senestech

Sound science. Effective solutions.

2017
Annual Report

We believe ContraPest® will establish a new paradigm in rodent control by offering a proven, non-lethal fertility-control solution.

TO OUR SHAREHOLDERS

Dr. Loretta Mayer
Founder, Chief Executive Officer and Chairman of the Board

Dr. Cheryl Dyer
Founder, Chief Research Officer

BUILDING A COMPANY

The building of a company is a complex process requiring vision, resilience, teamwork, enormous energy and a dedication to succeed. To transition to a commercial company, there are a number of things that have to be accomplished before the commencement of revenue. You've got to build the right team; you have to develop a commercial level EPA inspected manufacturing facility; you've got to develop the right marketing strategy including product definition, pricing, customer identification, and development of a value proposition in all market segments. In 2017, we took a quantum leap forward in completing the build-out of the necessary infrastructure – physical and personnel – to effectively market and sell our innovative ContraPest® technology for managing rodent populations through fertility control; and positioning SenesTech for long-term success. While 2017 was about setting the stage, 2018 will be about execution, customer acquisition, and revenue generation.

From a marketing standpoint, we have adjusted our product messaging and market outreach to attract new professional pest management (PMP) customers. ContraPest can be a highly effective solution whether as a fertility-control anchor to magnify the success of an Integrated Pest Management (IPM) program, or as a standalone, non-lethal solution for customers looking to reduce or eliminate the use of lethal methodologies. IPM is an ecosystem-based strategy that focuses on long-term prevention of pests and their damage through a combination of techniques, such as biological control, habitat manipulation, modification of environmental factors.

Rodenticides, or poisons, are used only after monitoring indicates they are needed according to established guidelines and treatments are made with the goal of removing only the target organism. Pest control materials are selected and applied to minimize risk to the human health and non-target organisms in the environment. In this context, ContraPest is ideally suited as a complementary tool to supplement traditional pest control strategies as it addresses the problem where it starts: reproduction. This messaging has been well received and we are beginning to gain traction with PMPs and national pest control distributors alike.

KEY DISTRIBUTION AGREEMENTS

During 2017, we established key distribution agreements with Univar and Target Specialty Products to create market access to many of the leading PMPs around the United States. In conjunction with providing this expanded distribution access, we have continued to develop relationships with key PMPs, who are now expanding their deployment

ContraPest®, SenesTech's flagship product, targets the reproductive capabilities of Norway and roof rats. The highly-palatable formulation promotes sustained consumption, reducing fertility in male and female rats, magnifying IPM success.

of ContraPest. These early PMP relationships are just the tip of the iceberg for what we believe will be the opportunity for ContraPest, but they are also crucial as the change leaders in an industry that has been hesitant to change. In addition to establishing these initial distributor, and PMP relationships, we are significantly expanding our marketing campaigns to build a strong brand and to share how ContraPest can support IPM protocols, while also learning how we can best support them as they fight their toughest and persistent rodent infestations. Additionally, we continue to work with municipal and government customers to support their transition from trial to commercial deployment.

Through these PMPs, we can see the successful results of ContraPest in a variety of customer types, such as housing units, hospitals, agriculture, commercial, etc.

EVOLVING MARKET DEVELOPMENTS

As we progress in the development of ContraPest and future products, there are a number of external factors that are driving change and potential opportunities in our market.

There are a number of cities and counties in the U.S. that have banned poison deployment altogether; and we expect that number to grow. Continued efforts in the California Legislature to ban the use of lethal poisons statewide are gaining traction and increased legislative support and Massachusetts is close behind. Globally, New Zealand has made the commitment to be pest free by 2050 and in Europe, where poisons have been used longer than in the United States, rodents are developing resistance to the active ingredients as only the resistant individuals are selected to reproduce. The World Food Program has estimated their grain transit losses rising to over 33% due to rodent grain damage and consumption.

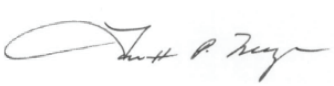
Also consider some of the natural disasters we've witnessed during the hurricane seasons of recent years. Be aware that as water levels rise, rats can swim. They can swim up to 10 miles and when the power is shut off, foods spoil and that becomes a banquet for them in addition to loss of sanitation systems and spread of leptospirosis.

There are other significant health risks, such as the rat lungworm disease in tropical areas, island ecology, not to mention the infrastructure damage that they inflict. Rats are the most successful mammalian species on earth because they can adapt to almost anything that nature, or humans, throw at them. They can breed their way out of many problems.

We may not be able to solve each of these challenges, but they are ones that we need to keep in mind as we grow and evolve.

As we head into 2018, we do so with great optimism. We believe that most of the heavy lifting has been done to position SenesTech for success in the coming years. We believe that 2018 will bring our first meaningful revenues and set the stage for consistent growth. I cannot adequately express my appreciation to our loyal shareholders for their support and patience as we have progressed across the continuum from a research and development stage company to a full-fledged commercial company. All of us at SenesTech are dedicated to growing your company and to dramatically enhancing the value of your investment.

Best regards,



Dr. Loretta Mayer

Dr. Cheryl Dyer

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, 2017

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 and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted 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 and post 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 ☒

The aggregate market value of the registrant's common stock held by non-affiliates on June 30, 2017 (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 $42,913,510. There were 10,320,254 shares of the registrant's common stock outstanding on June 30, 2017.

The number of shares of common stock outstanding as of March 28, 2018: 16,512,246

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 2018 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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PART I

Item 1. *Business.*

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:

- The likelihood of regulatory approvals for our product candidates;
- The potential market opportunities for commercializing our product candidates and the role we expect ContraPest® to hold within the market;
- The anticipated results and effects of our product candidates;
- Our expectations regarding the potential market size for our products candidates, if approved for commercial use;
- Estimates of our 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 future laboratory and field studies and our research and development programs;
- Our ability to develop and manufacture our product candidates 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.

BUSINESS

Overview

SenesTech, Inc. (‘‘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.

Although there is a myriad of tools available to fight rat infestations, pest management professionals (PMPs) continue to face challenges in controlling today’s infestations. Not only do these infestations result in incredible infrastructure damage, but rats also pose additional risks to the health and food security of our communities. In addition to these challenges, PMPs are being increasingly asked for new solutions to help them solve the problem. With growing interest in non-lethal options, it is becoming increasingly important for PMPs to have new tools at their disposable. Our goal is to provide PMPs with a proven solution to not only 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 integrated pest management (IPM) 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. We submitted ContraPest for registration with the EPA on August 23, 2015, and the EPA granted registration approval for ContraPest effective August 2, 2016. We expect to continue to pursue regulatory approvals and amendments to the existing registration in the United States for ContraPest, including additional species and additional jurisdictions.

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. To date, we have received registration for ContraPest in 49 states and the District of Columbia. Registration in California is currently pending.

Integrated Pest Management: Current Challenges

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, 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 our communities.

While traditional tools such as lethal poisons have been at the forefront of pest management programs to curb these infestations and thus the associated damage, they have not provided consistent, sustained results. This is because they are at a disadvantage: 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 campaigns. After the initial decline in the infestation, surviving rodents have plentiful food and harborage creating conditions under which rats can quickly reproduce. A single pair of rats can, under ideal breeding conditions, contribute over 15,000 progenies in 12 months. This means that PMPs typically need to visit a site often to combat not only the initial infestation, but subsequent rebounds.

Additionally, studies on rodent behavior show that rats can learn to avoid poisons. This aversion is referred to as bait shyness or bait aversion and is brought upon by various factors. When rats survive after ingesting a poison, they may fall ill. The illness causes them to avoid consuming the bait again. Observing other ill rats is another factor that may lead to bait shyness.

Finally, there is the potential for rats to develop a resistance to certain active ingredients found in lethal poisons further contributing to a potential failure of existing pest management approaches. This requires property owners and PMPs to continuously apply, on a rotating basis, poisons that vary in active ingredients and formulations in an effort to control these populations without favoring resistance to a particular poison.

Fertility Control: The Missing Link in Integrated Pest Management Programs

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 (IPM) is based upon this concept. However, no matter how many traditional tools are used, some rodent infestations remain a problem and continue to contribute billions of dollars in damage to stored food and/or infrastructure a year.

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. Targeting both males and females allows us to drive populations down more quickly and to sustain that population reduction. 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.

To help combat bait shyness, ContraPest was specifically formulated to be a desirable bait. Rats require 10% of their body weight in water, making ContraPest an attractive bait to add to IPM programs. The high fat content and sweet taste leads to repeat consumption even among sought after food sources. In free choice tests in laboratory settings, rats consume ContraPest in the presence of unlimited food and water. In field trials, ContraPest is consumed by rats even in the presence of abundant water sources and plentiful food options including animal feed, trash and other options.

Adding ContraPest to an IPM 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.

In addition to helping PMPs suppress infestations, we believe ContraPest can establish a new paradigm in rodent control, allowing for a decreased reliance on lethal options through the offering of a stand-alone non-lethal solution, where requested by the customer. ContraPest delivery system is designed to minimize handler exposure and is dispensed inside tamper resistant bait stations, minimizing the risks to non-target species. Consumption of ContraPest does not cause illness in rats and therefore it does not change behavior, and limits the chances of prey captures and secondary exposure.

