlers and non-targeted species such as wildlife, livestock, and pets, with Evolve being designated by the EPA as a minimum risk product; and
- Fertility control can be used as an anchor or enhancement for an IPM program, and as a solution to decrease reliance on poisons or other lethal control options.

Three core sales channels drive revenue allowing SenesTech to reach a wider customer base and target different segments of the market.

- e-Commerce. E-commerce provides a hub to push end-users for further education as well as providing 24/7 availability for purchasing products and managing subscriptions.
- Field Sales. Field sales allow for personal interaction, consultation, and development of potential customers. Field sales representatives, in charge of regional territories across the United States, focus in the larger account segments, attending trade shows and educational opportunities within target verticals.
- Distributors and resellers. Distributors and resellers serve as an expansion of our sales team, increasing our reach by leveraging the established networks and connections of these third-party businesses. Additionally, the logistics and marketing support offered through these partners reduces cost and effort required to expand our sales.

Raw Materials and Manufacturing Process

ContraPest contains two active ingredients, VCD, an industrial chemical, and Triptolide, a plant derived chemical. ContraPest also contains several other inactive, generally recognized as safe ("GRAS"), ingredients. Currently, we source VCD from standard industrial chemical supply providers. Triptolide is derived from the Thunder god vine, Tripterygium wilfordii, which is commonly cultivated and harvested wild in southeastern China and other Asian countries. Triptolide is available from a variety of sources, but the process to purify triptolide for use in ContraPest is expensive. Thus, we are investigating other, less costly sources of triptolide.

Our manufacturing process involves the incorporation of our two active ingredients, in low concentrations, into several inactive ingredients. Once incorporated, the entire product goes through a proprietary process in order to stabilize the final formulation. This process allows ContraPest to be delivered to rats in a palatable, effective manner, and it is designed to be non-lethal.

Evolve contains one active ingredient, cottonseed oil, a plant-derived food product. Evolve also contains several other inactive food ingredients. Currently, we source cottonseed oil from standard food suppliers, and it is available from a variety of sources. Our manufacturing process for Evolve involves the incorporation of our active ingredient, in low concentration, into several inactive ingredients. Once incorporated, the entire product is packaged inside of a casing and cut to length for sale. This process allows Evolve to be delivered to rats in a palatable, effective manner, and it is designed to be non-lethal.

Currently, we have production scale capability in our facilities in Arizona to manufacture ContraPest and Evolve. Our internal production capabilities allow us to meet our current and anticipated demand through 2024.

Scientific Background Regarding our Product

Female rats are born with a finite number of eggs, or oocytes, and remain fertile until death. Within the ovary, eggs develop within structures called follicles. The non-regenerating and least mature follicles are called primordial. The primordial follicles mature through primary, secondary and antral stages and ultimately ovulate. Once the primordial follicles have become depleted, ovarian failure occurs, which terminates reproductive capability. The active ingredients in our products cause specific loss of small ovarian follicles (both primordial and primary) and growing follicles (secondary and antral). In males, the active ingredients in our products exert a significant suppression of male fertility by preventing sperm maturation and impairing the movement of sperm.

The safety and efficacy of our active ingredients and products are supported by considerable evidence. The active ingredients are rapidly metabolized by the rat, limiting the possibility of bioaccumulation or effect on non-target species. Further, based on laboratory and toxicology studies, ContraPest and Evolve should not cause rats to become ill or change their behavior.

Furthermore, ContraPest and Evolve are contraceptives, not sterilants, limiting fertility in male and female rats beginning with the first breeding cycle following consumption. The average duration of infertility post consumption ranges from 42 to over 180 days.

Other Potential Products

We have begun work on the application of ContraPest and Evolve on other species, such as mice, and expect to introduce an additional product during 2024.

Competition

Currently, we are unaware of any other non-lethal fertility control products targeting rats that are registered by the EPA. There are non-registered products being sold online that claim to control rodent reproduction. We do not believe these to be competitive products.

Our principal competition are large corporations with greater resources that offer a wider range of products. Generally, these are lethal pest control products largely consisting of rodenticide-based products and other tools that PMPs use in their IPM.

Government Regulation and Product Approval

Federal, state and local government authorities in the United States regulate, among other things, the testing, manufacturing, quality control, approval, labeling, packaging, storage, record-keeping, distribution and marketing of the products we develop. The process for obtaining regulatory approval and compliance with appropriate federal, state and local regulations is rigorous and requires the expenditure of substantial time and financial resources.

United States Review and Approval Processes

In the United States, the EPA regulates the sale, distribution and use of any pesticide under FIFRA. The EPA's definition of a pesticide includes "any substance or mixture of substances intended for preventing, destroying, repelling, or mitigating any pest." FIFRA defines a pest as "any insect, rodent, nematode, fungus, or weed." To register a new product with the EPA, all active ingredients within the product must be registered with the EPA.

The EPA granted registration for ContraPest effective August 2, 2016, and as of July 12, 2018, we have received registration for ContraPest in all 50 states, the District of Columbia, and five major U.S. territories. This initial EPA approval labeled ContraPest as a restricted-use product, due to the need for applicator expertise for deployment. On October 18, 2018, the EPA removed the Restricted Use designation, meaning that we can sell ContraPest to consumers who do not have applicator expertise. ContraPest is currently limited by EPA requirements to indoor use and to use within one foot of manmade structures. We intend to diligently pursue additional related regulatory approvals from the EPA to support our product evolution, including seeking approval for full outdoor use, alternative formulations and for additional rodent species. This may entail the need to complete and submit to EPA additional studies, principally related to the effects on other animals and fish if ingested or if the product enters the water supply.

In addition to the EPA registration of ContraPest in the United States, we must obtain registration from the various state regulatory agencies prior to selling in each state. To date, we have received registration for ContraPest in all 50 states and the District of Columbia, 49 of which have approved the removal of the Restricted Use designation.

In addition to product registration, the EPA also approves all labeling (the container label, instructional inserts, and the Safety Data Sheet) of ContraPest. Generally, states accept the EPA approved label as is. ContraPest's labeling was submitted to states at initial registration and is resubmitted during state scheduled reregistration or for any significant labeling change requiring EPA approval.

In certain cases, our EPA and state registrations require completion of testing and certifications even after we have received approval for the product or its labeling. We continue to seek to comply with these requirements.

The EPA has an exemption under FIFRA, Section 25(b) which exempts certain pesticides from federal registration based on six criteria for minimum risk. Evolve qualifies from registration as a minimum risk pesticide under FIFRA, Section 25(b). All applicable requirements for registration, manufacturing, selling, or distributing into designated sates and territories have been met. Evolve has not been registered by the EPA but is in the process for registration in all 50 states, the District of Columbia, and five major U.S. territories. There are 10 states that accept the federal exemption for pesticide registration within the respective state. For those states that do not accept the federal exemption, we began the registration process for those states in October 2023. To date, we are authorized to sell Evolve in 30 states.

International Review and Approval Processes

We are researching potential international markets and will evaluate the regulatory landscapes of each prospective market. Country-specific regulatory laws have provisions that include requirements for certain labeling, safety, efficacy and manufacturers' quality control procedures to assure the consistency of the product, as well as company records and reports. Some specific in-country studies will be required for particular countries, but others will generally accept an EPA or EU compliant dossier.

Personnel

As of December 31, 2023, we had 25 full-time employees and no part-time employees. Within our workforce, eight employees are engaged in research and development and 17 employees are engaged in sales, business development, finance, regulatory, human resources, facilities, information technology and general management and administration.

None of our employees are represented by labor unions or covered by collective bargaining agreements.

Intellectual Property and Other Proprietary Rights

Maintaining a strong position in the rodenticide market requires constant innovation along with a healthy research program to evolve product lines to remain competitive and relevant to the needs of the changing global marketplace. We seek to protect our proprietary data and trade secrets with attention to data exchanges among employees, consultants, collaborators and research and trade partners.

Patent Filings

Our intellectual property portfolio supporting ContraPest consists of nine international patent filings (in the United States, Europe, Canada, Brazil, Russia, Japan, Mexico, South Korea, and Australia) addressing the ContraPest compound. Claims directed toward the compound include composition-of-matter involving a diterpenoid epoxide or salts thereof in combination with an organic diepoxide, use claims for inducing follicle depletion and for reducing the reproductive capability of a mammalian animal or non-human mammalian population. Issued claims will have a patent term extending to 2033 or longer based on patent term determinations in each of the filing countries. The novelty of ContraPest extends to its method of field distribution and has required innovation to perfect the dosing of our product to rodents. We have filed U.S. and international patent applications covering our novel bait station device to effectively and efficiently deliver our rodent bait at individual bait sites that would, if issued, offer patent term protection through at least 2036.

Trade Secrets and Trademarks

Beyond our patent right holdings, we broaden our intellectual property position with trademark, trade secret, know-how and continuous scientific discovery to accompany our product development efforts. We protect these proprietary assets with a combination of confidentiality terms in all commercial agreements or stand-alone confidentiality agreements along with rights-ownership agreements and structured information transfer understandings prior to beginning any collaborative projects. We own and maintain the ContraPest trademark and have initiated registration for Evolve. We intend to register new trademarks for products from our evolving rodenticide product line and for products for mammalian species beyond rodentia.

Data Sets

We have exclusive use status with the EPA for the data sets we have developed and submitted to the EPA as part of our application for ContraPest. The exclusive use status applies to new active ingredients and the final formulation of the ContraPest product for a period of 10 years. For five years after the 10-year period of exclusivity, if another applicant or the EPA Administrator chooses to rely on one or more data sets that we submitted in support of an application submitted by another applicant, the new applicant must make a binding offer to compensate us and certify to the EPA that it has done so. If we and the offeror cannot reach agreement on the terms of the compensation for the use of such data sets, FIFRA requires resolution by binding arbitration. The EPA rules do not describe how the compensation should be determined, and there is publicly available information about some, but not all, binding arbitration decisions.

Where You Can Find Additional Information

We electronically file with the SEC our Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act. We make available on our website at www.senestech.com, free of charge, copies of these reports, as soon as reasonably practicable after electronically filing such reports with, or furnishing them to, the SEC. The information contained in, or that can be accessed through, our website is not part of, and is not incorporated into, this Annual Report on Form 10-K.

ITEM 1A. RISK FACTORS.

As discussed immediately prior to Item 1 of Part I, "Business" under "Cautionary Note Regarding Forward-Looking Statements," our actual results could differ materially from those expressed in our forward-looking statements. Factors that might cause or contribute to such differences include, but are not limited to, those discussed below. Additional risks and uncertainties not presently known to us, or that we currently deem immaterial, may also impair our business operations. If any of the following risks occur, our business, financial condition, operating results, cash flows and the trading price of our common stock could be materially adversely affected.

Risks Related to our Business

Our success is dependent on the successful commercialization of ContraPest and Evolve.

The EPA granted registration approval for ContraPest effective August 2, 2016, and as of July 12, 2018, we have received registration for ContraPest in all 50 states, the District of Columbia, and five major U.S. territories. Evolve, as a FIFRA 25(b) minimum risk pesticide, does not require federal registration with the EPA but is in the process of being registered in all 50 states, the District of Columbia, and five major U.S. territories. To date, we are authorized to sell Evolve in 30 states. However, we have not yet had significant sales of ContraPest and Evolve, which are our only products to date that are available for commercialization and the generation of revenue.

ContraPest, Evolve, and our other product candidates may not achieve adequate market acceptance necessary for commercial success.

Market acceptance of any of our product candidates for which we receive approval depends on a number of factors, including the following:

- the potential and perceived advantages of product candidates over alternative or complementary products;
- the effectiveness of our sales and marketing efforts and those of our collaborators;
- the efficacy and safety of such product candidates as demonstrated in trials;
- the uses, indications or limitations for which the product candidate is approved;
- product labeling or product insert requirements of the EPA or other regulatory authorities;
- the timing of market introduction of our products as well as future competitive or alternative products;
- relative convenience and ease of use; and
- unfavorable publicity relating to the product.

If we cannot successfully commercialize our products, especially ContraPest and Evolve, we will not become profitable.

If any of our approved product candidates fail to achieve sufficient market acceptance, we will not be able to generate significant revenues or become profitable. The commercial success of ContraPest and Evolve will depend on a number of factors, including the following:

- the execution of our commercial strategy and the successful expansion of our commercial organization;
- our success in educating end users about the benefits, administration and use of ContraPest and/or Evolve;
- the effectiveness of our own or our potential strategic partners' marketing, sales and distribution strategy and operations;
- convincing PMPs to deploy ContraPest and Evolve in quantity as an enhancement to, or replacement of, their current strategy of rodenticide use;
- continued refinement of our pricing strategy;
- our ability to manufacture quantities of ContraPest and Evolve using commercially acceptable processes and at a scale sufficient to meet anticipated demand and enable us to reduce our cost of manufacturing; and
- a continued acceptable safety profile of ContraPest.

Many of these factors are beyond our control. If we are unable to successfully commercialize ContraPest and Evolve, we may not be able to earn sufficient revenues or profits to continue our business.

We will require additional capital to fund our operations. Failure to obtain this necessary capital if needed may force us to delay, limit, or terminate our product development efforts or other operations.

Commercialization of ContraPest and Evolve and developing further product candidates, including conducting experiments and field studies, obtaining and maintaining regulatory approval and commercializing any products approved for sale, is a time-consuming, expensive and uncertain process that takes years to complete. We expect our expenses to continue and to increase in connection with our ongoing activities, particularly as we advance our commercialization activities. We may expand our operations, and as a result of many factors, some of which may be currently unknown to us, our expenses may be higher than expected. Securing additional financing may divert our management from their day-to-day activities, which may adversely affect our ability to develop and commercialize our product candidates, including ContraPest and Evolve. In addition, we cannot guarantee that future financing will be available in sufficient amounts or on terms acceptable to us, if at all. If we are unable to raise additional capital when required or on acceptable terms, we may be required to take certain actions, including the following:

- significantly delay, scale back or discontinue the development or commercialization of our product candidates, including ContraPest and Evolve;
- seek strategic partners for the manufacturing, sales and distribution of ContraPest or Evolve or any of our other product candidates at an earlier stage than otherwise would be desirable or on terms that are less favorable than might otherwise be available; and
- relinquish, or license on unfavorable terms, our rights to technologies or product candidates that we otherwise would seek to develop or commercialize ourselves.

The occurrence of any of the events described above would have a material adverse effect on our business, operating results and prospects and on our ability to develop our product candidates.

If we are unable to establish and maintain an effective sales force and marketing and distribution infrastructures, or enter into and rely upon acceptable third-party relationships, we may be unable to generate any revenue.

We continue to develop a functional infrastructure for the sales, marketing, and distribution of our products and the cost of establishing and maintaining such an infrastructure may exceed the cost-effectiveness of doing so. In order to market products, we must continue to build our sales, marketing, managerial and other non-technical capabilities or make arrangements with third parties to perform these services for which we would incur substantial costs. If we are unable to establish and maintain adequate sales, marketing, and distribution capabilities, whether independently or with third parties, we may not be able to generate sufficient product revenue to become profitable. Without an effective internal commercial organization or the support of a third party to perform sales and marketing functions, we may be unable to compete successfully.

The misuse of our products may harm our reputation in the marketplace, result in injuries that lead to product liability suits or result in costly investigations, fines or sanctions by regulatory bodies if we are deemed to have engaged in the promotion of these uses, any of which could be costly to our business.

Customers, technicians, or service providers could use our products in a manner that is inconsistent with the products' intended use. We train our marketing personnel and sales representatives to not promote our products for uses outside of the intended use, however, we cannot otherwise prevent all instances of misuse. Further, the marketing and sales representatives that we have hired to help meet the demand for our products may not have received proper training or have the working knowledge needed to adequately advise our customers how to safely use our products. Misuse of our products may cause an increased risk of injury to customers, which could harm our reputation in the marketplace, as well as lead to potential product liability lawsuits.

We are currently operating in a period of economic uncertainty and capital markets disruption, which has been significantly impacted by geopolitical instability due to the ongoing Russia-Ukraine and Israel-Hamas wars.

U.S. and global markets are experiencing volatility and disruption following the escalation of geopolitical tensions and Russia's launch of a full-scale military invasion of Ukraine in February 2022. Although the length and impact of the ongoing military conflict is highly unpredictable, the war in Ukraine has led to market disruptions, including significant volatility in commodity prices, credit, and capital markets. Additionally, Russia's prior annexation of Crimea, recent recognition of two separatist republics in the Donetsk and Luhansk regions of Ukraine, and subsequent military invasion in Ukraine have led to sanctions and other penalties being levied by the United States, the European Union, and other countries against Russia, Belarus, the Crimea Region of Ukraine, the so-called Donetsk People's Republic, and the so-called Luhansk People's Republic, including the agreement by the U.S. and the EU to remove certain Russian financial institutions from the Society for Worldwide Interbank Financial Telecommunication payment system. Additional potential sanctions and penalties have also been proposed and/or threatened. Russian military actions and the resulting sanctions could adversely affect the global economy and financial markets and lead to instability and lack of liquidity in capital markets, potentially making it more difficult for us to obtain additional equity or debt funding. Any of the above-mentioned factors could affect our business, prospects, financial condition, and operating results. The extent and duration of the war, sanctions, and resulting market disruptions are impossible to predict, but could be substantial. Any such disruptions may also magnify the impact of other risks described herein.

In addition, as a result of the ongoing conflict between Russia and Ukraine, we may experience other risks, difficulties and challenges in the way we conduct our business and operations generally. For example, there may be an increased risk of cybersecurity attacks due to the current conflict between Russia and Ukraine, including cybersecurity attacks perpetrated by Russia or others at its direction in response to economic sanctions and other actions taken against Russia as a result of its invasion of Ukraine. Any increase in such attacks on us or our third-party providers or other systems could adversely affect our network systems or other operations. At this time, to the best of our knowledge, we do not believe we have experienced any cyberattacks that are related to the conflict between Russia and Ukraine. Although we have taken steps to enhance our protections against such attacks, we may not be able to address these cybersecurity threats proactively or implement adequate preventative measures and there can be no assurance that we will promptly detect and address any such disruption or security breach, if at all.

