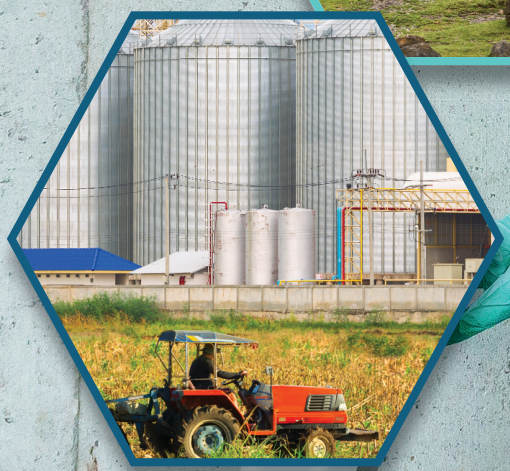
senestech

Sound science. Effective solutions.



2018 Annual Report

The SenesTech Mission & Vision

SenesTech, Inc. is very much aware of the problems that have developed as a result of worldwide use of poisons to try and reduce the issue of rodents and the effect they have on the environment. With this in mind, SenesTech has instituted a sustainability planning and governance committee as an internal watchdog to ensure we work towards improving our world and not causing more harm to it.

SenesTech's underlying goals are:

1. Reduce the harmful effects and dependency on poisons, which historically have not been effective, in the world of rodent control through our proven scientific methods;
2. Improve the health, safety, and well-being of humanity worldwide by reducing the negative impact of rodents causing diseases, food contamination, and consumption;
3. Provide an economic value to our shareholders through the increased use of our products to address current rodent issues while expanding our product base to include other opportunities as they are presented.

We have broken these goals down into 3 sections: **PLANET**, **PEOPLE**, and **PROGRESS**.

Planet

- Reduce the poison currently being used (ineffectively) to reduce the rodent population, which accumulates in the soil and our water sources.
- Reduce the negative impact of poisons on secondary or predatory species that consume the poison directly or feed on the target species, this includes accidental consumption by humans, often children.
- As we continue to increase our product demand, we are working (successfully) to reduce waste generated and energy used per liter of manufactured product, all while decreasing our COGS. We also both use recycled goods (office and manufacturing) and reconfigure manufacturing equipment when possible.

People

- With the decreased amount of food consumed or contaminated by rodents (by utilizing ContraPest®) the world food shortage/hunger problem can be reduced in many nations where humans do not have enough food to feed their population.
- Rodents are responsible for the transfer of many diseases that are harmful to humans, domestic animals, and other food sources. The reduction in rats alone will have a positive impact on our general health.
- Our employees are committed to helping on a local level with the donation of their time, money, and services which are provided to various community organizations. The most recent indication of this was the honor of receiving the Flagstaff Volunteer Business of the year for 2018.
- Our home office is pet-friendly with employees often bringing their pets (from dogs to lizards) to work with them. Many employees enjoy this benefit (especially the dogs) and will "make the rounds" to receive treats during the day.
- At SenesTech, we embrace diversity in our workforce which is also reflected in our Board of Directors. The majority of both the Board and officers are female, and the ages of the employees range from their 20's to 80's.

Progress

- We continue to work on teaching PMP's and the general public on the harm that poisons have on our society and the planet while providing a scientifically proven alternative to address the rodent problem.
- With the increased use of ContraPest we can reduce the dependency on harmful poisons and have a measured increase in the use and locations of where the product can be deployed.
- We will continue to educate end-users on the scientific basis for the need of an alternative to poison through public forums and research papers which was started in 2019.

"Non-responsiveness – also known colloquially as 'resistance' – is directly related to current practices in rodent control and is immediately relevant in Europe and the U.S."

-Dr. Stephen Shuster
Professor of Invertebrate Zoology at Northern Arizona University

Why ContraPest

Rats Love It.

- **It's Liquid:** Rats need to consume 10% of their body weight in liquid each day
- **Appealing Bait:** Our sweet and fatty bait is designed to be attractive to rats even when other food sources are present.
- **Combat Bait Aversion:** Rats do not show adverse affects after consuming ContraPest, meaning bait aversion is less of an issue.

We Keep PMPs Happy.

- **Work that Pays Off:** ContraPest minimizes the chance of populations rebounding after successful treatment, giving PMPs confidence that rat infestations are under control.
- **Versatile Tool:** Can amplify a current IPM program or be used as a stand alone non-lethal solution.
- **Targeted Approach:** ContraPest does not require standardized placement, treat only the areas that need it while getting successful results.

Customers Will Love It.

- **Proactive, not Reactive:** ContraPest targets a source of infestations…reproduction, treating the entire population, not just the individual rat.
- **Peace of Mind:** Studies have shown no behavioral changes or illness in rats, reducing risk of predation and secondary exposure.
- **No Accumulation Effect:** Reduced risk in non-targets due to low concentrations of the actives and short half life.

To Our Shareholders

2018 established SenesTech's revenue growth potential. Without any recent industry models for growing a novel approach to solve the global pest-management problem, we began the journey with a new concept: non-lethal population control. Our target goal in 2018 was to determine the optimal course for our commercialization success. The logical start was to offer ContraPest®, our fertility control tool, to the pest-management industry. The reality quickly emerged that early adopters and end-users had a pressing need and therefore demand that was ahead of the industry's adoption timing. With that, we have much to discuss in the 2018 annual report. Here is some background on the need for our solution and our approach.

When it comes to rats and rodents, we usually talk about three main challenges:

1. Rodents destroy food through consumption and contamination,
2. Rats damage infrastructure, and
3. Rats transmit disease, deadly pathogens to animals and humans and poisons to wildlife.

Centuries of trying have shown that reducing the risks by attempting to control infestations and population growth using lethal means cannot solve the problem. The heart of the problem is reproduction. Rats are one of the most successful mammalian species on earth because they can breed their way out of any threat to their species survival. The evidence is clear!

The task of implementing our vision and addressing our mission is not "easy" but the steps are fairly "simple". We strive to deliver the following:

1. Reduce harmful effects of current rodent management practices, which have historically not been effective, in the world of rodent control by addressing the root cause of the problem, reproduction, using proven scientific methods;
2. Improve the health, safety, and well-being of humanity worldwide by reducing the negative impact of rodent pest infestations on food security, disease, and the environment;
3. Provide value to our stakeholders through the increased use of our products to address current rodent pest issues while expanding our product base to meet the demands of a changing world as they are presented;

We intend to accomplish this following our "tag line"

Sound Science. Effective Solutions.

"Sound Science" is how SenesTech began in 2004, with two scientists destined to make a difference in this world. At the heart of it, Sound Science is the methodology of going from a concept that the world's scientific community has imagined, to developing a formulation for practical application. Since science is ever evolving, the principles developed in our viable product allowed us to continuously utilize new scientific discoveries to make the most optimal product for the market and to solve our customers rodent problems. In 2018, we moved our scientific discovery (intellectual property) from a provisional application for the base formulation, to an "issued" patent. The patent issued May 1, 2018. The total process took 6 years of laborious explanation and defense.

"Effective Solutions" stems from the history of rodent control and pest management. For years, traditional rodenticides have worked short term by killing rats. However, you can never kill them all and it only takes a breeding pair and their young to rebound the population with 15,000 individuals over a year. This rodent reproductive strategy provides room for rat infestations to become evident in a short period of time (3-4 months). Due to the principles of sound science, it also has been shown that some of the rats that aren't killed are resistant to the poisons and are selected to give birth to rodenticide-resistant pups. Through the development of a fertility control contraceptive, we have successfully produced an effective long-term sustainable solution of a non-lethal approach that targets both male and female rats. Our recent scientific publication demonstrates that our solution will not lead to resistance and help attenuate the threat of growing poison-resistant populations around the world.

Our Mission

SenesTech is committed to providing sustainable, humane treatment of animals, improving the quality of all human life, and enhancing environmental stewardship through global application of our effective solution in fertility control technology. This statement is our promise and commitment to our stakeholders: employees, customers, regulators, the public, and our investors.

Our flagship product ContraPest is evidence of the value in "Sound Science. Effective Solutions." Fertility control in the form of a contraceptive is a solution to the root of the problem not a temporary strategy such as lethal rodenticides. Therefore, ContraPest, is an effective long-term solution that dramatically reduces the exponential reproduction rate. And the first indication of success you can see is smaller numbers of recently weaned juvenile rats that are easy to distinguish from much larger adult rats.

ContraPest is a highly attractive, liquid bait containing the active ingredients (AI) 4-vinylcyclohexene diepoxide, or VCD, and triptolide, a plant-derived chemical, delivered in a proprietary trade secret emulsion with a high fat content and sweet taste.

- Rats repeatedly feed on ContraPest because of the nutrition and taste, and absence of any adverse effects. Their fertility is reduced as they consume the bait. The active ingredients target both male and female rodents resulting in sustained contraception with continued consumption
- Sustained impact and compared to anticoagulant rodenticides avoid population "rebound"
- When lethal means are used, the death rate is always less than birth rate for rats
- Because rats are territorial the immediate reduction of rats around any food source provides an open banquet, less competitive food supply to new invading rats
- Designed to minimize risk to handlers, non-targets and other animals

While ContraPest is a product with wide-ranging applicability, 2018 provided the evidence that our commercialization is best focused on very specific verticals: animal housing markets, commercial markets, and food markets.

Animal Housing Markets

SenesTech understands the difficult balance required to manage pests in the human-animal conflict in a responsible and safe way. We must create a balanced management strategy as we provide for human needs while at the same time being good stewards of our animal populations. Secondary exposure (animals consuming poisoned rodents) has become an increasing concern with non-target animals, especially in environments where other animals or wildlife reside. SenesTech's goal has always been to provide a better environment for animals, which is why we developed ContraPest. The animal housing markets that have specifically emerged this year are animal research facilities, animal sanctuaries, and zoos. As of this writing we have expanded our deployments in more than a dozen zoos, half a dozen sanctuaries, and a few research facilities.

Commercial/Structural Markets

When commercial buildings provide the critical infrastructure of our economy, nothing is more essential than effectively managing rodent control within these physical structures. However, building management is not the only factor to consider when selecting optimal products for your rodent management program. Managing the risk of exposure is critical to the health and wellbeing of the people who work in and around these properties. Additionally, construction of new buildings frequently displaces rats that migrate into adjacent properties. The urban rodent management challenge captures all of the issues of commercial buildings and must integrate that management with the human pressures of behavior, health, and sanitation. No one deserves to live with rat infestations. We have been fortunate to have been invited into some of the largest and challenging cities of the US to develop strategies and products, that ultimately deliver the right solution for municipalities and commercial business success – all while keeping control of daily operations. Our largest sale to date has been to the city of Washington DC with deployment in the first of 8 wards. Washington DC will indeed be a lead customer and flagship deployment. Toward the end of the quarter we began a small project for the city of St. Louis which is expanding in 2019. The Gateway Arch Park and numerous city buildings are included in the expansion.

Food Markets

Today's consumers have demanded a new emphasis on food safety and humane treatment of protein production animals, and the industry must answer with newer and better solutions in their facilities. One key emphasis area is more effective vector control, and inspection audits by regulatory agencies and third-parties. Rodents are an increasing health hazard and present a challenge to these industries owing to their potential to cause product and financial losses. These concerns are compounded by: the increasing global demand for food, concerns for humane conditions for production animals, the increasing demands of biosecurity programs and reducing the risk of infectious disease transmission.

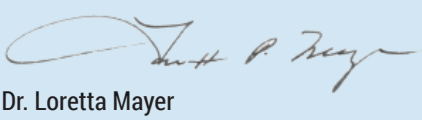
In 2018, our expected largest geographical market began to open with state approval for sales in California. As California is the fifth largest economy in the world, the total addressable market begs "all-in" efforts. In addition, California is one of the most environmentally conscientious states in the US. Currently, there are 16 municipalities within the state that have regulations demanding a poison-free approach to rodent control. In February of this year, AB1788 was introduced, cleared in committee, and is on the way to become law banning Second Generation Anti-coagulant Rodenticides (SAGARs) statewide. Our profile in the state has been raised by the discussion over this bill, and we are in the first quarter of 2019 answering the call to action for the many leading stakeholders in California. In short, we are further refining our market verticals into the California geography.

While many of these deployments were limited in nature, they all are expected to reach maturity in 2019. 2018 was also a gratifying year with respect to the financials, as we completed our first year of commercial launch. Our revenues were $300,000 for the year, a six-fold increase over 2017. We hope that a "six-fold" increase will be conservative when 2019 concludes. We successfully transformed from the "licensing" business model of a research company to a fully operating commercial company, while holding the line on our operating expense. In our manufacturing operation we have increased our efficiency "25-fold" and improved our margin by approximately 16%. Our strategy encouraged by many of our investors was to build the business, identify the target customers, focus on the right market at the right time, and as is the culture of our company, "stay the course" to open the market to our novel innovation. We also were prudent in our capital market activities, not wanting to dilute our shareholders unnecessarily.

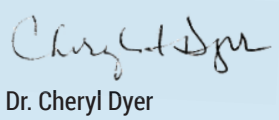
Corporate Social Responsibility is vital to the growth of our economy that is not at the expense of our global values. The guiding principles of our Sustainability planning and governance committee are captured in initiatives that focus on: PLANET, PEOPLE, and PROGRESS. Our immediate reach will target the problems that have been created as a result of the worldwide use of poisons. Poisons bio-accumulate in our environment threatening both humans, animals, our watersheds, and the total environment we live in. Our internal watch-dog strategy will ensure our every step works toward improving our world via our 3 focus points. The very nature of our product is a giant first step and 2019 will provide more insight for our journey ahead.

The heart of our corporate social responsibility effort is rooted in the people that make up SenesTech. Our employees are committed to helping on a local level with the donation of their time, money, and services which are provided to various community organizations, ranging from Sharon's Attic, Housing Solutions, the Flagstaff Food Bank, to High Country Puppy Rescue. We were honored to receive the Flagstaff Volunteer Business of the year for 2018 and hope we have inspired other businesses to consider their Corporate Social Responsibility. Look for our 2019 CSR report to be impacting and reflective of "who we are."

2018 has been a good year and 2019 holds the promise and clarity of a fantastic year.



Dr. Loretta Mayer



Dr. Cheryl Dyer

"We were thrilled to find ContraPest to control our rodent population. We've seen a dramatic reduction in the numbers of rodents in our barn. With ContraPest, we can just put out the product and over a short amount of time, and the rodents stop reproducing. We are thrilled to have found Senestech!"

- Kim Meagher
Wildhorse Ranch Rescue, Inc

Our Markets

Animal Markets

The SenesTech team understands the difficult balance required to manage pests in a responsible and safe way without compromising the health and welfare of the animals in your care. Secondary exposure from poisons has become an increasing concern with non-target animals, especially in environments where other animals or wildlife reside.

Commercial Markets

When commercial buildings are the core of your business, nothing is more essential than effectively managing rodent control within the physical structures themselves. However, building management is not the only factor to consider when selecting optimal products for your rodent management program.

Food Markets

Today's emphasis on food safety has resulted in increased scrutiny on manufacturing and processing facilities. One facet of this emphasis is the move toward more effective vector control due to the pressure of inspections by regulatory agencies and third-party auditors.

The Challenge

Rat Reproduction

Under ideal conditions, two mating rats can be responsible for 15,000 descendants within one year, making it difficult to maintain control of rat infestations.

Population growth like this can lead to continued infrastructure damage and product loss.

Sound Science.

How it Works

ContraPest is a proven solution!

- Place bait stations in suspected foraging locations to deploy SenesTech control bait
- Replace SenesTech control bait with ContraPest in confirmed foraging locations.
- Rats consume ContraPest and it reduces their fertility.
- Rat populations decrease and ContraPest reduces the rebound effect.
- Rat populations continue to decrease and fewer bait stations are needed.
- Rat populations are under control and your customers are happy!

The Solution

Fertility Control

While there are many rodent control tools designed to bring rat populations down quickly, without fertility control, survivors can reproduce, rebounding the population back to its initial size within 3 to 6 months.

ContraPest® is an innovative technology that targets the reproductive capabilities of Norway and roof rats.

Effective Solutions.

Animal Facility
Case Study

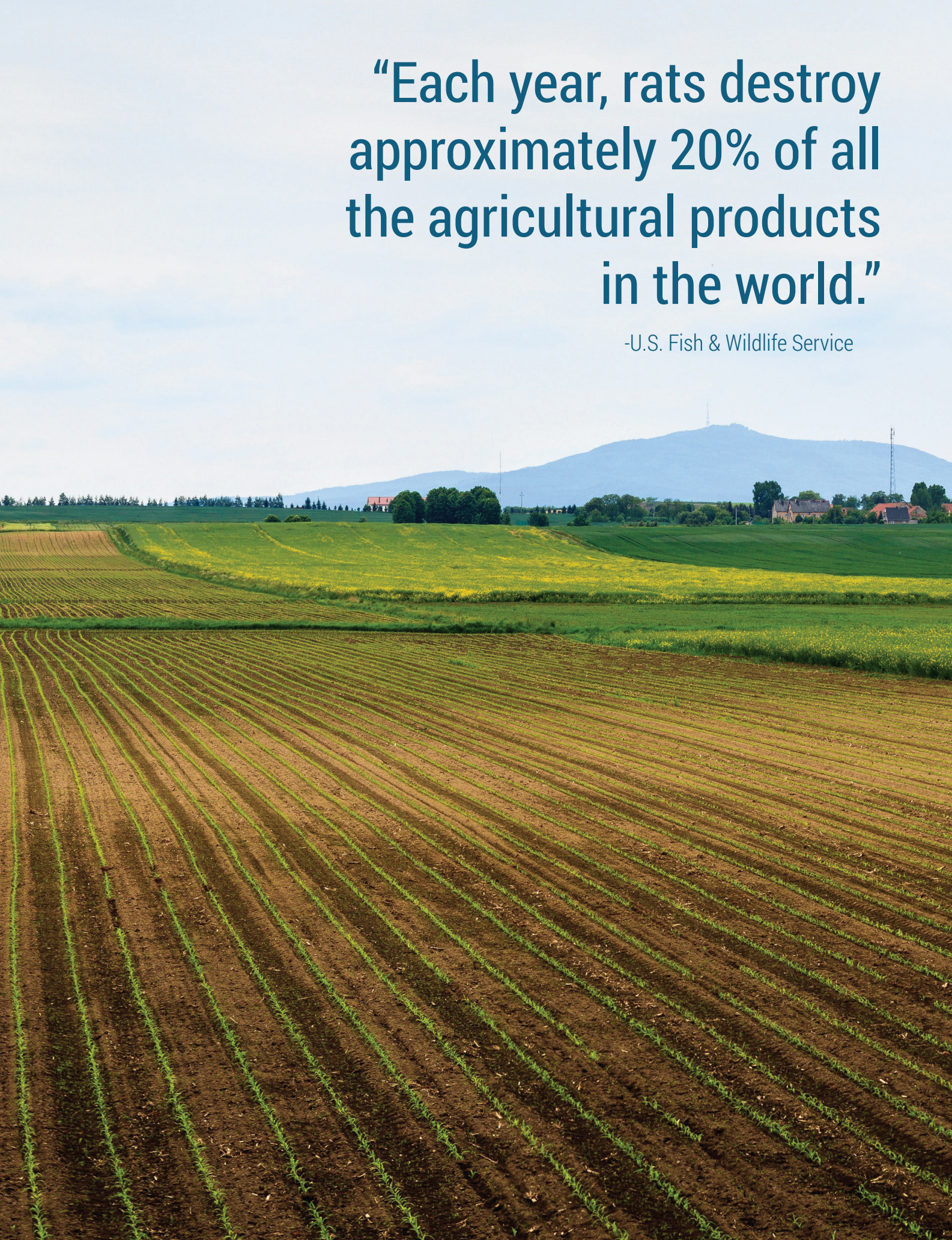
ContraPest successfully suppressed rat infestations on a 117-acre research facility in the southeastern U.S. that is home to sensitive wildlife.