Recent Research Regarding the Effectiveness of ContraPest

The majority of our research efforts have been focused on developing our lead product, ContraPest. We have completed studies regarding the effectiveness of our product, which were funded by and in cooperation with the National Institute of Health(NIH), the United States Department of Agriculture (USDA), the National Wildlife Research Center(NWRC), and the New York Metropolitan Transit Authority(MTA), and other third parties. The following summarizes the results of these recent studies:

- A NWRC study involving 50 rats completed in December 2014 demonstrated a 96% reduction in litter size in female and male wild caught Norway rats provided ContraPest as well as unlimited food and water in a laboratory setting;
- A NWRC study involving 32 rats completed in June 2015 demonstrated a 96% reduction in litter size in female and male wild caught Norway rats provided ContraPest along with unlimited food and water in a semi-field setting;
- A NWRC study involving 50 rats completed in September 2016 demonstrated a 96% reduction in litter size in female and male wild caught black or roof rats provided ContraPest and unlimited food and water in a laboratory setting;
- A March 2015 study in North Carolina resulted in a 46% reduction in rodent activity over 12 weeks after being exposed to ContraPest as compared to the use of rodenticide alone;
- A NIH-funded study completed in August 2014 in the subway trash rooms of the MTA in New York City observed that there was a 43% reduction in the rodent population in the trash rooms that were baited with ContraPest;
- Internal laboratory studies involving 32 rats have shown zero pups born to any rat groups provided with ContraPest along with unlimited food and water, while rats given the control bait with no active ingredients had on average 11 pups per litter;

- In December 2015 we completed a research study with the Chicago Transit Authority, or CTA. While the observations and results are subject to a confidentiality agreement, the performance of ContraPest and the new delivery system met expectations; and
- In August 2016 we conducted a study in neighborhoods in a Massachusetts suburb. This study resulted in suppressing rodent populations by upwards of 67% in approximately 4 months.

We have additional field trials underway in Hawaii and are contemplating further research trials in a variety of applications.

Together, these studies reinforce that ContraPest is a highly attractive, liquid contraceptive bait that with repeated consumption, is effective in reducing rat populations in a variety of settings.

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:

- Commercialize our lead product, ContraPest, throughout the U.S. and in other parts of the world where appropriate and economically viable.
- Educate our target markets on the long-term benefits our fertility control solution provides.
- Expand and improve our manufacturing processes and supply chain to meet growing demand.
- Leverage our scientific research and core technologies to develop and commercialize a broad suite of products.
- Continue to develop and establish third party relationships with manufacturing, marketing and distribution partners in the U.S. and internationally.

Manufacturing, Marketing and Distribution

Third Party Relationships

We intend to continue to establish and develop relationships in the U.S. and internationally. We are currently party to the following arrangements:

Distributors – In the U.S., ContraPest is classified by the EPA as a restricted use product, and as such, must be deployed and serviced by licensed PMPs. These PMPs typically purchase their supplies through distributors. Accordingly, we have signed agreements thus far with two distributors, Univar, signed on November 10, 2017, and Target Specialty Products, signed on November 6, 2017. We intend to add additional distributors from time to time.

Bioceres — In January 2016, we signed an agency agreement with INMET, the research and development subsidiary of Bioceres, Inc., a leading agricultural biotechnology company in Argentina, to seek regulatory approval for and conduct pre-sales marketing of ContraPest in Argentina. Under the agreement, INMET, which specializes in bacterial fermentation solutions, will act as our exclusive agent to obtain necessary governmental approvals to sell and market ContraPest in agricultural, residential and public transport applications throughout the country of Argentina. The parties intend to create a joint venture entity in Argentina which we will control. Sales in Argentina will occur only after regulatory approval is obtained and the joint venture entity is formed. We have also entered into a services agreement with Bioceres and INMET to provide research and development services to develop an efficient production method for a biosynthetic version of triptolide, one of the two active ingredients in ContraPest that also has pharmaceutical applications.

Subject to obtaining necessary regulatory approvals, we plan to market ContraPest in additional international jurisdictions, including Europe. The expectation is that we will stage these market launches based on the length of time required to complete each country's regulatory process, the market potential, identification and agreements with appropriate parties and the safety of our intellectual property. However, we have not yet entered into any binding agreements related to these matters.

Commercialization Plans

To date, we have generated minimal revenue from product sales, but we currently expect to fully commercialize ContraPest and begin to generate revenue from the sale of products in the second quarter of 2018. Subject to obtaining necessary regulatory approvals, we also intend to market ContraPest in international jurisdictions. Target segments for ContraPest include government (e.g., subways, transit systems and public housing agencies); healthcare; agriculture (e.g., farms, storage facilities and protein production facilities (including cattle, sheep, pig and poultry facilities)); food production (e.g., factories, meat packing facilities, dairy production plants and vegetable and fruit preparation facilities); and commercial (e.g., major restaurant chains, retail locations, casinos and hotels). Since EPA approval, we have received calls or emails of interest from the following types of potential customers: zoos, animal research facilities, waste and recycling centers, parks, transit agencies, natural resource managers, island conservation groups, botanical gardens, animal sanctuaries, children's gardens, healthcare providers, property managers, and food production facilities in non-food use areas. In addition, we intend to approach large pest management companies to pursue potential strategic relationships for the distribution and sale of ContraPest. ContraPest is classified by the EPA as a restricted use pesticide.

Pricing and Value

We value price our product ContraPest such that our pricing strategy takes into account not only the cost of goods sold, but an understanding of 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 current 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 increased value and premium price, built around the following proposed advantages:

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

Also, we will 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 versus 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 IPM tools as populations decrease with ContraPest deployment; and
- Public relations advantages when reducing usage of poisons and other lethal products.

Marketing Approach

While ContraPest can be used across many settings, our commercial focus today is within 3 major markets: agricultural, structural and municipal. While we recognize that each of these markets has unique challenges, they share common challenges including rebound effects and the costly secondary damage caused by rats to infrastructure. We feel ContraPest exhibits strong value as either a stand-alone, non-lethal solution, or as an anchor to a broader IPM program within these settings.

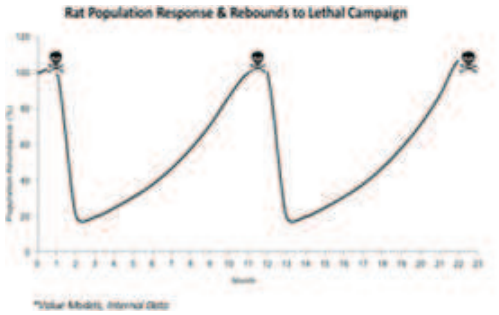
ContraPest is the solution for even the most difficult rat infestations

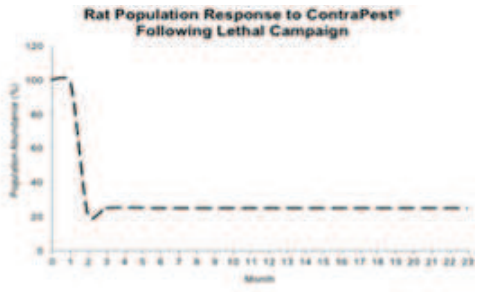
ContraPest is a versatile tool that can be used as a stand-alone non-lethal solution or within IPM program to help reduce reproduction and magnify the success of integrated infestation control methodologies.

Approved for use in indoor, non-food use areas as well as limited outdoors, 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 including but not limited to indoor, non-food areas, and within 1foot of external perimeters of manmade structures. ContraPest is currently housed inside the JT Eaton Rat Fortress (903TP), a tamper resistant bait station. Each tank and tray dispenses 550mL of product for a total of 1.1L per bait station, allowing the PMP to adjust the amount of bait with population size while also maximizing work flow as populations decrease.

Focus Areas & Key Markets

As part of an IPM program, ContraPest can target rat fertility and offer stable population control, to combat PMPs 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 IPM tools to focus on prevention and maintenance rather than responding to spikes.





Additional secondary 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 solution to helping PMPs bring and keep rat populations down.

Sales Approach

In the U.S., ContraPest is classified by the EPA as a restricted use pesticide, and must be deployed and serviced by a licensed PMP. The advantages to us of selling through such a third party 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, co-travel with sales representatives and the creation of sales and marketing tools.

We currently sell to end-user customers through a network of distributors. None of these end-user customers comprise a significant percentage of our gross sales.

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 a standard industrial chemical supply provider. However, in the near future we will be qualifying additional suppliers for VCD. 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. Currently, we have one EPA registered source of purified triptolide, and have internally validated a second source. However, the process to purify triptolide for use in ContraPest is expensive, and we are currently seeking other, less costly sources of triptolide, including biosynthetic methods.

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 and launch ContraPest. Our internal production capabilities allow us to meet our current and anticipated demand during 2018 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 mice and rats with VCD does not produce generalized toxicity nor does it affect other tissues. A VCD-dosed rat 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.

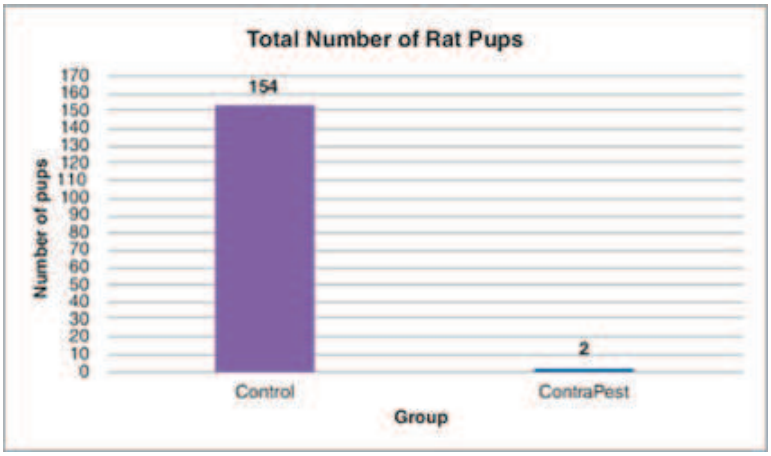


Figure: Total number of rat pups born after consumption of ContraPest. Sixteen female rats (n=8 control and n=8 treatment) were provided ContraPest or inactive bait for 15 days and bred with proven male breeders. After two breeding rounds, the number of pups was totaled. The bar on the left shows the 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
ContraPest/Mice	Regulatory submission required	Population management	Mice
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 (the root cause of the ‘‘taint’’) 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. A 2005 study estimated monetary losses by feral dogs within the U.S. at $620 million annually. Feral pigs can be aggressive and are known for damaging crops and transmitting diseases to humans, livestock and other wildlife. Feral pigs are present across more than three quarters of the U.S. and are responsible for an estimated $1.5 billion in damage each year.

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. Accordingly, we are currently conducting pilot studies to show efficacy of our approach prior to proceeding to larger pivotal studies and regulatory submission. We are currently completing specific development plans for this product candidate.