The conflict in Israel and surrounding areas has also created economic uncertainty and regional instability, including due to the risk of escalation into a wider regional conflict, and resulted in the imposition of sanctions targeting Hamas-affiliated individuals and entities. The broader consequences of these conflicts remain uncertain, but may include further sanctions, regional instability and geopolitical shifts, increased prevalence and sophistication of cyberattacks, potential retaliatory action against companies such as us, heightened regulatory scrutiny related to sanctions compliance, increased inflation, further increases or fluctuations in commodity and energy prices, decreases in global travel, further disruptions to the global supply chain and other adverse effects on macroeconomic conditions.

A protracted conflict between Ukraine and Russia and Israel and Hamas, any escalation of those conflicts, and the financial and economic sanctions and import and/or export controls imposed by the United States, the UK, the EU, Canada and others, and the above-mentioned adverse effect on our operations (both in this region and generally) and on the wider global economy and market conditions could, in turn, have a material adverse impact on our business, financial condition, cash flows and results of operations and could cause the market value of our common shares to decline.

Risks Related to Regulatory Matters

Regulatory approval processes of the EPA and comparable foreign regulatory authorities are lengthy, time-consuming and unpredictable, and if we are ultimately unable to obtain regulatory approval for our product candidates, our business may fail.

The EPA review process for a product with one or more new active ingredients typically takes approximately two years to complete and approval is never guaranteed. In addition, we continue to seek approvals to expand labels and use designations for ContraPest to broaden its market and usability. Our efforts could fail to receive approval from the EPA, with respect to ContraPest or our product candidates, or from a comparable foreign regulatory authority for many reasons, including the following:

- disagreement over the design or implementation of our trials;
- failure to demonstrate a product candidate is safe or works according to our claims;
- failure to demonstrate a product candidate’s benefits outweigh its risks;
- disagreement over our interpretation of data;
- disagreement over whether to accept efficacy results from trials;
- the insufficiency of data collected from trials to obtain regulatory approval;
- irreparable or critical compliance issues relating to our manufacturing process; or
- changes in the approval policies or regulations that render our data insufficient for approval.

Any of these factors, some of which are beyond our control, could jeopardize our ability to obtain regulatory approval of submittals. Any such setback in our pursuit of regulatory approval could have a material adverse effect on our business and prospects.

Even following receipt of any regulatory approval for ContraPest, Evolve, and our other product candidates, requiring regulatory approval, we will continue to face extensive regulatory requirements and our products may face future development and regulatory difficulties.

Even following receipt of any regulatory approval for ContraPest, Evolve, or our product candidates, our products will be subject to ongoing requirements by the EPA and comparable state and foreign regulatory authorities governing the manufacture, quality control, further development, labeling, packaging, storage, distribution, safety surveillance, import, export, advertising, promotion, recordkeeping and reporting of safety and other post-market information.

The safety profile of any product will continue to be closely monitored by the EPA, state and comparable foreign regulatory authorities after approval. In addition, we may be required, from time to time, to provide further testing results and certifications to the EPA and state regulatory agencies for ContraPest or Evolve.

For instance, we have found it challenging to produce applicable stability test results for one of our active ingredients, due in part to the small quantity used in the final product and continue to work with the EPA to develop appropriate biological and/or chemical measurements for active ingredient stability. Because our data continues to demonstrate the long-term efficacy of ContraPest, we believe that the testing is a matter we will resolve.

If the EPA or comparable foreign regulatory authorities become aware of new information after approval of ContraPest, Evolve, or any other product candidate, or we are unable to adequately complete required testing and certification requirements, a number of potentially significant negative consequences could result, including the following:

- we may be forced to suspend marketing of such product;
- regulatory authorities may withdraw their approvals of such product after certain procedural requirements have been met;
- regulatory authorities may require additional warnings on the label that could diminish the usage or otherwise limit the commercial success of such product;
- the EPA or other regulatory bodies may issue safety alerts, press releases or other communications containing warnings about such product;
- the EPA may require the establishment or modification of restricted use, or a comparable foreign regulatory authority may require the establishment or modification of a similar strategy that may, for instance, restrict distribution of our product and impose burdensome implementation requirements on us;
- we may be required to change the way the product is administered or conduct additional trials;
- we could be sued and held liable for harm caused;
- we may be subject to litigation or product liability claims; and
- our reputation may suffer.

Any of these events could prevent us from achieving or maintaining market acceptance of the particular product candidate, if approved, and could significantly harm our business, results of operations and prospects.

Moreover, existing government regulations may change, and additional government regulations may be enacted that could prevent, limit or delay regulatory approval of product candidates requiring such approval. If we are slow or unable to adapt to changes in existing requirements or the adoption of new requirements or policies, or if we are not able to maintain regulatory compliance, we may lose any marketing approval that we may have obtained and/or be subject to different marketing requirements or fines or enhanced government oversight and reporting obligations, which would adversely affect our business, prospects, and ability to achieve or sustain profitability.

Even following receipt of any regulatory approval or introduction of products or product candidates, we will continue to be subject to regulation of our manufacturing processes and advertising practices.

As a manufacturer of pest control products, we are subject to continual government oversight and periodic inspections by the EPA and other regulatory authorities. If we or a regulatory agency discover problems with a facility where our products are manufactured, a regulatory agency may impose restrictions on the manufacturing facility, including requiring recall or withdrawal of the product from the market or suspension of manufacturing until certain procedural requirements have been met. The occurrence of any such event or penalty could limit our ability to market ContraPest, Evolve, or any other product candidates and generate revenue.

In addition, the EPA strictly regulates the advertising and promotion of pest control products, and these pest control products may only be marketed or promoted for their EPA approved uses, consistent with the product's approved labeling. Advertising and promotion of any product candidate that obtains approval in the U.S. will be heavily scrutinized by the EPA, other applicable state regulatory agencies and the public. Violations, including promotion of our products for unapproved or off-label uses, are subject to enforcement actions, inquiries and investigations, and civil, criminal and/or administrative sanctions imposed by the EPA.

Failure to obtain regulatory approval in foreign jurisdictions would prevent our products or product candidates from being marketed in those jurisdictions.

To market and sell our products globally, we must obtain separate marketing approvals and comply with numerous and varying regulatory requirements. The approval procedure varies among countries and can involve additional testing. Obtaining foreign regulatory approvals and maintaining compliance with foreign regulatory requirements could result in significant delays, difficulties, and cost for us and could delay or prevent the introduction of our products in certain countries. Approval by the EPA does not ensure approval by regulatory authorities in other countries or jurisdictions, but EPA approval may influence decisions by the foreign regulatory authority. If we are unable to obtain approval of our products or product candidates by regulatory authorities in the world market, the commercial prospects of that product candidate may be significantly diminished and our business prospects could decline.

Risks Related to our Operations and Supply Chain

We depend on key personnel to operate our business. If we are unable to retain, attract and integrate qualified personnel, our ability to develop and successfully grow our business could be harmed.

We believe that our success is highly dependent on our ability to attract and retain highly skilled and experienced managerial, sales, research and development, and other personnel. If one or more of our executive officers or key employees terminates employment or becomes disabled or experiences long-term illness, we may not be able to replace their expertise, fully integrate new personnel or replicate the prior working relationships, and the loss of their services might significantly delay or prevent the achievement of our research and development and business objectives. Qualified individuals with the breadth of skills and experience in our industry that we require are in high demand, and we may incur significant costs to attract them. Many of the other companies that we compete against for qualified personnel have greater financial and other resources, different risk profiles and a more established history in the industry. They also may provide more diverse opportunities and better chances for career advancement. Our failure to attract and/or retain key personnel could impede the achievement of our research and development and commercialization objectives.

We have internal manufacturing capabilities to meet our current and near term forecasted demand for ContraPest, however, we must develop additional manufacturing capability or rely upon third parties to manufacture our products to meet future demand and our single location manufacturing operations could be disrupted.

Our existing internal manufacturing platform is adequate for meeting our current and near term forecasted demand for our products. We may be required to spend significant time and resources to expand these manufacturing facilities to fully meet future demand. If we are unable to develop full-scale manufacturing capabilities, we may not be able to meet demand of our products without relying on third party manufacturers, which could adversely affect our operations or financial condition.

In addition, if our manufacturing operations fail or are disrupted for any reason, including because of labor, disasters, and/or equipment malfunctions, among others, our ability to timely produce our products may be adversely affected, which would harm our sales and reputation. We only operate in a single location, which means we do not have back-up facilities to produce our products during a time when our manufacturing facility becomes unavailable.

We will need to expand our operations and grow the size of our organization, and we may experience difficulties in managing this growth.

As of December 31, 2023, we had 25 full-time employees. As our development and commercialization plans and strategies develop, we will need additional managerial, operational, sales, marketing, scientific and financial headcount and other resources. Our management, personnel, and systems currently in place may not be adequate to support this future growth. Future growth would impose significant added responsibilities on members of management, including the following:

- identifying, recruiting, maintaining, motivating and integrating additional employees with the expertise and experience we will require;
- managing our internal development efforts effectively while complying with our contractual obligations to licensors, licensees, contractors and other third parties;
- managing additional relationships with various strategic partners, suppliers and other third parties;
- managing our trials effectively, which we anticipate being conducted at numerous field study sites;
- improving our managerial, development, operational, marketing, production and finance reporting systems and procedures; and
- expanding our facilities.

Our failure to accomplish any of these tasks could prevent us from successfully growing our business.

Business or supply chain disruptions could seriously harm our future revenues and financial condition and increase our costs and expenses, particularly because we have limited suppliers and a critical ingredient for ContraPest is currently sourced from China.

Our operations could be subject to a variety of potential business disruptions, including power shortages, telecommunications failures, water shortages, floods, fires, earthquakes, extreme weather conditions, medical epidemics and other natural or man-made disasters or other interruptions, for which we are predominantly self-insured. We do not carry insurance for all categories of risk that our business may encounter. The occurrence of any of these business disruptions could seriously harm our operations and financial condition and increase our costs and expenses. Moreover, we rely on third parties to supply various ingredients and other items which are critical for producing our product candidates.

We currently use one supplier for each of our two active ingredients, triptolide and VCD. Our ability to produce our product candidates would be disrupted if the operations of these suppliers are affected by a man made or natural disaster or other business interruption. Because triptolide is sourced from China and other Asian countries, we have a greater risk of supply interruption, including as a result of tariff and trade disputes, or disruptive events like the outbreak of COVID-19. The ultimate impact on our operations from any business interruption impacting us or any of our significant suppliers is unknown, but our operations and financial condition would likely suffer adverse consequences. Further, any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our business, results of operations, financial condition and cash flows from future prospects.

We are dependent on triptolide, a key ingredient for ContraPest, which has limited sources and must be in a very refined condition.

If we are unable to develop additional sources of or alternatives to triptolide, a key ingredient for ContraPest, our long-term ability to produce ContraPest at a cost effective price could be in jeopardy. If market demand for triptolide causes the price to increase beyond our ability to market at a competitive price or causes the quality of the refined ingredient to be less than needed for our production, our ability to commercialize ContraPest could be limited or delayed, which would adversely affect our business, results of operations and financial condition.

A variety of risks associated with marketing our product candidates internationally could materially adversely affect our business.

We may seek regulatory approval of our product candidates outside of the United States and, in that case, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including the following:

- differing regulatory requirements in foreign countries;
- unexpected changes in tariffs, trade barriers, price and exchange controls and other regulatory requirements;
- economic weakness, including inflation or political instability in particular foreign economies and markets;
- compliance with tax, employment, immigration and labor laws for employees living or traveling internationally;
- foreign taxes, including withholding of payroll taxes;
- foreign currency fluctuations, which could result in increased operating expenses and reduced revenue, and other obligations incident to doing business in another country;
- difficulties staffing and managing foreign operations;
- workforce uncertainty in countries where labor unrest is more common than in the United States;
- potential liability under the U.S. Foreign Corrupt Practices Act of 1977, as amended, or the FCPA, or comparable foreign regulations;
- challenges enforcing our contractual and intellectual property rights, especially in those foreign countries that do not respect and protect intellectual property rights to the same extent as the United States;
- production shortages resulting from any events affecting raw material supply or manufacturing capabilities internationally; and
- business interruptions resulting from geopolitical actions, including war and terrorism.

These and other risks associated with our international operations may materially adversely affect our ability to attain or maintain profitable operations.

Risks Related to Our Intellectual Property and Legal Actions

If we fail to obtain or protect intellectual property rights, our competitive position could be harmed.

We depend on our ability to protect our proprietary technology. We rely on trade secret, patent, copyright and trademark laws, and confidentiality, licensing, and other agreements with employees and third parties, all of which offer only limited protection. Our commercial success will depend in part on our ability to obtain and maintain intellectual property protection in the United States and other countries with respect to our proprietary technology and products. Where we deem appropriate, we seek to protect our proprietary position by filing patent applications in the United States and internationally related to our novel technologies and products that are important to our business. However, our financial resources constrain us from seeking protection in every instance, so we may rationalize and selectively pursue expensive patent protection. Patent positions can be highly uncertain, involve complex legal and factual questions and be the subject of litigation. As a result, the issuance, scope, validity, enforceability and commercial value of our patents, including those patent rights licensed to us by third parties, are highly uncertain.

The steps we have taken to protect our proprietary rights may not be adequate to preclude misappropriation of our proprietary information or infringement of our intellectual property rights, both inside and outside the United States. The rights already granted under any of our currently issued patents and those that may be granted under future issued patents may not provide us with the proprietary protection or competitive advantages we are seeking. If we are unable to obtain and maintain protection for our technology and products, or if the scope of the protection obtained is not sufficient, our competitors could develop and commercialize technology and products similar or superior to ours, and our ability to successfully commercialize our technology and products may be adversely affected.

With respect to patent rights, we do not know whether any of our pending patent applications for any of our technologies or products will result in the issuance of patents that protect such technologies or products, or if our licensed patent will effectively prevent others from commercializing competitive technologies and products. Our pending patent applications cannot be enforced against third parties practicing the technology claimed in such applications unless and until a patent issues from such applications. Further, the examination process may require us to narrow the claims for our pending patent applications, which may limit the scope of patent protection that may be obtained if these applications issue. Because the issuance of a patent is not conclusive as to its inventorship, scope, validity or enforceability, issued patents that we own or have licensed from third parties may be challenged in the courts or patent offices in the U.S. and internationally. Such challenges may result in the loss of patent protection, the narrowing of claims in such patents, or the invalidity or unenforceability of such patents, which could limit our ability to stop others from using or commercializing similar or identical technology and products or limit the duration of the patent protection for our technology and products. Protecting against the unauthorized use of our patented technology, trademarks and other intellectual property rights, is expensive, difficult, and in some cases, may not be possible. In some cases, it may be difficult or impossible to detect third party infringement or misappropriation of our intellectual property rights, even in relation to issued patent claims, and proving any such infringement may be even more difficult.

Intellectual property rights do not necessarily address all potential threats to any competitive advantage we may have.

The degree of future protection afforded by our intellectual property rights is uncertain because intellectual property rights have limitations, and may not adequately protect our business, or permit us to maintain our competitive advantage. The following examples are illustrative:

- others may be able to make compounds that are the same as or similar to our future products but that are not covered by the claims of the patents that we own or have exclusively licensed;
- we might not have been the first to file patent applications covering certain of our inventions;
- others may independently develop similar or alternative technologies or duplicate any of our technologies without infringing on our intellectual property rights;
- issued patents that we own or have exclusively licensed may not provide us with any competitive advantages, or may be held invalid or unenforceable, as a result of legal challenges by our competitors;
- our competitors might conduct research and development activities in the U.S. and other countries that provide a safe harbor from patent infringement claims for certain research and development activities, as well as in countries where we do not have patent rights and then use the information learned from such activities to develop competitive products for sale in our major commercial markets;
- we may not develop additional proprietary technologies that are patentable or otherwise protectable;
- employees may violate confidentiality and proprietary invention assignment agreements and we may not have the resources to enforce those agreements or otherwise enforce our patent rights; and
- the patents of others may have an adverse effect on our business.

Our technology may be found to infringe third party intellectual property rights.

Third parties may in the future assert claims or initiate litigation related to their patent, copyright, trademark and other intellectual property rights in technology that is important to us. The asserted claims and/or litigation could include claims against us, our licensors, or our suppliers alleging infringement of intellectual property rights with respect to our product candidates or components of those products. Regardless of the merit of the claims, they could be time consuming, resulting in costly litigation and diversion of technical and management personnel, or require us to develop non-infringing technology or enter into license agreements. We cannot assure you that licenses will be available on acceptable terms, if at all. Furthermore, because of the potential for significant damage awards, which are not necessarily predictable, it is not unusual to find even arguably unmeritorious claims resulting in large settlements. If any infringement or other intellectual property claim made against us by any third party is successful, or if we fail to develop non-infringing technology or license the proprietary rights on commercially reasonable terms and conditions, our business, operating results and financial condition could be materially adversely affected.

If our product candidates, methods, processes and other technologies infringe the proprietary rights of other parties, we could incur substantial costs and we may have to take certain actions, including the following:

- obtain licenses, which may not be available on commercially reasonable terms, if at all;
- redesign our product candidates or processes to avoid infringement;
- stop using the subject matter claimed to be held by others;
- pay damages; or
- defend litigation or administrative proceedings which may be costly whether we win or lose, and which could result in a substantial diversion of our financial and management resources.