When ContraPest was added to existing protocol, the rat activity was reduced by an average of 23%.

Multi-Family Urban House
Case Study

ContraPest successfully suppressed rat infestations in a multi-family housing complex located in a dense urban area of New York.

With the implementation of ContraPest into the IMP program, it allowed the PMP to focus efforts on prevention versus battling the infestation.



"Each year, rats destroy approximately 20% of all the agricultural products in the world."

-U.S. Fish & Wildlife Service

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, 2018

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 Number)**

3140 N. Caden Court, Suite 1, Flagstaff, AZ 86004
(Address of principal executive offices, including zip code)
Registrant's telephone number, including area code: (928) 779-4143

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

Title of each class	**Name of each exchange on which registered**
Common Stock, $0.001 par value	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 Securities Exchange 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 if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ☒

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 is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes ☐ No ☒

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

The aggregate market value of the registrant's common stock held by non-affiliates on June 29, 2018 (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 $26,395,959. There were 18,040,497 shares of the registrant's common stock outstanding on June 29, 2018.

The number of shares of common stock outstanding as of [March 29], 2019: 23,560,864

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement to be filed with the Commission within 120 days of the end of the fiscal year and delivered to stockholders in connection with the 2019 Annual Meeting of Stockholders are incorporated by reference into Part III of this Annual Report on Form 10-K.

SENESTECH, INC.
FORM 10-K
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CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains "forward-looking statements" within the meaning of the safe-harbor provisions of the U.S. Private Securities Litigation Reform Act of 1995. Forward-looking statements can often be identified by words such as: "expect," "believe," "estimate," "plan," "strategy," "future," "potential," "continue," "may," "should," "will," and similar references to future periods. Examples include, among others, statements about:

- Our commercialization and promotion strategy and plans, including key elements to our business strategy, how we commercialize, our sales approach, our areas and markets of focus, our pricing strategy, our strategic relationships and which geographic markets we target;
- The potential market opportunities for commercializing our product candidates and the role we expect ContraPest® to hold within the market;
- Our seeking further regulatory approvals for our product candidates;
- The anticipated results and effects of our products, including those indicated in studies;
- Our expectations regarding the potential market size for our products;
- Estimates of our cash flow, expenses, capital requirements and need for additional financing;
- Our ability to enter into strategic arrangements and to achieve the expected results from such arrangements;
- The initiation, timing, progress and results of field studies and other studies and trials and our research and development programs;
- Our ability to develop and manufacture our products in a commercially efficient manner;
- The scope of protection we are able to obtain and maintain for our intellectual property rights covering our product candidates;
- Our financial performance;
- Developments and projections relating to our competitors and our industry;
- Our expectation regarding our pricing strategy and our ability to sell our products at commercially reasonable values;
- Our beliefs and expectations related to pending litigation; and
- Our expectation regarding the commercialization of ContraPest and generation of related revenue.

Forward-looking statements are neither historical facts nor assurances about future performance. Instead, they are only predictions, based on current beliefs, expectations and assumptions about the future of our business and other future conditions. Forward-looking statements are subject to known and unknown risks, uncertainties and changes in circumstances that are difficult to predict and many of which are outside of our control. Actual events and results may differ materially. Therefore, you should not rely on any of these forward-looking statements.

Any forward-looking statement made by us in this report is based only on information available to us on the date of this report. Except as may be required by law, we undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise.

Our forward-looking statements can be affected by inaccurate assumptions we might make or by known or unknown risks, uncertainties and other factors. We discuss many of these risks, uncertainties and other factors in this Annual Report on Form 10-K in greater detail under the Item 1A — "Risk Factors." We caution readers that our business and financial performance are subject to substantial risks and uncertainties.

ContraPest is a registered trademark of SenesTech Inc. This Annual Report on Form 10-K may also include trademarks and trade names owned by other parties, and all other such trademarks and trade names mentioned in this Annual Report on Form 10-K are the property of their respective owners.

PART I

Item 1. *Business.*

Overview

SenesTech, Inc. (referred to in this report as "SenesTech," the "Company," "we" or "us") was formed in July 2004 and incorporated in the state of Nevada. The Company subsequently reincorporated in the state of Delaware in November 2015. Our corporate headquarters is in Flagstaff, Arizona. We have developed and are commercializing a global, proprietary technology for managing animal pest populations, initially rat populations, through fertility control.

Although a myriad of tools are available to fight rat infestations, communities continue to face challenges in controlling today's infestations. Infestations result in incredible infrastructure damage, as well as pose additional risks to the health and food security of communities. In addition to these challenges, the pest management industry and Pest Management Professionals (PMPs) are being increasingly asked for new solutions to help solve the problem. With growing concerns about rat resistance to rodenticides and a growing interest in non-lethal options, it is becoming increasingly important for PMPs to have new tools at their disposal. Our goal is to provide customers with not only a solution to combat their most difficult infestations, but also offer a non-lethal option to serve customers that are looking to decrease or remove the amount of poison used in their pest management programs.

Our first fertility control product, ContraPest, is a liquid bait containing the active ingredients 4-vinylcyclohexene diepoxide (VCD) and triptolide. When consumed, ContraPest targets reproduction, limiting fertility in male and female rats beginning with the first breeding cycle following consumption. ContraPest is being marketed for use in controlling rat populations, specifically Norway and roof rats. On August 23, 2015, the United States Environmental Protection Agency (EPA) granted registration approval for ContraPest as a Restricted Product Due to Professional Expertise (referred to in this report as a "Restricted Use designation"), effective August 2, 2016. On October 18, 2018, the EPA approved the removal of the Restricted Use designation. We believe ContraPest is the first and only non-lethal, fertility control product approved by the EPA for the management of rodent populations.

In addition to the EPA registration of ContraPest in the U.S., we must obtain registration from the various state regulatory agencies prior to selling in each state. As of the date of this report, we have received registration for ContraPest in all 50 states and the District of Columbia, 23 of which have approved the removal of the Restricted Use designation.

We expect to continue to pursue regulatory approvals and amendments to existing registration in the United States for ContraPest, and if ContraPest begins to generate sufficient revenue, regulatory approvals for any additional jurisdictions beyond the United States. The Company also continues to develop other potential additional fertility control and animal health products for additional species.

Current Challenges in Pest Control Methodologies

Despite current pest control methodologies, ranging from sanitation and physical approaches to biological and chemical approaches, rat infestations continue to be a significant problem. While deploying these methodologies can lead to an initial decrease in rat populations, rat infestations persist. As these infestations persist, so does the damage associated with them. Rodents cause significant damage to public infrastructure by undermining foundations with burrowing and by gnawing on electrical wiring and insulation, fireproofing systems and electronic and computer equipment. Rats also pose additional risks to the health and food security of communities.

While lethal poisons have been at the forefront of pest management programs to curb these infestations and the associated damage, they have not provided consistent, sustained results. This is because rats reproduce at an extremely rapid rate. This rapid rate of reproduction can be seen in the "population rebound" that typically follows the initial decline in rodent populations that are exposed to lethal poisons. After the initial decline in the infestation, surviving rodents have plentiful food and harborage creating conditions in which rats can quickly reproduce. A single pair of rats in the wild can, under ideal breeding conditions, contribute over 15,000 progenies in their expected lifespan of 8-12 months. This means that PMPs typically need to visit a site often to combat not only the initial infestation, but also subsequent "rebounds."

Additionally, studies have shown that rodents will generally not consume food that they have seen adversely affect other rodents, which is referred to as "bait shyness." When the adverse effects of lethal products are displayed by rodents, other rodents in the vicinity typically avoid the areas where these poisons were located. Finally, there is the potential that rats may develop a resistance to certain lethal rodenticides, further contributing to a potential failure of existing pest management approaches. Widespread resistance to rodenticides has been identified as a problem in Europe, and recent research indicates this may be an emerging issue in the U.S. as well. This requires property owners and PMPs to continuously apply, on a rotating basis, rodenticides that vary in active ingredients and formulations in an effort to control these populations without favoring resistance to a particular poison.

Integrated Pest Management and Fertility Control

The most effective, long-term way to manage rodents is by using a combination of tools that work together to magnify the efficacy of the pest management protocol. Integrated pest management is based upon this concept. Regulatory agencies and industry experts recognize that fertility control is or can be an essential component of safe and sustainable integrated pest management.

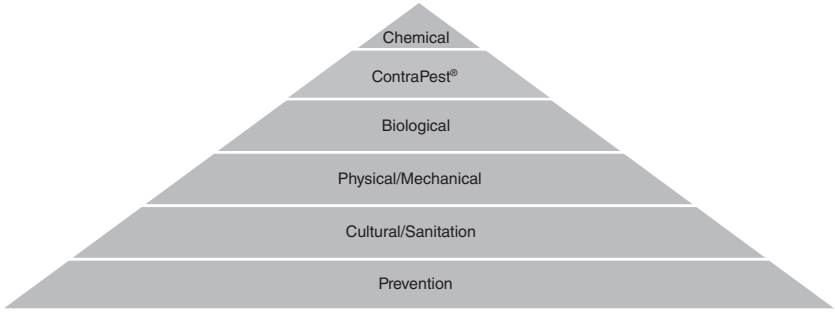
ContraPest is an innovative technology with an approach that targets the reproductive capabilities of both sexes in rat populations, inducing egg loss in female rats and impairing sperm development in males. Our proprietary formulation addresses key biological traits of rats, making it a more targeted solution. Targeting both males and females allows us to drive populations down and to sustain that population reduction. Its efficacy has been demonstrated in numerous internal and third-party studies.

Using a proprietary bait delivery method, ContraPest is dispensed in a highly palatable liquid formulation that promotes sustained consumption by rat communities, helping keep populations down. Rats require 10% of their body weight in water per day, making Contrapest an attractive bait to add to pest management programs. The high fat content and sweet taste leads to repeat consumption even among sought after food sources. In both field and laboratory settings, ContraPest was chosen by rats even in the presence of abundant water sources and plentiful food options including animal feed, trash, and other options. Consumption of ContraPest does not cause illness in rats and therefore it does not change behavior or result in "bait shyness."

Adding ContraPest to an integrated pest management program allows PMPs to bring the populations down and keep them at a more manageable level by preventing reproduction and therefore limiting population rebounds. Knowing the populations are lower should allow PMPs to be more focused on preventing future invasions and maintenance instead of continually needing to respond to population spikes. ContraPest's delivery system is designed to minimize handler exposure and is dispensed inside tamper-resistant bait stations, minimizing risks to handlers and non-target species.

We believe ContraPest can establish a new paradigm in rodent control, allowing for a decreased reliance on poisons through the offering of a stand-alone non-lethal option, where requested by the customer or required by circumstances.

ContraPest is a versatile tool that can be used as a standalone non-lethal solution or within integrated pest management program to help reduce reproduction and magnify the success of integrated infestation control methodologies.



Approved for use in indoor, non-food areas, and outdoors within one foot of a man-made structure, ContraPest gives PMPs an integral tool that can be deployed to fight rat infestations in a variety of settings. This is particularly important given that infested areas may include a diverse set of variables. ContraPest is currently dispensed from a tank and tray, housed inside a tamper resistant bait station.

Other Applications

We have also begun exploring diverse applications with a variety of collaborators. We have conducted proof of concept studies with feral dogs on the Navajo Reservation in New Mexico with a grant from the USDA, and we have collected rabies and geographic data on stray dogs in the Tibetan refugee camps of Mainpat, India. We completed a collaboration with Texas A&M University in June 2016 to test the potential of our product candidates to manage feral pigs. Studies have also been conducted for proof of concept in Australia with wallaby, rat, and mouse populations and in New Zealand with rats and brushtail possums. We have also conducted early trials with cats in collaboration with the University of Florida.

These diverse studies seek to provide evidence of the potential for ContraPest and the continued development of fertility control technology in general.

Business Strategy

Our goal is to become a leader in fertility control technology designed to limit the adverse effects of rodent infestations, including infrastructure damage and risks to our communities' health and food security. Key elements of our strategy are:

- Work to maximize market acceptance for, and generate sales of, our products;
- Manage the infrastructure for sales, marketing and distribution of ContraPest and any other product candidates for which we may receive regulatory approval;
- Seek additional regulatory approvals for ContraPest and, to the extent we believe there is commercial viability, our other product candidates;
- Further develop our manufacturing processes to contain costs while being able to scale to meet future demand of ContraPest and any other product candidates for which we receive regulatory approval;
- Continue product development of ContraPest and advance our research and development activities and, as our operating budget permits, advance the research 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 product development and commercialization efforts and operations as a public company.

Manufacturing, Marketing and Distribution

Commercialization Plans

We began to fully commercialize ContraPest and to generate revenue from the sale of **ContraPest in** the second quarter of 2018. Our target market segments for ContraPest include structural accounts (multi-family housing); national retailers; zoos and animal sanctuaries; food production and agriculture (e.g., meat packing facilities, dairy production plants, vegetable and fruit preparation facilities farms, storage facilities and protein production facilities (including cattle, sheep, pig and poultry facilities)); hospitality and theme parks (e.g., major restaurant chains and hotels) and municipalities (e.g., subways, transit systems and public housing agencies).

We market ContraPest both to pest management companies and directly to target segments, using a direct PMP sales channel, indirectly through distributor sales, and a direct sales force to targeted customer segments. In addition, we have been pursuing strategic relationships with large pest management companies and affinity groups for the distribution and sale of ContraPest.

Sales Approach

In the U.S., ContraPest is most commonly deployed and serviced by a licensed PMP, although some customers have in house pest management service personnel. In some circumstances, customers of pest management services will direct these PMPs to use certain products in the provision of their service.

Many of our potential customers purchase their products through a network of distributors. The advantages to us of selling through such distributors include:

- Immediate availability of a field sales force experienced in selling rodent control products;
- Familiarity with our target customers and the challenges they face;
- Our field personnel, customer service, accounts receivable, and shipping and handling teams can be smaller, thus reducing fixed operational costs; and
- Less need to substantially expand the sales force as our product gains traction with new customers.

Because of the unique nature of our technology, pest management companies generally have an interest in learning more about ContraPest. Consequently, we plan to continue to foster these discussions, to exchange data, and to negotiate agreements with carefully selected partners to maximize the appropriate deployment of our product.

We plan to be deeply involved in the initial deployment of ContraPest and assist with in-depth product training, business development, and the creation of sales and marketing tools.

Third-Party Arrangements

As a result of our sales approach and target markets, we are party to the following arrangements:

Distribution – In the U.S., ContraPest is primarily deployed and serviced by licensed PMPs. These PMPs typically purchase their supplies through distributors. Accordingly, we have agreements with seven distributors, and intend to add additional distributors from time to time. We also have the ability to sell directly to large pest control companies or other entities that provide in-house pest control.

Subject to obtaining necessary regulatory approvals, we plan to market ContraPest in additional international jurisdictions, including Europe. Our expectation is that we will stage these market launches after gaining further success in the United States or we find partners to finance the cost of the regulatory approval process and launches. However, we have not yet entered into any binding agreements related to these matters.

Pricing and Value

Our pricing strategy takes into account the cost of goods sold, the cost of competitive products and the value of our product to the end user. We believe ContraPest will be perceived as a significant value as a complement to existing pest control products or as a non-lethal stand-alone solution for managing rat infestations and, as such, should command a premium price. Our experience is that potential customers understand the advantages of ContraPest and become enthusiastic about its use. We plan to continue to use promotional efforts to support the value message and to justify our product's premium price, built around the following proposed advantages:

- ContraPest as a proven technology with:
    - A targeted delivery for maximum efficacy;
    - A proprietary gravity feeding system that optimizes consumption.
- ContraPest can be used as an anchor for an integrated pest management program, or as a stand-alone solution to decrease reliance on poisons or other lethal options.
- ContraPest is designed, formulated and dispensed to be low hazard for handlers and non-targeted species such as wildlife, livestock and pets.

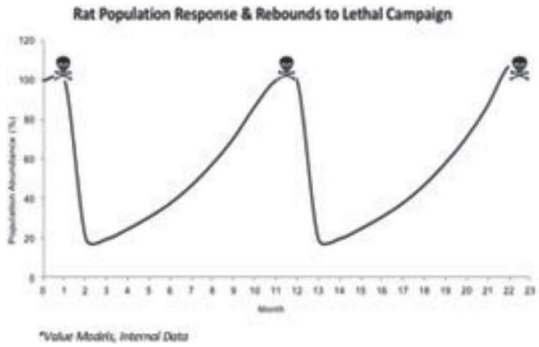
We also focus on specific advantages for the individual customer and expect to position our product as having the following additional general advantages:

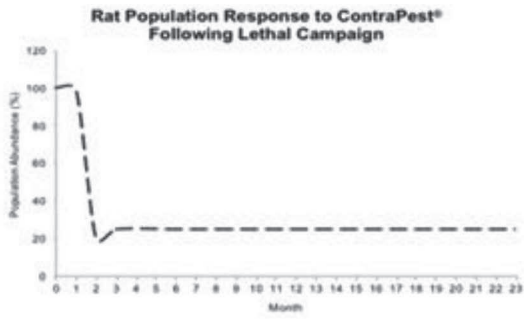
- Savings by reducing loss or contamination of food inventories;
- Savings by reducing damage to infrastructure;
- Creation of a more predictable cost model based on prevention vs. treatment of spikes in population seen with rebound effect;
- Reduction in disease vectors and clean-up costs with reduction of rat carcasses;
- Savings in reduction of the use of other integrated pest management protocols as populations decrease with ContraPest deployment; and
- Public relations advantages when reducing usage of poisons and other lethal products.

Focus Areas & Key Markets

As part of an integrated pest management program, ContraPest can target rat fertility and offer stable population control, to combat the most difficult rat infestations and assist in keeping manageable population levels going forward. This can limit the rebound effect seen with traditional rodent control measures, and with lower population levels in place, PMPs are able to reduce

the number of ContraPest stations to accommodate a lower population, increasing their work flow efficiency and saving time to focus on integrating other integrated pest management tools to focus on prevention and maintenance rather than responding to population spikes.





Target markets include specific customers looking to reduce the level of lethal poisons as part of their pest management program including settings such as zoos, animal sanctuaries and island ecologies. As a stand-alone option, ContraPest can offer a non-lethal approach to helping PMPs bring and keep rat populations down.