Companion Animal Product Candidates

We plan 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 larger companies.

- *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 $1.9 billion 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, there are no non-lethal fertility control products that target rodents. Products that are used for managing rodent infestations 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 IPM protocol. By targeting the reproduction of rats, ContraPest can offer a proven solution that allows PMPs 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. Future changes in federal, state and local regulations could increase our cost of environmental compliance.

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. We intend to diligently pursue additional related regulatory approvals from the EPA to support our product evolution, including seeking approval for full outdoor use, removal of the restricted-use status, alternative formulations and for additional species. Utilizing already approved active ingredients ContraPest is currently registered in 49/50 states and in the District of Columbia. Registration in California is currently pending.

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, 2017, we had 35 full-time, and four part-time employees including a total of three with Ph.D. degrees. Within our workforce, 21 employees are engaged in research and development and 18 in business development, finance, legal, human resources, facilities, information technology and general management and administration. None of our employees are represented by labor unions or covered by collective bargaining agreements.

Intellectual Property and Other Proprietary Rights

Research and development expenses accounted for approximately 25.9% and 25.0% of our total operating expenses for each of the years ended December 31, 2017 and 2016, respectively. For further discussion regarding our research and development expenses, see Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations-Components of our Results of Operations-Operating Expenses-Research and Development Expenses.

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

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;
- Acceptance of the product candidate as a safe and effective alternative;
- The potential and perceived advantages of product candidates over alternative 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 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.

Developing product candidates, including conducting experiments and field studies, obtaining and maintaining regulatory approval and commercializing any products later 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 any of our product candidates are approved but 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 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 are developing but do not currently have 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 establish adequate sales, marketing, and distribution capabilities, whether independently or with third parties, we may not be able to generate 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.

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

The EPA granted registration approval for ContraPest effective August 2, 2016, but we must still obtain applicable state approval and will also seek regulatory approval in other jurisdictions. As a result, our near-term prospects, including our ability to finance our operations and generate revenue, are substantially dependent on our ability to obtain sufficient regulatory approval for ContraPest, and, if approved, to successfully commercialize ContraPest. ContraPest is currently registered in 49/50 states and in the District of Columbia. Registration in California is currently pending.

We cannot commercialize our 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.

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 meets the safety requirements of the agency;
- 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 would 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 manufacturers 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 do not currently have internal full-scale manufacturing capability and we must develop our own full-scale manufacturing capability or rely upon third parties to manufacture our products.

Our existing internal manufacturing platform is adequate for meeting our current demand for ContraPest and is being expanded to meet further anticipated demand. We may be required to spend significant time and resources to expand these manufacturing facilities to fully meet demand. If we are unable to develop our own 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.

If a current or future strategic partner terminates or fails to perform its obligations under an agreement with us, the development and commercialization of our product candidates could be delayed or terminated.

We are currently party to various production, marketing and distribution arrangements, including a strategic commercial agreement with Bioceres. Our strategic commercial agreements may not lead to development or commercialization of product candidates in the most efficient manner, or at all. If our partners do not devote sufficient time and resources to their strategic arrangement with us, we may not realize the potential commercial benefits of the arrangement, and our results of operations may be materially adversely affected.

Much of the potential revenue from our current and future strategic arrangements may consist of contingent payments, such as payments for achieving regulatory milestones or royalties payable on sales of our products. The milestone and royalty revenue that we may receive under these arrangements will depend upon our partners' ability and willingness to successfully develop, introduce, market and sell ContraPest and any other product candidates for which we receive regulatory approval. Our partners may fail to develop or effectively commercialize products using our products or technologies because they:

- Decide not to devote the necessary resources due to internal constraints, such as limited personnel with the requisite expertise, limited cash resources or specialized equipment limitations, or the belief that other development programs may have a higher likelihood of obtaining marketing approval or may potentially generate a greater return on investment;
- Decide to pursue other technologies or develop other product candidates, either on their own or in collaboration with others, including our competitors, to treat the same problems targeted by our own products;
- Do not have sufficient resources necessary to carry the product candidate through development, marketing approval and commercialization; or
- Cannot obtain the necessary regulatory approvals.

Competition for our products and market forces in general may negatively impact any of our partners' focus on and commitment to our relationship and, as a result, could delay or otherwise negatively affect the commercialization of our products, which would have a material adverse effect on our operating results and financial condition.

We face a number of challenges in seeking future strategic arrangements. Strategic arrangements are complex and any potential discussions may not result in a definitive agreement for many reasons. For example, whether we reach a definitive agreement for a future arrangement will depend, among other things, upon our assessment of the potential partner's resources and expertise, the terms and conditions of the proposed arrangement, and the proposed arrangement's evaluation of a number of factors, such as the design or results of our field studies, the potential market for our product candidates, the costs and complexities of manufacturing and delivering our product candidates to customers, the potential of competing products, the existence of uncertainty with respect to ownership or the coverage of our intellectual property, and industry and market conditions generally. If we determine that additional arrangements for our product candidates are necessary and are unable to enter into such arrangements on acceptable terms, we might elect to delay or scale back the development or commercialization of our product candidates in order to preserve our financial resources or to allow us adequate time to develop the required physical resources and systems and expertise ourselves.

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, 2017, we had 35 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. We have previously identified and may in the future identify material weaknesses in our internal control over financial reporting. If we experience additional 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.

In connection with the preparation of our consolidated financial statements as of and for the year ended December 31, 2015, we identified a material weakness in our internal control over financial reporting. 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.

We are in the process of implementing measures designed further to improve our internal control over financial reporting, including how to remediate any identified material weakness in our internal controls, including:

- the appointment of a Corporate Controller in May 2016;
- 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. 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.

We currently have one source of triptolide, which, in a purified form, is a key ingredient for ContraPest. If we are unable to develop additional sources of triptolide 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 or any of our licensors or strategic partners 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 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 letter from the listing qualifications staff of The NASDAQ Stock Market providing notification that the bid price for our common stock no longer met the minimum bid price requirement for continued listing.

In the event that we are unable to increase our stock price above $1 per share to regain compliance with NASDAQ listing requirements, we may be required to ask our stockholders to approve a reverse stock split. In the event that we are unable to regain compliance with the applicable NASDAQ listing requirements or standards of The NASDAQ Capital Market, our common stock could be delisted from The NASDAQ Capital Market,

which could have a material adverse effect on our financial condition and which could cause the value of our common stock to decline. If our common stock is not eligible for listing or quotation on another market or exchange, trading of our common stock could be conducted in the over-the-counter market or on an electronic bulletin board established for unlisted securities such as the Pink Sheets or the OTC Bulletin Board. In such event, it 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.

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, 2017 and 2016, we reported net losses of $12.3 million and $10.9 million, respectively. As of December 31, 2017, we had an accumulated deficit since inception of $73.6 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:

- 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;
- 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 to establish an infrastructure for the sales, marketing and distribution of ContraPest and any other product candidates for which we may receive regulatory approval;
- Attempt to achieve market acceptance for our products;
- 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 launch 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. Although we have raised additional capital since December 31, 2015 through private offerings of our equity securities, our initial public offering of 1,875,000 shares of our common stock in December 2016 with warrants to purchase an additional 1,875,000 shares issued to Roth Capital Partners, LLC as underwriter, and a second offering in November 2017 of 5,860,000 shares of our common stock and warrants to investors to purchase an additional 4,657,500 shares and warrants issued to Roth Capital Partners, LLC, as underwriter, to purchase an additional 945,000 shares. 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. The sale of additional equity or convertible debt securities would dilute all of our stockholders. 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:

- Results and timing of our submissions with the EPA and other comparable regulatory authorities;
- Failure or discontinuation of any of our development programs;
- Regulatory developments or enforcements in the U.S. 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;
- 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;
- 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;
- Announcement or expectation of additional financing efforts;
- Sales of our common stock by us, our insiders, or our other stockholders;
- 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 our common shares, or the perception that such sales will occur, could cause a decline in the market price of our common shares. As of March 28, 2018, we have 16,512,246 common shares outstanding. Each of our directors and executive officers and certain of our other security holders were subject to certain lock-up agreements in connection with our initial public offering that expired in June 2017 and

in connection with our follow on offering in November 2017 that expired in February 2018. If these stockholders sell substantial amounts of common shares in the public market, or 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.

In addition, in the future, we may issue additional common shares or other equity or debt securities convertible into common shares 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.

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, 2017, 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. On November 16, 2016, we leased an additional 1,954 square feet of research and development space, also in Flagstaff, Arizona. This lease expires on November 15, 2018. We believe that our existing facilities are adequate and meet our current needs for business, manufacturing and research and development, even in the event we do not renew the 1,954 square feet expiring in November 2018.

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

On February 20, 2018, New Enterprises, Ltd. (''New Enterprises''), filed suit in the U.S. District Court for the District of Arizona against the Company and Roth Capital Partners, LLC. The suit 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; that the Company breached the lock-up agreement and tortuously interfered with prospective business advantage. New Enterprises is seeking monetary damages, including compensatory damages, punitive damages, and attorney's fees. The Company believes there is no basis to any of the claims, and intends to vigorously defend itself, including seeking appropriate counterclaims.

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." The following table sets forth the high and low sales prices for our common stock for the periods indicated, as reported by the NASDAQ Capital Market. Our common stock was initially listed for trading on the NASDAQ Capital Market on December 8, 2016.

	High	Low
Year Ended December 31, 2017:		
First Quarter (ending March 31, 2017)	$10.69	$7.05
Second Quarter (ending June 30, 2017)	$ 8.77	$4.85
Third Quarter (ending September 30, 2017)	$ 6.12	$1.54
Fourth Quarter (ending December 31, 2017)	$ 3.87	$0.56
Year Ended December 31, 2016:		
Fourth Quarter (beginning December 8, 2016)	$ 8.98	$7.44

Holders

As of March 28, 2018, there were approximately 700 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 issuance of 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, 2017:

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, 2017 to October 31, 2017	—	$ —	—	$—
November 1, 2017 to November 30, 2017	—	$ —	—	$—
December 1, 2017 to December 31, 2017	36,119	$0.67	—	$—
Total	36,119	$0.67	—	$—

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

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 consolidated financial statements and related notes. This Management's Discussion and Analysis of Financial Condition and Results of Operations may contain some statements and information that are not historical facts but are forward-looking statements. For a discussion of these forward-looking statements, and of important factors that could cause results to differ materially from the forward-looking statements contained in this report, see Item 1 of Part I, ''Business—Cautionary Note Regarding Forward-Looking Statements,'' and Item 1A of Part I, ''Risk Factors.''