We may need to license intellectual property from third parties, and such licenses may not be available or may not be available on commercially reasonable terms.

A third party may hold intellectual property, including patent rights that are important or necessary to the development of our product candidates. It may be necessary for us to use the patented or proprietary technology of a third party to manufacture or otherwise commercialize our own technology or products, in which case we would be required to obtain a license from such third party. Licensing such intellectual property may not be available or may not be available on commercially reasonable terms, which could have a material adverse effect on our business and financial condition.

We may be subject to legal proceedings in the ordinary course of our business that could result in significant harm to our business, financial condition and operating results.

We could be subject to legal proceedings and claims from time to time in the ordinary course of our business, including actions arising from tort, contract or other claims. See the information set forth under the headings “Legal Proceedings” and in the related notes to financial statements in the Company’s periodic reports on Form 10-K, 10-Q and 8-K incorporated by reference herein. Litigation is expensive, time consuming, and could divert management’s attention away from running our business. The outcome of litigation or other proceedings is subject to significant uncertainty, and it is possible that an adverse resolution of one or more such proceedings could result in reputational harm and/or significant monetary damages, injunctive relief or settlement costs that could adversely affect our results of operations or financial condition as well as our ability to conduct our business as it is presently being conducted. Insurance might not cover such claims, might not provide sufficient payments to cover all the costs to resolve one or more such claims and might not be available on terms acceptable to us. In addition, regardless of merit or outcome, claims brought against us that are uninsured or under insured could result in unanticipated costs, which could harm our business, financial condition and operating results and reduce the trading price of our stock.

For example, we have become aware that we were involved in a transaction in which an investor of the Company may have resold approximately 175,000 shares of our common stock pursuant to a registration statement that had not yet been declared effective by the SEC. As a result, it is possible that the SEC could bring an action against us, or we may ultimately be responsible for an action for rescission by purchasers of the securities that were resold. If the SEC were to bring such an enforcement action against us, or if purchasers were to bring such an action for rescission, it may have a material adverse effect on our financial position.

Product liability lawsuits against us could cause us to incur substantial liabilities and to limit commercialization of any products that we may develop.

We face an inherent risk of product liability exposure related to the use of ContraPest and Evolve. If we cannot successfully defend ourselves against claims from our product users, we could incur substantial liabilities. Regardless of merit or eventual outcome, liability claims may result in the following:

- decreased demand for any product that we may develop;
- termination of field studies or other research and development efforts;
- injury to our reputation and significant negative media attention;
- significant costs to defend the related litigation;
- substantial monetary awards to plaintiffs;
- loss of revenue;
- diversion of management and scientific resources from our business operations; and
- the inability to commercialize our product candidates.

We may be unable to obtain commercially reasonable product liability insurance for any products approved for marketing. Large judgments have been awarded in class action lawsuits based on products that had unanticipated side effects, including, without limitation, any potential adverse effects of our products on humans or other species. A successful product liability claim or series of claims brought against us, particularly if judgments exceed our insurance coverage, could decrease our cash and adversely affect our business.

Risks Related to our Reporting and Cybersecurity

We have not fully assessed our internal control over financial reporting. If we experience material weaknesses in the future or otherwise fail to maintain an effective system of internal controls, we may not be able to accurately or timely report our financial condition or results of operations, which may adversely affect investor confidence in us and, as a result, the value of our common stock.

A material weakness is a deficiency, or combination of deficiencies, in internal control over financial reporting such that there is a reasonable possibility that a material misstatement of our financial statements will not be prevented or detected on a timely basis.

Our Annual Report on Form 10-K for the year ended December 31, 2023 does not include an attestation report of our registered public accounting firm due to a transition period established by rules of the SEC for smaller reporting companies. As a result, we have not yet fully assessed our internal control over financial reporting and are unable to assure that the measures we have taken to date, together with any measures we may take in the future, will be sufficient to remediate the control deficiencies that led to our material weaknesses in our internal control over financial reporting, or to avoid potential future material weaknesses.

If we are unable to develop and maintain an effective system of internal control over financial reporting, successfully remediate any existing or future material weaknesses in our internal control over financial reporting, or identify any additional material weaknesses, the accuracy and timing of our financial reporting may be adversely affected, we may be unable to maintain compliance with securities law requirements regarding timely filing of periodic reports and Nasdaq listing requirements, investors may lose confidence in our financial reporting, and our stock price may decline as a result.

Privacy breaches and other cyber security risks related to our business could negatively affect our reputation, credibility and business.

We are making sales through our new e-Commerce tool, which depends on information technology systems and networks. We are also responsible for storing data relating to our customers and employees and rely on third party vendors for the storage, processing and transmission of personal and Company information. Consumers, lawmakers and consumer advocates alike are increasingly concerned over the security of personal information transmitted over the Internet, consumer identity theft and privacy. We do not control our third-party service providers and cannot guarantee that they have implemented reasonable security measures to protect our employees' and customers' identity and privacy, or that no electronic or physical computer break-ins or security breaches will occur in the future. Our systems and technology are vulnerable from time-to-time to damage, disruption or interruption from, among other things, physical damage, natural disasters, inadequate system capacity, system issues, security breaches, "hackers," email blocking lists, computer viruses, power outages and other failures or disruptions outside of our control. A significant breach of customer, employee or Company data could damage our reputation and our relationship with customers, and could result in lost sales, sizable fines, significant breach-notification costs and lawsuits, as well as adversely affect our results of operations. We may also incur additional costs in the future related to the implementation of additional security measures to protect against new or enhanced data security and privacy threats, or to comply with state, federal and international laws that may be enacted to address those threats.

Risks Related to our Capital Stock, Funding and Trading in our Stock

We have incurred significant operating losses every quarter since our inception and anticipate that we will continue to incur significant operating losses in the future.

Investment in product development is highly speculative because it entails substantial upfront capital expenditures and significant risk that any potential product candidate will fail to become commercially viable or gain regulatory approval. To date, we have financed our operations primarily through the sale of equity securities and debt financings as well as research grants. We have not generated sufficient revenue from product sales to date to achieve profitability. We continue to incur significant sales, marketing, research, development, and other expenses related to our ongoing operations. As a result, we are not profitable and have incurred losses in every reporting period since our inception. For the years ended December 31, 2023 and 2022, we reported net losses of $7.7 million and $9.7 million, respectively. Thru December 31, 2023, we have accumulated deficits of $129.9 million since inception.

Since inception, we have dedicated a majority of our resources to the discovery and development and marketing of our proprietary product candidates. We expect to continue to incur significant expenses and operating losses for the foreseeable future. The size of our losses will depend, in part, on the rate of future expenditures and our ability to generate revenues. In particular, we expect to incur substantial and increased expenses as we perform the following:

- attempt to achieve market acceptance for our products;
- continue to establish an infrastructure for the sales, marketing and distribution of our products and product candidates for which we may receive regulatory approval;
- scale up manufacturing processes and quantities for the commercialization of our products and product candidates for which we receive regulatory approval;
- continue the research and development of products and product candidates, including engaging in any necessary field studies;
- seek regulatory approvals for our products and product candidates;
- expand our research and development activities and advance the discovery and development programs for other product candidates;
- maintain, expand and protect our intellectual property portfolio; and
- add operational, financial and management information systems and personnel, including personnel to support our clinical development and commercialization efforts and operations as a public company.

We may encounter unforeseen expenses, difficulties, complications, delays, and other unknown factors that may adversely affect our financial condition. Our prior losses and expected future losses have had, and will continue to have, an adverse effect on our financial condition. If our products or product candidates do not gain or maintain sufficient regulatory approval, or if approved, fails to achieve market acceptance, we may never become profitable. Even if we achieve profitability in the future, we may not be able to sustain profitability in subsequent periods. Our failure to become and remain profitable would decrease the value of our company and could impair our ability to raise capital, expand our business, diversify our product offerings or continue our operations. A decline in the value of our company could cause you to lose all or part of your investment.

If we are unable to continue as a going concern, our securities will have little or no value.

We have incurred operating losses since our inception, and we expect to continue to incur significant expenses and operating losses for the foreseeable future. Our financial statements as of December 31, 2023 and 2022 have been prepared under the assumption that we will continue as a going concern. Our independent registered public accounting firm included in its opinion for the years ended December 31, 2023, and 2022 an explanatory paragraph referring to our net loss from operations and net capital deficiency and expressing substantial doubt in our ability to continue as a going concern without additional capital becoming available. If we encounter continued issues or delays in the commercialization of our products or greater than anticipated expenses, our prior losses and expected future losses could have an adverse effect on our financial condition and negatively impact our ability to fund continued operations, obtain additional financing in the future and continue as a going concern. There are no assurances that such financing, if necessary, will be available to us at all or will be available in sufficient amounts or on reasonable terms. Our financial statements do not include any adjustments that may result from the outcome of this uncertainty. If we are unable to generate additional funds in the future through financings, sales of our products, licensing fees, royalty payments or from other sources or transactions, we will exhaust our resources and will be unable to continue operations. If we cannot continue as a going concern, our stockholders would likely lose most or all of their investment in us.

We may not be able to comply with all applicable listing requirements or standards of The Nasdaq Capital Market, and Nasdaq could delist our common stock.

Our common stock is listed on The Nasdaq Capital Market. In order to maintain that listing, we must satisfy minimum financial and other continued listing requirements and standards. Previously, on September 26, 2018, March 20, 2019, February 20, 2020, March 2, 2022, and, most recently, on August 25, 2023, we received a letter from the listing qualifications staff of Nasdaq (the "Staff") providing notification that the bid price for our common stock had closed below $1.00 per share for the previous 30 consecutive business days and our common stock no longer met the minimum bid price requirement for continued listing under Nasdaq Listing Rule 5550(a)(2). In each case, in accordance with Nasdaq Listing Rule 5810(c)(3) (A), we had an initial period of 180 calendar days to regain compliance. To regain compliance, the closing bid price of our common stock had to be $1.00 per share or more for a minimum of 10 consecutive business days at any time before the expiration of the initial compliance period.

In the event that we are unable to regain compliance with Rule 5550(a)(2) during the initial compliance, Nasdaq rules provide that we may be eligible for an additional 180 calendar day compliance period. To qualify, we needed to meet the continued listing requirement for market value of publicly held shares and all other initial listing standards for the Nasdaq Capital Market, with the exception of the minimum bid price requirement, and to provide written notice of our intention to cure the deficiency during the second compliance period, by effecting a reverse stock split, if necessary.

On August 18, 2023, our stockholders approved a reverse stock split of our common stock, par value $.001 per share, at a ratio of not less than 1-for-2 and not more than 1-for-12, with the actual ratio to be determined by our board of directors. On November 7, 2023, the Reverse Split Committee of our Board of Directors approved a final split ratio of 1-for-12 (the "November 2023 Reverse Split"). Following such approval, we filed an amendment to the Certificate of Incorporation with the Secretary of State of the State of Delaware to effect the reverse stock split, with an effective time of 4:01 p.m., Eastern Time on November 16, 2023. However, even if a stock split has a positive effect on the market price for the common stock immediately following a reverse stock split, performance of our business and financial results, general economic conditions and the market perception of our business, and other adverse factors which may not be in our control, could lead to a decrease in the price of our common stock following the reverse stock split. While the bid price of our common stock has been at or above $1.000 per share for a minimum of 10 consecutive business days multiple times since the November 2023 Reverse Split, Nasdaq has used its discretion to monitor the bid price of our common stock for a longer period of time. We hope to receive from Nasdaq the additional 180-day compliance period in which to regain compliance. We intend to effect another reverse stock split within such additional 180-day compliance period, if necessary, in order to regain compliance.

In the event that we are unable to establish compliance, or again become non-compliant, with any of the minimum financial and other continued listing requirements of Nasdaq and cannot re-establish compliance within the require timeframe, our common stock could be delisted from The Nasdaq Capital Market, which could have a material adverse effect on our financial condition and which would cause the value of our common stock to decline. If our common stock is not eligible for listing or quotation on another market or exchange, trading of our common stock could be conducted in the over-the-counter market or on an electronic bulletin board established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board. In such event, it would become more difficult to dispose of, or obtain accurate price quotations for, our common stock, and there would likely be a reduction in our coverage by security analysts and the news media, which could cause the price of our common stock to decline further. In addition, it may be difficult for us to raise additional capital if we are not listed on a national securities exchange.

Our reverse stock splits may decrease the liquidity of the shares of our common stock.

On August 18, 2023, our stockholders approved a reverse stock split of our common stock, par value $0.001 per share, at a ratio of not less than 1-for-2 and not more than 1-for-12, with the actual ratio to be determined by our board of directors. On November 7, 2023, the Reverse Split Committee of our Board of Directors approved a final split ratio of 1-for-12 to regain compliance with the Nasdaq minimum bid price requirement. Prior to the November 2023 reverse stock split, we effected a reverse stock split in November 2022 with a ratio of 1-for-20. The liquidity of the shares of our common stock may be affected adversely by the reverse stock splits given the reduced number of shares that are outstanding following the reverse stock splits. In addition, the reverse stock splits increase the number of stockholders who own odd lots (less than 100 shares) of our common stock, creating the potential for such stockholders to experience an increase in the cost of selling their shares and greater difficulty effecting such sales.

Following a reverse stock split, the resulting market price of our common stock may not attract new investors, including institutional investors, and may not satisfy the investing requirements of those investors. Consequently, the trading liquidity of our common stock may not improve.

Although we believe that a higher market price of our common stock may help generate greater or broader investor interest, there can be no assurance that a reverse stock split will result in a share price that will attract new investors, including institutional investors. In addition, there can be no assurance that the market price of our common stock will satisfy the investing requirements of those investors. As a result, the trading liquidity of our common stock may not necessarily improve.

Raising additional capital may cause dilution to our existing stockholders, restrict our operations or require us to relinquish rights to our technologies or product candidates.

Until such time, if ever, as we can generate sufficient product revenues, we expect to finance our cash needs primarily through the sale of equity securities and debt financings, and possibly through credit facilities and government and foundation grants. We may also seek to raise capital through third party collaborations, strategic alliances and similar arrangements. We currently do not have any committed external source of funds.

Raising funds in the future may present additional challenges and future financing may not be available in sufficient amounts or on terms acceptable to us, if at all. The terms of any financing arrangements we enter into may adversely affect the holdings or the rights of our stockholders and the issuance of additional securities by us, or the possibility of such issuance, may cause the market price of our shares to decline. For example, during 2022 and 2020, we completed equity financings that resulted in the issuance of shares of common stock and warrants to purchase common stock, resulting in substantial dilution to the existing stockholders. Similarly, in the first quarter of 2021, we again issued shares of common stock and warrants to purchase common stock, resulting in additional substantial dilution to the existing stockholders. We generally have raised capital as the opportunity arises.

Certain of our agreements with investors and our outstanding warrants contain provisions that impose limitations on our ability to participate in certain variable rate transactions, including at-the-market transactions, which may limit our opportunities to obtain financing in sufficient amounts or on acceptable terms. The sale of additional equity or convertible debt securities would dilute all of our stockholders, and if such sales occur at a deemed issuance price that is lower than the current exercise price of our outstanding warrants sold to investors in November 2017, the exercise price for those warrants would adjust downward to the deemed issuance price pursuant to price adjustment protection contained within those warrants. Our various warrants contain other terms that may affect our fundraising. In connection with this offering, we may agree to amend the terms of certain of our outstanding warrants held by certain significant purchasers in this offering. Any such amendments may, among other things, decrease the exercise prices or increase the term of exercise of those warrants.

The incurrence of indebtedness through credit facilities would result in increased fixed payment obligations and, potentially, the imposition of restrictive covenants. Those covenants may include limitations on our ability to incur additional debt, making capital expenditures or declaring dividends, and may impose limitations on our ability to acquire, sell, or license intellectual property rights and other operating restrictions that could adversely impact our ability to conduct our business.

If we raise additional funds through collaborations, strategic alliances, or licensing arrangements or other marketing or distribution arrangements with third parties, we may have to relinquish valuable rights to our technologies, future revenue streams, research programs or product candidates or grant licenses on terms that may not be favorable to us. If we are unable to expand our operations or otherwise capitalize on our business opportunities, our business, financial condition and results of operations could be materially adversely affected.

If we are unable to raise additional funds through equity or debt financings when needed, we may be required to delay, limit, reduce or terminate our product development or commercialization efforts, or grant others rights to develop and market product candidates that we would otherwise prefer to develop and market ourselves.

Our share price is volatile, which could subject us to securities class action litigation and your investment in our securities could decline in value.

Our stock could be subject to wide fluctuation in response to many risk factors listed in this section, and others beyond our control, including the following:

- market acceptance and commercialization of our products;
- our being able to timely demonstrate achievement of milestones, including those related to revenue generation, cost control, cost effective source supply, and regulatory approvals;
- our ability to remain listed on Nasdaq;
- results and timing of our submissions with the regulatory authorities;
- failure or discontinuation of any of our development programs;
- regulatory developments or enforcements in the United States and non-U.S. countries with respect to our products or our competitors' products;
- failure to achieve pricing acceptable to the market;
- regulatory actions with respect to our products or our competitors' products;
- actual or anticipated fluctuations in our financial condition and operating results or our continuing to sustain operating losses;
- competition from existing products or new products that may emerge;
- announcements by us or our competitors of significant acquisitions, strategic arrangements, joint ventures, collaborations or capital commitments;
- issuance of new or updated research or reports by securities analysts;
- announcement or expectation of additional financing efforts, particularly if our cash available for operations significantly decreases or if the financing efforts result in a price adjustment to certain outstanding warrants;
- fluctuations in the valuation of companies perceived by investors to be comparable to us;
- share price and volume fluctuations attributable to inconsistent trading volume levels of our shares;

- disputes or other developments related to proprietary rights, including patents, litigation matters and our ability to obtain patent protection for our technologies;
- entry by us into any material litigation or other proceedings;
- sales of our common stock by us, our insiders, or our other stockholders;
- exercise of outstanding warrants;
- market conditions for equity securities; and
- general economic and market conditions unrelated to our performance.