Raw Materials and Manufacturing Process

ContraPest contains two active ingredients, VCD, an industrial chemical, and triptolide, a plant derived chemical from the Thunder God Vine, *Tripterygium wilfordii*. ContraPest also contains several other inactive ingredients. Currently, we source VCD from standard industrial chemical supply providers. Triptolide is derived from the Thunder God Vine, which is commonly cultivated and harvested wild in southeastern China and other Asian countries, and is available from a variety of sources. The process to purify triptolide for use in ContraPest is expensive, and we are currently investigating other, less costly sources of triptolide.

Our manufacturing process involves the incorporation of our two active ingredients, in low concentrations, into several inert ingredients. Once incorporated, the entire product goes through a micro-encapsulation process in order to stabilize the final formulation. Stabilizing the product in this manner allows it to be delivered to rodents in a non-lethal and effective manner.

Currently, we have production scale capability in our facilities in Arizona to manufacture ContraPest. Our internal production capabilities allow us to meet our current and anticipated demand during 2019 for ContraPest.

Scientific Background Regarding our Product

ContraPest is a liquid bait containing the active ingredients VCD and triptolide. When consumed, ContraPest targets reproduction, limiting fertility in male and female rats beginning with the first breeding cycle following consumption.

The female rat is born with a finite number of eggs, also called oocytes, and she remains fertile and will reproduce until the day she dies. Within the ovary, eggs are contained in structures called follicles. The non-regenerating and most immature stage of follicles is called primordial. The primordial follicles mature through several stages from primary to secondary to antral follicles and ultimately ovulate. Once the primordial follicles have become depleted, ovarian failure occurs, which terminates reproductive capability.

VCD has been well studied and causes specific loss of ovarian small follicles (both primordial and primary). Because oocytes do not regenerate, loss of these follicles leads to ovarian failure. Following repeated dosing, VCD causes ovarian failure in rats. However, daily dosing of rats with VCD does not produce generalized toxicity nor does it affect other tissues. A rat that consumes VCD will continue to reproduce until the pool of growing follicles are depleted through ovulation or atresia, which is the natural removal of follicles, which can take up to three months.

The second active ingredient, triptolide, stops growing follicles and exerts a significant suppression of male fertility by preventing sperm maturation impairing the movement of sperm. Female rats treated with triptolide ovulate fewer eggs because the follicles stop growing. Triptolide does not affect primordial follicles, but when used in combination with VCD, the result is contraception. The combination of VCD and triptolide profoundly effects the male.

Both VCD and triptolide are supported by evidence regarding their safety and mechanism of action. Additionally, recent studies, both in the lab and in the field, have documented their effect in fertility reduction and therefore reduction in rat populations. The graph below displays the total numbers of pups after two breeding rounds in one study.

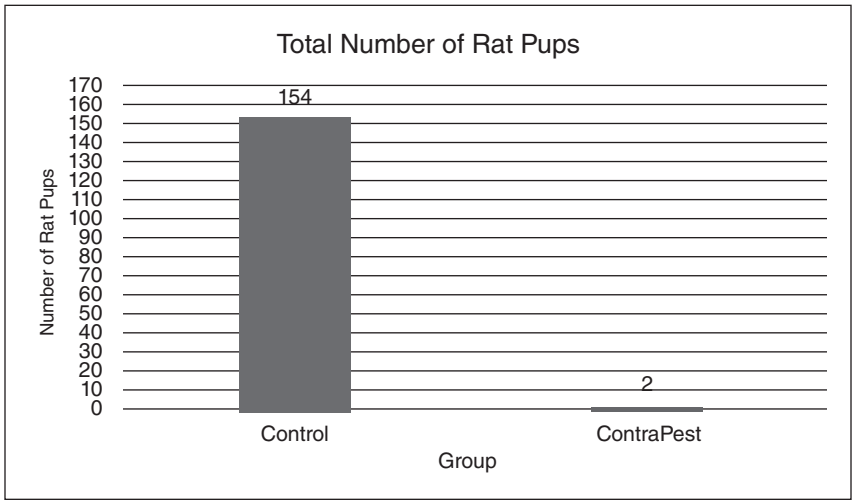


Figure: Total number of rat pups born after consumption of ContraPest. Sixteen female rats (n=8 control and n=8 treatment) were provided ContraPest or inactive bait for 15 days and bred with proven male breeders. After two breeding rounds, the number of pups was totaled. The bar on the left shows the number of pups born to control females while the bar on the right shows the number of pups born to females that consumed ContraPest.

Other Potential Products

We have developed a pipeline of potential additional fertility control and animal health products, with diverse applications, as outlined in the following chart and in more detail below. As we focus on the commercialization of ContraPest, only minimal progress is expected on new product development during the coming year.

Product Candidate/Area	Development Status	Segment	Primary Target
Feral animal fertility control	Pilot study	Population management	Feral dogs and hogs
Non-surgical spay and neutering	Pilot study	Companion animal health	Companion dogs and cats
Boar taint	Laboratory and initial pilot study	Food production and safety	Boars
Animal cancer treatment	Concept	Companion animal health	Companion dogs

Boar Taint Product Candidate

Boar taint is the offensive odor or taste that can be evident during the cooking or eating of pork or pork products caused by hormones, called pheromones, present in non-castrated boars once they reach puberty. Castration without anesthesia shortly after birth is currently the standard procedure used to eliminate boar taint, but it results in lower meat production due to decreased weight gain, which is an effect of castration. This process also introduces a surgical risk of infection and can raise safety issues for workers.

If we are successful at developing a boar taint product candidate, we expect that it will target testosterone production and will be easily administered to feedlots and will have none of the safety issues associated with castration. The next step will be continued scientific and field studies followed by submission to and approval by the appropriate regulatory agencies.

Feral Animal Fertility Control Product Candidate

Feral dogs and hogs present problems both in the United States and internationally. The negative impacts of feral dogs include threats to human health and safety, agriculture, natural resources and property. Feral pigs can be aggressive and are known for damaging crops and transmitting diseases to humans, livestock and other wildlife.

Current strategies for controlling feral animal populations are often ineffective, difficult to conduct and costly. Studies have shown that our fertility control technology is effective in both these species. Further development on this product candidate is on hold, but we intend to pursue this further as resources become available.

Companion Animal Product Candidates

We would like to develop the following products for use in companion animals such as domestic dogs and cats. However, applications for companion animals require FDA approval, which is a much longer and more expensive regulatory process. Our expectation is that we will pursue these technologies through research and development arrangements with other stakeholders.

- *Non-Surgical Spay and Neutering Product Candidate*. Based on a low average of $100 for each spay or neuter procedure, the spay and neutering of companion animals constitutes a significant market in the United States alone, with few effective non-surgical alternatives. We are developing a product that can be easily administered to the companion animal orally or by injection in combination with vaccinations. No surgery is required and the surgical risks of infection and pain could be eliminated. This product candidate targets the ovaries and testes and is delivered through a proprietary drug delivery methodology. Early field studies with feral dogs showed encouraging signs of efficacy.

- *Animal Cancer Treatment Product Candidate*. Cancer therapy for companion animals is often not a viable option since chemotherapy can be a long, painful and expensive process. However, we have developed a manufacturing technology that allows the chemotherapeutics to be encapsulated and delivered directly to the affected tissues without causing the side effects to the immune, hypothalamic systems or neuro pathways.

Competition

Currently, we are unaware of any other non-lethal fertility control products that target rodents. There are complementary products that are used for managing rodent infestations, which include rodenticides, kill devices and traps, as well as other integrated pest management approaches such as exclusion and sanitation improvements.

While ContraPest can be used as a non-lethal, stand-alone solution, we also believe that it has a valuable role within a successful integrated pest management protocol. By targeting the reproduction of rats, ContraPest can offer a proven solution that allows pest managers to reduce even the most challenging rat infestations, helping keep populations down thus enabling them to focus their efforts on complementary techniques.

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. Our wildlife and pest fertility control products must be approved by the EPA Office of Pesticide Programs, or OPP, before they can be legally marketed and sold in the United States. 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.

Additional product candidates in our pipeline may require approval from other government agencies, namely the USDA and FDA. In 2015, the FDA and EPA entered into a "data sharing" agreement to streamline data review and speed the regulatory process avoiding redundancy where possible, which may facilitate the approval process of our additional product candidates with the FDA.

United States Review and Approval Processes

In the United States, the EPA regulates the sale, distribution and use of any pesticide under the Federal Insecticide, Fungicide and Rodenticide Act, or 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 approval for ContraPest effective August 2, 2016. This EPA approval was granted on a restricted-use basis, including indoor and limited outdoor use, and is based on a liquid formation. On October 18, 2018, the EPA removed the Restricted Use designation. 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. In addition to the EPA registration of ContraPest in the U.S., 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, 23 of which have approved the removal of the Restricted Use designation.

International Review and Approval Processes

We are researching potential additional international markets and will evaluate 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 products, 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, 2018, we had 40 full-time, and four part-time employees including a total of two with Ph.D. degrees. Within our workforce, 21 employees are engaged in research and development and 23 in sales, business development, finance, legal, human resources, facilities, information technology and general management and administration.

With more focus on commercialization of ContraPest, we expect certain field support employees currently classified as research and development will be refocused on sales and marketing efforts and thus, reclassified as such.

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 protect the intellectual property resulting from these efforts with the broadest international patent protections available. Our proprietary data and trade secrets are protected with vigilance and attention to data exchanges among employees, consultants, collaborators and research and trade partners. We further strengthen our market position employing international regulatory expertise.

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 United States 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.

License Agreements

We have an exclusive patent license with the University of Arizona for background intellectual property that we plan to employ for future product development in the domestic animal fertility control market. The patent claims in the United States, Australia and New Zealand cover the use of 4-vinylcyclohexene diepoxide to deplete ovarian follicles in individual mammals and mammal populations. The license agreement, signed in 2005, will terminate with the last-to-expire patent claims, which have a term extending to 2026.

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 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. See Item 1A, "Risk Factors," for more information regarding our intellectual property and other proprietary rights.

Available Information

We electronically file with the Securities and Exchange Commission ("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 Securities Exchange Act of 1934. 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 Securities and Exchange Commission. 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 under Item 1 of Part I, "Business — 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 Relating to our Business

Our future success is dependent on the commercialization of ContraPest and regulatory approval and commercialization of our other product candidates.

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 and the District of Columbia. However, we have not yet had meaningful sales of ContraPest, which is our only product to date that is available for commercialization and the generation of revenue.

We cannot commercialize our other product candidates in the U.S. without first obtaining regulatory approval for each product and each use pattern from the EPA or, if applicable, the Food and Drug Administration, or FDA, and from any related applicable state authorities. Before obtaining regulatory approvals for the commercial sale of any product candidate for a target indication, the law requires that applicants demonstrate through laboratory and field studies and related data that the product candidate will perform its intended function without causing unreasonable adverse effects on the environment. The EPA or a comparable foreign regulatory authority may require more information, including additional data to support approval that may delay or prevent approval.

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

Even following receipt of regulatory approval for ContraPest or future regulatory approval of our other product candidates, such products may not gain market acceptance. Market acceptance of any of our product candidates for which we receive approval depends on a number of factors, including:

- The efficacy and safety of such product candidates as demonstrated in trials;
- The uses, indications or limitations for which the product candidate is approved;
- The potential and perceived advantages of product candidates over alternative or complementary products;
- 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;
- The effectiveness of our sales and marketing efforts and those of our collaborators; and
- Unfavorable publicity relating to the product.

Depending on the commercial success of ContraPest, we may 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 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 to increase in connection with our ongoing activities, particularly as we advance our commercialization activities. We plan to substantially 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. 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:

- Significantly delay, scale back or discontinue the development or commercialization of our product candidates, including ContraPest;

- Seek strategic partners for the manufacturing, sales and distribution of ContraPest 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 cannot successfully commercialize our products, especially ContraPest, we will not become profitable.

If any of our approved product candidates fail to achieve market acceptance, we will not be able to generate significant revenues, which would compromise our ability to become profitable. Furthermore, the commercial success of ContraPest will depend on a number of factors, including the following:

- The development of a commercial organization or establishment of a commercial arrangement with a commercial infrastructure;

- Establishment of a commercially viable pricing;

- Our ability to manufacture quantities of ContraPest using commercially acceptable processes and at a scale sufficient to meet anticipated demand and enable us to reduce our cost of manufacturing;

- Our success in educating end users about the benefits, administration, and use of ContraPest;

- The effectiveness of our own or our potential strategic partners' marketing, sales and distribution strategy, and operations; and

- A continued acceptable safety profile of ContraPest.

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

ContraPest is the first product we have marketed, and 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 established and are continuing to develop a fully 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 ContraPest and any other products that may be approved by the EPA and comparable foreign regulatory authorities, 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 establishand maintain adequate sales, marketing, and distribution capabilities, whether independently or with third parties, we may not be able to generate additional product revenue and may not 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 against more established companies.

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.

Although we obtained EPA approval for ContraPest in less than one year, 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. Our other product candidates could fail to receive marketing approval from the EPA or, with respect to ContraPest or our other product candidates, from a comparable foreign regulatory authority for many reasons, including:

- Disagreement over the design or implementation of our trials;

- Failure to demonstrate a product candidate is safe;

- 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 for and successfully market any of our product candidates. 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 and our other product candidates, 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 or our product candidates, such 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 and comparable foreign regulatory authorities after approval. If the EPA or comparable foreign regulatory authorities become aware of new safety information after approval of ContraPest or any other product candidate, a number of potentially significant negative consequences could result, including:

- 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 ContraPest or any other product candidates. 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 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 for ContraPest and our other 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 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 ContraPest or any other 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. The time required to obtain approval may differ substantially from that required to obtain EPA approval. 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 ContraPest or for any of our other 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.

We have internal manufacturing capabilities to meet our current demand for ContraPest, however, we must develop additional manufacturing capability or rely upon third parties to manufacture our products to meet future demand.

Our existing internal manufacturing platform is adequate for meeting our current demand for ContraPest. 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.

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, 2018, we had 40 full-time and four part-time employees. As our development and commercialization plans and strategies develop, or as a result of acquisitions, we will need additional managerial, operational, sales, marketing, scientific, 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:

- Managing our trials effectively, which we anticipate being conducted at numerous field study sites;
- 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;

- 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.

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 future success is highly dependent on the contributions of our significant employees, as well as our ability to attract and retain highly skilled and experienced sales, research and development, and other personnel in the U.S. and internationally. All of our employees, including our co-founders (one of which is also our chief executive officer), are free to terminate their employment relationship with us at any time, subject to any applicable notice requirements, and their knowledge of our business and industry would be difficult to replace. If one or more of our co-founders, executive officers or significant employees terminates his or her 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, 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. Additionally, our facilities are located in Arizona, which may make attracting and retaining qualified scientific and technical personnel from outside of Arizona difficult. Our failure to attract or retain key personnel could impede the achievement of our research, development, and commercialization objectives.

We have not fully designed, implemented or 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. There are currently no material weaknesses in our internal controls over financial reporting and we are in the process of implementing measures designed to further improve our internal control over financial reporting, including how to remediate any identified material weakness in our internal controls, including:

- the establishment of formalized accounting policies and procedures and internal controls; and

- the implementation of manual and automated controls to support our overall control environment and the segregation of duties and procedures.

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 and emerging growth 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 design and implement 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.

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 Item 3, "Legal Proceedings," for more information. 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 underinsured could result in unanticipated costs, which could harm our business, financial condition and operating results and reduce the trading price of our stock.

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 any of our other products. 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:

- 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.

Business or supply chain disruptions could seriously harm our future revenues and financial condition and increase our costs and expenses.

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 manmade 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 various third parties to supply various ingredients and other items which are critical for producing our product candidates. Our ability to produce our product candidates would be disrupted if the operations of these suppliers are affected by a manmade or natural disaster or other business interruption. 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 plan to seek regulatory approval of our product candidates outside of the U.S. and, accordingly, we expect that we will be subject to additional risks related to operating in foreign countries if we obtain the necessary approvals, including:

- 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.

We are subject to anti-corruption and anti-money laundering laws with respect to our operations and noncompliance with such laws can subject us to criminal and/or civil liability and harm our business.

We are subject to the FCPA, which is the U.S. domestic bribery statute contained in 18 U.S.C. §201, the U.S. Travel Act, the USA PATRIOT Act and other anti-bribery and anti-money laundering laws in countries in which we conduct our business. Anti-corruption laws are interpreted broadly and prohibit companies and their employees and third-party intermediaries from authorizing, offering or providing, directly or indirectly, improper payments or benefits to recipients in the public or private sector. As we commercialize our product candidates and commence international sales and business, we may engage with collaborators and third-party intermediaries to sell our products internationally and to obtain necessary permits, licenses and other regulatory approvals. We or our third-party intermediaries may have direct or indirect interactions with officials and employees of government agencies or state-owned or affiliated entities. We may be found liable for the corrupt or other illegal activities of these third-party intermediaries, our employees, representatives, contractors, partners and agents, even if we do not explicitly authorize such activities.

Noncompliance with anti-corruption and anti-money laundering laws could subject us to whistleblower complaints, investigations, sanctions, settlements, prosecution, other enforcement actions, disgorgement of profits, significant fines, damages, other civil and criminal penalties or injunctions, suspension and/or debarment from contracting with certain persons, the loss of export privileges, reputational harm, adverse media coverage and other collateral consequences. Responding to any action will likely result in a materially significant diversion of management's attention and resources and significant defense costs and other professional fees.

If we are unable 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 U.S. and internationally related to our novel technologies and products that are important to our business. 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 U.S. 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; 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 noninfringing 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 noninfringing 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:

- 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 in the patents 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.

Risks Related to our Capital 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 demonstrate adequate efficacy or an acceptable safety profile, gain regulatory approval, or become commercially viable. To date, we have financed our operations primarily through research grants as well as through the sale of equity securities and debt financings. Until August 2, 2016, we did not have any products approved by a regulatory authority for marketing or commercial sale, and we have generated minimal revenue from product sales to date. We continue to incur significant research, development, and other expenses related to our ongoing operations, including sales, marketing, and distribution functionality. As a result, we are not profitable and have incurred losses in every

reporting period since our inception. For the years ended December 31, 2018 and 2017, we reported net losses of $12.2 million and $12.3 million, respectively. As of December 31, 2018, we had an accumulated deficit since inception of $85.8 million.

Since inception, we have dedicated a majority of our resources to the discovery and development 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:

- Attempt to achieve market acceptance for our products;
- Continue to establish an infrastructure for the sales, marketing and distribution of ContraPest and any other product candidates for which we may receive regulatory approval;
- Scale up manufacturing processes and quantities to prepare for the commercialization of ContraPest and any other product candidates for which we receive regulatory approval;
- Continue the research and development of ContraPest and our other product candidates, including engaging in any necessary field studies;
- Seek regulatory approvals for ContraPest in various jurisdictions and for our other 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 ContraPest or any other product candidate does not gain 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. If we encounter significant issues or delays in the commercialization of ContraPest, these prior losses and expected future losses could have an adverse effect on our financial condition, negatively impact our ability to fund continued operations, our ability to obtain additional financing in the future and our ability to 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.

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, debt financings, 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.

Certain of 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.

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 may be 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:

- 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 the Nasdaq Capital Market;
- 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;
- Additions or departures of key management or scientific personnel;
- 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.

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.