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 $47.2 million from our sales of common stock, preferred stock and issuance of convertible and other promissory notes and an aggregate of $1.6 million from research grants and licensing fees.

We have incurred significant operating losses every year since our inception. Our net losses were $12.3 million and $11.0 million for the years ended December 31, 2017 and 2016 respectively. As of December 31, 2017, we had an accumulated deficit of $73.6 million. 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, 2017 and December 31, 2016 was $3.7 million and $3.4. million, respectively, which represented 30.0% and 31.4%, respectively, of our total operating expenses for those periods.

Components of our Results of Operations

Revenue

For the years ended December 31, 2017 and 2016, we generated revenue from product sales of $52,000 and less than $1,000, respectively. Except for the product sales noted above, all of our revenue to date has been derived from payments received in connection with research grants and licensing fees received under the former license agreement with Neogen. We recognized revenue of $0 and $132,000 for the years ended December 31, 2017 and 2016 respectively for services performed under NIH grants and $0 and $186,000 for the years ended December 31, 2017 and 2016, respectively, 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 discovery and development of our 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.

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 selling, 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 any approved products 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 any approved products 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.

Other Income (Expense), Net

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. For the year ended December 31, 2017, we recorded $29,000 of interest income on our cash and short term, highly liquid investments.

Interest Expense. Interest expense in 2017 consists primarily of interest accrued on our lease and note commitments. Interest expense in 2016 consisted primarily of interest on $2.9 million in convertible and other promissory notes we issued during 2014, 2015 and 2016, most of which were converted or redeemed by December 31, 2016. At December 31, 2017, $12,000 of these promissory notes remained outstanding.

Other Income (Expense), Net. Other income (expense), net, consists primarily of net losses on extinguishment of convertible and non-convertible, secured and unsecured promissory notes. We recorded $87,000 of other income, net, for the year ended December 31, 2017 due to recognized changes in value of short-term investments and reduced expense related to the year-over-year fair market value adjustment of our derivative warrant.

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 three and six months ended December 31, 2017 has been effected 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. As of December 31, 2017, we had federal net operating loss carryforwards of $44.1 million which begin to expire in 2023 and state net operating loss carryforwards of $44.1 million which began to expire in 2016, unless utilized.

Comparison of the Years December 31, 2017 to 2016

The following table summarizes our results of operations for the years ended December 31, 2017 and 2016:

	Year Ended December 31,	
	2017	2016
	(in thousands)	
Revenue	$ 52	$ 318
Cost of Sales	45	—
Gross Profit	7	318
Operating expenses:		
Research and development	3,191	2,705
Selling, general and administrative	9,132	8,129
Total operating expenses	12,323	10,834
Loss from operations	(12,316)	(10,516)
Interest income	29	—
Interest expense	(86)	(87)
Loss on extinguishment debt	—	(161)
Other income (expense), net	87	(31)
Net loss	$(12,286)	$(10,795)

Revenue

Revenue was $52,000 for the year ended December 31, 2017, compared to $318,000 for the year ended December 31, 2016.

The $52,000 of revenue recognized for the year ended December 31, 2017 represented sales of our product ContraPest We currently sell to end-user customers through a network of distributors. None of these end-user customers comprise a significant percentage of our gross sales. We recognized revenue of $132,000 for the year ended December 31, 2016 for services performed under NIH grants and $186,000 of 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.

Research and Development Expenses

	Year Ended December 31,		Increase (Decrease)
	2017	2016	
	(in thousands)		
Direct research and development expenses:			
Unallocated expenses:			
Personnel related (including stock-based compensation)	$1,840	$2,016	$(176)
Facility related	293	218	75
Other	1,058	471	587
Total research and development expenses	$3,191	$2,705	$ 486

Research and development expenses were $3.2 million for the year ended December 31, 2017, compared to $2.7 million for the year ended December 31, 2016. The $486,000 increase in research and development expenses was primarily due to increases in consulting and legal expenses primarily related to regulatory affairs,, manufacturing equipment maintenance of $119,000, travel expenses related to technical services and customer

support of $113,000, depreciation expense of $100,000 due to equipment adds during 2017, facility and rent expense of $75,000 as a result of the temporary leasing of a facility on the east coast to support technical services, shipping and postage expense of $26,000 due to increased sales volume and $21,000 in training expense, offset by reduced personnel related expense of $176,000 as a result of reduced regulatory and technical services headcount and related stock compensation.

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.

Selling, General and Administrative Expenses

Selling, general and administrative expenses were $9.1 million for the year ended December 31, 2017, compared to $8.1 million for the year ended December 31, 2016. The increase of $1.0 million in selling, general and administrative expenses was due to an increase of $1.7 million in personnel related costs, including an increase of $400,000 in stock-based compensation expense, as a result of ten additional headcount (seven in the sales and marketing area), $290,000 in compensation for our board of directors, $132,000 in legal fees, $307,000 in insurance, including Directors and Officers coverage, $98,000 in depreciation, $150,000 in computers and IT related expense and $59,000 in marketing, offset by decreases of $1.0 million of contract cancellation settlement expenses that were recognized in 2016, decreases in accounting fees and related consultants of $443,000, and a $201,000 reduction in EPA consulting and registration fees.

Interest Expense, Net

We recorded $57,000 of interest expense, net for the year ended December 31, 2017, compared to $248,000 for the year ended December 31, 2016. The decrease in interest expense net of $191,000 was a result of $29,000 in interest income in 2017 on investments in short term investments, $161,000 of loss on extinguishment of unsecured notes in 2016 and lower interest expense in the amount of $1,000 in 2017 due to $2.9 million of convertible notes that were issued in 2014 and exchanged for Series B convertible preferred stock in December of 2016 offset by interest expense on equipment financing arrangements during 2017.

Other Income (Expense), Net

We recorded $87,000 of other income, net, for the year ended December 31, 2017, compared to $31,000 of other expense, net, for the year ended December 31, 2016. The $118,000 net decrease in other expense was primarily due to $18,000 in recognized change in value of short-term investments and $100,000 of reduced expense related to the year-over-year fair market value adjustment of our derivative warrant.

Liquidity and Capital Resources

Since our inception, in the course of our research and development activities, we have sustained significant operating losses 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 primarily 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 under research grants and pursuant to our former license agreement with Neogen. Through December 31, 2017, we had received net proceeds of $54.4 million from our sales of common stock and preferred stock and issuance of convertible and other promissory notes, and an aggregate of $1.6 million from licensing fees.

The Company's ultimate success depends upon the outcome of a combination of factors, including: (i) the success of our research and development; (ii) ongoing regulatory approval and commercialization of ContraPest and our other product candidates; (iii) market acceptance and commercial viability and profitability of ContraPest and other products if the Company obtains the necessary regulatory approvals; (iv) the ability to market our products and establish an effective sales force and marketing infrastructure to generate significant revenue; (v) the ability to retain and attract key personnel to develop, operate and grow our business; and (vi) the timely and successful completion of additional financing as needed. The Company has funded its operations to date through the sale of convertible preferred stock and common stock, including 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 as underwriter, a second offering on November 21, 2017 of 5,860,000 shares of our common stock at $1 per share with warrants issued to investors to purchase an additional 4,657,500 shares of our common stock at $1.50 per share, and warrants issued to Roth Capital Partners, LLC, as underwriter, to purchase an additional 945,000 shares at $1.50 per share, debt financing, consisting primarily of convertible notes and, to a lesser extent, payments received in connection with research grants and licensing fees. At December 31, 2017, we had an accumulated deficit of $73.6 million and cash and cash equivalents and highly liquid investments of $7.1 million.

Based upon its current operating plan, the Company expects that cash and cash equivalents and highly liquid, short term investments at December 31, 2017, in combination with anticipated revenue, will be sufficient to fund its current operations for the near future. However, if anticipated revenue targets are not achieved, the Company may seek to reduce operating expenses and is likely to require additional capital in order to fund its operating losses and research and development activities by issuing additional debt and equity instruments, until such time as the Company is profitable. If such equity or debt financing is not available at adequate levels or on acceptable terms, the Company may need to delay, limit or terminate development and commercialization efforts.

Funding Requirements

We expect our expenses to increase substantially in connection with our ongoing activities, particularly as we advance field studies of our product candidates in development. In addition, we incur additional costs associated with operating as a public company.

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

- Continue the research and development of ContraPest and our other product candidates, including engaging in any necessary field studies;
- Seek regulatory approvals for ContraPest and our other product candidates;
- Scale up manufacturing processes and quantities to prepare for the commercialization of ContraPest and any other product candidates for which we receive regulatory approval;
- Establish an infrastructure for the sales, marketing and distribution of ContraPest and any other product candidates for which we may receive regulatory approval;
- Attempt to achieve market acceptance for our products;
- 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 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,	
	2017	**2016**
Cash used in operating activities	$(9,321)	$ (6,696)
Cash used in investing activities	(5,902)	(57)
Cash provided by financing activities	5,498	18,438
Net increase (decrease) in cash and cash equivalents	$(9,725)	$11,685

Operating Activities.

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 selling, 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.

During the year ended December 31, 2016, operating activities used $6.7 million of cash, primarily resulting from our net loss of $10.8 million, partially offset by non-cash charges of $3.8 million and by changes in our operating assets and liabilities of $342,000. Our net loss was primarily attributed to research and development activities and our selling, general and administrative expenses, as we generated limited 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, 2016 consisted primarily of an increase in prepaid expenses of $301,000, a $221,000 decrease in deferred revenue related to our former license agreement with Neogen, an increase in inventories of $57,000 and an increase in deposits of $3,000, partially offset by a $916,000 increase in accrued expenses and accounts payable and an increase in deferred rent and accounts receivable of $8,000. The increase in accrued expenses and accounts payable was due to increased accrual of $1 million related to our settlement agreement with Neogen.