Furthermore, the capital markets can experience extreme price and volume fluctuations that may affect the market prices of equity securities of many companies. These broad market and industry fluctuations, as well as general economic, political, and market conditions such as recessions, interest rate changes, or international currency fluctuations, may negatively impact the market price of shares of our common stock. In addition, such fluctuations could subject us to securities class action litigation, which could result in substantial costs and divert our management's attention from other business concerns, which could seriously harm our business. You may not realize any return on your investment in us and may lose some or all of your investment.

Future sales, or the possibility of future sales, of a substantial number of our common shares could adversely affect the price of the shares and dilute stockholders.

Future sales of a substantial number of shares of our common stock, or the perception that such sales will occur, could cause a decline in the market price of our common stock. This is particularly true if we sell our stock at a discount. Any future issuance of common stock or securities convertible or exercisable into our common stock could cause a further downward adjustment of the exercise price of these warrants to the deemed issuance price if the issuance price is less than the exercise price of the warrants at the time of the new issuance.

Also, in the future, we may issue additional shares of our common stock or other equity or debt securities convertible into common stock in connection with a financing, acquisition, litigation settlement, employee arrangements, or otherwise. Any such issuance could result in substantial dilution to our existing stockholders and could cause our common share price to decline.

An active market in the shares may not continue to develop in which investors can resell our common stock.

We cannot predict the extent to which an active market for our common stock will continue to develop or be sustained, or how the development of such a market might affect the market price for our common stock. Market conditions in effect at the time you acquire our stock may not be indicative of the price at which our common stock will trade in the future. Investors may not be able to sell their common stock at or above the price they acquired it.

If securities or industry analysts, or other sources of information, do not publish research, or publish inaccurate or unfavorable research or other information about our business, our stock price and trading volume could decline.

The trading market for our common stock may depend on the research, reports and other information that securities or industry analysts, or other third-party sources of information, publish about us or our business. We do not have any control over these analysts or other third-party sources of information. From time to time inaccurate or unfavorable research or other information about our business, financial condition, results of operations and stock ownership may be published. We cannot assure that analysts will cover us or provide favorable coverage. If one or more of the analysts who cover us downgrade our stock or change their opinion of our stock, our share price could decline. If one or more of these analysts cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our stock price or trading volume to decline. If incorrect or misleading information is disseminated publicly by third parties about us, our stock price could decline.

Our corporate documents, Delaware law and certain warrants contain provisions that could discourage, delay or prevent a change in control of our company.

Provisions in our amended and restated certificate of incorporation and our amended and restated bylaws may discourage, delay or prevent a merger or acquisition involving us that our stockholders may consider favorable. For example, our amended and restated certificate of incorporation currently provides for a staggered board of directors, whereby directors serve for three-year terms, with approximately one-third of the directors coming up for reelection each year. Having a staggered board will make it more difficult for a third party to obtain control of our board of directors through a proxy contest, which may be a necessary step in an acquisition of us that is not favored by our board of directors. Additionally, most of our warrants provide a Black Scholes value-based payment to the warrant holders in connection with certain transactions that may discourage, delay or prevent a merger or acquisition.

We are also subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law. Under these provisions, if anyone becomes an "interested stockholder," we may not enter into a "business combination" with that person for three years without special approval, which could discourage a third party from making a takeover offer and could delay or prevent a change of control. For purposes of Section 203, "interested stockholder" means, generally, someone owning 15% or more of our outstanding voting stock or an affiliate of ours that owned 15% or more of our outstanding voting stock during the past three years, subject to certain exceptions as described in Section 203.

ITEM 1B. UNRESOLVED STAFF COMMENTS.

Not applicable.

ITEM 1C. CYBERSECURITY.

Risk Management and Strategy.

The consideration of cybersecurity threats are integrated into our overall risk management program. We engage external consultants who are experts in the field of cybersecurity and meet at regular intervals to evaluate current conditions and address any cybersecurity threats accordingly. We also provide continuous training to our employees regarding the risks related to cybersecurity. We are not aware of any risks from cybersecurity threats that have materially affected our business strategy, results of operations, or financial condition.

Governance.

Our board of directors are responsible for the oversight of risks from cybersecurity threats. At least annually management reports to our board of directors about such risks. Our chief financial officer, Thomas Chesterman, has direct management responsibility in assessing and managing such risks. Mr. Chesterman has prior academic and professional experience in cybersecurity.

ITEM 2. PROPERTIES.

As of December 31, 2023, our corporate headquarters and manufacturing facility are located in Phoenix, Arizona. We lease and occupy approximately 5,100 square feet of office space for our corporate headquarters and approximately 7,700 square feet of separate facility space for our manufacturing facility pursuant to a lease that expires on November 30, 2024. We believe that our existing facilities are adequate and meet our current needs for business, manufacturing and research.

ITEM 3. LEGAL PROCEEDINGS.

See Note 11, Contingencies in the Notes to Financial Statements in Item 8.— "Financial Statements and Supplementary Data," for information regarding legal proceedings, which is incorporated herein by reference.

ITEM 4. MINE SAFETY DISCLOSURES.

Not applicable.

PART II

ITEM 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES.

Market Information

Our common stock is traded on the Nasdaq Capital Market under the symbol "SNES." Our common stock was initially listed for trading on the Nasdaq Capital Market on December 8, 2016.

Holders

As of February 20, 2024, there were approximately 691 holders of record of our common stock. Because many shares of our common stock are held by brokers and other institutions on behalf of stockholders, we are unable to determine the total number of beneficial owners represented by these holders of record.

Dividends

We have never declared or paid any cash dividends on our common stock. We currently intend to retain all available funds and any future earnings to support our operations and finance the growth and development of our business. We do not intend to pay cash dividends on our common stock for the foreseeable future. Any future determination related to our dividend policy will be made at the discretion of our board of directors and will depend upon, among other factors, our results of operations, financial condition, capital requirements, contractual restrictions, business prospects and other factors our board of directors may deem relevant.

Recent Sales of Unregistered Securities

None.

Purchases of Equity Securities by the Company

We withhold shares of common stock in connection with the vesting of restricted stock units to satisfy required tax withholding obligations when they occur. There were no purchases of our equity securities during the 12 months ended December 31, 2023.

ITEM 6. [RESERVED].

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

You should read the following discussion and analysis of our financial condition and results of operations in conjunction with our financial statements and the notes thereto included elsewhere in this Annual Report on Form 10-K. In addition to historical financial information, the following discussion contains forward-looking statements that reflect our plans, estimates, beliefs and expectations that involve risks and uncertainties. Our actual results and the timing of events could differ materially from those discussed in the forward-looking statements. Factors that could cause or contribute to these differences include those discussed below and elsewhere in this Annual Report on Form 10-K, particularly in the sections of this report titled "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements."

Overview

Since our inception, we have sustained significant operating losses in the course of our research and development activities and commercialization efforts and expect such losses to continue for the near future. We have generated limited revenue to date from product sales, research grants and licensing fees received under a former license. We have primarily funded our operations to date through the sale of equity securities, including convertible preferred stock, common stock and warrants to purchase common stock; and debt financing, consisting primarily of convertible notes.

Through December 31, 2023, we had received net proceeds of $92.5 million from our sales of common stock, preferred stock and issuance of convertible and other promissory notes, an aggregate of $1.7 million from research grants and licensing fees and an aggregate of $3.7 million in product sales. At December 31, 2023, we had an accumulated deficit of $129.9 million and cash and cash equivalents of $5.4 million.

We have incurred significant operating losses every year since our inception. Our net losses were $7.7 million and $9.7 million for the years ended December 31, 2023 and 2022, respectively. We expect to continue to incur significant expenses and generate operating losses for at least the next 12 months.

We will need additional funding to continue to fund our operations, achieve profitability and become cash flow positive, we will continue to seek additional financing. If such equity or debt financing is not available at adequate levels or on acceptable terms, we may need to delay, limit or terminate commercialization and development efforts or discontinue operations.

We have historically utilized, and intend to continue to utilize, various forms of stock-based awards in order to hire, retain and motivate talented employees, consultants and directors and encourage them to devote their best efforts to our business and financial success. In addition, we believe that our ability to grant stock-based awards is a valuable and necessary compensation tool that aligns the long-term financial interests of our employees, consultants and directors with the financial interests of our stockholders. As a result, a significant portion of our operating expenses includes stock-based compensation expense. Stock-based compensation expense has been, and will continue to be for the foreseeable future, a significant recurring expense in our business and an important part of our compensation strategy. Specifically, our stock-based compensation expense for the year ended December 31, 2023 and December 31, 2022 was $555,000 and $711,000, respectively, which represented 6.7% and 7.0%, respectively, of our total operating expenses for those periods.

Results of Operations

The following tables provide financial and operational information to be considered in conjunction with management's discussion and analysis of results of operations.

The results of operations are as following for the years presented (dollars in thousands):

	Years Ended December 31,		% Increase (Decrease)
	2023	2022	
Revenues, net	$ 1,193	$ 1,019	17 %
Cost of sales	654	555	18 %
Gross profit	539	464	16 %
Operating expenses:			
Research and development	1,228	1,859	(34)%
Selling, general and administrative	7,043	8,279	(15)%
Total operating expenses	8,271	10,138	(18)%
Loss from operations	(7,732)	(9,674)	(20)%
Other income (expense), net	22	(21)	(205)%
Net loss	$ (7,710)	$ (9,695)	(20)%

Revenues, net

Sales, which are net of any discounts and promotions, were $1.2 million for the year ended December 31, 2023, compared to $1.0 million for the year ended December 31, 2022. Sales increased by $174,000 in 2023 driven by more than 70% increases in our agribusiness, commercial and distributor vertical markets, as we continue efforts at commercializing our products, slightly offset by a 10% decrease in e-commerce.

Cost of Sales

Cost of sales, consisting primarily of the cost of products sold, including scrap and reserves for obsolescence, was $654,000 for the year ended December 31, 2023, compared with $555,000 for the year ended December 31, 2022, an increase of $99,000, or 17.8%. However, cost of sales as a percent of sales was comparable year over year, at 54.8% for 2023 compared with 54.5% for 2022.

Gross Profit

Gross profit for the year ended December 31, 2023 was $539,000 compared with gross profit of $464,000 for the year ended December 31, 2022, an increase of $75,000, or 16.2%. However, gross profit margin was comparable year over year at 45.2% for 2023 compared with 45.5% for 2022.

Research and Development Expenses

Research and development expenses are expensed as incurred and consist primarily of costs incurred in connection with the research and development of ContraPest and Evolve and our other product candidates. Such costs include the following:

- employee related expenses, including salaries, related benefits, travel and stock-based compensation expense for employees engaged in research and development functions, including that portion of manufacturing not included in cost of goods sold;
- expenses incurred in connection with the development of our product candidates, including related regulatory and production expenses; and
- facilities, depreciation, and other expenses, which include direct and allocated expenses for rent and maintenance of facilities, insurance, and supplies.

Research and development expense consisted of the following (in thousands):

	Years Ended December 31,		Increase (Decrease)
	2023	2022	
Personnel (including stock-based compensation)	$ 636	$ 996	$ (360)
Professional fees	156	284	(128)
Facility	122	108	14
Depreciation	109	128	(19)
Other	205	343	(138)
Total	$ 1,228	$ 1,859	$ (631)

Research and development expenses were $1.2 million for the year ended December 31, 2023, compared to $1.9 million for the year ended December 31, 2022. The $631,000 decrease was primarily driven by lower personnel costs and lower legal fees related to research and development matters, offset by higher costs related to increased and expanded product development efforts in the later part of 2023.

Selling, General and Administrative Expenses

Selling, general and administrative expenses consist primarily of salaries and related costs, including stock-based compensation, for personnel in executive, finance, sales, marketing and administrative functions. Selling, general and administrative expenses also include direct and allocated facility-related costs as well as professional fees for legal, consulting, accounting and audit services.

Selling, general and administrative expense consisted of the following (in thousands):

	Years Ended December 31,		Increase (Decrease)
	2023	2022	
Personnel (including stock-based compensation)	$ 3,440	$ 3,851	$ (411)
Professional fees	1,722	2,193	(471)
Marketing	317	631	(314)
Travel and related expenses	228	201	27
Facility	155	155	—
Depreciation expense	27	55	(28)
Other	1,154	1,193	(39)
Total	$ 7,043	$ 8,279	$ (1,236)

Selling, general and administrative expenses were $7.0 million for the year ended December 31, 2023, compared to $8.3 million for the year ended December 31, 2022. The $1.2 million decrease was driven by lower professional fees related to legal matters, consulting related to advertising and marketing activities and recruiting costs related to employee turnover, partially offset by higher cost in 2023 related to the settlement of a legal matter. Additionally, costs related to software licenses and marketing efforts for digital and social media outlets were lower in 2023 when compared to 2022, combined with lower costs related to the timing of personnel changes. In 2023, personnel costs includes severance costs of $191,000 related to the termination of our former Chief Revenue Officer, while 2022 includes severance costs of $356,000 related to the termination of our former Chief Executive Officer.

Other Income (Expense), Net

Other income (expense), net, consists of interest income and expense, as well as any gains or losses related to the sale of fixed assets and other miscellaneous items. For the year ended December 31, 2023, other income, net largely consisted of interest income of $26,000, while other expense, net for the year ended December 31, 2022 largely consisted of a loss realized on the sale of research and development equipment of $28,000. Interest income was higher in 2023 when compared with 2022, as interest rates continued to climb throughout 2022 and into 2023, which then leveled off. Interest expense was also higher in 2023 when compared with 2022 due to new notes entered into to finance the purchase of new manufacturing equipment.

Liquidity and Capital Resources

Since our inception, we have sustained significant operating losses in the course of our research and development activities and commercialization efforts and expect such losses to continue for the near future. While we have generated $1.2 million of revenue in our most recent fiscal year, it is not sufficient to cover our base operating costs. We have primarily funded our operations to date through the sale of equity securities, including convertible preferred stock, common stock and warrants to purchase common stock; and debt financing, consisting primarily of convertible notes.

Through December 31, 2023, we had received net proceeds of $92.5 million from our sales of common stock, preferred stock and issuance of convertible and other promissory notes, an aggregate of $1.7 million from research grants and licensing fees and an aggregate of $3.7 million in product sales. At December 31, 2023, we had an accumulated deficit of $129.9 million and cash and cash equivalents of $5.4 million.

Our ultimate success depends upon the outcome of a combination of factors, including the following: (i) successful commercialization of ContraPest and Evolve and maintaining and obtaining regulatory approval of our products and product candidates; (ii) market acceptance, commercial viability and profitability of ContraPest, Evolve and other products; (iii) the ability to market our products and establish an effective sales force and marketing infrastructure to generate significant revenue; (iv) the success of our research and development; (v) the ability to retain and attract key personnel to develop, operate and grow our business; and (vi) our ability to meet our working capital needs.

Based upon our current operating plan, we expect that cash and cash equivalents at December 31, 2023, in combination with anticipated revenue, will be sufficient to fund our current operations for at least the next nine months. We have evaluated and will continue to evaluate our operating expenses and will concentrate our resources toward the successful commercialization of ContraPest and Evolve in the United States. However, if anticipated revenue targets and margin targets are not achieved or expenses are more than we have budgeted, we may need to raise additional financing before that time. If we need more financing, including within the next nine months, and we are unable to raise the necessary capital through the sale of our securities, we may be required to take other measures that could impair our ability to be successful and operate as a going concern. In any event, we may require additional capital in order to fund our operating losses and research and development activities before we become profitable and may opportunistically raise capital. We may never achieve profitability or generate positive cash flows, and unless and until we do, we will continue to need to raise capital through equity or debt financing. If such equity or debt financing is not available at adequate levels or on acceptable terms, we may need to delay, limit or terminate commercialization and development efforts or discontinue operations.

Additional Funding Requirements

We expect our expenses to continue or increase in connection with our ongoing activities, particularly as we focus on marketing and sales of ContraPest. In addition, we will continue to incur costs associated with operating as a public company.

In particular, we expect to incur substantial and increased expenses as we:

- work to maximize market acceptance for, and generate sales of, our products, including by conducting field demonstrations at potential lead customers;
- explore strategic partnerships to enable us to penetrate additional target markets and geographical locations;
- manage the infrastructure for sales, marketing and distribution of ContraPest and Evolve and any other product candidates for which we may receive regulatory approval;
- seek additional regulatory approvals, if any, for ContraPest and Evolve, including to more fully expand the market and use for ContraPest and Evolve and, if we believe there is commercial viability, for our other product candidates;
- further develop our manufacturing processes to contain costs while being able to scale to meet future demand of ContraPest and Evolve and any other product candidates for which we receive regulatory approval;
- continue product development of ContraPest and Evolve and advance our research and development activities and, as our operating budget permits, advance the research and development programs for other product candidates;
- maintain and protect our intellectual property portfolio; and
- add operational, financial and management information systems and personnel, including personnel to support our product development and commercialization efforts and operations as a public company.

We believe we will need additional financing to fund these continuing and additional expenses.

Cash Flows

The following table summarizes our sources and uses of cash for each of the years presented (in thousands):

	Years Ended December 31,	
	2023	**2022**
Cash and cash equivalents, beginning of year	$ 4,775	$ 9,326
Net cash provided by (used in):		
Operating activities	(7,566)	(8,577)
Investing activities	(149)	(170)
Financing activities	8,335	4,196
Net change in cash and cash equivalents	620	(4,551)
Cash and cash equivalents, end of year	$ 5,395	$ 4,775

Cash Flows from Operating Activities—Cash flows from operating activities are generally determined by the amount and timing of cash received from customers and payments made to vendors, as well as the nature and amount of non-cash items, including depreciation and amortization and stock-based compensation included in operating results during a given period.