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. As of March 25, 2019, we had 3,181,841 shares of our common stock subject to outstanding warrants that contain anti-dilution adjustments that provide for an adjustment to the exercise price for certain dilutive issuances of securities. If we offer or issue additional securities at a deemed price lower than the current exercise price of these outstanding warrants, these warrants will adjust

pursuant to the price adjustment protection contained within these warrants. For example, our Rights Offering during 2018 resulted in an additional downward adjustment of the exercise price of these warrants from $1.50 per share to $0.95 per share. 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.

In connection with our Rights Offering, each of our directors and officers was subject to certain lock-up agreements that expired in November 2018. Also in connection with our Rights Offering, we sold 5,357,052 shares of common stock, which are generally not subject to lock-up agreements and may be sold by the holder at any time, and warrants to purchase 5,357,052 shares of common stock, which are exercisable immediately by the holder. If these stockholders sell substantial amounts of common shares in the public market, or if the market perceives that such sales may occur, the market price of our common shares and our ability to raise capital through an issue of equity securities in the future could be adversely affected.

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. On January 3, 2018, we received a deficiency letter from the listing qualifications staff of the Nasdaq Stock Market, notifying us that, for the prior 30 consecutive business days, the closing bid price of our common stock was not maintained at the minimum required closing bid price of at least $1.00 per share as required for continued listing on the Nasdaq Capital Market. In accordance with Nasdaq Listing Rules, we had an initial compliance period of 180 calendar days, until July 2, 2018, to regain compliance with this requirement. On June 5, 2018, we received notice from the listing qualifications staff of the Nasdaq Stock Market, notifying us that the closing bid price of our common stock was greater than $1.00 per share for ten consecutive business days and that we had regained compliance with the minimum bid price requirement.

On September 26, 2018, we received a deficiency letter from the listing qualifications staff of the Nasdaq Stock Market, notifying us that, for the prior 30 consecutive business days, the closing bid price of our common stock was not maintained at the minimum required closing bid price of at least $1.00 per share as required for continued listing on the Nasdaq Capital Market. In accordance with Nasdaq Listing Rules, we had an initial compliance period of 180 calendar days, until March 25, 2019, to regain compliance with this requirement. On March 20, 2019 we received notice from the listing qualifications staff of the Nasdaq Stock Market, notifying us that the closing bid price of our common stock was greater than $1.00 per share for ten consecutive business days and that we had regained compliance with the minimum bid price requirement.

We cannot provide any assurance that our stock price will maintain the minimum bid price requirements of Nasdaq or that we will be able to satisfy any other continued listing requirement of the Nasdaq Stock Market. In the event that our common stock is not eligible for 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 could 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 major exchange.

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

Provisions in our 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 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, warrants we issued in November 2017 and June 2018 and the warrants included in the units issuable in the Rights Offering provide a Black Scholes value based payment in connection with certain transactions that may discourage, delay or prevent a merger or acquisition. We may issue additional warrants with similar terms.

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.

We are an "emerging growth company" as that term is used in the JOBS Act, and we intend to take advantage of reduced disclosure and governance requirements applicable to emerging growth companies, which could result in our common stock being less attractive to investors and adversely affect the market price of our common stock or make it more difficult to raise capital as and when we need it.

We are an "emerging growth company" as that term is used in the JOBS Act, and we intend to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies including, but not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act, reduced disclosure obligations regarding executive compensation in our periodic reports and proxy statements, exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and stockholder approval of any golden parachute payments not previously approved, and exemptions from any rules that the Public Company Accounting Oversight Board may adopt requiring mandatory audit firm rotation or a supplement to the auditor's report on the financial statements. We currently intend to take advantage of some of the reduced regulatory and reporting requirements that will be available to us under the JOBS Act, so long as we qualify as an "emerging growth company." For example, so long as we qualify as an "emerging growth company," we may elect not to provide you with certain information, including certain financial information and certain information regarding compensation of our executive officers, that we would have otherwise been required to provide in filings we make with the SEC, which may make it more difficult for investors and securities analysts to evaluate us.

Because of the exemptions from various reporting requirements provided to us as an "emerging growth company," we may be less attractive to investors and it may be difficult for us to raise additional capital as and when we need it. We may take advantage of these reporting exemptions until we are no longer an emerging growth company, which in certain circumstances could be for up to five years. If some investors find our common stock less attractive as a result, there may be a less active trading market for our common stock and our stock price may be more volatile. Investors may be unable to compare our business with other companies in our industry if they believe that our financial accounting is not as transparent as other companies in our industry. If we are unable to raise additional capital as and when we need it, our business, results of operations, financial condition and cash flows, and future prospects may be materially and adversely affected.

Item 1B. ***Unresolved Staff Comments.***

Not applicable

Item 2. ***Properties.***

As of December 31, 2018, our corporate headquarters is located in Flagstaff, Arizona, where we lease and occupy 17,797 square feet of office and industrial space pursuant to a lease that commenced on December 20, 2011 and expires on December 31, 2019. Our manufacturing facility is located within our corporate headquarters, occupying 4,865 square feet of the total space. We believe that we will be able to extend this lease or relocate to nearby facilities.

On November 16, 2016, we leased an additional 1,954 square feet of research and development space, also in Flagstaff, Arizona. This lease expired on November 15, 2018 and was extended for 24 months, through November of 2020. We believe that our existing facilities are adequate and meet our current needs for business, manufacturing and research.

Item 3. ***Legal Proceedings.***

On February 20, 2018, New Enterprises, Ltd. ("New Enterprises"), filed lawsuit against the Company and Roth Capital Partners, LLC ("Roth") in the U.S. District Court for the District of Arizona (the "Court"). The complaint alleges nine counts against the Company, including that: the Company engaged in common law fraud and securities fraud to induce the chairman of New Enterprises into investing in the Company; failed to register New Enterprises' requested transfer; breached stock certificates and the lock-up contract; tortuously interfered with prospective business advantage; and conversion. New Enterprises is seeking monetary damages, including compensatory damages, punitive damages, and attorney's fees. On April 23, 2018, the Company moved to dismiss each of the claims alleged against the Company, and on May 18, 2-18, Roth moved to dismiss each of the claims alleged against it. The motions to dismiss were fully briefed, the Court issued an order granting the motions to dismiss, dismissing each of the claims alleged in the Complaint but allowed New Enterprises to file a motion for leave to file an Amended Complaint seeking to cure the deficiencies in its claims. On January 25, 2019, New Enterprises moved for leave to file an amended complaint, alleging similar claims against the Company and Roth. The Company and Roth have filed oppositions to New Enterprises' motion, New Enterprises filed its reply, and the motion is currently under advisement with the Court. Roth has made a claim for indemnification to the Company based on contractual indemnification agreements, but to date, the Company has not accepted Roth's indemnification demand.

On April 20, 2018, the Company's former Executive Vice President and Chief Operating Officer Andrew Altman filed a charge of employment discrimination with the Equal Employment Opportunity Commission (EEOC) against the Company. Mr. Altman claimed that he was terminated after he expressed opposition to an email Cheryl Dyer, Chief Research Officer, had sent out to the management team, in which she criticized a Mormon newspaper. The Company filed a position statement on May 21, 2018. No substantive action has been taken since then, and the Company has not heard anything further either from the EEOC or Mr. Altman's attorneys.

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 March 28, 2019, there were approximately 626 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 (repurchase) shares of common stock in connection with the vesting of restricted shares to satisfy required tax withholding obligations. The following table sets forth information regarding purchases of our equity securities during the three months ended December 31, 2018:

Period	(a) Total number of shares purchased[1]	(b) Average price paid per share[1]	(c) Total number of shares purchased as part of publicly announced plans or programs	(d) Approximate dollar value of shares that may yet be purchased under the plans or programs
October 1, 2018 to October 31, 2018	—	$ —	—	$ —
November 1, 2018 to November 30, 2018	—	$ —	—	$ —
December 1, 2018 to December 31, 2018.	17,375	$ 0.70	—	$ —
Total	17,375	$ 0.70	—	$ —

(1) Fully vested shares of common stock withheld (purchased) by us in satisfaction of required withholding tax liability upon vesting of restricted stock.

Item 6. ***Selected Financial Data.***

Not applicable.

Item 7. ***Management's Discussion and Analysis of Financial Condition and Results of Operations.***

The following Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with our condensed consolidated financial statements and related notes. Some statements and information contained in this Management's Discussion and Analysis of Financial Condition and Results of Operations, notes to our condensed consolidated financial statements and elsewhere in this report are not historical facts but are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended (the "Securities Act"), and Section 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). In some cases, readers can identify forward- looking statements by terms such as "may," "will," "should," "expect," "plan," "intend," "forecast," "anticipate," "believe," "estimate," "predict," "potential," "continue," or the negative of these terms or other comparable terminology, which when used are meant to signify the statement as forward-looking. These forward-looking statements include, but are not limited to, our expectations regarding new accounting standards on our financial results, our expectations regarding our critical accounting policies; our expectations regarding our current operating plan, including operating expenses, product sales and revenue expectations, profitability and cash flows, anticipated revenue and sales of our equity securities, our beliefs regarding the use of stock-based awards as a compensation tool, our beliefs regarding certain tax positions, our beliefs regarding our revenue targets and the sufficiency of our liquidity and capital resources, our beliefs regarding ongoing litigation, our expectations regarding our significant employees, our expectations regarding commercialization of ContraPest and product development of our other product candidates, our expectations regarding our sales channel, including distributors, our expectations regarding regulatory approval of our products or product candidates, the continued listing of our common stock on The Nasdaq Capital Market, statements about our plans, objectives, expectations and intentions and other statements that are not historical facts. 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 of Part II of this Report, entitled "Risk Factors," and those contained from time to time in our other filings with the Securities and Exchange Commission. Readers are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date made. Except as required by law, we undertake no obligation to update any forward-looking statement, whether as a result of new information, future events or otherwise.

Overview

Since our inception in 2004, we have devoted substantially all of our resources to organizing and staffing our company, conducting research and development activities for our product candidates, business planning, raising capital and acquiring and developing product and technology rights. Until August 2016, we did not have any products approved for sale, and we have generated minimal revenue from product sales to date. We have primarily funded our operations to date with proceeds from the sale of common stock and preferred stock, the issuance of convertible and other promissory notes and, to a lesser extent, payments received in connection with research grants and licensing fees. Through December 31, 2017, we had received net proceeds of $61.7 million from our sales of common stock, preferred stock and issuance of convertible and other promissory notes and an aggregate of $1.7 million from research grants and licensing fees and an aggregate of $0.4 million in product sales. At December 31, 2018, we had an accumulated deficit of $85.8 million and cash and cash equivalents of $4.9 million.

We have incurred significant operating losses every year since our inception. Our net losses were $12.2 million and $12.3 million for the years ended December 31, 2018 and 2017 respectively. We expect to continue to incur significant expenses and generate operating losses for at least the next 12 months.

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, 2018 and December 31, 2017 was $3.4 million and $3.7. million, respectively, which represented 28.6% and 30.0%, respectively, of our total operating expenses for those periods.

Components of our Results of Operations

Net Sales

Net sales are comprised primarily of sales, net of discounts and promotions, of ContraPest and related components, to our distributors and customers.

Prior to 2017, all of our revenue was derived from payments received in connection with research grants and licensing fees received under the former license agreement with Neogen. We recognized $0 revenue for the years ended December 31, 2018 and December 31, 2017, respectively, for services performed under NIH grants and in licensing fees under our former license agreement with Neogen. We do not anticipate additional grant revenue under the NIH grants or additional revenue from our former license agreement with Neogen.

Operating Expenses

Research and Development Expenses

Research and development expenses consist primarily of costs incurred in connection with the research and development of ContraPest and our other product candidates, which include:

- Employee related expenses, including salaries, related benefits, travel and stock-based compensation expense for employees engaged in research and development functions;
- Expenses incurred in connection with the development of our product candidates; and
- Facilities, depreciation and other expenses, which include direct and allocated expenses for rent and maintenance of facilities, insurance and supplies.

We expense research and development costs as incurred.

We continue to investigate other applications of our core technology to other product candidates, which includes laboratory tests and academic collaborations. We also continue to develop our supply chain, particularly identifying and improving our sourcing of triptolide, a key active ingredient for our product candidates. At this time, we cannot reasonably estimate the costs for further development of ContraPest or the cost associated with the development of any of our other product candidates.

We plan to continue to hire employees to support our research and development efforts and anticipate that we will continue to utilize various forms of stock-based compensation awards in order to attract and retain employees for our research and development efforts. As a result, we anticipate that stock-based compensation expense will continue to represent a significant portion of our research and development expenses for the foreseeable future.

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.

We anticipate that our selling, general and administrative expenses may increase in the future as we increase our headcount to support commercialization of ContraPest and further development of our product candidates. We also anticipate that we will incur increased accounting, audit, legal, regulatory, compliance, director and officer insurance costs as well as investor and public relations expenses associated with being a public company.

We plan to continue to hire employees to support our commercialization of ContraPest and further development of our product candidates and anticipate that we will continue to utilize various forms of stock-based compensation awards in order to attract and retain qualified employees. As a result, we anticipate that stock-based compensation expense will continue to represent a significant portion of our selling, general and administrative expenses for the foreseeable future.

Interest Income.

Interest income consists primarily of interest income earned on cash and cash equivalents. Prior to 2017, our interest income has not been significant due to nominal cash and investment balances and low interest earned on invested balances.

Interest Expense.

Interest expense consists primarily of interest accrued on our capital lease and note commitments.

Other Income (Expense), Net.

Other income (expense), net, consists primarily of recognized change in value of short-term investments and income (expense) related to the year-over-year fair market value adjustment of our derivative warrant and losses associated with the early extinguishment of debt.

Income Taxes

Deferred tax assets and liabilities are determined based on differences between the financial statement and tax basis of assets and liabilities, as well as a consideration of net operating loss and credit carry forwards, using enacted tax rates in effect for the period in which the differences are expected to impact taxable income. A valuation allowance is established, when necessary, to reduce deferred tax assets to the amount that is more likely than not to be realized. The Company's effective tax rate for the years ended December 31, 2018 and December 31, 2017 has been affected by the valuation allowance on the Company's deferred tax assets.

Since our inception, we have not recorded any U.S. federal or state income tax benefits for the net losses we have incurred in each year or for our earned research and development tax credits, due to our uncertainty of realizing a benefit from those items. At December 31, 2018, the Company has federal and state net operating loss carryforwards of approximately $51.1 million and $37.6 million, respectively, not considering the IRC Section 382 annual limitation discussed below. The federal loss carryforwards begin to expire in 2023, unless previously utilized. Additionally, the utilization of the net operating loss carryforwards are subject to an annual limitation under Section 382 and 383 of the Internal Revenue Code od 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 percent points over a three-year period. The Company has 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, the Company's net operating losses could be limited.

Comparison of the Years December 31, 2018 to 2017

The following table summarizes our results of operations for the years ended December 31, 2018 and 2017:

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

	For the Years Ended December 31,	
	2018	**2017**
Net Sales	$ 297	$ 52
Cost of sales	241	45
Gross profit	56	7
Operating expenses:		
Research and development	2,404	3,191
Selling, general and administrative	9,532	9,132
Total operating expenses	11,936	12,323
Net operating loss	(11,880)	(12,316)
Other income (expense):		
Interest income	25	29
Interest expense	(74)	(85)
Interest expense, related parties	—	(1)
Other income (expense)	21	87
Total other income (expense)	(28)	30
Net loss and comprehensive loss	$ (11,908)	$ (12,286)
Warrant andtdilution price protection adjustment.	333	—
Net loss attributable to common shareholders	$ (12,241)	$ (12,286)
Loss per share attributable to common shareholders, basic and diluted	$ (0.63)	$ (1.12)
Weighted average common shares outstanding - basic and fully diluted	19,402,091	10,920,909

Net Sales

Net sales, shown net of sales discounts and promotions, were $297,000 for the year ended December 31, 2018, compared to $52,000 for year ended December 31, 2017. The increase in our net product sales of $245,000 was a result of increased sales of ContraPest to our distributors as a result of increased marketing efforts and sales promotions. We expect net product sales to continue to increase year over year for the foreseeable future.

Cost of Goods Sold

Cost of goods sold was $241,000, or 81.1% of net sales, for the year ended December 31, 2018, compared to $45,000, or 86.5% of net sales for year ended December 31, 2017. The increase in cost of goods sold of $196,000, was driven by the cost of increased sales, increased sales discounts and promotions as well as increased scrap related to product manufactured during scale up activities that were ultimately deemed unsellable. The decrease as a percentage of sales was a result of process improvement efficiencies. We anticipate cost of goods sold as a percentage of sales will improve for the foreseeable future due to manufacturing efficiencies as a result of the scale up activities.

Gross Profit

Gross profit for the year ended December 31, 2018 was $56,000 or 18.9% of net sales, compared to a gross profit of $7,000 or 13.5% of net sales, for the year ended December 31, 2017. The increase in gross profit was a direct result of increased sales volume as described above, partially offset by increased sales discounts and promotions as well as increased scrap related to scale up activities.

Research and Development Expenses

	Year Ended December 31,		Increase (Decrease)
	2018	2017	
		(in thousands)	
Direct research and development expenses:			
Personnel related (including stock-based compensation)	$ 1,548	$ 1,840	$ (292)
Facility related	234	293	(59)
Other	622	1,058	(436)
Total research and development expenses	$ 2,404	$ 3,191	$ 787

Research and development expenses were $2.4 million for the year ended December 31, 2018, compared to $3.2 million for the year ended December 31, 2017. The $800,000 decrease in research and development expenses was primarily due to decreases in consulting and legal expenses, primarily related to regulatory affairs, of $384,000, stock compensation expenses of $271,000, rent and facilities of $60,000 and a reduction of manufacturing equipment maintenance of $134,000, offset by increases in travel related to customer support expense of $30,000 and depreciation expense of $290,000 due to equipment adds during 2018.

We continue to investigate other applications of our core technology to other product candidates, which includes laboratory tests and academic collaborations. We also continue to develop our supply chain, particularly identifying and improving our sourcing of triptolide and other ingredients for our product and product candidates.

Selling, General and Administrative Expenses

Selling, general and administrative expenses were $9.5 million for the year ended December 31, 2018, compared to $9.1 million for the year ended December 31, 2017. The increase of $0.4 million in selling, general and administrative expenses was primarily due to an increase of $307,000 in recruiting and other benefit expenses and an increase of $125,000 in legal expenses as a result of ongoing litigation, offset by a decrease of $32,000 in stock-based compensation expense.

Interest Expense Net

We recorded $49,000 of interest expense, net for the year ended December 31, 2018, compared to $57,000 for the year ended December 31, 2017. The decrease in interest expense, net of $8,000 was the result of decreased debt in the form of notes payable due primarily to the sale of a vehicle and related debt reduction in April 2018.

Other Income (Expense), Net

We recorded $21,000 of other income, net for the year ended December 31, 2018, compared to $87,000 of other income for the year ended December 31, 2017. The $66,000 net decrease in other income was primarily due to lower income recognized for year-over-year fair market value adjustment of our convertible promissory notes and a $10,000 loss on the early extinguishment of a note payable during 2018.