Investing Activities.

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.

During the year ended December 31, 2016, we used $57,000 of cash in investing activities, consisting of purchases of property and equipment.

Financing Activities.

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, $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.

During the year ended December 31, 2016, net cash provided by financing activities was $18.4 million as a result of $18.8 million of proceeds from the issuance of shares of common stock in our initial public offering and the rights offering in 2016, $896,000 of proceeds received from the issuance of Series B convertible preferred stock prior to our initial public offering, $521,000 of proceeds received from the exercise of stock options and warrants, $326,000 of proceeds received from our issuance of notes payable prior to our initial public offering, all of which were partially offset by payments of $1.9 million related to the notes payable, $2.2 million of deferred offering costs, $176,000 of payments of preferred stock dividends and $21,000 in repayments of capital lease obligations.

Recent Developments

None

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 to our audited financial statements, 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

We recognize revenue in accordance with the Financial Accounting Standards Board (the ''FASB'') Accounting Standards Codification (''ASC''), Topic 605, *Revenue Recognition*. Accordingly, we recognize revenue from our licensing agreements and contracts to perform pilot studies when (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.

When we receive nonrefundable, upfront license fee payments for the exclusive rights to licensing our intellectual property, management determines if such license has stand-alone value. If management determines that the license to our intellectual property did not have stand-alone value, we recognize revenue attributable to that license on a straight-line basis over the estimated related performance period. Any changes in the estimated period of performance will be accounted for prospectively as a change in estimate.

In 2016, we generated revenue from a license agreement with a strategic partner pursuant to which we granted to such partner an exclusive license in North America to manufacture, distribute and sell commercial control products based on our intellectual property, which includes ContraPest, for the later of 10 years or the expiration of the patent for ContraPest (if issued). This licensing agreement was terminated in January 2017.

Because management determined that the license to our intellectual property did not have stand-alone value, we recognized revenue attributable to that license on a straight-line basis over the estimated related performance period.

Our licensing agreement with this strategic partner also provided for a future fixed amount of contingent milestone payments and contingent sales-based royalties to be received upon the achievement of milestone events. We recognize revenue that is contingent upon the achievement of a substantive milestone in its entirety in the period in which the milestone is achieved and the milestone payments are due and collectible. A milestone is considered substantive when the consideration payable to us for such milestone has all of the following characteristics: (1) there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved; (2) the event can only be achieved based in whole or part on either our performance or a specific outcome resulting from our performance; and (3) if achieved, the event would result in additional payments being due to us. In making this assessment in the future for similar arrangements, we will consider all facts and circumstances relevant to the arrangement, including whether any portion of the milestone consideration is related to future performance or deliverables. In addition, we will account for sales-based royalties as revenue upon achievement of certain sales milestones.

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 $3.7 million and $3.4 million for the years ended December 31, 2017 and 2016 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,	
	2017	2016
	(in thousands)	
Selling, general and administrative expenses	$3,351	$2,964
Research and development expense	377	403
Total stock-based compensation expense	$3,728	$3,367

The intrinsic value of stock options outstanding as of December 31, 2017 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, 2017 and 2016, 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, 2017, 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, 2017 and 2016, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2017, 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 30, 2018

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

	December 31, 2017	December 31, 2016
ASSETS		
Current assets:		
Cash	$ 2,101	$ 11,826
Investment in securities held to maturity	5,023	—
Accounts receivable	16	10
Prepaid expenses	170	337
Inventory	540	57
Deposits	19	9
Total current assets	7,869	12,239
Property and equipment, net	1,454	631
Total assets	$ 9,323	$ 12,870
LIABILITIES AND STOCKHOLDERS' EQUITY		
Current liabilities:		
Short-term debt	$ 177	$ 45
Accounts payable	391	351
Accrued contract cancellation settlement	—	1,000
Accrued expenses	589	371
Notes payable, related parties	12	30
Total current liabilities	1,169	1,797
Notes payable, related parties	—	6
Long-term debt, net	591	138
Common stock warrant liability	—	69
Deferred rent	41	33
Total liabilities	1,801	2,043
Commitments and contingencies (See note 15)	—	—
Stockholders' equity:		
Common stock, $0.001 par value, 100,000,000 shares authorized, 16,404,195 and 10,157,292 shares issued and outstanding at December 31, 2017 and 2016, respectively	16	10
Additional paid-in capital	81,103	72,069
Stock subscribed, but not issued, consisting of -0- and 4,750 shares at December 31, 2017 and 2016, respectively	—	59
Accumulated deficit	(73,597)	(61,311)
Total stockholders' equity	7,522	10,827
Total liabilities and stockholders' equity	$ 9,323	$ 12,870

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

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

	For the Years Ended December 31,	
	2017	**2016**
Revenue:		
License revenue	$ —	$ 186
Sales	52	132
Total revenue	52	318
Cost of sales	45	—
Gross profit	7	318
Operating expenses:		
Research and development	3,191	2,705
Selling, general and administrative	9,132	8,129
Total operating expenses	12,323	10,834
Net operating loss	(12,316)	(10,516)
Other income (expense):		
Interest income	29	—
Interest expense	(85)	(32)
Interest expense, related parties	(1)	(55)
Loss on extinguishment of unsecured promissory note	—	(161)
Other income (expense)	87	(31)
Total other income (expense)	30	(279)
Net loss	(12,286)	(10,795)
Series A convertible preferred stock dividends	—	(159)
Net loss and comprehensive loss	$ (12,286)	$ (10,954)
Weighted average common shares outstanding - basic and fully diluted	10,920,909	6,417,936
Net loss per common share - basic and fully diluted	$ (1.12)	$ (1.71)

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

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

	Series A Convertible Preferred Stock		Series B Convertible Preferred Stock		Common Stock		Additional Paid-In Capital	Stock Subscribed not Issued		Accumulated Other Comprehensive Loss	Accumulated Deficit	Total Stockholders' Equity (Deficit)
	Shares	Amount	Shares	Amount	Shares	Amount		Shares	Amount			
Balance, December 31, 2015	400,000	$ 4,380	399,512	$ 3,096	4,108,766	$ 4	$39,000	3,250	$ 14	$ 17	$(50,357)	$(11,322)
Issuance of series B convertible preferred stock for cash	—	—	115,668	896	—	—	—	—	—	—	—	—
Issuance of series B convertible preferred stock for conversion of notes	—	—	2,007	16	—	—	—	—	—	—	—	—
Issuance of common stock upon conversion of series A preferred stock	(400,000)	(4,380)	—	—	400,000	—	4,380	—	—	—	—	4,380
Issuance of common stock upon conversion of series B preferred stock	—	—	(517,187)	(4,008)	517,187	1	4,007	—	—	—	—	4,008
Issuance of common stock sold for cash	—	—	—	—	4,353,486	4	18,828	—	—	—	—	18,832
Issuance of common stock for services	—	—	—	—	126,373	—	338	5,250	45	—	—	383
Issuance of common stock for services, related parties	—	—	—	—	13,320	—	295	—	—	—	—	295
Stock-based compensation	—	—	—	—	—	—	2,689	—	—	—	—	2,689
Forgiveness of accrued liabilities, related party	—	—	—	—	—	—	2,003	—	—	—	—	2,003
Issuance of common stock upon exercise of stock options and warrants	—	—	—	—	630,935	1	520	—	—	—	—	521
Recognition of warrants issued with unsecured notes	—	—	—	—	—	—	9	—	—	—	—	9
Cashless exercise of warrants	—	—	—	—	7,225	—	—	—	—	—	—	—
Dividends paid on preferred shares	—	—	—	—	—	—	—	—	—	(17)	(159)	(176)
Net loss for the year ended December 31, 2016	—	—	—	—	—	—	—	—	—	—	(10,795)	(10,795)
Balance, December 31, 2016	—	$ —	—	$ —	10,157,292	$10	$72,069	8,500	$ 59	$ —	$(61,311)	$ 10,827
Issuance of common stock sold for cash	—	—	—	—	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

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,	
	2017	**2016**
CASH FLOWS FROM OPERATING ACTIVITIES		
Net loss	$(12,286)	$(10,795)
Adjustments to reconcile net loss to net cash used in operating activities:		
Gain on investments held to maturity	(36)	—
Amortization of discounts on investments held to maturity	17	—
Depreciation and amortization	391	196
Stock-based compensation	3,728	3,367
Amortization of debt discount	—	27
(Gain) loss on remeasurement of common stock warrant liability	(69)	6
Loss on extinguishment of unsecured promissory note	—	161
(Increase) decrease in current assets:		
Accounts receivable	(6)	3
Prepaid expenses	167	(301)
Inventory	(483)	(57)
Deposits	(10)	(3)
Increase (decrease) in current liabilities:		
Accounts payable	40	(193)
Accrued contract cancellation settlement	(1,000)	—
Accrued expenses	218	1,109
Deferred rent	8	5
Deferred revenues	—	(221)
Net cash used in operating activities	(9,321)	(6,696)
CASH FLOWS FROM INVESTING ACTIVITIES		
Purchase of securities held to maturity	(5,004)	—
Purchase of property and equipment	(898)	(57)
Net cash used in investing activities	(5,902)	(57)
CASH FLOWS FROM FINANCING ACTIVITIES		
Dividend payments on preferred stock	—	(176)
Proceeds from the issuance of series B convertible preferred stock	—	896
Proceeds from the issuance of common stock, net of offering costs	5,253	18,832
Proceeds from the issuance of convertible notes payable	—	326
Repayments of convertible notes payable	—	(810)
Proceeds from the issuance of notes payable	437	—
Repayments of notes payable	(73)	(29)
Repayments of notes payable, related parties	(24)	(1,101)
Repayments of capital lease obligations	(95)	(21)
Payment of deferred offering costs	—	—
Proceeds from exercise of stock options and warrants	—	521
Net cash provided by financing activities	5,498	18,438
NET CHANGE IN CASH	(9,725)	11,685
CASH AT BEGINNING OF PERIOD	11,826	141
CASH AT END OF PERIOD	$ 2,101	$ 11,826
SUPPLEMENTAL INFORMATION:		
Interest paid	$ 87	$ 393
Income taxes paid	$ —	$ —
NON-CASH INVESTING AND FINANCING ACTIVITIES:		
Purchases of equipment under capital lease obligations	$ 316	$ 157
Issuance of shares of common stock upon conversion of convertible notes payable	$ —	$ 8,387
Original issue discount	$ —	$ 147
Debt discount on convertible notes	$ —	$ 9
Related party convertible note extinguished for settlement payable	$ —	$ 404
Contributed capital, debt forgiveness by related parties	$ —	$ 2,003

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

1. Organization and Description of Business

SenesTech, Inc. (the ''Company'') was formed in July 2004 and incorporated in the state of Nevada. The Company subsequently reincorporated in the state of Delaware in November 2015. The Company has its corporate headquarters in Flagstaff Arizona.