During 2023, net cash flows used in operating activities consisted of our net loss of $7.7 million and by changes in our operating assets and liabilities of $545,000, offset by non-cash charges of $688,000. Our net loss was primarily attributed to expenses incurred related to selling, general and administrative as we continue efforts to commercialize our products, as well as research and development activities. Revenue from our product sales did not cover our operating expenses during the year. Net cash used by changes in our operating assets and liabilities consisted primarily of a $583,000 decrease in accrued expenses and accounts payable, a $26,000 decrease in deferred revenue; and a $10,000 increase in prepaid expenses, offset by decreases of $58,000 in inventory and $20,000 in accounts receivable.

During 2022, net cash flows used in operating activities consisted of our net loss of $9.7 million, offset by changes in our operating assets and liabilities of $191,000 and non-cash charges of $928,000. Our net loss was primarily attributed to research and development activities and our selling, general and administrative expenses. Net cash generated by changes in our operating assets and liabilities consisted primarily of a $188,000 increase in accrued expenses and accounts payable, a $148,000 decrease in inventory and a $44,000 increase in deferred revenue, offset by increases of $148,000 in prepaid expenses and $42,000 in accounts receivable.

Cash Flows from Investing Activities—Cash flows used in investing activities primarily consist of the purchase of property and equipment, offset by any proceeds received in connection with sales of property and equipment. In 2023, our purchases were $25,000 lower than 2022, slightly offset by a decrease of $4,000 in proceeds received on sales of property and equipment.

Cash Flows from Financing Activities—Financing activities provide cash for both day-to-day operations and capital requirements as needed. In 2023, net cash provided by financing activities largely consisted of $5.4 million of net proceeds from issuances of common stock, $2.8 million from the exercise of warrants, and $114,000 from proceeds from notes payable. In 2022, net cash provided by financing activities consisted of $4.2 million of net proceeds from the issuance of common stock, partially offset by $32,000 of repayments related to notes payable and finance lease obligations.

Critical Accounting Policies and Estimates

Our financial statements are prepared in accordance with generally accepted accounting principles in the United States, or U.S. GAAP. The preparation of our financial statements and related disclosures requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, costs and expenses, and the disclosure of contingent assets and liabilities in our financial statements. We base our estimates on historical experience, known trends and events and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different assumptions or conditions.

We believe that the following critical accounting policies affect our more significant judgments and estimates used in the preparation of our financial statements:

Inventory Valuation. We value inventory at the lower of cost or net realizable value. In addition, we write down any obsolete, unmarketable or otherwise impaired inventory to net realizable value. The determination of obsolete, or excess inventory requires us to estimate the future demand for our products. The estimate of future demand is compared to inventory levels to determine the amount, if any, of obsolete or excess inventory. If actual market conditions are less favorable than those we projected at the time the inventory was written down, additional inventory write-downs may be required. Inventory valuation is re-evaluated on a quarterly basis.

Stock-Based Compensation. Stock-based compensation expenses is measured at the grant date, based on the estimated fair value of the award using the Black-Scholes option pricing model for stock options and market price for restricted stock units. The use of the Black-Scholes option pricing model, requires certain estimates, including expected term of options granted, the method of calculating expected volatilities and the risk-free interest rate used in the option-pricing model. The resulting calculated fair value of stock options is recognized as compensation expenses over the requisite service period, which is generally the vesting period. When there are changes to the assumptions used in the option-pricing model, including fluctuations in the market prices of our common stock, there will be variations in the calculated fair value of our future stock option awards, which results in variation in the stock-based compensation expensed recognized. Additionally, any modification of an award that increases its fair value will require us to recognize additional expense.

Income Taxes. We record deferred income taxes for temporary difference between the amounts of assets and liabilities for financial and tax reporting purposes and we record a valuation allowance to reduce our deferred tax assets to the amount that is more likely than not to be realized. We also regularly conduct a comprehensive review of our uncertain tax positions. In this regard, an uncertain tax position represents our expected treatment of a tax position taken in a filed tax return, or planned to be taken in a future tax return, that has not been reflected in measuring income tax expense for financial reporting purposes. Until these positions are sustained by the taxing authorities, we do not recognize the tax benefit resulting from such positions and report the tax effect for uncertain tax positions in our balance sheets.

Off-Balance Sheet Arrangements

None.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK.

Not applicable.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA.

The following financial statements and report are included in Item 8:

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and
Stockholders of SenesTech, Inc.

Opinion on the Financial Statements

We have audited the accompanying balance sheets of SenesTech, Inc. (the Company) as of December 31, 2023 and 2022, and the related statements of operations and comprehensive loss, stockholders' equity, and cash flows for each of the years in the two-year period ended December 31, 2023, and the related notes (collectively referred to as the financial statements). In our opinion, the financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2023 and 2022, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2023, in conformity with accounting principles generally accepted in the United States of America.

Going Concern

The accompanying financial statements have been prepared assuming that the Company will continue as a going concern. As discussed in Note 1 to the financial statements, the Company suffered a net loss from operations and has a net capital deficiency, which raises substantial doubt about its ability to continue as a going concern. Management's plans regarding those matters are also described in Note 1. The financial statements do not include any adjustments that might result from the outcome of this uncertainty.

Basis for Opinion

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

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

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

Critical Audit Matter

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

Equity Transactions

As discussed in Note 6 and Note 9 to the financial statements, the Company issues options and warrants. The proper valuation of options and warrants requires significant management judgment in determining the volatility and method used to calculate the option and warrant values.

To evaluate the appropriateness of the model and estimates determined by management, we examined and evaluate the model, and the time period and stock prices used in determining the valuation of the options and warrants issued.

/s/ M&K CPAS, PLLC

We have served as the Company's auditor since 2017.

Houston, TX
February 21, 2024

SENESTECH, INC.
BALANCE SHEETS
(In thousands, except share and per share data amounts)

	As of December 31,	
	2023	**2022**
ASSETS		
Current assets:		
Cash and cash equivalents	$ 5,395	$ 4,775
Accounts receivable, net	95	113
Prepaid expenses	388	378
Inventory, net	795	853
Total current assets	6,673	6,119
Right to use assets, operating leases	210	347
Property and equipment, net	388	294
Other noncurrent assets	22	22
Total assets	**$ 7,293**	**$ 6,782**
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Accounts payable	150	540
Accrued expenses	368	560
Current portion of operating lease liability	217	180
Current portion of notes payable	33	—
Deferred revenue	18	44
Total current liabilities	786	1,324
Operating lease liability, less current portion	—	179
Notes payable, less current portion	156	—
Total liabilities	942	1,503
Commitments and contingencies (see notes)		
Stockholders' equity:		
Preferred stock, $0.001 par value, 10,000,000 shares authorized, none issued and outstanding	—	—
Common stock, $0.001 par value, 100,000,000 shares authorized, 5,140,024 and 67,472 shares issued and outstanding as of December 31, 2023 and 2022, respectively	5	—
Additional paid-in capital	136,259	127,482
Accumulated deficit	(129,913)	(122,203)
Total stockholders' equity	6,351	5,279
Total liabilities and stockholders' equity	**$ 7,293**	**$ 6,782**

See accompanying notes to the financial statements.

SENESTECH, INC.
STATEMENTS OF OPERATIONS AND COMPREHENSIVE LOSS
(In thousands, except share and per share data)

	Years Ended December 31,	
	2023	**2022**
Product sales, net	$ 1,193	$ 1,019
Cost of sales	654	555
Gross profit	539	464
Operating expenses:		
Research and development	1,228	1,859
Selling, general and administrative	7,043	8,279
Total operating expenses	8,271	10,138
Loss from operations	(7,732)	(9,674)
Other income (expense):		
Interest income	26	7
Interest expense	(4)	(2)
Miscellaneous expense	—	(26)
Other income (expense), net	22	(21)
Net loss and comprehensive loss	(7,710)	(9,695)
Weighted average shares outstanding — basic and diluted	669,861	65,473
Loss per share — basic and diluted	$ (11.51)	$ (148.08)

See accompanying notes to the financial statements.

SENESTECH, INC.
STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In thousands, except shares)

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Total
	Shares	Amount			
Balances as of December 31, 2021	50,864	$ —	$ 122,543	$ (112,508)	$ 10,035
Stock-based compensation	—	—	707	—	707
Net proceeds received for issuance of common stock and prefunding of warrants	5,631	—	4,228	—	4,228
Issuance of common stock upon exercise of warrants	10,916	—	—	—	—
Issuance of common stock for services	57	—	4	—	4
Issuance of common stock for fractional shares in the 20:1 reverse stock split	4	—	—	—	—
Net loss	—	—	—	(9,695)	(9,695)
Balances as of December 31, 2022	67,472	—	127,482	(122,203)	5,279
Stock-based compensation	—	—	455	—	455
Net proceeds received for issuance of common stock and prefunding of warrants	521,735	—	5,407	—	5,407
Issuance of common stock upon exercise of warrants, net	4,544,437	5	2,826	—	2,831
Issuance of common stock for services	4,539	—	100	—	100
Issuance of shares pursuant to the vesting of restricted stock units, net of shares withheld for taxes	1,102	—	(11)	—	(11)
Issuance of common stock for fractional shares in the 12:1 reverse stock split	739	—	—	—	—
Net loss	—	—	—	(7,710)	(7,710)
Balances as of December 31, 2023	5,140,024	$ 5	$ 136,259	$ (129,913)	$ 6,351

See accompanying notes to the financial statements.

SENESTECH, INC.
STATEMENTS OF CASH FLOWS
(In thousands)

	Years Ended December 31,	
	2023	**2022**
Cash flows from operating activities:		
Net loss	$ (7,710)	$ (9,695)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation and amortization	135	183
Stock-based compensation	555	711
Loss on sale of equipment	—	28
Bad debt expense	(2)	6
Changes in operating assets and liabilities:		
Accounts receivable	20	(42)
Other assets	(4)	—
Prepaid expenses	(10)	(148)
Inventory	58	148
Accounts payable	(390)	206
Accrued expenses	(192)	(18)
Deferred revenue	(26)	44
Net cash used in operating activities	(7,566)	(8,577)
Cash flows from investing activities:		
Proceeds received on sale of property and equipment	—	4
Purchase of property and equipment	(149)	(174)
Net cash used in investing activities	(149)	(170)
Cash flows from financing activities:		
Proceeds from the issuance of common stock, net	5,407	4,228
Proceeds from the exercise of warrants	2,831	—
Proceeds from the issuance of notes payable	114	—
Repayments of notes payable	(6)	(5)
Repayments of finance lease obligations	—	(27)
Payment of employee withholding taxes related to share based awards	(11)	—
Net cash provided by financing activities	8,335	4,196
Increase (decrease) in cash and cash equivalents	620	(4,551)
Cash and cash equivalents, beginning of year	4,775	9,326
Cash and cash equivalents, end of year	$ 5,395	$ 4,775
Supplemental disclosures of cash flow information:		
Cash paid for:		
Interest paid	$ 4	$ 1
Income taxes paid	—	—
Non-cash investing and financing activities:		
Notes payable incurred for the purchase of certain equipment	81	—

See accompanying notes to the financial statements.

SENESTECH, INC.
NOTES TO THE FINANCIAL STATEMENTS

NOTE 1: BASIS OF PRESENTATION

Nature of Business

SenesTech, Inc. (referred to in this report as "SenesTech," the "Company," "we" or "us") was incorporated in the state of Nevada in July 2004. On November 15, 2015, the Company subsequently reincorporated in the state of Delaware. Our corporate headquarters and manufacturing site are in Phoenix, Arizona. We have developed and are commercializing a global, proprietary technology for managing animal pest populations, initially rat populations, through fertility control with our current products known as ContraPest and Evolve.

ContraPest is a liquid bait containing the active ingredients 4-vinylcyclohexene diepoxide and triptolide. ContraPest limits reproduction of male and female rats beginning with the first breeding cycle following consumption. ContraPest is being marketed for use in controlling Norway and roof rat populations. In addition to the EPA registration of ContraPest in the United States, we must obtain registration from the various state regulatory agencies prior to selling in each state. To date, we have received registration for ContraPest in all 50 states and the District of Columbia, 49 of which have approved the removal of the Restricted Use designation, as well as the District of Columbia and five major U.S. territories.

In November 2023, we launched our latest product, Evolve, a soft bait containing the active ingredient cottonseed oil. Evolve limits reproduction of male and female rats after one to two breeding cycles following consumption. Evolve is being marketed for use in controlling rat populations as a minimum risk pesticide under the U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act, Section 25(b). We must obtain registration from the various state regulatory agencies that do not accept the federal exemption. To date, we are authorized to sell Evolve in 30 states.

Reverse Stock Split

On November 16, 2023, we amended our amended and restated certificate of incorporation to effect a 1-for-12 reverse split of our issued and outstanding shares of common stock. The accompanying financial statements and notes thereto give retrospective effect to the reverse stock split for all periods presented. All issued and outstanding common stock, options and warrants exercisable for common stock, restricted stock units and per share amounts contained in our financial statements have been retrospectively adjusted.

Going Concern

Although our audited financial statements for the years ended December 31, 2023 and December 31, 2022 were prepared under the assumption that we would continue our operations as a going concern, the report of our independent registered public accounting firm that accompanies our financial statements for the years ended December 31, 2023 and December 31, 2022 contains a going concern qualification in which such firm expressed substantial doubt in our ability to continue as a going concern without additional capital from becoming available, based on the financial statements at that time. Specifically, as noted above, we have incurred operating losses since our inception, and we expect to continue to incur significant expenses and operating losses for the foreseeable future. These prior losses and expected future losses have had, and will continue to have, an adverse effect on our financial condition. If we encounter continued issues or delays in the commercialization of ContraPest, our prior losses and expected future losses could have an adverse effect on our financial condition and negatively impact our ability to fund continued operations, obtain additional financing in the future and continue as a going concern. There are no assurances that such financing, if necessary, will be available to us at all or will be available in sufficient amounts or on reasonable terms. Our financial statements do not include any adjustments that may result from the outcome of this uncertainty. If we are unable to generate additional funds in the future through financings, sales of our products, licensing fees, royalty payments or from other sources or transactions, we will exhaust our resources and will be unable to continue operations.

Need for Additional Capital

Since our inception, we have sustained significant operating losses in the course of our research and development and commercialization activities and expect such losses to continue for the near future. We have generated limited revenue to date from product sales, research grants and licensing fees from a former license. We have primarily funded our operations to date through the sale of equity securities, including convertible preferred stock, common stock and warrants to purchase common stock; and debt financing, consisting primarily of convertible notes. As of December 31, 2023, we had an accumulated deficit of $129.9 million and cash and cash equivalents of $5.4 million.

Our ultimate success depends upon the outcome of a combination of factors, including the following: (i) successful commercialization of ContraPest and Evolve and maintaining and obtaining regulatory approval of our products and product candidates; (ii) market acceptance, commercial viability and profitability of ContraPest, Evolve and other products; (iii) the ability to market our products and establish an effective sales force and marketing infrastructure to generate significant revenue; (iv) the success of our research and development; (v) the ability to retain and attract key personnel to develop, operate and grow our business; and (vi) our ability to meet our working capital needs.

Based upon our current operating plan, we expect that cash and cash equivalents at December 31, 2023, in combination with anticipated revenue, will be sufficient to fund our current operations for at least the next nine months. We have evaluated and will continue to evaluate our operating expenses and will concentrate our resources toward the successful commercialization of ContraPest and Evolve in the United States and globally. However, if anticipated revenue targets and margin targets are not achieved or expenses are more than we have budgeted, we may need to raise additional financing before that time. If we need more financing, including within the next nine months, and we are unable to raise necessary capital through the sale of our securities, we may be required to take other measures that could impair our ability to be successful and operate as a going concern. In any event, we may require additional capital in order to fund our operating losses and research and development activities before we become profitable and may opportunistically raise capital. We may never achieve profitability or generate positive cash flows, and unless and until we do, we will continue to need to raise capital through equity or debt financing. If such equity or debt financing is not available at adequate levels or on acceptable terms, we may need to delay, limit or terminate commercialization and development efforts or discontinue operations.

Use of Estimates

The preparation of our financial statements and related disclosures in accordance with U.S. GAAP requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenue, costs and expenses, and the disclosure of contingent assets and liabilities in our financial statements. We base our estimates on historical experience, known trends and events and various other factors that we believe are reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. We evaluate our estimates and assumptions on an ongoing basis. Our actual results may differ from these estimates under different conditions.

NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Cash and Cash Equivalents

Highly liquid investments with maturities of three months or less as the date of acquisition are classified as cash equivalents, of which we had $4.2 million and $4.4 million as of December 31, 2023 and 2022, respectively, included within Cash and cash equivalents in the balance sheets.

Accounts Receivable

Accounts receivable are recorded at invoiced amounts based on standard prices and do not bear interest. We provide an allowance for doubtful receivables equal to the estimated uncollectible amounts. That estimate is based on historical collection experience, current economic and market conditions and a review of the current status of each customer's trade accounts receivable. Provisions for uncollectible accounts receivable are charged to Selling, general and administrative expense, with an offsetting credit to the allowance for uncollectible accounts.

Inventories

Inventories consist of raw materials, work in progress and finished goods and are stated at the lower of cost or market value, using the first-in, first-out convention. Cost includes the acquired cost of raw materials, with work-in-progress and finished goods including the application of labor and overhead costs related to the manufacturing process. Raw materials are stocked to reduce the risk of impact on manufacturing for any potential supply interruptions or long lead times on certain ingredients.