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. We have generated limited revenue to date from product sales, research grants and licensing fees received under our former license agreement with Neogen. In 2017, we began full scale marketing of our first product, ContraPest, and we continue to develop other product candidates, which are in various phases of development. We have funded our operations to date through the sale of equity securities, including convertible preferred stock, common stock and warrants to purchase common stock, debt financing, consisting primarily of convertible notes; and, to a lesser extent, payments received in connection with product sales, research grants and licensing fees. Through December 31, 2018, we had received net proceeds of $61.7 million from our sales of common stock, preferred stock and warrant exercises and issuance of convertible and other promissory notes, and an aggregate of $1.7 million from licensing fees and an aggregate of $0.4 million from product sales. At December 31, 2018, we had an accumulated deficit of $85.8 million and cash and cash equivalents of $4.9 million.

Our ultimate success depends upon the outcome of a combination of factors, including: (i) successful commercialization of ContraPest and ongoing regulatory approval of our other product candidates; (ii) market acceptance, commercial viability and profitability of ContraPest 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 and highly liquid, short term investments at December 31, 2018, in combination with anticipated revenue and additional sales of our equity securities, will be sufficient to fund our current operations for at least the next 12 months. However, if anticipated revenue targets and margin targets are not achieved and we are unable to raise necessary capital through the sale of our securities, we may seek to reduce operating expenses, and take other measures that could impair our ability to be successful and operate as a going concern. In any event, we are likely to require additional capital in order to fund our operating losses and research and development activities until we become profitable. 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.

Additional Funding Requirements

We expect our expenses to increase in connection with our ongoing activities, particularly as we market and focus on sales of ContraPest, and as we advance field studies of our product candidates in development. In addition, we will continue to incur costs associated with operating as a public company. As a result, we anticipate requiring additional funding during 2019.

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

- Work to maximize market acceptance for, and generate sales of, our products;
- Manage the infrastructure for the sales, marketing and distribution of ContraPest and any other product candidates for which we may receive regulatory approval;
- Continue the development of ContraPest and our other product candidates, including engaging in any necessary field studies;
- Seek additional regulatory approvals for ContraPest and our other product candidates;
- Scale up manufacturing processes and quantities to meet future demand of ContraPest and any other product candidates for which we receive regulatory approval;
- Continue product development of ContraPest and advance our research and development activities and advance the research 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 product development and commercialization efforts and operations as a public company.

Cash Flows

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

	Year Ended December 31,	
	2018	**2017**
Cash used in operating activities	$ (9,129)	$ (9,321)
Cash used in investing activities	5,016	(5,902)
Cash provided by financing activities	6,932	5,498
Net increase (decrease) in cash and cash equivalents	$ 2,819	$ (9,725)

Operating Activities.

During the year ended December 31, 2018, operating activities used $9.1 million of cash, primarily resulting from our net loss of $11.9 million and changes in our operating assets and liabilities of $1.0 million, partially offset by non-cash charges of $3.8 million. Our net loss was primarily attributed to research and development activities and our selling, general and administrative expenses, as we generated limited product sales and no research grant and licensing revenue during the period. Net cash used by changes in our operating assets and liabilities for the year ended December 31, 2018 consisted primarily of a $29,000 decrease in accrued expenses and accounts payable, an increase in inventories of $721,000, a net increase in accounts receivable and deposits of $113,000 and an increase in prepaid expenses of $172,000

During the year ended December 31, 2017, operating activities used $9.3 million of cash, primarily resulting from our net loss of $12.3 million and changes in our operating assets and liabilities of $1.0 million, partially offset by non-cash charges of $4.0 million. Our net loss was primarily attributed to research and development activities and our general and administrative expenses, as we generated limited product sales, research grant and licensing revenue during the period. Net cash used by changes in our operating assets and liabilities for the year ended December 31, 2017 consisted primarily of a $742,000 decrease in accrued expenses and accounts payable, an increase in inventories of $483,000 and an increase in accounts receivable and deposits of $14,000, partially offset by a decrease in prepaid expenses of $167,000. The decrease in accrued expenses and accounts payable was primarily a result of a $1.0 million payment to Neogen in fulfillment of our settlement agreement in January 2017, offset by decreased payments of accrued expenses and accounts payable as a result of negotiation of better payable terms and management of payment timing.

Investing Activities.

During the year ended December 31, 2018, we generated $5.0 million of cash in investing activities, which consisted of $5 million in the sale of short term, highly liquid investments and $185,000 generated from the sale of equipment, offset by $239,000 used in the purchases of property and equipment.

During the year ended December 31, 2017, we used $5.9 million of cash in investing activities, which consisted of $5 million in the purchase of short term, highly liquid investments and $898,000 used in the purchases of property and equipment.

Financing Activities.

During the year ended December 31, 2018, net cash provided by financing activities was $6.9 million as a result of $5.1 million in proceeds from the issuance of common stock, net, $2.2 million in proceeds from warrant exercises and $9,000 in proceeds from issuances of notes, offset by $293,000 of repayments of related to notes payable and notes payable, related party, $71,000 in repayments of capital lease obligations and $58,000 of payments for employee withholding taxes related to share-based awards.

During the year ended December 31, 2017, net cash provided by financing activities was $5.5 million as a result of $5.2 million of net proceeds from the issuance of shares of common stock in a public offering in November 2017 as discussed elsewhere in this Annual Report on Form 10-K, $6,000 of proceeds received from the exercise of stock options and warrants, and $437,000 of proceeds received from our issuance of notes payable, all of which were partially offset by payments of $97,000 related to the notes payable, and $95,000 in repayments of capital lease obligations.

Recent Developments

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. On January 3, 2018, we received a deficiency letter from the listing qualifications staff of the Nasdaq Stock Market, notifying us that, for the prior 30 consecutive business days, the closing bid price of our common stock was not maintained at the minimum required closing bid price of at least $1.00 per share as required for continued listing on the Nasdaq Capital Market. In accordance with Nasdaq Listing Rules, we had an initial compliance period of 180 calendar days, until July 2, 2018, to regain compliance with this requirement. On June 5, 2018, we received notice from the listing qualifications staff of the Nasdaq Stock Market, notifying us that the closing bid price of our common stock was greater than $1.00 per share for ten consecutive business days and that we had regained compliance with the minimum bid price requirement.

On September 26, 2018, we received a deficiency letter from the listing qualifications staff of the Nasdaq Stock Market, notifying us that, for the prior 30 consecutive business days, the closing bid price of our common stock was not maintained at the minimum required closing bid price of at least $1.00 per share as required for continued listing on the Nasdaq Capital Market. In accordance with Nasdaq Listing Rules, we had an initial compliance period of 180 calendar days, until March 25, 2019, to regain compliance with this requirement. On March 20, 2019 we received notice from the listing qualifications staff of the Nasdaq Stock Market, notifying us that the closing bid price of our common stock was greater than $1.00 per share for ten consecutive business days and that we had regained compliance with the minimum bid price requirement.

We cannot provide any assurance that our stock price will maintain the minimum bid price requirements of Nasdaq or that we will be able to satisfy any other continued listing requirement of the Nasdaq Stock Market. In the event that our common stock is not eligible for 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 could 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 major exchange.

Critical Accounting Policies and Significant Judgments 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.

While our significant accounting policies are described in more detail in Note 2 — Summary of Significant Accounting Policies to our financial statements included elsewhere in this Annual Report on Form 10-K, we believe that the following accounting policies are those most critical to the judgments and estimates used in the preparation of our financial statements.

Revenue Recognition

Effective January 1, 2018, the Company adopted ASC 606 — Revenue from Contracts with Customers. Under ASC 606, the Company recognizes 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. For the comparative periods, revenue has not been adjusted and continues to be reported under ASC 605 — Revenue Recognition. Under ASC 605, revenue is recognized when the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) the performance of service has been rendered to a customer or delivery has occurred; (3) the amount of fee to be paid by a customer is fixed and determinable; and (4) the collectability of the fee is reasonably assured.

There was no impact on the Company's financial statements as a result of adopting ASC 606 for the years ended December 31, 2018 and 2017, respectively.

Stock-Based Compensation

We recognize compensation costs related to stock options granted to employees based on the estimated fair value of the awards on the date of grant, net of estimated forfeitures, in accordance with ASC Topic 718 — *Stock Compensation* ("ASC 718"). We estimate the grant date fair value of the awards, and the resulting stock-based compensation expense, using the Black-Scholes option pricing model. The grant date fair value of stock-based awards is expensed on a straight-line basis over the vesting period of the respective award. We account for stock-based compensation arrangements with non-employees using a fair value approach. The fair value of these stock options is measured using the Black-Scholes option-pricing model reflecting the same assumptions as applied to employee options in each of the reported periods, other than the expected life, which is assumed to be the remaining contractual life of the option. The fair value of the stock options granted to non-employees is re-measured as the stock options vest and is recognized in the statements of operations and comprehensive loss during the period the related services are rendered.

We recorded stock-based compensation expense of approximately $3.4 million and $3.7 million for the years ended December 31, 2018 and 2017 respectively. We expect to continue to grant stock options and other equity-based awards in the future, and to the extent that we do, our stock-based compensation expense recognized in future periods will likely increase.

The Black-Scholes option pricing model requires the use of highly subjective and complex assumptions, which determine the fair value of stock-based awards. If we had made different assumptions, our stock-based compensation expense, net loss and loss per share of common stock could have been significantly different. Our assumptions are as follows:

- *Expected term*. The expected term represents the period that the stock-based awards are expected to be outstanding. Our historical share option exercise experience does not provide a reasonable basis upon which to estimate an expected term because of a lack of sufficient data. Therefore, we estimate the expected term by using the simplified method, which calculates the expected term as the average of the time-to-vesting and the contractual life of the options.

- *Expected volatility*. Expected volatility is derived from the average historical volatilities of publicly traded companies within our industry that we consider to be comparable to our business over a period approximately equal to the expected term. We intend to continue to consistently apply this process using the same or similar public companies until a sufficient amount of historical information regarding the volatility of our own common stock price becomes available, or unless circumstances change such that the identified companies are no longer similar to us, in which case, more suitable companies whose share prices are publicly available would be utilized in the calculation.

- *Risk-free interest rate*. The risk-free interest rate is based on the U.S. Treasury yield in effect at the time of grant for zero coupon U.S. Treasury notes with maturities approximately equal to the expected term.

- *Expected dividend*. The expected dividend is assumed to be zero as we have never paid dividends and have no current plans to pay any dividends on our common stock.

- *Expected forfeitures*. We use historical data to estimate pre-vesting option forfeitures and record stock-based compensation expense only for those awards that are expected to vest. To the extent actual forfeitures differ from the estimates, the difference will be recorded as a cumulative adjustment in the period that the estimates are revised.

Significant Factors, Assumptions and Methodologies Used in Determining Fair Value of Our Common Stock

As noted above, we are required to estimate the fair value of the common stock underlying our stock-based awards when performing the fair value calculations using the Black-Scholes option-pricing model. In the absence of an active market for our common stock, we utilized methodologies in accordance with the framework of the American Institute of Certified Public Accountants' Technical Practice Aid, *Valuation of Privately-Held Company Equity Securities Issued as Compensation*, to estimate the fair value of our common stock. In addition, we have conducted periodic assessments of the valuation of our common stock.

The assumptions underlying these valuations represent management's best estimates, which involve inherent uncertainties and the application of management's judgment. If we had made different assumptions than those used, the amount of our stock-based compensation expense, net income and net income per share amounts could have been significantly different. The fair value per share of our common stock for purposes of determining stock-based compensation expense is the closing price of our common stock as reported on the applicable grant date. The compensation cost that has been included in the statements of operations and comprehensive loss for all stock-based compensation arrangements is as follows:

	Years Ended December 31,	
	2018	2017
	(in thousands)	
Selling, general and administrative expenses	$ 3,306	$ 3,338
Research and development expense	106	377
Total stock-based compensation expense	$ 3,412	$ 3,715

The intrinsic value of stock options outstanding as of December 31, 2018 is $0.

Emerging Growth Company Status

The Jumpstart Our Business Startups Act of 2012, or the JOBS Act, permits an "emerging growth company" such as us to take advantage of an extended transition period to comply with new or revised accounting standards applicable to public companies until those standards would otherwise apply to private companies. We have irrevocably elected to "opt out" of this provision and, as a result, we intend to comply with new or revised accounting standards when they are required to be adopted by public companies that are not emerging growth companies.

Off-Balance Sheet Arrangements

None.

Item 7A. ***Quantitative and Qualitative Disclosures about Market Risk.***

Not applicable.

Item 8. ***Financial Statements and Supplementary Data.***

SENESTECH, INC.
INDEX TO CONSOLIDATED FINANCIAL STATEMENTS

SENESTECH, INC.
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, 2018 and 2017, and the related statements of income, comprehensive income, stockholders' equity, and cash flows for each of the years in the two-year period ended December 31, 2018, and the related notes and schedules (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, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

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.

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.

/s/ M&K CPAS, PLLC

We have served as the Company's auditor since 2014.

Houston, TX

March 29, 2019

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

	December 31, 2018	December 31, 2017
ASSETS		
Current assets:		
Cash	$ 4,920	$ 2,101
Investment in securities	—	5,023
Accounts receivable	139	16
Prepaid expenses	342	170
Inventory	1,261	540
Deposits	9	19
Total current assets	6,671	7,869
Property and equipment, net	1,083	1,454
Total assets	$ 7,754	$ 9,323
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	$ 219	$ 177
Accounts payable	173	391
Accrued expenses	771	589
Notes payable, related parties	—	12
Total current liabilities	1,163	1,169
Long-term debt, net	261	591
Deferred rent	16	41
Total liabilities	1,440	1,801
Commitments and contingencies (See note 15)	—	—
Stockholders' equity:		
Common stock, $0.001 par value, 100,000,000 shares authorized, 23,471,999 and 16,404,195 shares issued and outstanding at December 31, 2018 and December 31, 2017, respectively	24	16
Additional paid-in capital	92,128	81,103
Accumulated deficit	(85,838)	(73,597)
Total stockholders' equity	6,314	7,522
Total liabilities and stockholders' equity	$ 7,754	$ 9,323

See accompanying notes to financial statements.

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

	For the Years Ended December 31,	
	2018	**2017**
Net Sales	$ 297	$ 52
Cost of sales	241	45
Gross profit	56	7
Operating expenses:		
Research and development	2,404	3,191
Selling, general and administrative	9,532	9,132
Total operating expenses	11,936	12,323
Net operating loss	(11,880)	(12,316)
Other income (expense):		
Interest income	25	29
Interest expense	(74)	(85)
Interest expense, related parties	—	(1)
Other income (expense)	21	87
Total other income (expense)	(28)	30
Net loss and comprehensive loss	$ (11,908)	$ (12,286)
Deemed dividend-warrant antidilution price protection adjustment	333	—
Net loss attributable to common shareholders	$ (12,241)	$ (12,286)
Loss per share attributable to common shareholders, basic and diluted	$ (0.63)	$ (1.12)
Weighted average common shares outstanding - basic and fully diluted	19,402,091	10,920,909

See accompanying notes to financial statements.

SENESTECH, INC.
STATEMENT OF CHANGES IN CONVERTIBLE PREFERRED STOCK AND STOCKHOLDERS' EQUITY (DEFICIT)
(In thousands, except shares and per share data)

	Common Stock		Additional Paid-In	Stock Subscribed not Issued		Accumulated Other Comprehensive	Accumulated	Total Stockholders' Equity
	Shares	Amount	Capital	Shares	Amount	Loss	Deficit	(Deficit)
Balance, December 31, 2016	10,157,292	$ 10	$ 72,069	8,500	$ 59	$ —	$ (61,311)	$ 10,827
Issuance of common stock sold for cash, net of fees	5,860,000	6	5,247	—	—	—	—	5,253
Issuance of common stock for services	168,206	—	552	(8,500)	(59)	—	—	493
Issuance of common stock for services, related parties	204,683	—	659	—	—	—	—	659
Issuance of common stock options for services	—	—	2,576	—	—	—	—	2,576
Cashless exercise of options	14,014	—	—	—	—	—	—	—
Net loss for the year ended December 31, 2017	—	—	—	—	—	—	(12,286)	(12,286)
Balance, December 31, 2017	16,404,195	$ 16	$ 81,103	—	$ —	$ —	$ (73,597)	$ 7,522
Issuance of common stock sold for cash, net of fees	5,357,052	5	5,127	—	—	—	—	5,132
Issuance of common stock for services	221,193	—	36	—	—	—	—	36
Stock-based compensation	—	—	1,691	—	—	—	—	1,691
Issuance of common stock upon exercise of warrants	1,475,659	2	2,212	—	—	—	—	2,214
Issuance of common stock upon cashles exercise of stock options	13,900	—	—	—	—	—	—	—
Issuance of warrants			1,693					1,693
Warrant antidilution price protection adjustment			333				(333)	—
Option forfeitures and expirations			(67)					(67)
Net loss for the year ended December 31, 2018	—	—	—	—	—	—	(11,908)	(11,908)
Balance, December 31, 2018	23,471,999	$ 24	$ 92,128	—	$ —	$ —	$ (85,838)	$ 6,314

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

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

	For the Years Ended December 31,	
	2018	2017
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$ (11,908)	$ (12,286)
Adjustments to reconcile net loss to net cash used in operating activities:		
Gain on investments	(47)	(36)
Amortization of discounts on investments	—	17
Depreciation and amortization	447	391
Stock-based compensation	3,413	3,728
Loss on sale of equipment	15	—
Loss on early extinguishment of debt	10	—
(Gain) loss on remeasurement of common stock warrant liability	1	(69)
(Increase) decrease in current assets:		
Accounts receivable	(123)	(6)
Prepaid expenses	(172)	167
Inventory	(721)	(483)
Deposits	10	(10)
Increase (decrease) in current liabilities:		
Accounts payable	(218)	40
Accrued contract cancellation settlement	—	(1,000)
Accrued expenses	189	218
Deferred rent	(25)	8
Net cash used in operating activities	(9,129)	(9,321)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of securities	—	(5,004)
Proceeds received on sale of securities	5,070	—
Proceeds received on sale of equipment	185	—
Purchase of property and equipment	(239)	(898)
Net cash provided by (used in) investing activities	5,016	(5,902)
CASH FLOWS FROM FINANCING ACTIVITIES		
Proceeds from the issuance of common stock, net	5,132	5,253
Proceeds from the issuance of notes payable	9	437
Repayments of notes payable, net	(281)	(73)
Repayments of notes payable, related parties	(12)	(24)
Repayments of capital lease obligations	(71)	(95)
Proceeds from the exercise of warrants	2,213	—
Payment of employee withholding taxes relating to share-based awards	(58)	—
Net cash provided by financing activities	6,932	5,498
NET CHANGE IN CASH	2,819	(9,725)
CASH AT BEGINNING OF PERIOD	2,101	11,826
CASH AT END OF PERIOD	$ 4,920	$ 2,101
SUPPLEMENTAL INFORMATION:		
Interest paid	$ 74	$ 87
Income taxes paid	$ —	$ —
NON-CASH INVESTING AND FINANCING ACTIVITIES:		
Deemed dividend	$ 333	—
Purchases of equipment under capital lease obligations	$ 37	$ 316

See accompanying notes to financial statements.

1. Organization and Description of Business

SenesTech, Inc. (referred to as "SenesTech," the "Company," "we" or "us") was formed in July 2004 and incorporated in the state of Nevada. The Company subsequently reincorporated in the state of Delaware in November 2015. Our corporate headquarters is in Flagstaff, Arizona. We have developed and are commercializing a global, proprietary technology for managing animal pest populations, primarily rat populations, through fertility control.