The Company has developed proprietary technology for managing animal pest populations through fertility control. As an innovative solution focused on fertility control, ContraPest® can be a solution within your Integrated Pest Management program to bring populations down and keep them down or as a stand-alone, non-lethal solution for customers looking to reduce or eliminate their use of lethal products. Its first fertility control product, ContraPest, is marketed for use in controlling the rat population. The innovative compound is consumed by rats and leaves them non-reproductive without other observable side effects. The Company has received regulatory approval for ContraPest in 49 states and the District of Columbia and is pursuing regulatory approvals in California and other jurisdictions, including India, Argentina and the European Union (''EU''). On August 23, 2015, the Company submitted ContraPest for registration with the U.S. Environmental Protection Agency (''EPA''), and the EPA granted registration approval for ContraPest effective August 2, 2016. Following regulatory approval for ContraPest throughout the United States, the Company plans to further commercialize and distribute ContraPest by leveraging new and existing third party relationships with manufacturing, marketing and distribution partners in the U.S. and internationally.

Need for Additional Capital

In the course of its research and development activities, the Company has sustained operating losses since its inception and expects such losses to continue for the foreseeable future.

The Company's ultimate success depends upon the outcome of a combination of factors, including: (i) the success of its research and development; (ii) ongoing regulatory approval and commercialization of ContraPest and its other product candidates; (iii) market acceptance and commercial viability and profitability of ContraPest and other products if the Company obtains the necessary regulatory approvals; (iv) the ability to market its products and establish an effective sales force and marketing infrastructure to generate significant revenue; (v) the ability to retain and attract key personnel to develop, operate and grow its business; and (vi) the timely and successful completion of additional financing as needed. The Company has funded its operations to date through the sale of convertible preferred stock and common stock, including an initial public offering of 1,875,000 shares of its common stock with warrants to purchase an additional 187,5000 shares, on December 8, 2016, a second offering on November 21, 2017 of 5,860,000 shares of its common stock at $1.00 per share with warrants to purchase an additional 4,657,500 shares of its common stock at $1.50 per share sold to investors and warrants to purchase an additional 945,000 shares of its common stock at $1.50 per share issued to Roth Capital Partners, LLC, as underwriter, debt financing, consisting primarily of convertible notes and, to a lesser extent, payments received in connection with research grants and licensing fees. At December 31, 2017, we had an accumulated deficit of $73.6 million and cash and cash equivalents and highly liquid investments of $7.1 million.

Based upon its current operating plan, the Company expects that cash and cash equivalents and highly liquid, short term investments at December 31, 2017, in combination with anticipated revenue, will be sufficient to fund its current operations for the near future. However, if anticipated revenue targets are not achieved, the Company may seek to reduce operating expenses and is likely to require additional capital in order to fund its operating losses and research and development activities by issuing additional debt and equity instruments, until such time as the Company is profitable. If such equity or debt financing is not available at adequate levels or on acceptable terms, the Company may need to delay, limit or terminate development and commercialization efforts.

All amounts shown in these financial statements are in thousands, except percentages and per share and share amounts. Per share and share amounts reflect post-reverse split values.

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.

Deferred Offering Costs

Deferred offering costs consist primarily of legal, accounting and other direct and incremental fees and costs related to the Company's initial public offering on December 8, 2016. Deferred offering costs of $2,234 were offset against the proceeds received from the initial public offering in December, 2016. There were no deferred offering costs at December 31, 2017 or 2016.

Cash and Cash Equivalents

The Company considers money market fund investments to be cash equivalents. The Company had cash equivalents of $3 and $-0- at December 31, 2017 and December 31, 2016, respectively, included in cash as reported.

Investments in Securities Held to Maturity

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 investments in 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 $0 at December 31, 2017 and 2016, 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. As of December 31, 2017, and 2016, the Company had inventories of $540 and $57, respectively.

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.

2. Summary of Significant Accounting Policies – (continued)

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

The Company recognizes revenue from the commercial sales of products, licensing agreements and contracts to perform pilot studies when (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.

The Company has generated revenue from a license agreement with a strategic partner, pursuant to which the Company had granted to such partner the exclusive right to manufacture and distribute its product, ContraPest, once the required regulatory approvals were received. This licensing agreement was subsequently terminated on January 23, 2017. The terms of the licensing agreement contained multiple elements or deliverables, as discussed below. Management evaluates whether the arrangement involving the multiple deliverables contains more than one unit of accounting. To determine the units of accounting under a multiple-element arrangement, management evaluates certain separation criteria, including whether the deliverables have stand-alone value, based on the relevant facts and circumstances of the arrangement.

The Company determined that the license granted pursuant to the license agreement did not have stand-alone value and, therefore, the nonrefundable, upfront license fee payments received by the Company are recognized on a straight-line basis over the estimated related performance period (i.e. from the effective date of the agreement through the estimated completion date of the Company's substantive performance obligations).

In accordance with the terms of the license agreement, the Company was also to receive a future fixed amount of contingent milestone payments (i.e. post-regulatory approval license fees) and contingent sales-based royalties to be received upon the achievement of certain milestone events. The milestone events under the agreement include regulatory approval, patent issuance or alternative intellectual property coverage, and sales-based events. The Company did not earn or receive any of the potential contingent milestone payments, as the milestone events to receive such post-approval license fees and sales-based royalties were not achieved. The Company recognizes revenue that is contingent upon the achievement of a substantive milestone event in its entirety in the period in which the milestone is achieved. A milestone is considered substantive when the consideration payable to the Company for such milestone has all of the following characteristics: (i) there is substantive uncertainty at the date the arrangement is entered into that the event will be achieved; (ii) the event can only be achieved based in whole or part on either the Company's performance or a specific outcome resulting from the Company's performance; and (iii) if achieved, the event would result in additional payments being due to the Company. As the potential contingent consideration was to be received only upon the achievement of milestone events that are considered substantive, the Company would only recognize such revenue in the period the milestone is achieved and the milestone payments became due and collectible. In addition, the Company accounts for sales-based royalties as revenue upon achievement of certain sales milestones.

2. Summary of Significant Accounting Policies – (continued)

Amounts received prior to satisfying the revenue recognition criteria are recorded as deferred revenue on the balance sheet. Amounts expected to be recognized as revenue in the next twelve months following the balance sheet date are classified as a current liability.

The Company recognizes other revenue earned from pilot studies upon the performance of specific services under the respective service contract.

For the year ended December 31, 2017, the Company generated net revenues of $52.

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, and 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.

Valuation of Common Stock

Due to the absence of an active market for the Company's common stock prior to our initial public offering, the Company 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 its common stock. The valuation methodology includes estimates and assumptions that require significant judgments made by the Company's management. These estimated assumptions include a number of objective and subjective factors, including external market conditions affecting the biotechnology industry sector, and the likelihood of achieving a liquidity event, such as an initial public offering or sale.

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.

(In thousands, except share and per share data)

2. Summary of Significant Accounting Policies – (continued)

In November 2015, the Financial Accounting Standards Board (the ''FASB'') issued Accounting Standards Update No. 2015-17, *Balance Sheet Classification of Deferred Taxes*, which eliminates the guidance in Topic 740, Income Taxes, that required an entity to separate deferred tax assets and liabilities between current and noncurrent amounts in a classified balance sheet. The amendments require that all deferred tax assets and liabilities of the same jurisdiction or a tax filing group, as well as any related valuation allowance, be offset and presented as a single noncurrent amount in a classified balance sheet. The standard became effective for annual periods beginning after December 15, 2016, and interim periods within those annual periods, and may be applied either prospectively to all deferred tax liabilities and assets or retrospectively to all periods presented. Early adoption was permitted and the Company early adopted this standard for the year ended December 31, 2015. The adoption of this standard did not have a material impact on the Company's financial statements.

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, 2017 or 2016 and as such, no interest or penalties were recorded in income tax expense.

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.

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, 2017 and 2016. 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,	
	2017	2016
Common stock purchase warrants	6,431,785	829,285
Restricted stock unit	287,885	455,430
Common stock options	1,651,800	1,477,300
Total	8,371,470	2,762,015

In May 2017, the FASB issued Accounting Standard Update (''ASU'') No. *2017-9, Compensation — Stock Compensation (Topic 718): Scope of Modification Accounting* (''ASU2017-9''), which provides guidance about which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. Per ASU 2017-9, an entity should account for the effects of a modification unless all the following are met: (1) the fair value (or calculated value or intrinsic value, if such an alternative

2. Summary of Significant Accounting Policies – (continued)

measurement method is used) of the modified award is the same as the fair value (or calculated value or intrinsic value, if such an alternative measurement method is used) of the original award immediately before the original award is modified. If the modification does not affect any of the inputs to the valuation technique that the entity uses to value the award, the entity is not required to estimate the value immediately before and after the modification, (2) the vesting conditions of the modified award are the same as the vesting conditions of the original award immediately before the original award is modified, and (3) the classification of the modified award as an equity instrument or a liability instrument is the same as the classification of the original award immediately before the original award is modified. The current disclosure requirements in Topic 718 apply regardless of whether an entity is required to apply modification accounting under the amendments in ASU 2017-9. ASU 2017-9 is effective for public business entities for annual and interim periods in fiscal years beginning after December 15, 2017. Early adoption is permitted, including adoption in any interim period, for (1) public business entities for reporting periods for which financial statements have not yet been issued and (2) all other entities for reporting periods for which financial statements have not yet been made available for issuance. The amendments in this ASU should be applied prospectively to an award modified on or after the adoption date. The Company early adopted ASU 2017-9 and adoption did not have a material impact on the Company's financial statements or related disclosures.