Reserves for obsolete inventory consist of reserves primarily related to obsolete product containers and delivery systems.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Equipment held under finance leases are stated at the present value of minimum lease payments less accumulated amortization.

Depreciation on property and equipment is computed using the straight-line method over the estimated useful lives of the respective assets as follows:

Research and development equipment	5 years
Office and computer equipment	3 years
Autos	5 years
Furniture and fixtures	7 years

The cost of leasehold improvements is amortized over the life of the improvement or the term of the lease, whichever is shorter. Equipment held under finance leases are amortized over the shorter of the lease term or estimated useful life of the asset. The Company incurs maintenance costs on its major equipment. Repair and maintenance costs are expensed as incurred.

Impairment of Long-Lived Assets

Long-lived assets, such as property and equipment, are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. If circumstances require long-lived assets or asset groups to be tested for possible impairment, the Company compares the undiscounted cash flows expected to be generated from the use of the asset or asset group to its carrying amount. If the carrying amount of the long-lived asset or asset group is not recoverable on an undiscounted cash flow basis, an impairment charge is recognized to the extent that the carrying amount exceeds its fair value. Fair value is determined through various valuation techniques, such as discounted cash flow models and the use of third-party independent appraisals. We have not recorded an impairment of long-lived assets since our inception.

Revenue Recognition

In accordance with Accounting Standards Codification ("ASC") 606 — *Revenue from Contracts with Customers* ("ASC 606"), we recognize revenue from the commercial sales of products, licensing agreements and contracts to perform pilot studies by applying the following steps: (1) identify the contract with a customer; (2) identify the performance obligations in the contract; (3) determine the transaction price; (4) allocate the transaction price to each performance obligation in the contract; and (5) recognize revenue when each performance obligation is satisfied.

We derive revenue primarily from commercial sales of products, net of discounts and promotions, as well as consulting and implementation services provided in conjunction with our product deployments. We recognize revenue when product is shipped at a fixed selling price with payment terms of 30 to 120 days from invoicing. We recognize any other revenue earned from pilot studies, consulting and implementation services upon the performance of specific services under the respective service contract.

Research and Development

Research and development costs are expensed as incurred. Research and development expenses primarily consist of salaries and benefits for research and development employees, stock-based compensation, consulting fees, lab supplies, costs incurred related to conducting scientific trials and field studies, regulatory compliance costs, as well as manufacturing costs associated with process improvement and other research. Research and development expenses include an allocation of facilities related costs, including depreciation of equipment.

Stock-based Compensation

Stock-based awards, consisting of stock options and restricted stock units expected to be settled in shares of our common stock, are recorded as equity awards. The grant date fair value of these awards is measured using the Black-Scholes option pricing model for stock options and grant date market value for restricted stock units. We expense the grant date fair value of our stock-based awards on a straight-line basis over their respective vesting periods.

Advertising Costs

Advertising costs are expensed as incurred and was $238,000 and $369,000 for the years ended December 31, 2023 and 2022, respectively.

Income Taxes

We account for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are determined based on the differences between the financial statements and tax bases of assets and liabilities and net operating loss carryforwards using enacted tax rates in effect for the year in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in the period that includes the enactment date.

We record net deferred tax assets to the extent we believe these assets will more likely than not be realized. These deferred tax assets are subject to periodic assessments as to recoverability and if it is determined that it is more likely than not that the benefits will not be realized, valuation allowances are recorded which would increase the provision for income taxes. In making such determination, we consider all available positive and negative evidence, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and recent financial operations. We currently maintain a full valuation allowance against its deferred tax assets.

We apply a more-likely-than-not recognition threshold for all tax uncertainties. Only those benefits that have a greater than fifty percent likelihood of being sustained upon examination by the taxing authorities are recognized. Based on our evaluation, we have concluded there are no significant uncertain tax positions requiring recognition in our financial statements.

We recognize interest and/or penalties related to uncertain tax positions in income tax expense. There are no uncertain tax positions as of December 31, 2023 or December 31, 2022 and as such, no interest or penalties were recorded in income tax expense.

Comprehensive Loss

We have no other comprehensive income items for the periods presented. As a result, our net loss and comprehensive loss were the same for all periods presented and a separate statement of comprehensive loss is not included in the accompanying financial statements.

NOTE 3: BALANCE SHEET COMPONENTS

Accounts Receivable, Net

Accounts receivable, net consist of the following (in thousands):

	As of December 31,	
	2023	2022
Accounts receivable	$ 99	$ 119
Allowance for uncollectible accounts	(4)	(6)
Accounts receivable, net	$ 95	$ 113

The following is the activity in the allowance for uncollectible accounts (in thousands):

	Years Ended December 31,	
	2023	2022
Balance as of beginning of year	$ 6	$ —
Increase in provision	2	8
Amounts written off, less recoveries	(4)	(2)
Balance as of end of year	$ 4	$ 6

Inventory, Net

Inventory, net consist of the following (in thousands):

	As of December 31,	
	2023	2022
Raw materials	$ 747	$ 772
Finished goods	53	99
Total inventory	800	871
Reserve for obsolescence	(5)	(18)
Inventory, net	$ 795	$ 853

The following is the activity in the reserve for obsolescence (in thousands):

	Years Ended December 31,	
	2023	2022
Balance as of beginning of year	$ 18	$ 29
Increase in reserve	—	—
Amounts relieved	(13)	(11)
Balance as of end of year	$ 5	$ 18

Prepaid Expenses

Prepaid expenses consist of the following (in thousands):

	As of December 31,	
	2023	2022
Software licenses	$ 152	$ 157
Prepaid inventory	111	—
Insurance	64	61
Professional services	30	41
Patents	14	39
Marketing programs and conferences	1	74
Other	16	6
Total prepaid expenses	$ 388	$ 378

Property and Equipment, Net

Property and equipment, net consist of the following (in thousands):

	As of December 31,	
	2023	2022
Research and development equipment	$ 1,763	$ 1,558
Office and computer equipment	808	800
Autos	54	54
Furniture and fixtures	41	41
Leasehold improvements	141	119
Total in service	2,807	2,572
Accumulated depreciation and amortization	(2,419)	(2,283)
Total in service, net	388	289
Construction in progress	—	5
Property and equipment, net	$ 388	$ 294

During the years ended December 31, 2023 and 2022, depreciation and amortization expense was $135,000 and $183,000, respectively.

Accrued Expenses

Accrued expenses consist of the following (in thousands):

	As of December 31,	
	2023	2022
Compensation, severance and related benefits	$ 232	$ 497
Legal services	121	36
Product warranty	15	18
Personal property and franchise tax	—	6
Other	—	3
Total accrued expenses	$ 368	$ 560

Notes Payable

In the second half of 2023, we arranged financing for the purchase of certain equipment. The notes payable have an annual interest rate of 9.1% with a term of five years and is secured by the underlying equipment.

As of December 31, 2023, future principal payments were as follows (in thousands):

2024	$ 33
2025	36
2026	39
2027	43
2028	38
Total principal payments	189
Less: current portion of notes payable	(33)
Notes payable, less current portion	$ 156

NOTE 4: FAIR VALUE MEASUREMENTS

The accounting guidance for fair value, among other things, establishes a consistent framework for measuring fair value and expands disclosure for each major asset and liability category measured at fair value on either a recurring or nonrecurring basis. Fair value is defined as the price that would be received to sell an asset or paid to transfer a liability (an exit price) in an orderly transaction between market participants at the reporting date. The framework for measuring fair value consists of a three-level valuation hierarchy that prioritizes the inputs to valuation techniques used to measure fair value based upon whether such inputs are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect market assumptions made by the reporting entity. The three-level hierarchy for the inputs to valuation techniques is briefly summarized as follows:

Level 1 — Inputs are unadjusted, quoted prices in active markets for identical assets or liabilities at the measurement date;

Level 2 — Inputs are observable, unadjusted quoted prices in active markets for similar assets or liabilities, unadjusted quoted prices for identical or similar assets or liabilities in markets that are not active, or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the related assets or liabilities; and

Level 3 — Unobservable inputs that are significant to the measurement of the fair value of the assets or liabilities that are supported by little or no market data.

An asset's or liability's fair value measurement level within the fair value hierarchy is based on the lowest level of any input that is significant to the fair value measurement. Valuation techniques used need to maximize the use of observable inputs and minimize the use of unobservable inputs.

Assets and liabilities measured at fair value are based on one or more of the following three valuation techniques:

A. Market approach: Prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities.

B. Cost approach: Amount that would be required to replace the service capacity of an asset (replacement cost).

C. Income approach: Techniques to convert future amounts to a single present amount based upon market expectations, including present value techniques, option-pricing and excess earnings models.

Financial Instruments Not Carried at Fair Value

The carrying amounts of our financial instruments, including accounts payable and accrued liabilities, approximate fair value due to their short maturities. The estimated fair value of the long-term debt, not recorded at fair value, are recorded at cost or amortized cost, which was deemed to estimate fair value.

NOTE 5: LEASES

We determine if an arrangement is a lease at inception and whether the arrangement is classified as an operating or finance lease. At commencement of the lease, we record a right-of-use ("ROU") asset and lease liability in the balance sheet based on the present value of lease payments over the term of the arrangement. ROU assets represent the right to use an underlying asset for the lease term and lease liabilities represent our obligation to make lease payments arising from the lease. If the implicit rate is not readily determinable in the contract, we use our incremental borrowing rate based on the information available at commencement date in determining the present value of lease payments. Contract terms may include options to extend or terminate the lease, and, when we deem it is reasonably certain that we will exercise that option, it is included in the ROU asset and liability.

Operating leases reflect lease expense on a straight-line basis, while any finance leases result in the separate presentation of interest expense on the lease liability and amortization expense of the ROU asset.

We have operating leases for our corporate headquarters and our manufacturing and research facility, which expire in 2024. We were obligated under finance leases for certain research and computer equipment, of which the last arrangement expired in July 2022.

The components of lease cost are as follows (in thousands):

	Years Ended December 31,	
	2023	**2022**
Operating lease cost	$ 231	$ 222
Finance lease cost:		
Amortization of ROU asset	—	35
Interest on lease liability	—	1
Total finance lease cost	$ —	$ 36

As of December 31, 2023, maturities of operating lease liabilities are follows (in thousands):

Years Ending December 31:		
2024	$	225
Total operating lease payments		225
Less imputed interest		(8)
Total operating lease liabilities	$	217

NOTE 6: STOCK-BASED COMPENSATION

In 2018, our stockholders approved the adoption of the SenesTech, Inc. 2018 Equity Incentive Plan (the “2018 Plan”). The 2018 Plan has since been amended and restated on certain occasions, most recently on June 23, 2023, when our stockholders approved an increase to the total number of authorized shares to 70,717 shares.

Stock options are generally issued with a per share exercise price equal to the fair market value of our common stock at the date of grant. Options granted generally vest immediately, or ratably over a two- to 36-month period coinciding with their respective service periods, with terms of generally five years. Certain stock option awards provide for accelerated vesting upon a change in control.

As of December 31, 2023, we had 42,008 shares of common stock available for issuance under the 2018 Plan.

Stock Options

We measure the fair value of stock options with service-based vesting criteria to employees, directors and consultants on the date of grant using the Black-Scholes option pricing model. The Black-Scholes valuation model requires us to make certain estimates and assumptions, including assumptions related to the expected price volatility of our stock, the period during which the options will be outstanding, the rate of return on risk-free investments, and the expected dividend yield for our stock.

Fair value of options granted is determined using the Black-Scholes option-pricing model with the following weighted average assumptions:

	2023	2022
Risk-free interest rate	5.3 %	3.7 %
Expected dividend yield	— %	— %
Expected volatility	128 %	90.5 %
Expected term (in years)	5.0	3.3

The weighted average fair value of options granted during the years ended December 31, 2023 and 2022 was $14.88 and $41.04 per share, respectively. The risk-free interest rate is estimated using treasury bill interest rates. The expected dividend yield is no as we have not paid any dividends to date and do not expect to pay dividends in the future. Expected volatility is estimated based on the historical volatility of our common stock over the expected term as this represents our best estimate of future volatility. The contractual life of stock options granted is five years, and we have elected to use the “simplified method” to estimate expected term. Under the simplified method, an option’s expected term is calculated as the average of its vesting period and original contractual life. For non-employee options, the expected term of options granted is the contractual term of the options.

The stock option activity consists of the following:

	Number of Options	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value [1]
Outstanding as of December 31, 2021	4,533	$ 2,071.20	3.9	$ —
Granted	20,163	69.48	5.0	—
Exercised	—	—	—	—
Forfeited	(1,278)	—	—	—
Expired	(16)	—	—	—
Outstanding as of December 31, 2022	23,402	204.00	3.9	—
Granted	16,616	15.00	5.0	—
Exercised	—	—	—	—
Forfeited	(3,282)	—	—	—
Expired	(28)	—	—	—
Outstanding as of December 31, 2023	36,708	119.70	4.0	—
Exercisable as of December 31, 2023	20,634 [2]	154.31	3.8	—

(1) Calculated based on the difference between the estimated fair value of our stock and the exercise price of the underlying option. The estimated stock values used in the calculation was $15.00 and $71.52 per share for the years ended December 31, 2023 and 2022, respectively.

(2) Includes options related to 8,249 shares that are inducement awards and not granted under the 2018 Plan.

As of December 31, 2023, the unrecognized stock-based compensation cost was $293,000, which is expected to be recognized over a weighted average period of 13 months.

Restricted Stock Units

The restricted stock unit activity consists of the following:

	Number of Units	Weighted Average Grant Date Fair Value Per Unit
Outstanding as of December 31, 2021	2	$ 432.00
Granted	1,587	34.44
Vested	(23)	212.04
Forfeited	—	—
Outstanding as of December 31, 2022	1,566	32.52
Granted	—	—
Vested	(1,566)	32.52
Forfeited	—	—
Outstanding as of December 31, 2023	—	—

The stock-based compensation expense was recorded as following (in thousands):

	Years Ended December 31,	
	2023	2022
Research and development	$ 17	$ 3
General and administrative	538 [(1)]	708
Total stock-based compensation expense	$ 555	$ 711

(1) Includes $100,000 related to stock issued in exchange for marketing services.

NOTE 7: INCOME TAXES

Our losses before income taxes for the years ended December 31, 2023 and December 31, 2022 were generated entirely from U.S. operations.

We have no current or deferred provision for income taxes from continuing operations for the years ended December 31, 2023 and 2022.

The significant differences between the U.S. Federal statutory rate and our effective rate for financial reporting purposes are as follows:

	Years Ended December 31,	
	2023	2022
Federal statutory tax rate	(21.0)%	(21.0)%
State taxed, net of federal tax benefit	(3.8)	(3.7)
Change in valuation allowance	23.5	14.3
Return-to-provision and other	0.1	7.9
Stock-based compensation	1.2	2.5
Effective tax rate	— %	— %

Deferred income tax assets and liabilities consist of the following (in thousands):

	As of December 31,	
	2023	2022
Deferred income tax assets:		
Federal and state net operating loss carryovers	$ 22,167	$ 20,498
Capitalized research costs	608	432
Stock-based compensation	260	253
Compensation accruals and other	59	92
Operating leases related to ROU assets	54	89
Deferred revenue	4	11
Depreciation	11	8
Other	2	1
Total deferred income tax assets	23,165	21,384
Valuation allowance for deferred income tax assets	(23,113)	(21,298)
Deferred income tax assets, net of valuation allowance	52	86
Deferred income tax liabilities:		
ROU assets	(52)	(86)
Total deferred income tax liabilities	(52)	(86)
Deferred income tax assets, net	$ —	$ —

A valuation allowance has been recognized to offset the net deferred tax assets as realization of such deferred tax assets have not met the more likely than not threshold.

As of December 31, 2023, we had federal and state net operating loss carryforwards of approximately $91.2 million and $78.0 million, respectively, not considering the IRC Section 382 annual limitation discussed below. The federal loss carryforwards begin to expire in 2029, unless previously utilized. In addition, we have approximately $46.8 million of the total $91.2 million of net operating losses that do not expire, as these losses were generated after the law change introduced as part of the Tax Cuts and Jobs Act. The state net operating losses expire if not utilized by 2043.

Additionally, the utilization of the net operating loss carryforwards could be subject to an annual limitation under Section 382 and 383 of the Internal Revenue Code of 1986, and similar state tax provisions due to ownership change limitations that have occurred previously or that could occur in the future. These ownership changes limit the amount of net operating loss carryforwards and other deferred tax assets that can be utilized to offset future taxable income and tax, respectively. In general, an ownership change, as defined by Section 382 and 383, results from transactions increasing ownership of certain stockholders or public groups in the stock of the corporation by more than 50 percentage points over a three-year period. We have not conducted an analysis of an ownership change under Section 382. To the extent that a study is completed and an ownership change is deemed to occur, our net operating losses could be limited.

We do not have any unrecognized tax benefits at the beginning and end of the years ended December 31, 2023 and 2022, and do not expect a significant change in unrecognized tax benefits over the next 12 months.

We file income tax returns in the United States and Arizona with general statutes of limitations of three and four years, respectively. Due to net operating losses incurred, our tax returns from inception to date are subject to examination by taxing authorities. Our policy is to recognize interest expense and penalties related to income tax matters as a component of income tax expense. As of December 31, 2023, we had no interest or penalties accrued related to uncertain tax positions.

NOTE 8: STOCKHOLDERS' EQUITY

Preferred Stock

We are authorized to issue 10 million shares of preferred stock with a par value of $0.001. Rights and any series designation would be established at time of issuance of preferred stock. As of December 31, 2023 and 2022 there was no preferred stock outstanding.

Common Stock

We are authorized to issue 100 million shares of common stock with a par value of $0.001 per share. Stockholders of common stock have unlimited voting rights and are entitled to receive the net assets of the Company upon dissolution, subject to the rights of the preferred stockholders, if any.