SenesTech, Inc. (referred to in this report as "SenesTech," the "Company," "we" or "us") was formed in July 2004 and incorporated in the state of Nevada. The Company subsequently reincorporated in the state of Delaware in November 2015. Our corporate headquarters is in Flagstaff, Arizona. We have developed and are commercializing a global, proprietary technology for managing animal pest populations, initially rat populations, through fertility control.

Although a myriad of tools are available to fight rat infestations, communities continue to face challenges in controlling today's infestations. Infestations result in incredible infrastructure damage, as well as pose additional risks to the health and food security of communities. In addition to these challenges, the pest management industry and Pest Management Professionals (PMPs) are being increasingly asked for new solutions to help solve the problem. With growing concerns about rat resistance to rodenticides and a growing interest in non-lethal options, it is becoming increasingly important for PMPs to have new tools at their disposal. Our goal is to provide customers with not only a solution to combat their most difficult infestations, but also offer a non-lethal option to serve customers that are looking to decrease or remove the amount of poison used in their pest management programs.

Our first fertility control product, ContraPest, is a liquid bait containing the active ingredients 4-vinylcyclohexene diepoxide (VCD) and triptolide. When consumed, ContraPest targets reproduction, limiting fertility in male and female rats beginning with the first breeding cycle following consumption. ContraPest is being marketed for use in controlling rat populations, specifically Norway and roof rats. On August 23, 2015, the United States Environmental Protection Agency (EPA) granted registration approval for ContraPest as a Restricted Product Due to Professional Expertise (referred to in this report as a "Restricted Use designation"), effective August 2, 2016. On October 18, 2018, the EPA approved the removal of the Restricted Use designation. We believe ContraPest is the first and only non-lethal, fertility control product approved by the EPA for the management of rodent populations.

In addition to the EPA registration of ContraPest in the U.S., we must obtain registration from the various state regulatory agencies prior to selling in each state. As of the date of this report, we have received registration for ContraPest in all 50 states and the District of Columbia, nine of which have approved the removal of the Restricted Use designation.

We expect to continue to pursue regulatory approvals and amendments to existing registration in the United States for ContraPest, as well as regulatory approvals for any additional jurisdictions beyond the United States. The Company also continues to pursue other potential additional fertility control and animal health products for additional species.

Besides providing just the product, SenesTech provides PMPs with product training, and supports the PMPs by creating tools, training and awareness campaigns to help inform their customers, specifically within the food safety industry and larger residential customers, such as Home Owners Associations ("HOAs"), on the benefits of including ContraPest into their IPM protocols.

Going Concern

Although our audited financial statements for the year ended December 31, 2018 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 year ended December 31, 2018 contains a going concern qualification in which such firm expressed substantial doubt about our ability to continue as a going concern, 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 cannot continue as a going concern, our stockholders would likely lose most or all of their investment in us.

1. Organization and Description of Business (cont.)

Potential Need for Additional Capital

Since our inception, we have sustained significant operating losses in the course of our research and development 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 received under our former license agreement with Neogen. In 2017, we began to prepare and launch commercialization of our first product, ContraPest. We have funded our operations to date through the sale of equity securities, including convertible preferred stock, common stock and warrants to purchase common stock. Such sales include:

(i) an initial public offering of 1,875,000 shares of our common stock on December 8, 2016 with warrants to purchase an additional 187,500 shares issued to Roth Capital Partners, LLC with an exercise price of $9.60 per share, as underwriter,

(ii) a public offering on November 21, 2017 of 5,860,000 shares of our common stock at $1.00 per share with warrants issued to investors to purchase an additional 4,657,500 shares of our common stock with an initial exercise price of $1.50 per share that subsequently adjusted downward to $0.95 per share pursuant to antidilution price protection contained within those warrants, and warrants issued to Roth Capital Partners, LLC, as underwriter, to purchase an additional 945,000 shares with an exercise price of $1.50 per share,

(iii) a private placement of warrants to purchase 1,133,909 shares of common stock in June 2018 with an exercise price of $1.82 per share in connection with an inducement agreement with a holder of outstanding warrants issued in November 2017 to exercise its original warrant representing 1,133,909 shares at an exercise price of $1.50 per share; and

(iv) a rights offering in August 2018 (the "Rights Offering"), where we accepted subscriptions for 5,357,052 units for a purchase price of $1.15 per unit, with each unit consisting of one share of our common stock and one warrant, with each warrant exercisable for one share of our common stock at an exercise price of $1.15 per share, and warrants issued to an affiliate of Maxim Group, LLC, as dealer-manager, to purchase an additional 267,853 shares at $1.725 per share.

We have also raised capital through debt financing, consisting primarily of convertible notes; and, to a lesser extent, payments received in connection with product sales, research grants and licensing fees.

Through December 31, 2018, we had received net proceeds of $61.7 million from our sales of common stock, preferred stock and warrant exercises and issuance of convertible and other promissory notes, an aggregate of $1.7 million from licensing fees and an aggregate of $0.4 million in net product sales. At December 31, 2018, we had an accumulated deficit of $85.8 million and cash and cash equivalents of $4.9 million.

Our ultimate success depends upon the outcome of a combination of factors, including: (i) successful commercialization of ContraPest and ongoing regulatory approvals of our other product candidates, (ii) market acceptance, commercial viability and profitability of ContraPest 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) our 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 and highly liquid, short term investments at December 31, 2018, in combination with anticipated revenue and additional sales of our equity securities, will be sufficient to fund our current operations for at least the next 12 months. However, if anticipated revenue targets and margin targets are not achieved and we are unable to raise necessary capital through the sale of our securities, we may seek to reduce operating expenses and are likely to require additional capital in order to fund our operating losses and research and development activities until we become profitable. We may never achieve profitability or generate positive cash flows, and unless and until we do,

1. Organization and Description of Business (cont.)

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.

Major Customer

The Company has two major customers that accounted for approximately 52% and 13% and $157,000 and $38,000 of sales for the year ended December 31, 2018 and 91% and $127,000 of total accounts receivable at December 31, 2018. The Company expects to maintain this relationship with the customer.

2. Summary of Significant Accounting Policies

Use of Estimates

The preparation of the financial statements in conformity with accounting principles generally accepted in the United States of America ("U.S. GAAP") requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and reported amounts of revenues and expenses during the reporting period. The significant estimates in the Company's financial statements include the valuation of preferred stock, common stock and related warrants, and other stock-based awards. Actual results could differ from such estimates.

Reclassifications

Certain prior year amounts have been reclassified to conform to the current year presentation. These reclassifications had no impact on net earnings, financial position or cash flows.

Cash and Cash Equivalents

The Company considers money market fund investments to be cash equivalents. The Company had cash equivalents of $0 and $3 at December 31, 2018 and December 31, 2017, respectively, included in cash as reported.

Investments in Securities

The Company uses cash holdings to purchase highly liquid, short term, investment grade securities diversified among security types, industries and issuers. All of the Company's investment securities are measured at fair value. The Company's investment securities primarily consist of municipal debt securities, corporate bonds, U.S. agency securities and commercial paper and highly-liquid money market funds.

Accounts Receivable

Accounts receivable consist primarily of trade receivables. The Company provides an allowance for doubtful trade 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. The allowance for doubtful trade receivables was less than $1 at December 31, 2018 and $0 at December 31, 2017, respectively.

Inventories

Inventories are stated at the lower of cost or market value, using the first-in, first-out convention. Inventories consist of raw materials and finished goods.

2. Summary of Significant Accounting Policies (cont.)

Prepaid Expenses

Prepaid expenses consist primarily of payments made for director and officer insurance, director compensation, rent, legal and inventory purchase deposits and seminar fees to be expensed in the current year.

Property and Equipment

Property and equipment are stated at cost less accumulated depreciation. Equipment held under capital 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. 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 capital 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. The Company has not recorded an impairment of long-lived assets since its inception.

Revenue Recognition

Effective January 1, 2018, the Company adopted ASC 606 — *Revenue from Contracts with Customers.* Under ASC 606, the Company recognizes 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. For the comparative periods, revenue has not been adjusted and continues to be reported under ASC 605 — *Revenue Recognition.* Under ASC 605, revenue is recognized when the following criteria are met: (1) persuasive evidence of an arrangement exists; (2) the performance of service has been rendered to a customer or delivery has occurred; (3) the amount of the fee to be paid by a customer is fixed and determinable; and (4) the collectability of the fee is reasonably assured. The performance obligations identified by the Company under Accounting Standards Codification ("ASC") Topic 606, Revenue From Contracts With Customers, are straightforward and similar to the unit of account and performance obligation determination under ASC Topic 605, *Revenue Recognition*. There was no impact on the Company's financial statements as a result of adopting ASC 606 for the twelve months ended ended December 31, 2018 and 2017, respectively.

The Company recognizes revenue when it leaves their dock at a fixed selling price and payment terms of 30 to 120 days from invoicing. The Company recognizes other revenue earned from pilot studies upon the performance of specific services under the respective service contract.

2. Summary of Significant Accounting Policies (cont.)

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, and regulatory compliance costs. Also, included in research and development expenses is an allocation of facilities related costs, including depreciation of research and development equipment.

Stock-based Compensation

Employee stock-based awards, consisting of restricted stock units and stock options expected to be settled in shares of the Company's common stock, are recorded as equity awards. The grant date fair value of these awards is measured using the Black-Scholes option pricing model. The Company expenses the grant date fair value of its stock options on a straight-line basis over their respective vesting periods. Performance-based awards are expensed over the performance period when the related performance goals are probable of being achieved.

For equity instruments issued to non-employees, the stock-based consideration is measured using a fair value method. The measurement of the stock-based compensation is subject to re-measurement as the underlying equity instruments vest.

Income Taxes

The Company accounts 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.

The Company records net deferred tax assets to the extent it believes 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, the Company considers 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.

The Company applies 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 its evaluation, the Company has concluded there are no significant uncertain tax positions requiring recognition in its financial statements.

The Company recognizes interest and/or penalties related to uncertain tax positions in income tax expense. There are no uncertain tax positions as of December 31, 2018 or December 31, 2017 and as such, no interest or penalties were recorded in income tax expense.

On December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118") which provides guidance on accounting for the tax effects of the Tax Cuts and Job Act of 2017 (the "Tax Act"). SAB 118 provides a measurement period that should not extend beyond one year from the date of enactment for companies to complete the accounting under ASC 740, Income Taxes. The Company is still analyzing the Tax Act and the impact, if any, it will have.

Comprehensive Loss

Net loss and comprehensive loss were the same for all periods presented; therefore, a separate statement of comprehensive loss is not included in the accompanying financial statements.

(In thousands, except share and per share data)

2. Summary of Significant Accounting Policies (cont.)

Loss Per Share Attributable to Common Stockholders

Basic loss per share attributable to common stockholders is calculated by dividing the net loss attributable to common stockholders by the weighted average number of common shares outstanding during the period. Diluted loss per share attributable to common stockholders is computed by dividing the loss attributable to common stockholders by the weighted average number of common shares and potentially dilutive securities outstanding for the period determined using the treasury stock and if-converted methods. For purposes of the computation of diluted loss per share attributable to common stockholders, common stock purchase warrants, restricted stock units and common stock options 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, 2018 and 2017. Therefore, basic and diluted loss per share attributable to common stockholders was the same for all periods presented.

The following table sets forth the outstanding potentially dilutive securities that have been excluded in the calculation of diluted loss per share attributable to common stockholders (in common stock equivalent shares):

	December 31,	
	2018	2017
Common stock purchase warrants	11,226,821	6,431,785
Restricted stock unit	136,245	287,885
Common stock options	1,721,771	1,651,800
Total	12,084,837	8,371,470

In May 2014 the FASB issued ASU 2014-09, *Revenue from Contracts with Customers*. Since ASU 2014-09 was issued, several additional ASUs have been issued to clarify various elements of the guidance. These standards provide guidance on recognizing revenue, including a five-step model to determine when revenue recognition is appropriate. The standard requires that an entity recognize revenue to depict the transfer of control of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Effective January 1, 2018, the Company adopted ASU 2014-09, *"Revenue from Contracts with Customers"* using the modified retrospective method to all contracts that were not completed as of the date of adoption. The results of operations for reported periods after January 1, 2018 are presented under this amended guidance, while prior period amounts are reported in accordance with ASC 605 — *Revenue Recognition*. There was no material impact on our financial position, results of operations, or cash flows. See Note 2 — Summary of Significant Accounting Policies — Revenue Recognition.

In August 2016, the FASB issued ASU 2016-15, *Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments*. The amendments in this ASU provide guidance on the following eight specific cash flow classification issues: (1) debt prepayment or debt extinguishment costs; (2) settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; (3) contingent consideration payments made after a business combination; (4) proceeds from the settlement of insurance claims; (5) proceeds from the settlement of corporate-owned life insurance policies, including bank-owned life insurance policies; (6) distributions received from equity method investees; (7) beneficial interests in securitization transactions; and (8) separately identifiable cash flows and application of the predominance principle. The amendments of this ASU are effective for reporting periods beginning after December 15, 2017, with early adoption permitted. The Company has adopted the provisions of ASU 2016-15 on its financial statements. There was no material impact on our financial position, results of operations, or cash flows.

In January 2016, the FASB issued ASU 2016-01, *Recognition and Measurement of Financial Assets and Financial Liabilities* ("ASU 2016-01"). This standard affects the accounting for equity instruments, financial liabilities under the fair value option and the presentation and disclosure requirements of financial instruments. ASU 2016-01 is effective the first quarter of 2018. The Company has adopted the provisions of ASU 2016-01 on its financial statements. There was no material impact on our financial position, results of operations, or cash flows.

2. Summary of Significant Accounting Policies (cont.)

Accounting Standards Issued But Not Yet Adopted:

In February 2016, the FASB issued ASU 2016-02, *Leases* ("ASU 2016-02"). This standard amends various aspects of existing accounting guidance for leases, including the recognition of a right-of-use asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement. This standard also introduces new disclosure requirements for leasing arrangements. ASU 2016-02 is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years for public business entities. Early adoption is permitted and the new standard must be adopted using a modified retrospective approach, and provides for certain practical expedients. At December 31, 2018, the Company had future minimum lease payments on its operating leases of $316 that would be recorded as a capital lease liability on its balance sheet. The Company plans to adopt ASU 2016-02 on its financial statements and related disclosures at March 31, 2019.

3. Fair Value Measurements

We invest in various short term, highly liquid financial instruments, which may include municipal debt securities, corporate bonds, U.S. agency securities and commercial paper. We value these instruments at fair value. 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.

The Company's cash equivalents, which include money market funds, are classified as Level 1 because they are valued using quoted market prices. The Company's marketable securities consist of securities and are generally classified as Level 2 because their value is based on valuations using significant inputs derived from or corroborated by observable market data.

3. Fair Value Measurements (cont.)

In certain cases where there is limited activity or less transparency around the inputs to valuation, securities are classified as Level 3. Level 3 liabilities consist of common stock warrant liability.

Items Measured at Fair Value on a Recurring Basis

The following table sets forth the Company's financial instruments that were measured at fair value on a recurring basis by level within the fair value hierarchy (in thousands):

	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Financial Assets:				
Money market funds	$ —	$ —	$ —	$ 3
Corporate fixed income debt securities	—	—	—	—
Total	$ —	$ —	$ —	$ —
Financial Liabilities:				
Common stock warrant liability[1]	$ —	$ —	$ —	$ —
Total	$ —	$ —	$ —	$ —

	December 31, 2017			
	Level 1	Level 2	Level 3	Total
Financial Assets:				
Money market funds	$ 3	$ —	$ —	$ 3
Corporate fixed income debt securities	—	5,023	—	5,023
Total	$ 3	$ 5,023	$ —	$ 5,026
Financial Liabilities:				
Common stock warrant liability[1]	$ —	$ —	$ —	$ —
Total	$ —	$ —	$ —	$ —

(1) The change in the fair value of the common stock warrant and convertible notes payable for the twelve months ended December 31, 2018 and 2017 was recorded as a decrease to other income (expense) and interest expense of $1 and $1, respectively, in the statements of operations and comprehensive loss.

Financial Instruments Not Carried at Fair Value

The carrying amounts of the Company's financial instruments, including accounts payable and accrued liabilities, approximate fair value due to their short maturities. The estimated fair value of the convertible notes and other notes, not recorded at fair value, are recorded at cost or amortized cost which was deemed to estimate fair value.

Note 4 — Investment in Securities

As of December 31, 2017, investment in securities held to maturity primarily consisted of corporate fixed income securities. investment in securities primarily consisted of corporate fixed income securities. These investments are in short term, highly liquid investments which are recorded at cost plus or minus market fluctuation and gains and losses are recognized as the sale or redemption of the securities is realized. Gains and losses are included in non-operating other income (expense) on the condensed statement of operations and are derived using the specific identification method for determining the cost of the securities sold. Interest and dividends on investment securities are included in interest and other income, net, in the condensed statements of operations.

The Company did not have any held to maturity securities at December 31, 2017.

(In thousands, except share and per share data)

5. Credit Risk

The Company is potentially subject to concentrations of credit risk in its accounts receivable. Credit risk with respect to receivables is limited due to the number of companies comprising the Company's customer base. Although the Company is directly affected by the financial condition of its customers, management does not believe significant credit risks exist at December 31, 2018. The Company does not require collateral or other securities to support its accounts receivable.

6. Prepaid expenses

Prepaid expenses consist of the following:

	December 31,	
	2018	2017
Director compensation	$ 100	$ 66
Director, officer and other insurance	121	33
Marketing programs and conferences	53	—
Legal retainer	25	25
Inventory purchase deposits	—	20
Professional service retainer	8	8
Rent	19	—
Equipment service deposits	3	7
Engineering, software licenses and other	13	11
Total prepaid expenses	$ 342	$ 170

7. Property and Equipment

Property and equipment, net consist of the following:

		December 31,	
	Useful Life	2018	2017
Research and development equipment	5 years	$ 1,552	$ 1,349
Office and computer equipment	3 years	742	672
Autos	5 years	54	305
Furniture and fixtures	7 years	37	34
Leasehold improvements	*	283	283
		2,668	2,643
Less accumulated depreciation and amortization		1,585	1,189
Total		$ 1,083	$ 1,454

* Shorter of lease term or estimated useful life

Depreciation and amortization expense was approximately $447 and $391 for the year ended December 31, 2018 and 2017, respectively.

(In thousands, except share and per share data)

8. Accrued Expenses

Accrued expenses consist of the following:

	December 31,	
	2018	2017
Compensation and related benefits	$ 479	$ 304
Accrued Litigation	269	269
Personal property and franchise tax	23	—
Board Compensation	—	16
Other	—	—
Total accrued expenses	$ 771	$ 589

9. Borrowings

A summary of the Company's borrowings, including capital lease obligations, is as follows:

	At December 31,	
Short-term debt:	2018	2017
Current portion of long-term debt	219	177
Total short-term debt	$ 219	$ 177
Long-term debt:		
Capital lease obligations	$ 232	$ 272
Other unsecured promissory notes	248	496
Total	480	768
Less: current portion of long-term debt	219	177
Total long-term debt	$ 261	$ 591

Capital Lease Obligations

Capital lease obligations are for computer and lab equipment leased through GreatAmerica Financial Services, Thermo Fisher Scientific, Navitas Credit Corp., Wells Fargo and ENGS Commercial Finance Co. These capital leases expire at various dates through July 2023 and carry interest rates ranging from 6.0% to 11.6%.