In August 2016, the FASB issued ASU No. 2016-15, *Statement of Cash Flows (Topic230): 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. Current GAAP does not include specific guidance on these eight cash flow classification issues. The amendments of this ASU are effective for reporting periods beginning after December 15, 2017, with early adoption permitted. The Company early adopted ASU No. 2016-15 and adoption did not have a material impact on the Company's financial statements or related disclosures.

In March 2016, the FASB issued ASU No. 2016-09, *Improvements to Employee Share-Based Payment Accounting* (''ASU 2016-09''). This standard involves several aspects of the accounting for share-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows. ASU 2016-09 is effective for annual periods beginning after December 15, 2016 and interim periods within those annual periods for public business entities. The method of adoption is dependent on the specific aspect of accounting addressed in this new guidance. Early adoption was permitted in any interim or annual period. ASU 2016-09 was adopted by the Company and did not have a material impact on the Company's financial statements or related disclosures.

In February 2016, the FASB issued ASU No. 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. The Company is evaluating the impact of the adoption of ASU 2016-02 on its financial statements and related disclosures.

In January 2016, the FASB issued ASU No. 2016-01, *Financial Instruments — Overall: 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

2. Summary of Significant Accounting Policies – (continued)

disclosure requirements of financial instruments. ASU 2016-01 is effective in the first quarter of 2019. The Company is evaluating the impact of the adoption of ASU 2016-01 on its financial statements and related disclosures.

In August 2014, the FASB issued ASU No. 2014-15, *Disclosures of Uncertainties about an Entity's Ability to Continue as a Going Concern* (''ASU 2014-15''). This standard requires management to perform an evaluation in each interim and annual reporting period whether there are conditions or events, considered in the aggregate, that raise substantial doubt about the entity's ability to continue as a going concern within one year of the date the financial statements are issued. If such conditions or events exist, ASU 2014-14 also requires certain disclosures of management's plans and evaluation, as well as the plans, if any, that are intended to mitigate those conditions or events that will alleviate the substantial doubt. ASU No. 2014- 15 is effective for the annual period ending after December 15, 2016 and for annual and interim periods thereafter. Early adoption was permitted for annual or interim reporting periods for which the financial statements have not been previously issued. ASU 2014-15 was adopted by the Company and did not have a material impact on the Company's condensed consolidated financial statements or related disclosures.

In May 2014 the FASB issued ASU No. 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. Adoption of the new standard is effective for reporting periods beginning after December 15, 2017. We plan to use the modified retrospective method of adoption and will adopt the standard as of January 1, 2018. We have completed an initial evaluation of the potential impact from adopting the new standard, including a detailed review of performance obligations for all material revenue streams. Based on this initial evaluation, we do not expect adoption will have a material impact on our financial position, results of operations, or cash flows. Related disclosures will be expanded in line with the requirements of the standard. We will continue our evaluation until our adoption of the new standard.

3. Fair Value Measurements

The accounting guidance for fair value, among other things, defines fair value, 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.

3. Fair Value Measurements – (continued)

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.

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, 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	$ —	$ —	$ —	$ —

	December 31, 2016			
	Level 1	Level 2	Level 3	Total
Financial Assets:				
None	$ —	$ —	$ —	$ —
Financial Liabilities:				
Common stock warrant liability[1]	$ —	$ —	$ 69	$ 69
Total	$ —	$ —	$ 69	$ 69

(1) The change in the fair value of the common stock warrant and convertible notes payable for the twelve months ended December 31, 2017 and 2016 was recorded as a decrease to other income (expense) and interest expense of $69 and ($6), 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.

(In thousands, except share and per share data)

4. Investment in Securities Held to Maturity

As of December 31, 2017, investment in securities held to maturity primarily consisted of corporate fixed income securities. The Company did not have investments prior to the first quarter of 2017. The Company classifies all investments as held to maturity as these investments are short term, highly liquid investments which we intend to hold to maturity. Held to maturity securities 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. For the twelve months ended December 31, 2017, the Company recorded $18 net gain (loss) on investments recorded. Interest and dividends on investments held to maturity are included in interest and other income, net, in the condensed statements of operations.

The following is a summary of held to maturity securities at December 31, 2017:

		December 31, 2017			
	Contractual Maturity (in months)	Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Market Value
Corporate fixed income securities	Less than 12 months	$5,020	$3	$ —	$5,023
Total investments		$5,020	$3	$ —	$5,023

5. Prepaid expenses

Prepaid expenses consist of the following:

	December 31,	
	2017	2016
Director compensation	$ 66	$215
Director, officer and other insurance	33	70
Legal retainer	25	25
Inventory purchase deposits	20	
Professional service retainer	8	
Rent	—	17
Equipment service deposits	7	
Engineering, software licenses and other	11	10
Total prepaid expenses	$170	$337

6. Property and Equipment

Property and equipment, net consist of the following:

		December 31,	
	Useful Life	2017	2016
Research and development equipment	5 years	$1,349	$ 989
Office and computer equipment	3 years	672	235
Autos	5 years	305	—
Furniture and fixtures	7 years	34	17
Leasehold improvements	*	283	189
		2,643	1,430
Less accumulated depreciation and amortization		1,189	799
Total		$1,454	$ 631

* Shorter of lease term or estimated useful life

Depreciation and amortization expense was approximately $391 and $196 for the year ended December 31, 2017 and 2016, respectively.

(In thousands, except share and per share data)

7. Accrued Expenses

Accrued expenses consist of the following:

	December 31, 2017	December 31, 2016
Compensation and related benefits	$304	$ 82
Accrued Litigation	269	286
Board Compensation	16	—
Other	—	3
Total accrued expenses	$589	$371

8. Accrued contract cancellation settlement

The accrued contract cancellation settlement of $1.0 million was a result of the Company entering into a settlement agreement with Neogen Corporation in which Neogen and the Company agreed to (a) terminate the existing Exclusive License Agreement between us and Neogen dated May 15, 2014 (the ''License Agreement''), with neither Neogen or the Company having any further obligations thereunder (other than certain confidentiality obligations); (b) dismiss with prejudice the court action filed by Neogen in the District Court for the District of Arizona on January 19, 2017 (the ''Court Action''), and (c) mutually release any and all existing or future claims between the parties and their affiliates related to or arising from the License Agreement or the Court Action. Under the terms of the agreement, the Company agreed to make a one-time payment in the amount of $1.0 million in settlement of all claims and termination of all existing contracts between the parties.

9. Borrowings

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

	At December 31, 2017	At December 31, 2016
Short-term debt:		
NAU Promissory Note	$ —	$ —
Current portion of long-term debt	177	45
Total short-term debt	$ 177	$ 45
Long-term debt:		
Capital lease obligations	$ 272	$ 51
Other promissory notes	496	132
Total	768	183
Less: current portion of long-term debt	(177)	(45)
Total long-term debt	$ 591	$138

Capital Lease Obligations

Capital lease obligations are for computer and lab equipment leased through GreatAmerica Financial Services, Thermo Fisher Scientific, Navitas Credit Corp. and ENGS Commercial Finance Co. These capital leases expire at various dates through April 2022 and carry interest rates ranging from 6.4% and 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% and 13.8%.

(In thousands, except share and per share data)

10. Notes Payable, Related Parties

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

	December 31, 2017	December 31, 2016
Unsecured promissory note, interest rate of 4.25% and 8% per annum	$12	$36
Total notes payable, related parties	12	36
Less: current portion of notes payable, related parties	12	30
Total notes payable, long-term	$—	$ 6

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 continue to bear interest at 8% and 4.25%, respectively. The note requires monthly payments of $1 and matures in May 2018. The deferred salary obligation requires monthly payments of $1 and matures in June 2018.

Amounts outstanding on these obligations were $12 and $36 at December 31, 2017 and 2016, respectively.

Interest expense on the notes payable, related parties, was $1 and $56 for the years ended December 31, 2017 and 2016, respectively.

11. Common Stock Warrants and Common Stock Warrant Liability

The table summarizes the common stock warrant activity as of December 31, 2017 as follows:

Common Stock Warrants	Number of Warrants	Date Issued	Term	Exercise Price
Outstanding at December 31, 2015	610,487			
Initial Public Offering Underwriter	187,500	December 2016	5 years	$9.60
Marketing and Development Services	100,000	February 2016	5 years[1]	$7.50
Other Advisory Services	40,000	August 2016	3 years[2]	$7.50
Promissory Notes	9,031	March 2016	3 years[2]	$7.50
Warrants issued	336,531			
Warrants exercised	(117,733)			
Outstanding at December 31, 2016	829,285			
Common Stock Offering Warrants Issued	4,657,500	November 2017	5 years	$1.50
Common Stock Offering Underwriter Warrants	945,000	November 2017	5 years	$1.50
Outstanding at December 31, 2017	6,431,785			

(1) The warrant also terminates, if not exercised, by the earlier of (i) five years from grant date, (ii) December 13, 2018, or the second anniversary of the closing of an initial public offering of common stock; or (ii) a liquidation, dissolution or winding up of the Company.

(2) The warrant also terminates, if not exercised, by the earlier of (i) three years from grant date, (ii) December 13, 2018, or the second anniversary of the closing of an initial public offering of common stock; or (ii) a liquidation, dissolution or winding up of the Company.