We had the following common stock offerings in 2023 and 2022:

November 2022. We consummated a private placement with certain institutional and accredited investors and issued an aggregate of 5,631 shares of our common stock at a purchase price of $42.00 per share, pre-funded warrants to purchase up to an aggregate of 113,416 shares of common stock at a purchase price of $42.00 per pre-funded warrant ("November 2022 Pre-Funded Warrants") and associated warrants to purchase up to an aggregate of 238,094 share of common stock at $37.98 per share ("Series A" and "Series B" warrants), for gross proceeds of approximately $5.0 million, prior to deducting placement agent fees and offering expenses of $770,000. In connection with this offering, we issued the placement agent warrants to purchase up to 8,931 shares of common stock with an exercise price of $52.50 per share.

Of the November 2022 Pre-Funded Warrants,10,916 were exercised in December 2022, with the remaining 102,500 exercised in early 2023.

The common stock, November 2022 Pre-Funded Warrants and Series A and Series B warrants issued in this November 2022 offering were offered and sold pursuant to a registration statement on Form S-1 (File No. 333-267991) initially filed with the SEC on October 24, 2022, as amended, which was declared effective by the SEC on November 16, 2022.

April 2023. We consummated a registered direct offering with certain institutional investors and issued an aggregate of 71,429 shares of our common stock at a purchase price of $21.00 per share and warrants to purchase up to an aggregate of 71,430 shares of common stock at a purchase price of $19.44 per share ("Series C" warrants), for gross proceeds of approximately $1.5 million, prior to deducting placement agent fees and offering expenses of $290,000. In connection with this offering, we issued the placement agent warrants to purchase up to 5,359 share of common stock with an exercise price of $26.25 per share.

The common stock and Series C warrants issued in this April 2023 offering were offered and sold pursuant to a shelf registration statement on Form S-3 (File No. 333-261227) initially filed with the SEC on November 19, 2021, as amended, which was declared effective by the SEC on May 6, 2022, and a prospectus supplement dated April 10, 2023.

November 2023. We consummated a private placement with certain institutional and accredited investors and issued an aggregate of 450,306 shares of our common stock at a purchase price of $1.30 per share, pre-funded warrants to purchase up to an aggregate of 3,395,848 shares of common stock at a purchase price of $1.30 per pre-funded warrant ("November 2023 Pre-Funded Warrants") and associated warrants to purchase up to an aggregate of 7,692,308 shares of common stock at $1.30 per share ("Series D" and "Series E" warrants), for gross proceeds of approximately $5.0 million, prior to deducting placement agent fees and offering expenses of $800,000. In connection with this offering, we issued the placement agent warrants to purchase up to 288,462 shares of common stock with an exercise price of $1.630 per share.

All of the November 2023 Pre-Funded Warrants were exercised by December 31, 2023.

The common stock, November 2023 Pre-Funded Warrants and Series D and Series E warrants issued in this November 2023 offering were offered and sold pursuant to a registration statement on Form S-1 (File No. 333-273370) initially filed with the SEC on July 21, 2023, as amended, which was declared effective by the SEC on November 27, 2023.

NOTE 9: COMMON STOCK WARRANTS

The following is the activity for common stock warrants:

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NOTES TO THE FINANCIAL STATEMENTS, continued

Issue Date	Warrant Type	Term Date	Exercise Price	Balance December 31, 2021	Issued	Exercised	Expired	Balance December 31, 2022	Issued	Exercised	Expired	Balance December 31, 2023
November 2017	Common Stock Offering	November 2022	$ 327.84	507	—	—	(507)	—	—	—	—	—
June 2018	Reissue	December 2023	8,736.00	236	—	—	—	236	—	—	(236)	—
August 2018	Rights Offering	July 2023	5,520.00	843	—	—	—	843	—	—	(843)	—
August 2018	Dealer Manager	August 2023	8,280.00	55	—	—	—	55	—	—	(55)	—
July 2019	Dealer Manager	July 2024	8,100.00	37	—	—	—	37	—	—	—	37
January 2020	Registered Direct Offering	July 2025	2,160.00	765	—	—	—	765	—	—	—	765
January 2020	Dealer Manager	July 2025	2,400.00	57	—	—	—	57	—	—	—	57
March 2020	Dealer Manager	March 2025	901.51	57	—	—	—	57	—	—	—	57
April 2020	Dealer Manager	April 2025	952.80	493	—	—	—	493	—	—	—	493
April 2020	Registered Direct Offering	April 2025	732.00	209	—	—	—	209	—	—	—	209
October 2020	Private Inducement	November 2027	37.98	4,166	—	—	—	4,166	—	(4,166)	—	—
October 2020	Dealer Manager	April 2026	517.44	356	—	—	—	356	—	—	—	356
February 2021	Private Placement Agreement	August 2026	531.84	6,867	—	—	—	6,867	—	—	(1,372)	5,495
February 2021	Private Placement Agreement	November 2027	37.98	2,285	—	—	—	2,285	—	(2,285)	—	—
February 2021	Dealer Manager	August 2026	683.54	1,374	—	—	—	1,374	—	—	—	1,374
March 2021	Dealer Manager	March 2026	600.00	619	—	—	—	619	—	—	—	619
November 2022	Pre-Funded Warrants	February 2023	42.00	—	113,416	(10,916)	—	102,500	—	(102,500)	—	—
November 2022	Series A	November 2027	37.98	—	119,047	—	—	119,047	—	(119,047)	—	—
November 2022	Series B	December 2023	37.98	—	119,047	—	—	119,047	—	(119,047)	—	—
November 2022	Dealer Manager	November 2027	52.50	—	8,931	—	—	8,931	—	—	—	8,931
April 2023	Series C	October 2028	19.44	—	—	—	—	—	71,430	—	—	71,430
April 2023	Dealer Manager	April 2028	26.25	—	—	—	—	—	5,359	—	—	5,359
August 2023	Private Inducement	September 2024	8.64	—	—	—	—	—	238,096	—	—	238,096
August 2023	Private Inducement	August 2028	8.64	—	—	—	—	—	251,001	—	—	251,001
August 2023	Dealer Manager	August 2028	10.80	—	—	—	—	—	12,229	—	—	12,229
November 2023	Pre-Funded Warrants	December 2023	1.30	—	—	—	—	—	3,395,848	(3,395,848)	—	—
November 2023	Series D	November 2028	1.30	—	—	—	—	—	3,846,154	(30,000)	—	3,816,154
November 2023	Series E	May 2025	1.30	—	—	—	—	—	3,846,154	(771,544)	—	3,074,610
November 2023	Dealer Manager	November 2028	1.63	—	—	—	—	—	288,462	—	—	288,462
				18,926	360,441	(10,916)	(507)	367,944	11,954,733	(4,544,437)	(2,506)	7,775,734

As of December 31, 2023, we had 7,775,734 shares of common stock issuable upon exercise of outstanding common stock warrants, at a weighted-average exercise price of $2.95 per share and expiring as follows:

Years Ending December 31:	Weighted Average Exercise Price	Shares
2024	$ 9.90	238,133
2025	2.10	3,076,191
2026	563.14	7,844
2027	52.50	8,931
2028	2.08	4,444,635
	2.95	7,775,734

Common Stock Warrants Issued in November 2022 Common Stock Offering

In November 2022, in connection with a registered direct offering with certain institutional and accredited investors, we issued common stock warrants as follows:

- Pre-Funded Warrants to purchase up to an aggregate of 113,416 shares of common stock at an exercise price of $42.00 per share, which are exercisable immediately and terminate until exercised in full. A portion of the Pre-Funded Warrants were exercised in December 2022, with the last traunch of these warrants being exercised in February 2023. We estimated the fair value of the Pre-Funded Warrants to be $153,000 using a Black Scholes model based on the following significant inputs: common stock price of $36.36 per share; comparable company volatility of 93.9%; remaining term of three months; dividend yield of 0% and risk-free interest rate of 3.8%.

- Series A warrants to purchase up to an aggregate of 119,047 shares at an exercise price of $37.980 per share, which are exercisable immediately and expire five years from date of issuance. We estimated the fair value of the Series A warrants to be $3.1 million using a Black Scholes model based on the following significant inputs: common stock price of $36.36 per share; comparable company volatility of 93.9%; remaining term of five years; dividend yield of 0% and risk-free interest rate of 3.8%.

- Series B warrants to purchase up to an aggregate of 119,047 shares at an exercise price of $37.98 per share, which are exercisable immediately and expire 13 months from date of issuance. We estimated the fair value of the Series B warrants to be $1.6 million using a Black Scholes model based on the following significant inputs: common stock price of $36.36 per share; comparable company volatility of 93.9%; remaining term of five years; dividend yield of 0% and risk-free interest rate of 3.8%.

In August 2023, certain terms of the Series A and Series B warrants were modified to induce exercise. The exercise price was reduced to $8.64 per share, and the warrants were exercised in full ("Warrant Inducement Transaction"). The offsetting impact related to the warrant inducement transaction was $657,000 , which was calculated as the difference between the fair value of the warrants immediately prior to modification and immediately after modification using the Black-Scholes model based on the following significant inputs: common stock price of $8.18 per share; volatility of 96%; term of 2.3 years; dividend yield of 0%; and risk-free rate of 5.0%.

Common Stock Warrants Issued to Placement Agent in November 2022 Common Stock Offering

In connection with the registered direct offering in November 2022, we issued to the placement agent, warrants to purchase up to 8,931 shares of common stock. The placement agent warrants will be exercisable commencing six months following the date of issuance, expire five years following the date of sale and have an exercise price per share of $52.50 per share. The placement agent warrants, and the shares of common stock issuable upon exercise thereof, will be issued in reliance on the exemption from registration provided in Section 4(a)(2) under the Securities Act of 1933, as amended, and Regulation D promulgated thereunder.

We estimated the fair value of these warrants to be $240,000 using a Black Scholes model based on the following significant inputs: common stock price of $39.00; comparable company volatility of 93.9%; remaining term five years; dividend yield of 0%; and risk-free interest rate of 3.8%.

Common Stock Warrants Issued in April 2023 Registered Direct Offering

In April 2023, Series C warrants were issued to the investors to purchase up to 71,430 shares of our common stock. The Series C warrants are exercisable immediately with an exercise price of $19.44 per share and expire October 12, 2028. We estimated the fair value of these warrants to be $1.1 million using a Black-Scholes model based on the following significant inputs: common stock price of $16.56 per share; volatility of 164%; term of 5.5 years; dividend yield of 0%; and risk-free interest rate of 3.4%.

In April 2023, placement agent warrants were issued to purchase up to 5,359 shares of our common stock. The placement agent warrants are exercisable immediately upon issuance, with an exercise price per share of $26.25 per share, and expire April 10, 2028. We estimated the fair value of these warrants to be $82,000 using a Black-Scholes model based on the following significant inputs: common stock price of $16.56 per share; volatility of 165%; term of 5 years; dividend yield of 0%; and risk-free interest rate of 3.5%.

Common Stock Warrants Issued in August 2023 Private Inducement

In August 2023, in connection with the Warrant Inducement Transaction, warrants were issued to the investor in the Warrant Inducement Transaction to purchase up to 489,097 shares of our common stock. These warrants are exercisable immediately with an exercise price of $8.64 per share, with 251,001 expiring August 2028 ("5-Year Warrants") and 238,096 expiring September 2024 ("13-Month Warrants"). We estimated the fair value of the 5-Year Warrants to be $1.5 million using a Black-Scholes model based on the following significant inputs: common stock price of $8.18 per share; volatility of 98%; term of 5 years; dividend yield of 0%; and risk-free rate of 4.4%. The fair value of the 13-Month Warrants was estimated to be $930,000 using the Black-Scholes model based on the following significant inputs: common stock price of $8.18 per share; volatility of 122%; term of 1.1 years; dividend yield of 0%; and risk-free rate of 4.4%.

In August 2023, placement agent warrants were issued to purchase up to 12,229 shares of our common stock. The placement agent warrants are exercisable immediately upon issuance, with an exercise price per share of $10.80 per share, and expire August 2028. We estimated the fair value of these warrants to be $72,000 using a Black-Scholes model based on the following significant inputs: common stock price of $8.18 per share; volatility of 98%; term of 5 years; dividend yield of 0%; and risk-free interest rate of 5.4%.

Common Stock Warrants Issued in November 2023 Common Stock Offering

In November 2023, in connection with a registered direct offering with certain institutional and accredited investors, we issued common stock warrants as follows:

- Pre-Funded Warrants to purchase up to an aggregate of 3,395,848 shares of common stock at an exercise price of $1.30 per share, which are exercisable immediately and terminate only when exercised in full. These warrants were exercised in full by December 31, 2023. We estimated the fair value of the Pre-Funded Warrants to be $685,000 using a Black Scholes model based on the following significant inputs: common stock price of $0.93 per share; volatility of 262%; remaining term of one month; dividend yield of 0% and risk-free interest rate of 5.5%.
- Series D warrants to purchase up to an aggregate of 3,846,154 shares at an exercise price of $1.30 per share, which are exercisable immediately and expire November 2028.We estimated the fair value of the Series D warrants to be $2.6 million using a Black Scholes model based on the following significant inputs: common stock price of $0.93 per share; volatility of 103%; remaining term of 5 years; dividend yield of 0% and risk-free interest rate of 4.2%.
- Series E warrants to purchase up to an aggregate of 3,846,154 shares at an exercise price of $1.30 per share, which are exercisable immediately and expire May 2025. We estimated the fair value of the Series E warrants to be $1.8 million using a Black Scholes model based on the following significant inputs: common stock price of $0.93 per share; volatility of 128%; remaining term of 1.5 years; dividend yield of 0% and risk-free interest rate of 4.6%.

Common Stock Warrants Issued to Placement Agent in November 2023 Common Stock Offering

In connection with the registered direct offering in November 2023, we issued to the placement agent, warrants to purchase up to 288,462 shares of common stock. The placement agent warrants will be exercisable commencing six months following the date of issuance, expire five years following the date of sale and have an exercise price per share of $1.63 per share. The placement agent warrants, and the shares of common stock issuable upon exercise thereof, will be issued in reliance on the exemption from registration provided in Section 4(a)(2) under the Securities Act of 1933, as amended, and Regulation D promulgated thereunder.

We estimated the fair value of these warrants to be $189,000 using a Black Scholes model based on the following significant inputs: common stock price of $0.93 per share; volatility of 103%; remaining term of five years; dividend yield of 0%; and risk-free interest rate of 4.2%.

NOTE 10: LOSS PER SHARE

Basic loss per share is calculated by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding during the period, which includes prefunded warrants and any shares held in abeyance from date of issuance. Diluted loss per share is computed by dividing the loss attributable to common stockholders by the weighted average number of common shares used in the basic loss per share calculation plus potentially dilutive securities outstanding during the period determined using the treasury stock method. Stock options, warrants and restricted stock units are considered to be potentially dilutive securities but have been excluded from the calculation of diluted loss per share attributable to common stockholders because their effect would be anti-dilutive given the net loss reported for the years ended December 31, 2023 and 2022. Therefore, basic and diluted loss per share was the same for all periods presented.

The following shares were excluded from the calculation of diluted loss per share:

	December 31,	
	2023	**2022**
Common stock warrants	6,755,010	172,473
Restricted stock units	—	1,567
Common stock options	—	10,052
Total	6,755,010	184,092

NOTE 11: CONTINGENCIES

In July 2020, our former corporate general counsel (the “Plaintiff”), commenced an action against us in the Superior Court of the State of California, for the County of San Diego. The complaint alleged, among other things, that we breached the Plaintiff’s employment contract with us, as well as the implied covenant of good faith and fair dealing, by refusing to issue him the balance of stock options he claimed that we owed him. In September 2021, the Plaintiff served us and also named 10 individuals as defendants, consisting of current and former directors and employees. The Plaintiff alleged that such individuals agreed to knowingly and wrongfully withhold the stock options owed to him and were knowingly in receipt of stolen property. In November 2023, this legal matter was settled for $185,000.

In addition to the matter described above, we may be subject to other legal proceedings and claims arising from contracts or other matters from time to time in the ordinary course of business. Management is not aware of any other pending or threatened litigation where the ultimate disposition or resolution could have a material adverse effect on our financial position, results of operations or liquidity.

NOTE 12: RELATED PARTY TRANSACTIONS

Related party transactions are conducted in the normal course of business and, unless otherwise noted, are measured at the exchange amount, which is the amount of consideration established and agreed to by the related parties. In connection with consulting agreements in place, during each of the years ended December 31, 2023 and 2022, $4,200 and $50,400, respectively, of cash payments were made to the Kito Impact Foundation of which the Chair of our board, serves as chief executive officer.

NOTE 13: SUBSEQUENT EVENTS

Subsequent to December 31, 2023, 4,608 shares of common stock were issued pursuant to the exercise of certain warrants for gross proceeds of $6,000.

We have evaluated subsequent events from the balance sheet date through February 21, 2024, the date at which the financial statements were issued, and determined that there were no other items that require adjustment to or disclosure in the financial statements.

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

None.

ITEM 9A. CONTROLS AND PROCEDURES.

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that the information required to be disclosed in the reports that we file or submit under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

In connection with the preparation of this Annual Report on Form 10-K, our management carried out an evaluation, under the supervision and with the participation of our Chief Executive Officer and Chief Financial Officer, as of December 31, 2023, of the effectiveness of the design and operation of our disclosure controls and procedures, as such term is defined under Rule 13a-15(e) and 15d-15(e) under the Exchange Act. Based upon this evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective as of December 31, 2023.

Management's Report on Internal Control Over Financial Reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) or 15d-15(f) under the Exchange Act. Our internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. GAAP. All internal control systems, no matter how well designed, have inherent limitations. Even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation. Management is committed to continue monitoring our internal controls over financial reporting and will modify or implement additional controls and procedures that may be required to ensure the ongoing integrity of our consolidated financial statements.