Other Promissory Notes

Also included in the table above are three notes payable to Direct Capital, one note to M2 Financing and one note to Fidelity Capital, all for the financing of fixed assets. These notes expire at various dates through June 2022 and carry interest rates ranging from 4.3% to 13.8%.

10. Notes Payable, Related Parties

A summary of the Company's notes payable, related parties is as follows:

	December 31,	
	2018	2017
Unsecured promissory note, interest rate of 4.25% and 8% per annum	$ —	$ 12
Total notes payable, related parties	—	12
Less: current portion of notes payable, related parties	—	12
Total notes payable, long-term	$ —	$ —

(In thousands, except share and per share data)

10. Notes Payable, Related Parties (cont.)

In April 2013, the Company and a previous employee entered into an agreement to settle all outstanding obligations consisting of a promissory note of $40, dated March 2009, and deferred salaries amounting to $72. The note and salary obligation provided for interest of 8% and 4.25%, respectively. The note required monthly payments of $1 and matured in May 2018. The deferred salary obligation required monthly payments of $1 and matured in June 2018.

Amounts outstanding on these obligations were $0 and $12 at December 31, 2018 and 2017, respectively.

Interest expense on the notes payable, related parties, was $1 and $1 for the years ended December 31, 2018 and 2017, respectively.

11. Common Stock Warrants and Common Stock Warrant Liability

The table summarizes the common stock warrant activity as of December 31, 2018 as follows:

Common Stock Warrants	Number of Warrants	Date Issued	Term	Exercise Price
Outstanding at December 31, 2016	829,285			
Common Stock Offering Warrants Issued	4,657,500	November 2017	5 years	$ 1.50[(1)]
Common Stock Offering Underwriter Warrants	945,000	November 2017	5 years	$ 1.50
Outstanding at December 31, 2017	6,431,785			
Warrants issued	1,133,909	June 2018	5 Years	$ 1.82
Common Stock Offering Warrants Issued	5,357,052	August 2018	5 Years	$ 1.15[(1)]
Common Stock Offering – Dealer Manager Warrants	267,853	August 2018	5 Years	$ 1.725
Warrants exercised	(1,475,659)			
Expired Warrants	(488,119)			
Outstanding at December 31, 2018	11,226,821			

(1) The common stock warrants issued in November 2017 with an initial exercise price of $1.50 per share adjusted downward to $0.95 per share effective July 24, 2018 in connection with our Rights Offering, and may be subject to further downward adjustments, pursuant to antidilution price adjustment protection contained within those warrants.

On November 21, 2017, the Company issued a total of 4,657,500 detachable common stock warrants issued with the second public offering of 5,860,000 shares of its common stock at $1.00 per share. The common stock warrant is exercisable until five years from the date of grant. The common shares of the Company's stock and detachable warrants exist independently as separate securities. As such, the Company estimated the fair value of the common stock warrants, exercisable at $1.50 per share, to be $661 using a lattice model based on the following significant inputs: Common stock price of $1.00; comparable company volatility of 73.8%; remaining term 5 years; dividend yield of 0% and risk-free interest rate of 1.87. The initial exercise price of these warrants was $1.50 per share, which adjusted downward to $1.47 on July 24, 2018, the record date of the Right's Offering and downward to $0.95 per share on August 13, 2018, the date of the Rights Offering, pursuant to antidilution price adjustment protection contained within these warrants. Per guidance of ASC 260, the Company recorded a deemed dividend of $333 on the 3,181,841 unexercised warrants that contained this antidilution price adjustment protection provision and was calculated as the difference between the fair value of the warrants immediately prior to downward exercise price adjustment and immediately after the adjustment using a Black Scholes model based on the following significant inputs: On July 24, 2018: Common stock price of $1.38; comparable company volatility of 72.4%; remaining term 4.33 years; dividend yield of 0% and risk-free interest rate of 2.83. On August 13, 2018: Common stock price of $1.02; comparable company volatility of 74.0%; remaining term 4.25 years; dividend yield of 0% and risk-free interest rate of 2.75.

On June 20, 2018, the Company entered into an agreement with a holder of 1,133,909 of the November 2017 warrants to exercise its original warrant representing 1,133,909 shares of Common Stock for cash at the $1.50 exercise price for gross

11. Common Stock Warrants and Common Stock Warrant Liability (cont.)

proceeds of $1.7 million and the Company issued to holder a new warrant to purchase 1,133,909 shares of Common Stock at an exercise price of $1.82 per share. The new warrant did not contain the antidilution price adjustment protection that was contained within the exercised warrants. In June 2018, the Company recorded stock compensation expense of $1.7 million representing the fair value of the of 1,133,909 inducement warrants issued. The Company estimated the fair value of the common stock warrants, exercisable at $1.82 per share, to be $1.7 million using a Black Scholes model based on the following significant inputs: Common stock price of $2.11; comparable company volatility of 72.6%; remaining term 5 years; dividend yield of 0% and risk-free interest rate of 2.8%. Also in June 2018, an additional 341,750 of the November 8, 2017 warrants that were in the money at the time of exercise, were exercised for gross proceeds of $513.

On August 13, 2018, in connection with a Rights Offering of 5,357,052 shares of its common stock, the Company issued 5,357,052 warrants to purchase shares of its common stock at an exercise price of $1.15 per share. The Company estimated the fair value of the common stock warrants, exercisable at $1.15 per share, to be $3.6 million using a Monte Carlo model based on the following significant inputs: common stock price of $0.94; comparable company volatility of 159.0%; remaining term 5 years; dividend yield of 0% and risk-free interest rate of 2.77%.

In connection with the closing of the Rights Offering, the Company issued a warrant to purchase 267,853 shares of common stock to Maxim Partners LLC, an affiliate of the dealer-manager of the Rights Offering. The Company estimated the fair value of the common stock warrants, exercisable at $1.725 per share, to be $169 using a using a Monte Carlo model based on the following significant inputs: common stock price of $0.94; comparable company volatility of 159.0%; remaining term 5 years; dividend yield of 0% and risk-free interest rate of 2.77%.

Common Stock Warrant Issued to Underwriter of Common Stock Offering

In November 2017, the Company issued to Roth Capital Partners, LLC, as underwriter, a warrant to purchase 945,000 shares of common stock at an exercise price of $1.50 per share as consideration for providing services in connection with our common stock offering. The warrant was fully vested and exercisable on the date of issuance. The common stock warrant is exercisable until five years from the date of grant. The Company estimated the fair value of the common stock warrants, exercisable at $1.50 per share, to be $134 using a lattice model based on the following significant inputs: Common stock price of $1.00; comparable company volatility of 73.8%; remaining term 5 years; dividend yield of 0% and risk-free interest rate of 1.87%.

University of Arizona Common Stock Warrant

In connection with the June 2015 amended and restated exclusive license agreement with the University of Arizona ("University"), the Company issued to the University a common stock warrant to purchase 15,000 shares of common stock at an exercise price of $7.50 per share. The warrant was fully vested and exercisable on the date of grant, and expires, if not exercised, five years from the date of grant. In the event of a "terminating change" of the Company, as defined in the warrant agreement, the warrant holder would be paid in cash the aggregate fair market value of the underlying shares immediately prior to the consummation of the terminating change event. Due to the cash settlement provision, the derivative warrant liability was recorded at fair value and is revalued at the end of each reporting period. The changes in fair value are reported in other income (expense) in the statements of operations and comprehensive loss. The estimated fair value of the derivative warrant liability was $53 at the date of grant.

The estimated fair value of the derivative warrant liability was $0 at December 31, 2018. As this derivative warrant liability is revalued at the end of each reporting period, the fair values as determined at the date of grant and subsequent periods was based on the following significant inputs using a Monte Carlo option pricing model: common stock price of $7.91; comparable company volatility of 77.7% of the underlying common stock; risk-free rates of 1.93%; and dividend yield of 0%; including the probability assessment of a terminating change event occurring. The change in fair value of the derivative warrant liability was $1 for year ended December 31, 2018 and was recorded in other income (expense) in the accompanying statements of operations and comprehensive loss.

12. Stockholders' Deficit

Capital Stock

The Company was organized under the laws of the state of Nevada on July 27, 2004 and was subsequently reincorporated under the laws of the state of Delaware on November 10, 2015. In connection with the reincorporation, as approved by the stockholders, the Company changed its authorized capital stock to consist of (i) 100 million shares of common stock, $.001 par value, and (ii) 2 million shares of preferred stock, $0.001 par value, designated as Series A convertible preferred stock. In December 2015, the Company amended its Certificate of Incorporation to change its authorized capital stock to provide for 15 million authorized shares of preferred stock of which 7,515,000 was designated as Series B convertible preferred stock, par value $.001 per share.

Prior to November 10, 2015, the Company's authorized capital stock consisted of 100 million shares of common stock, $.001 par value, and 10 million shares of preferred stock, $.001 par value.

Common Stock

The Company had 23,471,999 and 16,404,195 shares of common stock issued and outstanding as of December 31, 2018 and 2017, respectively. During the year ending December 31, 2018, the Company issued 7,021,092 shares of common stock as follows:

- an aggregate of 5,357,052 shares in connection with a Rights Offering generating net proceeds to the Company of approximately $5.1 million,
- an aggregate of 1,475,659 shares for net proceeds of $2.1 million for the exercise of the Company's November 2017 warrants (see Note 10 — Common Stock Warrants and Common Stock Warrant Liability for further details),
- 13,900 shares for the cashless exercise of stock options to employees,
- 32,625 shares to a former employee for the net settlement of restricted stock units whose vesting accelerated upon the termination of their employment contract,
- 37,162 shares to a Board member in net settlement of Board compensation totaling $28 and
- 151,406 shares for the net settlement of restricted stock units that vested during the period.

Rights Offering

On August 13, 2018, the Company closed a Rights Offering. Pursuant to the Rights Offering, the Company accepted subscriptions for 5,357,052 units for a purchase price of $1.15 per unit, with each unit consisting of one share of the Company's common stock, par value $0.001 per share, and one warrant. Each warrant included in the unit was exercisable for one share of the Company's common stock at an exercise price of $1.15 per share. At closing of the Rights Offering, the Company issued 5,357,052 shares of its common stock and 5,357,052 warrants to purchase shares of its common stock at an exercise price of $1.15 per share. The Rights Offering generated net proceeds to the Company of approximately $5.1 million after the payment of fees and expenses related to the Rights Offering. In connection with the closing of the Rights Offering, the Company issued a warrant to purchase 267,853 shares of common stock to Maxim Partners LLC, an affiliate of the dealer-manager of the Rights Offering.

On November 8, 2017, the Company issued 5,860,000 shares of its common stock with a total of 4,657,500 detachable common stock warrants for net proceeds of $5.2 million in a second public offering of the Company's common stock. In connection with this common stock offering, the Company issued to Roth Capital Partners, LLC, as underwriter, warrants to purchase an additional 945,000 shares of common stock.

(In thousands, except share and per share data)

12. Stockholders' Deficit (cont.)

In addition, during the year ended December 31, 2017, the Company issued an aggregate of 386,903 shares of common stock as follows: 48,240 shares to consultants for services, valued at $137, to settle previous claims; 14,404 shares for the cashless exercise of stock options, 137,354 shares to certain employees and Board members in net settlement of bonus and Board compensation totaling $115 and 187,295 shares for the net settlement of restricted stock units that vested during the period.

13. Stock-based Compensation

On June 12, 2018, the Company's stockholders approved the 2018 Equity Incentive Plan (the "2018 Plan") to replace the Company's 2015 Equity Incentive Plan (the "2015 Plan"). The 2018 Plan authorized the issuance of 1,000,000 shares of our common stock. In addition, up to 2,874,280 shares of our common stock currently reserved for issuance under the 2015 Plan became available for issuance under the 2018 Plan to the extent such shares were available for issuance under the 2015 Plan as of June 12, 2018 or cease to be subject to awards outstanding under the 2015 Plan, such as by expiration, cancellation, or forfeiture of such awards.

The stock-based awards are generally issued with a price equal to no less than fair value at the date of grant. Options granted under the 2018 Plan generally vest immediately, or ratably over a two- to 36-month period coinciding with their respective service periods; however, participants may exercise their options prior to vesting as provided by the 2018 Plan. Unvested shares issued for options exercised early may be subject to a repurchase by the Company if the participant terminates, at the original exercise price. Options under the 2018 Plan generally have a contractual term of five years. Certain stock option awards provide for accelerated vesting upon a change in control.

As of December 31, 2018, the Company had 1,849,569 shares of common stock available for issuance under the 2018 Plan.

The Company measures the fair value of stock options with service-based and performance-based vesting criteria to employees, directors and consultants on the date of grant using the Black-Scholes option pricing model. The fair value of equity instruments issued to non-employees is re-measured as the award vests. The Black-Scholes valuation model requires the Company to make certain estimates and assumptions, including assumptions related to the expected price volatility of the Company's stock, the period under which the options will be outstanding, the rate of return on risk-free investments, and the expected dividend yield for the Company's stock.

The weighted-average assumptions used in the Black-Scholes option-pricing model used to calculate the fair value of options granted during the year ended December 31, 2017, were as follows:

	Employee	Non-Employee
Expected volatility	71.6% to 83.7%	N/A
Expected dividend yield	—	N/A
Expected term (in years)	3.0 to 3.5	N/A
Risk-free interest rate	1.45% to 1.84%	N/A

The weighted-average assumptions used in the Black-Scholes option-pricing model used to calculate the fair value of options granted during the year ended December 31, 2018, were as follows:

	Employee	Non-Employee
Expected volatility	71.0% –79.8%	N/A
Expected dividend yield	—	N/A
Expected term (in years)	3.0–3.5	N/A
Risk-free interest rate	1.58%–2.89%	N/A

Due to the Company's limited operating history and lack of company-specific historical or implied volatility, the expected volatility assumption was determined based on historical volatilities from traded options of biotech companies of comparable in size and stability, whose share prices are publicly available. The expected term of options granted to employees is calculated

(In thousands, except share and per share data)

13. Stock-based Compensation (cont.)

based on the mid-point between the vesting date and the end of the contractual term according to the simplified method as described in SEC Staff Accounting Bulletin 110 because the Company does not have sufficient historical exercise data to provide a reasonable basis upon which to estimate the expected term due to the limited period of time its awards have been outstanding. For non-employee options, the expected term of options granted is the contractual term of the options. The risk-free rate by reference to the implied yields of U.S. Treasury securities with a remaining term equal to the expected term assumed at the time of grant. The expected dividend assumption is based on the Company's history and expectation of dividend payouts. The Company has not paid and does not intend to pay dividends on its shares of capital stock.

The table summarizes the stock option activity, for both plans, for the periods indicated as follows:

	Number of Options	Weighted Average Exercise Price Share	Weighted Average Remaining Contractual Per Term (years)	Aggregate Intrinsic Value[1]
Outstanding at December 31, 2016	1,477,300	$ 1.61	5.8	$ 9,662
Granted	258,500	$ 4.62	5.0	$ 34
Exercised	(18,000)	$ 0.50		
Forfeited	(1,000)	$ 0.50		
Expired	(65,000)	$ 10.22		
Outstanding at December 31, 2017	1,651,800	$ 1.67	3.7	$ —
Granted	179,471	$ 1.53	4.4	$ —
Exercised	(49,000)	$ 0.50		
Forfeited	(50,500)	$ —		
Expired	(10,600)	$ —		
Outstanding at December 31, 2018	1,721,171	$ 1.57	4.0	$ —
Exercisable at December 31, 2018	1,443,296	$ 1.56	3.5	$ —

(1) The aggregate intrinsic value on the table was calculated based on the difference between the estimated fair value of the Company's stock and the exercise price of the underlying option. The estimated stock values used in the calculation was $0.59 and $0.72 per share for each of the years ended December 31, 2018 and 2017 respectively.

The weighted average grant date fair value of options granted to employees for the year Ended December 31, 2017 was $1.53 per share.

The stock-based compensation expense was recorded as follows:

	Years Ended December 31,	
	2018	2017
Research and development	$ 106	$ 377
General and administrative	3,306	3,338
Total stock-based compensation expense	$ 3,412	$ 3,715

The allocation between research and development and general and administrative expense was based on the department and services performed by the employee or non-employee.

Included in the table above, the Company recorded stock-based compensation expense of $137 and $137 for the years ended December 31, 2018 and 2017, respectively, for stock options granted to non-employees.

13. Stock-based Compensation (cont.)

At December 31, 2018, the total compensation cost related to non-vested options not yet recognized was $577, which will be recognized over a weighted average period of 27 months, assuming the employees complete their service period required for vesting.

Effective July 2015, the Company's stockholders approved the 2015 Equity Incentive Plan (the "2015 Plan"), which permits the issuance of up to 2,000,000 shares reserved for the grant of stock options, stock appreciation rights, restricted stock units and other stock-based awards for employees, directors or consultants.

Restricted Stock Units

The following table summarizes restricted stock unit activity for the years ended December 31, 2017 and 2016:

	Number of Units	Weighted Average Grant Date Fair Value Per Units
Outstanding as of December 31, 2016	455,430	$ 0.76
Granted	117,885[(1)]	$ 6.95
Vested	(282,344)	$ 1.75
Forfeited	(3,086)	$ —
Outstanding as of December 31, 2017	287,885	$ 1.86
Granted	75,732[(2)]	$ 1.62
Vested	(223,795)	$ 2.56
Forfeited	(3,577)	$ 6.99
Outstanding as of December 31, 2018	136,345	$ 0.98

(1) 40,000 restricted stock units were granted on March 27, 2017 with a weighted average grant date fair value of $8.35, 17,885 restricted stock units were granted on May 19, 2017 with a weighted average grant date fair value of $6.99 and 60,000 restricted stock units were granted on June 19, 2017 with a weighted average grant date fair value of $6.00.

(2) 12,820 restricted stock units were granted on June 12, 2017 with a weighted average grant date fair value of $0.65 and 62,912 restricted stock units were granted on June 12, 2018 with a weighted average grant date fair value of $1.82

14. Income Taxes

The components of the pretax loss from operations for the years ended December 31, 2018 and 2017 are as follows (in thousands)

	2018	2017
U.S. Domestic	(11,908)	(12,286)
Foreign	—	—
Pretax loss from operations.	(11,908)	(12,286)

14. Income Taxes (cont.)

The provision for income taxes from continuing operations for the years ended December 31, 2018 and 2017 are as follows (in thousands):

	2018	2017
Current		
Federal	—	—
State	—	—
Foreign	—	—
Total current	—	—
Deferred		
Federal	—	—
State	—	—
Foreign	—	—
Total deferred	—	—
Total income tax expense (benefit)	—	—

Tax Rate Reconciliation

A reconciliation on income taxes to the amount computed by applying the statutory federal income tax rate to the net loss is summarized as follows (in thousands):

	12/31/18	12/31/17
Income tax benefit at statutory rates	(2,501)	(4,176)
State income tax, net of federal benefit	(331)	(566)
Permanent items	8	7
Stock-based compensation	697	—
Tax Rate Adjustment – TCJA	7,758	—
Change in rate	941	—
Stock Compensation DTA Adjustment	5,794	—
Change in Valuation Allowance	(12,673)	4,735
RTP and Other	307	—
Income tax expense (benefit)	—	—

Significant components of the Company's deferred tax assets as of December 31, 2018 and 2017 are shown below. 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.