With the participation of our Chief Executive Officer and Chief Financial Officer, management conducted an evaluation of the effectiveness of internal control over financial reporting as of December 31, 2023. In making this assessment, the Company used the framework established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, management has concluded that internal control over financial reporting was effective as of December 31, 2023 based on those criteria.

This annual report does not include an attestation report of the company's registered public accounting firm due to a transition period established by rules of the SEC for smaller reporting companies.

Changes in Internal Control over Financial Reporting

There was no change in our internal control over financial reporting that occurred during the quarter ended December 31, 2023, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

ITEM 9B. OTHER INFORMATION.

During the quarter ended December 31, 2023, no director or officer of the Company adopted or terminated a "Rule 10b5-1 trading arrangement" or a "non-Rule 10b5-1 trading arrangement" (in each case, as defined in Item 408 of Regulation S-K).

ITEM 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS.

Not applicable.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE.

The information required by this Item relating to our directors and corporate governance is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2024 Annual Meeting of Stockholders.

ITEM 11. EXECUTIVE COMPENSATION.

The information required by this Item relating to our directors and corporate governance is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2024 Annual Meeting of Stockholders.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS.

The information required by this Item relating to our directors and corporate governance is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2024 Annual Meeting of Stockholders.

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

The information required by this Item relating to our directors and corporate governance is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2024 Annual Meeting of Stockholders.

ITEM 14. PRINCIPAL ACCOUNTING FEES AND SERVICES.

The information required by this Item relating to our directors and corporate governance is incorporated herein by reference to the definitive Proxy Statement to be filed pursuant to Regulation 14A of the Exchange Act for our 2024 Annual Meeting of Stockholders.

PART IV

ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES.

(a) Financial Statements and Schedules

1. Financial Statements are listed in the Index to Financial Statements on page F-1 of this report.

2. All schedules for which provision is made in the applicable accounting regulations of the SEC have been omitted because of the absence of the conditions under which they are required or because the information required is shown in the financial statements or notes above.

(b) Exhibit Listing

Exhibit Number	Description
(3)	**Articles of Incorporation and Bylaws**
3.1*	Amended and Restated Certificate of Incorporation, as amended by the Certificate of Amendment to the Amended and Restated Certificate of Incorporation (Form 10-K filed March 17, 2020, Exhibit 3.1 (File no. 001-37941)).
3.1(a)*	Certificate of Designation of the Series C Preferred Stock of the Registrant (Form 8-K filed August 26, 2022, Exhibit 3.1(a) (File no. 001-37941)).
3.1(b)*	Certificate of Amendment to Amended and Restated Certificate of Incorporation of SenesTech, Inc. (Form 8-K filed November 15, 2022, Exhibit 3.1(a) (File no. 001-37941)).
3.1(c)*	Certificate of Amendment to Amended and Restated Certificate of Incorporation of SenesTech, Inc. (Form 8-K filed November 15, 2023, Exhibit 3.1(a) (File no. 001-37941)).
3.2*	Amended and Restated Bylaws (Form S- 1 filed September 21, 2016, Exhibit 3.5 (File no. 333-213736)).
3.2(a)*	Amendment No. 1 to the Amended and Restated Bylaws of SenesTech, Inc., dated June 16, 2021 (Form 8-K filed June 17, 2021, Exhibit 3.2 (File no. 001-37941)).
(4)	**Instruments defining the rights of security holders, including indentures**
4.1*	Description of Securities (Form 10-K/A filed April 21, 2020, Exhibit 4.1 (File no. 001-37941)).
4.2*	Form of the Registrant's Common Stock certificate (Form S-1 filed October 7, 2016, Exhibit 4.1 (File no. 333-213736)).
4.3*	Form of Restricted Stock Unit Agreement (Form 8-K filed December 21, 2016, Exhibit 4.1 (File no. 001-37941)).
4.4*	Form of Warrant (Form S-1 filed November 16, 2017, Exhibit 4.2 (File no. 333-221433)).
4.5*	Form of Underwriter's Warrant, as amended (Form 8-K filed November 21, 2017, Exhibit 4.1 (File no. 001-37941)).
4.6*	Form of New Warrant (Form 8-K filed June 20, 2018, Exhibit 4.1 (File no. 001-37941)).
4.7*	Form of Warrant issued to investors in Rights Offering (Form 10-Q filed August 14, 2018, Exhibit 4.1 (File no. 001-37941)).
4.8*	Form of Warrant issued to dealer-manager in Rights Offering (Form 10-Q filed August 14, 2018, Exhibit 4.2 (File no. 001-37941)).
4.9*	Warrant Agency Agreement, dated August 13, 2018, between the Registrant and Transfer Online, Inc. (Form 10-Q filed August 14, 2018, Exhibit 4.3 (File no. 001-37941)).
4.10*	Form of Placement Agent Warrant (Form 8-K filed July 17, 2019, Exhibit 4.1 (File no. 001-37941)).
4.11*	Form of Warrant (Form 8-K filed January 28, 2020, Exhibit 4.1 (File no. 001-37941)).
4.12*	Form of Placement Agent Warrant (Form 8-K filed January 28, 2020, Exhibit 4.2 (File no. 001-37941)).
4.13*	Form of Warrant (Form 8-K filed March 6, 2020, Exhibit 4.1 (File no. 001-37941)).
4.14*	Form of Placement Agent Warrant (Form 8-K filed March 6, 2020, Exhibit 4.2 (File no. 001-37941)).
4.15*	Form of Restricted Stock Unit Notice and Agreement (Form 10-K filed March 17, 2020, Exhibit 4.6 (File no. 001-37941)).
4.16*	Form of New Warrant (Form 8-K filed October 27, 2020, Exhibit 4.1 (File no. 001-37941)).

4.17*	Form of Placement Agent Warrant (Form 8-K filed October 27, 2020, Exhibit 4.1 (File no. 001-37941)).
4.18*	Form of Pre-Funded Warrant (Form 8-K filed February 2, 2021, Exhibit 4.1 (File no. 001-37941)).
4.19*	Form of Warrant (Form 8-K filed February 2, 2021, Exhibit 4.2 (File no. 001-37941)).
4.20*	Form of Placement Agent Warrant (Form 8-K filed February 2, 2021, Exhibit 4.3 (File no. 001-37941)).
4.21*	Form of Placement Agent Warrant (Form 8-K filed March 23, 2021, Exhibit 4.1 (File no. 001-37941)).
4.22*	Form of Series A Warrant (Form S-1/A filed November 15, 2022, Exhibit 4.21 (File no. 333-267991)).
4.23*	Form of Series B Warrant (Form S-1/A filed November 15, 2022, Exhibit 4.22 (File no. 333-267991)).
4.24*	Form of Pre-Funded Warrant (Form S-1/A filed November 15, 2022, Exhibit 4.23 (File no. 333-267991)).
4.25*	Form of Placement Agent Warrant (Form S-1/A filed November 15, 2022, Exhibit 4.24 (File no. 333-267991)).
4.26*	Form of SenesTech, Inc. Stock Option Grant Notice and Stand-Alone Option Agreement (Form S-8 filed February 10, 2023, Exhibit 4.2 (File no. 333-269686)).
4.27*	Form of SenesTech, Inc. Restricted Stock Unit Grant Notice and Stand-Alone Restricted Stock Unit Agreement (Form S-8 filed February 10, 2023, Exhibit 4.3 (File no. 333-269686)).
4.28*	Form of Series C Warrant (Form 8-K filed April 12, 2023, Exhibit 4.28 (File no. 001-37941)).
4.29*	Form of Series Placement Agent Warrant (Form 8-K filed April 12, 2023, Exhibit 4.29 (File no. 001-37941)).
4.30*	Form of New Warrants (Form 8-K filed August 22, 2023, Exhibit 4.33 (File no. 001-37941)).
4.31*	Form of Series D Warrant (Form 8-K filed November 29, 2023, Exhibit 4.34 (File no. 001-37941)).
4.32*	Form of Series E Warrant (Form 8-K filed November 29, 2023, Exhibit 4.35 (File no. 001-37941)).
4.33*	Form of Pre-Funded Warrant (Form 8-K filed November 29, 2023, Exhibit 4.36 (File no. 001-37941)).
4.34*	Form of Placement Agent Warrant (Form 8-K filed November 29, 2023, Exhibit 4.37 (File no. 001-37941)).
(10)	**Material Contracts**
10.1*	SenesTech, Inc. 2015 Equity Incentive Plan and forms of agreement thereunder (Form S-1 filed September 21, 2016, Exhibit 10.2 (File no. 333-213736)).+
10.2*	Form of Indemnification Agreement (Form S-1 filed September 21, 2016, Exhibit 10.6 (File no. 333-213736)). +
10.3*	Employment Offer Letter by and between the Registrant and Thomas Chesterman dated November 20, 2015 (Form S-1 filed September 21, 2016, Exhibit 10.9 (File no. 333-213736)). +
10.4*	Promissory Note, dated April 15, 2020, by and between the Company and BMO Harris Bank National Association (Form 8-K filed April 21, 2020, Exhibit 10.1 (File no. 001-37941)).
10.5*	Employment Letter Agreement by and between SenesTech, Inc. and Kenneth Siegel dated May 16, 2019 (Form 8-K filed May 20, 2019, Exhibit 10.1 (File no. 001-37941)).+
10.6*	Lease by and between the Registrant and Pinnacle Campus Office-Retail, LLC, dated as of November 18, 2019 (Form 10-K filed March 29, 2022, Exhibit 10.1 (File no. 333-236302)).
10.7*	Standard Industrial/Commercial Multi-Tenant Lease, between the Company and Duke Go PP, LLC, dated as of June 22, 2020 (Form 10-Q filed August 13, 2020, Exhibit 10.4 (File no. 001-37941)).
10.8*	Form of Securities Purchase Agreement (Form 8-K filed July 17, 2019, Exhibit 10.1 (File no. 001-37941)).
10.9*	Form of Securities Purchase Agreement (Form 8-K filed January 28, 2020, Exhibit 10.1 (File no. 001-37941)).
10.10*	Form of Securities Purchase Agreement (Form 8-K filed March 6, 2020, Exhibit 10.1 (File no. 001-37941)).
10.11*	Form of Securities Purchase Agreement (Form S-1/A filed February 13, 2020, Exhibit 10.19 (File no. 333-236302)).
10.12*	Form of Securities Purchase Agreement (Form 8-K filed April 21, 2020, Exhibit 10.1 (File no. 001-37941)).
10.13*	Form of Letter Agreement, dated as of October 23, 2020, between the Company and the purchaser thereto (Form 8-K filed October 27, 2020, Exhibit 10.1 (File no. 001-37941)).

10.14*	Form of Securities Purchase Agreement, dated as of January 27, 2021 (Form 8-K filed February 2, 2021, Exhibit 10.1 (File no. 001-37941)).
10.15*	Form of Registration Rights Agreement, dated as of January 27, 2021 (Form 8-K filed February 2, 2021, Exhibit 10.2 (File no. 001-37941)).
10.16*	Form of Securities Purchase Agreement (Form S-1 filed November 15, 2022, Exhibit 10.18 (File no. 333-267991)).
10.17*	SenesTech, Inc. 2018 Equity Incentive Plan, as amended (Form 8-K filed October 14, 2022, Exhibit 10.23 (File no. 001-37941)). +
10.17(a)*	Form of SenesTech, Inc. Stock Option Grant Notice and Option Agreement (Form 8-K filed October 14, 2022, Exhibit 10.23A (File no. 001-37941)).
10.17(b)*	Form of SenesTech, Inc. Restricted Stock Unit Grant Notice and Restricted Stock Unit Agreement (Form 8-K filed October 14, 2022, Exhibit 10.23B (File no. 001-37941)).
10.18*	Form of Securities Purchase Agreement (Form 8-K filed March 19, 2021, Exhibit 10.1 (File no. 001-37941)).
10.19*	Employment Offer Letter by and between the Registrant and Nicole Williams dated May 1, 2021 (Form 8-K filed January 5, 2022, Exhibit 10.1 (File no.001-37941)). +
10.20*	Employment Letter Agreement between SenesTech, Inc. and Joel Fruendt dated November 9, 2022 (Form 8-K filed November 14, 2022, Exhibit 10.24 (File no. 001-37941)). +
10.21*	Separation Agreement, by and between SenesTech, Inc. and Kenneth Siegel, dated December 29, 2022 (Form 8-K filed January 5, 2023, Exhibit 10.25 (File no. 001-37941)).
10.22*	Form of Securities Purchase Agreement (Form 8-K filed April 12, 2023, Exhibit 10.26 (File no. 001-37941)).
10.23*	Separation Agreement between SenesTech, Inc. and Nicole Williams dated April 21, 2023 (Form 8-K filed April 24, 2023, Exhibit 10.27 (File no. 001-37941)).
10.24*	SenesTech, Inc. 2018 Equity Incentive Plan, as amended (Form 8-K filed June 27, 2023, Exhibit 10.28 (File no. 001-37941)).
10.25*	Form of Inducement Letter (Form 8-K filed August 22, 2023, Exhibit 10.29 (File no. 001-37941)).
10.26*	Form of Securities Purchase Agreement between SenesTech, Inc. and the Purchasers named therein dated November 27, 2023 (Form 8-K filed November 29, 2023, Exhibit 10.28 (File no. 001-37941)).
(21)	
21.1	List of Subsidiaries of the Registrant.
(23)	**Consents of Experts and Counsel**
23.1	Consent of Independent Registered Public Accounting Firm M&K CPAS, PLLC.
(31)	**Rule 13a-14(a)/15d-14(a) Certifications**
31.1	Certification of Chief Executive Officer.
31.2	Certification of Chief Financial Officer.
(32)	**Section 1350 Certifications**
32.1	Certifications of Chief Executive Officer and Chief Financial Officer.
(101)	**Interactive Data File**
101.INS	Inline XBRL Instance Document.
101.SCH	Inline XBRL Taxonomy Extension Schema Document.
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document.
101.LAB	Inline XBRL Taxonomy Extension Labels Linkbase Document.
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document.
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document.
104	Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101).

* Incorporated by reference as indicated.
\+ Indicates a management contract or compensatory plan or arrangement.

ITEM 16. FORM 10-K SUMMARY.

Not applicable.

SIGNATURES

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

SENESTECH, INC.

Date: February 21, 2024	By:	/s/ Joel Fruendt **Joel Fruendt** *President and Chief Executive Officer*
Date: February 21, 2024	By:	/s/ Thomas C. Chesterman **Thomas C. Chesterman** *Vice President, Chief Financial Officer, Treasurer and Secretary*

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

Signature	Title	Date
/s/ Joel Fruendt **Joel Fruendt**	*President and Chief Executive Officer* (Principal Executive Officer)	February 21, 2024
/s/ Thomas C. Chesterman **Thomas C. Chesterman**	*Vice President, Chief Financial Officer, Treasurer, and Secretary* (Principal Financial and Accounting Officer)	February 21, 2024
/s/ Jamie Bechtel **Jamie Bechtel**	*Chair of the Board*	February 21, 2024
/s/ Delphine Francois Chiavarini **Delphine Francois Chiavarini**	*Director*	February 21, 2024
/s/ Phil Grandinetti **Phil Grandinetti**	*Director*	February 21, 2024
/s/ Jake Leach **Jake Leach**	*Director*	February 21, 2024
/s/ Matthew K. Szot **Matthew K. Szot**	*Director*	February 21, 2024

Exhibit 21.1

SUBSIDIARIES OF THE REGISTRANT

The following is a list of subsidiaries of the registrant as of December 31, 2023.

Name	Jurisdiction of incorporation or organization
NONE	

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statements Nos. 333-251173, 333-237563, and 333-236359 on Form S-1; Registration Nos. 333-261227, 333-252665, 333-226842, and 333-274894 on Form S-3; and Registration Nos. 333-269686, 333-258851, 333-246258, 333-225710, 333-215026, and 333-274700 on Form S-8 of our report dated February 21, 2024, relating to the financial statements of SenesTech, Inc., for the years ended December 31, 2023 and 2022, which appear in this Annual Report on Form 10-K of SenesTech, Inc. for the year ended December 31, 2023.

/s/ M&K CPAS, PLLC

www.mkacpas.com
Houston, Texas
Dated: February 21, 2024

Exhibit 31.1

CERTIFICATIONS

I, Joel Fruendt, certify that:

1. I have reviewed this Annual Report on Form 10-K of SenesTech, Inc.;

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

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

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

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

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

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

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

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

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

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

Dated: February 21, 2024

/s/ Joel Fruendt
Joel Fruendt
President and Chief Executive Officer

Exhibit 31.2

CERTIFICATIONS

I, Thomas C. Chesterman, certify that:

1. I have reviewed this Annual Report on Form 10-K of SenesTech, Inc.;

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

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

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

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

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

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

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

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

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

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

Dated: February 21, 2024

/s/ Thomas C. Chesterman

Thomas C. Chesterman
Vice President, Chief Financial Officer, Treasurer and Secretary

Exhibit 32.1

SECTION 1350 CERTIFICATIONS

We, Joel Freundt, President and Chief Executive Officer, and Thomas Chesterman, Vice President, Chief Financial Officer, Treasurer and Secretary of SenesTech, Inc. (the “Company”), do hereby certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that to our knowledge, (i) the Company’s Annual Report on Form 10-K for the year ended December 31, 2023 (the “Report”), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and (ii) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

/s/ Joel Fruendt	/s/ Thomas Chesterman
Joel Fruendt	Thomas Chesterman
President and Chief Executive Officer	*Vice President, Chief Financial Officer, Treasurer and Secretary*
Dated: February 21, 2024	Dated: February 21, 2024