14. Income Taxes (cont.)

	12/31/18	12/31/17
Deferred tax assets:		
Deferred Rent	4	29
Federal and State Net Operating Loss Carryovers	12,964	17,013
Stock Based Compensation	448	9,234
Compensation Accruals and Other	187	(5)
Total deferred tax assets	13,603	26,271
Valuation Allowance for deferred tax assets	(13,550)	(26,222)
Deferred tax assets, net of valuation allowance	53	49
Deferred tax liabilities:		
Depreciation	(53)	(49)
Total deferred tax liabilities	(53)	(49)
	—	—

At December 31, 2018, the Company has federal and state net operating loss carryforwards of approximately $51.1 million and $37.6 million, respectively, not considering the IRC Section 382 annual limitation discussed below. The federal loss carryforwards begin to expire in 2023, unless previously utilized.

Additionally, the utilization of the net operating loss carryforwards are 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 percent points over a three-year period. The Company has 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, the Company's net operating losses could be limited.

The following table summarizes the activity related to the Company's gross unrecognized tax benefits at the beginning and end of the years ended December 31, 2018 and 2017 (in thousands):

	12/31/18	12/31/17
Gross unrecognized tax benefits at the beginning of the year	—	—
Increases related to current year positions	—	—
Increases related to prior year positions	—	—
Decreases related to prior year positions	—	—
Expiration of unrecognized tax benefits	—	—
Gross unrecognized tax benefits at the end of the year	—	—
	—	—

None of the unrecognized tax benefits would affect the Company's annual effective tax rate.

The Company does not expect a significant change in unrecognized tax benefits over the next 12 months.

The Company files income tax returns in the United States and Arizona with general statutes of limitations of 3 and 4 years, respectively. Due to net operating losses incurred, the Company's tax returns from inception to date are subject to examination by taxing authorities. The Company's policy is to recognize interest expense and penalties related to income tax matters as a component of income tax expense. As of Dec 31, 2018, the Company had no interest or penalties accrued for uncertain tax positions.

14. Income Taxes (cont.)

Tax Cuts and Jobs Act Disclosures:

On December 20, 2017 the United States House of Representatives and the Senate passed the "Tax Cuts and Jobs Act" (the "Tax Act"), which was signed into law on December 22, 2017.

Due to the complexity of the Tax Act, the SEC issued guidance in ASU 2018-05 which clarified the accounting for income taxes under ASC 740 if certain information was not yet available, prepared or analyzed in reasonable detail to complete the accounting for income tax effects of the Tax Act. ASU 2018-05 provided for a measurement period of up to one year after the enactment of the Tax Act, during which time the required analyses and accounting must have been completed.

During the measurement period (i) income tax effects of the Tax Act must have been reported if the accounting was completed; (ii) provisional amounts must have been reported for income tax effects of the Tax Act for which the accounting was incomplete but a reasonable estimate could be determined; and (iii) provisional amounts were not required to be reported for income tax effects of the Tax Act for which a reasonable estimate could not be determined.

The Tax Act did not have a material impact on the Company's net deferred tax balances or its provision for income taxes due to the Company's full valuation allowance since inception.

The determination of the Tax Act's income tax effects may change following future legislation or further interpretation of the Tax Act based on the publication of recently proposed U.S. Treasury regulations and guidance from the Internal Revenue Service and state tax authorities.

15. Commitments and Contingencies

Legal Proceedings

The Company may be subject to 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 pending or threatened litigation where the ultimate disposition or resolution could have a material adverse effect on its financial position, results of operations or liquidity.

On February 20, 2018, New Enterprises, Ltd. ("New Enterprises"), filed lawsuit against the Company and Roth Capital Partners, LLC ("Roth") in the U.S. District Court for the District of Arizona (the "Court"). The complaint alleges nine counts against the Company, including that: the Company engaged in common law fraud and securities fraud to induce the chairman of New Enterprises into investing in the Company; failed to register New Enterprises' requested transfer; breached stock certificates and the lock-up contract; tortuously interfered with prospective business advantage; and conversion. New Enterprises is seeking monetary damages, including compensatory damages, punitive damages, and attorney's fees. On April 23, 2018, the Company moved to dismiss each of the claims alleged against the Company, and on May 18, 2-18, Roth moved to dismiss each of the claims alleged against it. The motions to dismiss were fully briefed, the Court issued an order granting the motions to dismiss, dismissing each of the claims alleged in the Complaint but allowed New Enterprises to file a motion for leave to file an Amended Complaint seeking to cure the deficiencies in its claims. On January 25, 2019, New Enterprises moved for leave to file an amended complaint, alleging similar claims against the Company and Roth. The Company and Roth have filed oppositions to New Enterprises' motion, New Enterprises filed its reply, and the motion is currently under advisement with the Court. Roth has made a claim for indemnification to the Company based on contractual indemnification agreements, but to date, the Company has not accepted Roth's indemnification demand.

On April 20, 2018, the Company's former Executive Vice President and Chief Operating Officer Andrew Altman filed a charge of employment discrimination with the Equal Employment Opportunity Commission (EEOC) against the Company. Mr. Altman claimed that he was terminated after he expressed opposition to an email Cheryl Dyer, Chief Research Officer, had sent out to the management team, in which she criticized a Mormon newspaper. The Company filed a position statement on May 21, 2018. No substantive action has been taken since then, and the Company has not heard anything further either from the EEOC or Mr. Altman's attorneys.

(In thousands, except share and per share data)

15. Commitments and Contingencies (cont.)

Lease Commitments

The Company is obligated under capital leases for certain research and computer equipment that expire on various dates through May 2020. At December 31, 2018, the gross amount of office and computer equipment, and research equipment and the related accumulated amortization recorded under the capital leases was $521 and $200, respectively.

In February 2012, the Company entered into an operating lease for its corporate headquarters. The lease was due to expire in January 2015. In December 2013, the Company amended its lease to expand into the remaining area in the building and extended the term to December 31, 2019. In February 2014, the Company further amended the lease to expand into an adjacent building. The lease requires escalating rental payments over the lease term. Minimum rental payments under the operating lease are recognized on a straight-line basis over the term of the lease and accordingly, the Company records the difference between the cash rent payments and the recognition of rent expense as a deferred rent liability. The lease is guaranteed by the President of the Company. We are in current discussions to extend the current lease.

On November 16, 2016, we leased an additional 1,954 square feet of research and development space, also in Flagstaff. This lease expired on November 15, 2018 but was extended for an additional 24 months, through November 2020. A subsequent amendment to the lease allows for the Company to cancel the lease at any time through the lease term with 30 days notice.

The lease extension requires fixed rental payments over the lease term. Minimum rental payments under the operating lease are recognized on a straight-line basis over the term of the lease as expense, and accordingly, the Company recorded no deferred rent liability under this lease.

Rent expense was $242 and $312 for the year ended December 31, 2018 and 2017, respectively. The future minimum lease payments under non-cancellable operating lease and future minimum capital lease payments as of December 31, 2018 are follows:

	Capital Leases	Operating Lease
Years Ending December 31,		
2019	99	271
2020	78	45
2021	63	—
2022	33	—
2023	3	
Total minimum lease payments	$ 276	$ 316

	Capital Leases
Less: amounts representing interest (ranging from 7.75% to 11.58%)	$ 43
Present value of minimum lease payments	233
Less: current installments under capital lease obligations	77
Total long-term portion	$ 156

16. Subsequent Events

In January 2019, the Company net issued 18,474 shares of common stock for a cashless exercise of vested common share options.

Also in January 2019, the Company issued 38,580 shares of common stock to certain employees in net settlement of bonus compensation of $49 accrued at December 31, 2018.

In March 2019, the Company issued an aggregate of 31,811 shares of common stock for the exercise of certain warrants. The net proceeds to the company for this exercise was $37.

On March 20, 2019 we received notice from the listing qualifications staff of the Nasdaq Stock Market, notifying us that the closing bid price of our common stock was greater than $1.00 per share for ten consecutive business days and that we had regained compliance with the minimum bid price requirement of the Nasdaq Stock Market.

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 Securities Exchange Act of 1934 ("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, 2018, 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, 2018.

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 of 1934. 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, 2018. 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, (COSO). Based on this assessment, management has concluded that internal control over financial reporting was effective as of December 31, 2018 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 Securities and Exchange Commission for smaller reporting companies and emerging growth 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, 2018, that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. ***Other Information.***

None.

PART III

Item 10. ***Directors, Executive Officers and Corporate Governance.***

Certain information required by this Item regarding our directors and executive officers is set forth in Part I of this report under Item 1, "Business — Directors and Executive Officers of the Registrant" and will be included in our definitive proxy statement for our 2019 Annual Meeting of Stockholders to be filed with the SEC under the captions "Nominees and Continuing Directors" and "Executive Officers" and is incorporated herein by this reference.

The information required by this Item regarding compliance by our directors, executive officers and holders of ten percent of a registered class of our equity securities with Section 16(a) of the Securities Exchange Act of 1934 will be included in our definitive proxy statement for our 2019 Annual Meeting of Stockholders to be filed with the SEC under the caption "Stock Ownership" and is incorporated herein by this reference.

The remaining information required by this Item will be included in our definitive proxy statement for our 2019 Annual Meeting of Stockholders to be filed with the SEC under the caption "Corporate Governance" and is incorporated herein by this reference.

Item 11. ***Executive Compensation.***

The information required by this Item will be included in our definitive proxy statement for our 2019 Annual Meeting of Stockholders to be filed with the SEC under the captions "Corporate Governance" and "Executive Officer Compensation" and is incorporated herein by this reference.

Item 12. ***Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.***

The information required by this Item regarding equity compensation plan information will be included in our definitive proxy statement for our 2019 Annual Meeting of Stockholders to be filed with the SEC under the caption "Equity Compensation Plan Information" and is incorporated herein by this reference.

The information required by this Item regarding security ownership will be included in our definitive proxy statement for our 2019 Annual Meeting of Stockholders to be filed with the SEC under the caption "Security Ownership of Principal Stockholders, Directors and Management" and is incorporated herein by this reference.

Item 13. ***Certain Relationships and Related Transactions, and Director Independence.***

The information required by this Item will be included in our definitive proxy statement for our 2019 Annual Meeting of Stockholders to be filed with the SEC under the captions "Corporate Governance" and "Certain Relationships and Related Transactions" and is incorporated herein by this reference.

Item 14. ***Principal Accounting Fees and Services.***

The information required by this Item with respect to principal accounting fees and services will be included in our definitive proxy statement for our 2019 Annual Meeting of Stockholders to be filed with the SEC under the caption "Ratify Appointment of Independent Registered Public Accounting Firm" and is incorporated herein by this reference.

PART IV

Item 15. ***Exhibits, Financial Statement Schedules.***

(a) Financial Statements and Schedules

1. *Financial Statements*.

The following consolidated financial statements are filed as part of this report under Item 8 of Part II, "Financial Statements and Supplementary Data."

A. Balance Sheets as of December 31, 2018 and 2017.

B. Statements of Operations and Comprehensive Income (Loss) for the years ended December 31, 2018 and 2017.

C. Statements of Stockholders' Equity for the years ended December 31, 2018 and 2017.

D. Statements of Cash Flows for the years ended December 31, 2018 and 2017.

2. *Financial Statement Schedules*.

Financial statement schedules not included herein have been omitted because they are either not required, not applicable, or the information is otherwise included herein.

3. *Exhibits.*

Exhibits are incorporated herein by reference or are filed with this report as indicated below (numbered in accordance with Item 601 of Regulation S-K).

(b) Exhibits

The exhibits listed in the accompanying Index to Exhibits are filed with this report or incorporated herein by reference.

SENESTECH, INC.
INDEX TO EXHIBITS

Exhibit Number	Description	Filed or Furnished Herewith	Incorporated by Reference			
			Form	Filing Date	Exhibit	File No.
3.1	Amended and Restated Certificate of Incorporation		S-1/A	10/20/2016	3.3	333-213736
3.2	Amended and Restated Bylaws		S-1	9/21/2016	3.5	333-213736
10.1[(1)]	SenesTech, Inc. 2008 – 2009 Non-Qualified Stock Option Plan and form of agreement thereunder		S-1	9/21/2016	10.1	333-213736
10.2[(1)]	SenesTech, Inc. 2015 Equity Incentive Plan and forms of agreement thereunder		S-1	9/21/2016	10.2	333-213736
10.3[(1)]	Form of Restricted Stock Unit Agreement		8-K	12/21/2016	4.1	001-37941
10.4[(1)]	Form of Indemnification Agreement		S-1	9/21/2016	10.2	333-213736
10.5[(1)]	Employment Letter Agreement by and between the Registrant and Loretta P. Mayer, Ph.D. dated June 30, 2016		S-1	9/21/2016	10.7	333-213736
10.6[(1)]	Employment Letter Agreement by and between the Registrant and Cheryl A. Dyer, Ph.D. dated June 30, 2016		S-1	9/21/2016	10.8	333-213736
10.7[(1)]	Employment Offer Letter by and between the Registrant and Thomas Chesterman dated November 20, 2015.		S-1	9/21/2016	10.9	333-213736
10.8	Lease by and between the Registrant and Caden Court, LLC, dated as of December 20, 2011 and amendments thereto dated December 6, 2013 and February 27, 2014.		S-1	9/21/2016	10.5	333-213736
10.9[(2)]	Agency Agreement by and between the Registrant, Inmet S.A. and Bioceres, Inc. dated January 21, 2016.		S-1	9/21/2016	10.10	333-213736
10.10[(2)]	Services Agreement by and between the Registrant, Inmet S.A. and Bioceres, Inc. dated January 21, 2016.		S-1	9/21/2016	10.11	333-213736
10.11	Settlement Agreement and Release dated January 23, 2017 by and between Neogen Corporation and the Registrant.		8-K	1/23/2017	1.1	001-37941
21.1	Subsidiaries of the Registrant	X				
23.1	Consent of Independent Registered Public Accounting Firm	X				
31.1	Certification of Chief Executive Officer pursuant to Exchange Act Rule 13a-14(a) under the Securities and Exchange Act of 1934	X				
31.2	Certification of Chief Financial Officer pursuant to Exchange Act Rule 13a-14(a) under the Securities and Exchange Act of 1934	X				

Exhibit Number	Description	Filed or Furnished Herewith	Incorporated by Reference			
			Form	Filing Date	Exhibit	File No.
32.1	Certification of Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X				
32.2	Certification of Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002	X				
101.INS	XBRL Instance Document	X				
101. SCH	XBRL Taxonomy Extension Schema Document	X				
101. CAL	XBRL Taxonomy Extension Calculation Linkbase Document	X				
101. DEF	XBRL Taxonomy Extension Definition Linkbase	X				
101. LAB	XBRL Taxonomy Extension Label Linkbase Document	X				
101. PRE	XBRL Taxonomy Extension Presentation Linkbase Document	X				

(1) Indicates a management contract or compensatory plan or arrangement.

(2) Confidential treatment has previously been granted by the SEC for certain portions of the referenced exhibit.

(c) Financial Statement Schedules

None

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: March 29, 2019 By: /s/ Loretta P. Mayer, Ph.D.
Loretta P. Mayer
Chair of the Board, Chief Executive Officer and Chief Scientific Officer

Date: March 29, 2019 By: /s/ Thomas C. Chesterman
Thomas C. Chesterman
Chief Financial Officer and Treasurer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on March 29, 2019, on behalf of the registrant and in the capacities indicated.

Signature	Title
/s/ Loretta P. Mayer, Ph.D. **Loretta P. Mayer, Ph.D.**	Chair of the Board, Chief Executive Officer and Chief Scientific Officer (Principal Executive Officer)
/s/ Thomas C. Chesterman **Thomas C. Chesterman**	Chief Financial Officer and Treasurer (Principal Financial and Accounting Officer)
/S/ Delphine Francois Chiavarini **Delphine Francois Chiavarini**	Director
/S/ Marc Dumont **Marc Dumont**	Director
/S/ Jamie Bechtel **Jamie Bechtel**	Director
/S/ Matthew K. Szot **Matthew K. Szot**	Director
/S/ Julia Williams, M.D. **Julia Williams, M.D.**	Director
/S/ Ken Siegel **Ken Siegel**	Director

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Directors, Officers and Corporate Information

Headquarters
3140 N. Caden Court, Suite 1, Flagstaff, Arizona 86004
Corporate Counsel
Perkins Coie, Phoenix, Arizona
Independent Registered Public Accountants
M&K CPAS, PLLC, Houston, Texas
Transfer Agent and Registrar
Transfer Online, Inc., Portland, Oregon
Investor Relations
Lytham Partners, LLC, Phoenix, Arizona

Directors
- Loretta P. Mayer, Ph.D. – Chair of the Board, CEO and Chief Scientific Officer, SenesTech, Inc.
- Jamie Bechtel – Co-founder and board member of New Course, Founder and managing partner of Kito Global
- Marc Dumont – Owner, Chairman and CEO of Chateau de Messey Wineries, Meursault, France
- Kenneth Siegel – President, Diamond Resorts International, Inc., Retired
- Matthew K. Szot – CFO and Executive Vice President, S&W Seed Company
- Julia Williams, M.D. – Physician, Founder and President of Humanitarian Efforts Reaching Out (HERO)

Officers
- Loretta P. Mayer, Ph.D. – Chair of the Board, CEO and Chief Scientific Officer, SenesTech, Inc.
- Cheryl A. Dyer, Ph.D. – Director, President and Chief Research Officer, SenesTech, Inc.
- Thomas C. Chesterman – Executive Vice President, CFO, Treasurer and Assistant Secretary, SenesTech, Inc.
- Kim Wolin – Executive Vice President Operations, SenesTech, Inc.
- Edward Albe – Senior Vice President of Commercialization, SenesTech, Inc.

Annual Meeting
Our annual meeting of stockholders will be held on June 18, 2019 at 10:00 a.m., local time, at the Holiday Inn & Suites Phoenix Airport North, 1515 North 44th Street, Phoenix, AZ 85008.

Form 10-K
We file an Annual Report on Form 10-K with the Securities and Exchange Commission. Copies are available without charge upon request. Requests should be sent to inquiries@senestech.com.

Stock Exchange Listing
Our common stock is traded on the NASDAQ Capital Market under the symbol SNES.

Dividends
We have never declared or paid 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 and, therefore, do not intend to pay cash dividends on our common stock for the foreseeable future.

Forward-Looking Statements
This annual report contains forward-looking statements based on current expectations, estimates and projections about our industry and management's beliefs and assumptions. These forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties that are difficult to predict. Please refer to the information set forth under the captions "Risk Factors" and "Cautionary Note Regarding Forward-Looking Statements" in our Annual Report on Form 10-K and other reports or documents we file from time to time with the Securities and Exchange Commission. Readers are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date made, and except as required by law, we undertake no obligation to update any forward-looking statement.

senestech

Sound science. Effective solutions.

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Flagstaff, Arizona 86004

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