Common Stock Warrant Issued for Marketing and Development Services

In February 2016, the Company issued to a stockholder a warrant to purchase 100,000 shares of common stock at an exercise price of $7.50 per share as consideration for providing marketing and development services in Southeast Asia. The warrant was fully vested and exercisable on the date of grant. The common stock warrant is exercisable until the earlier of (i) five years from the date of grant; (ii) two years after the closing of an initial public offering of common stock by the Company; and (iii) the closing of a liquidation, dissolution or winding up of the Company. The Company estimated the fair value of the common stock warrant to be $431 on the date of grant using a Black- Scholes option pricing model based on the following significant inputs**:** common stock

11. Common Stock Warrants and Common Stock Warrant Liability – (continued)

price of $7.57; comparable company volatility of 77.8%; remaining term 3.75 years; dividend yield of 0% and risk-free rate of 2.09%. The Company recorded the fair value of the warrant as stock-based compensation expense within selling, general and administrative expense on the date of grant.

March 2016 Promissory Notes Common Stock Warrants

In March 2016, the Company issued certain 2016 Unsecured Notes with common stock warrants to purchase an aggregate of 9,031 shares of common stock at an exercise price of $7.50 per share. The common stock warrants are exercisable until the earlier of (i) 3 years from the date of grant; (ii) 2 years after the closing of an initial public offering of common stock; and (iii) the closing of a liquidation, dissolution or winding up of the Company. The Company estimated the fair value of the common stock warrants on the date of grant using a Monte Carlo pricing model based on the following significant inputs: common stock price of $7.575; comparable company volatility 79.6%; and risk-free rate of 1.49%.

August 2016 Other Advisory Services

On August 16, 2016, the Company issued to each of two advisors warrants to purchase 20,000 shares of common stock at an exercise price of $7.50 per share, in each case, on a post-reverse split basis, as consideration for providing advisory services to the Company. The warrants were fully vested and exercisable on the date of grant until the earlier of (i) three years from the date of grant; (ii) two years after the closing of an initial public offering of common stock; and (iii) the closing of a liquidation, dissolution or winding up of the Company. The Company recorded the fair value of the warrants as stock-based compensation expense within selling, general and administrative expense on the date of grant.

Common Stock Warrant Issued To Initial Public Offering Underwriter

In December 2016, the Company issued to the underwriter of its IPO a warrant to purchase 187,500 shares of common stock at an exercise price of $9.60 per share as consideration for providing services in connection with our initial public offering. The warrant was fully vested and exercisable on the date of grant. The common stock warrant is exercisable until five years from the date of grant. The Company estimated the fair value of the common stock warrant to be $939 on the date of grant using a Black- Scholes option pricing model based on the following significant inputs**:** common stock price of 8.00; comparable company volatility of 82.1%; remaining term 5 years; dividend yield of 0% and risk-free rate of 1.92%.

Common Stock Warrants Issued To Participants in Offering of the Company's Common Stock

On November 8, 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%.

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%.

12. Convertible Preferred Stock

Series A Convertible Preferred Stock

In November 2015, the Company issued 400,000 shares of Series A convertible preferred stock, valued at $4,380, in exchange for cancellation of the NAU Promissory Note.

The Series A convertible preferred stock was recorded at the date of issuance at fair value. The Company's Series A convertible preferred stock has been classified as temporary equity on its balance sheet at December 31, 2015. Upon certain liquidation events, as discussed below, that are not solely within the control of the Company, including liquidation, sale or transfer of control of the Company, holders of the Series A convertible preferred stock can cause the redemption of the Series A convertible preferred stock for cash highlighting the potential future cash obligation.

A general summary of the rights with respect to the Series A convertible preferred stock are provided below:

Dividends

The holders of the Series A convertible preferred stock are entitled to dividends at the rate of 6% of the original issue price ($5.00) per annum which accrues whether or not earned or declared by the Board of Directors, whether or not there are profits or funds legally available for the payment and are cumulative to the extent not paid. The Company is restricted to pay or declare any dividend or make any other distribution on the common stock, or purchase, redeem or acquire for value any shares of common stock as long as the Series A convertible preferred stock is outstanding.

Voting

Each holder of the Series A convertible preferred stock is entitled to the number of votes equal to the number of shares of common stock into which such shares of Series A convertible preferred stock could be converted. The preferred stockholders shall vote as a separate class to (i) approve amendments to the Certificate of Incorporation, (ii) authorization of any new classes of stock, and (iii) any asset transfers or acquisitions or any voluntary dissolution or liquidation of the Company.

For so long as any shares of preferred stock remain outstanding, the holders of the Series A convertible preferred stock may appoint one member of the Board in a nonvoting observer capacity.

Conversion Rights

Series A convertible preferred stock may, at the option of the holder, be converted at any time into shares of common stock at a conversion rate of $5.00 per share, subject to certain adjustments for stock splits, stock dividends, reclassifications and certain other events.

Each share of Series A convertible preferred stock will automatically be converted into shares of common stock on the then- effective Series A conversion price (i) at any time upon the affirmative election of the holders of the majority of the outstanding shares of the Series A convertible preferred stock or (ii) immediately upon the closing of a firmly underwritten public offering of common stock in which the gross cash proceeds to the Company are at least $20 million and the Company's shares have been listed for trading on the New York Stock Exchange, NASDAQ Global Select Market or NASDAQ Global Market (''Qualified IPO''). Upon conversion, any declared and unpaid dividends would be paid.

Redemption Rights

Pursuant to the NAU Agreement, in connection with a Qualified IPO, the Company agreed to use the proceeds to redeem all shares of Series A convertible preferred stock (or common stock issued upon conversion) at a price per share equal to the greater of (i) the original issue price ($5.00) of Series A convertible preferred stock plus all unpaid accrued dividends and (ii) the then fair market value (''Redemption Price'').

In connection with a ''change of control event,'' the Company would use such proceeds to redeem all shares of Series A convertible preferred stock (or common stock issued upon conversion) at a price per share equal to the

12. Convertible Preferred Stock – (continued)

greater of (i) the original issue price ($5.00) of the Series A convertible preferred stock plus all unpaid accrued dividends and (ii) the then-current Redemption Price. A change of control event is defined as a liquidation, merger, stock sale or sale of substantially all of the assets of the Company.

Liquidation Rights

The holders of the Series A convertible preferred stock have a liquidation preference that gives such holders first priority upon a change in control event whereby such holders shall be entitled to receive an amount in liquidation equal to the original issued price ($5.00) plus accrued unpaid dividends.

Immediately prior to our initial public offering, all outstanding Series A Convertible Preferred Stock was converted to common stock. There were no outstanding Series A Convertible Preferred shares outstanding at December 31, 2017 or 2016.

Series B Convertible Preferred Stock

In December 2015, the Company issued Series B convertible preferred stock at $7.75 per share as follows: (i) 312,861 shares to the holders of the 2014/2015 Convertible Notes in exchange for the cancellation of such notes; (ii) 66,651 shares to the holder of the Secured Promissory Note in exchange for the cancellation of such note; and (iii) 20,000 shares sold to a related party investor for cash in the Series B convertible preferred stock financing.

The Series B convertible preferred stock has been classified as temporary equity on the accompanying balance sheet at December 31, 2015. Although the Series B convertible preferred stock is not subject to mandatory redemption, upon certain change in control liquidation events that are outside of the Company's control, the holders of the Series B convertible preferred stock can elect to receive, at their option, cash in amount equal to the liquidation value of such holder's Series B convertible preferred stock.

As of December 31, 2015, the Company has 399,512 shares of Series B convertible preferred stock issued and outstanding with an aggregate carrying value of $3,096.

For year ended December 31, 2016, the Company issued an aggregate of 115,668 shares of Series B convertible preferred stock to investors at a per share price of $7.75 for total cash consideration of $896. In addition, in January 2016, a holder of 33,578 shares of Series B convertible preferred stock converted its shares into 33,578 shares of common stock.

In March 2016, certain 2016 Unsecured Notes were exchanged by the holders for 2,007 shares of Series B convertible preferred stock. See Note 8.

Upon the closing of the initial public offering in December 2016, 483,609 shares of the Series B convertible preferred stock automatically converted into 483,609 shares of the Company's common stock.

Significant provisions of the Series B convertible preferred stock are as follows:

Dividends

Dividends may be declared and paid on the Series B convertible preferred stock from funds legally available thereof as and when determined by the Board of Directors.

Liquidation Value

A change in control is treated as a liquidation event that entitles the holder to receive, at their option, cash in amount equal to the liquidation value of each holder's Series B convertible preferred shares. The liquidation value for each share of Series B convertible preferred stock is an amount equal to $7.75 per share, subject to adjustment in the event of a stock split, stock dividend or similar event.

12. Convertible Preferred Stock – (continued)

Conversion Rights

The holder of the Series B convertible preferred stock has the right to convert at any time all or part of the preferred shares into shares of common stock. Each share of Series B convertible preferred stock will automatically convert into shares of common stock on the closing of an underwritten public offering of the Company's equity securities which results in gross proceeds of at least $5 million. The initial conversion price is $7.75 per share, subject to certain adjustments for stock splits, stock dividends, reclassification and certain other defined events.

Voting

Each holder of the Series B convertible preferred stock is entitled to the number of votes equal to the number of shares of common stock into which such shares of Series A convertible preferred stock could be converted. The holders of shares of Series B convertible preferred stock are entitled to vote on all matters submitted to the vote of the stockholders.

Immediately prior to the initial public offering, all outstanding Series B Convertible Preferred Stock was converted to common stock. There were no outstanding Series B Convertible Preferred shares outstanding at December 31, 2017 or 2016.

13. 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 16,404,195 and 10,157,292 shares of common stock issued and outstanding as of December 31, 2017 and 2016, respectively. The holders of shares of common stock are entitled to one vote per share on all matters submitted to a vote of the stockholders. If any shares of preferred stock are outstanding, the holders of outstanding shares of common stock are not entitled to receive any dividends. In the event of liquidation, dissolution or winding up of the Company, the holders of common stock are entitled to share ratably in all assets remaining after payment of liabilities and the liquidation preference of any then outstanding shares of preferred stock. The holders of common stock have no preemptive, conversion or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock.

On April 7, 2016, a short-term unsecured promissory note for $27 was settled with the issuance of 54,000 shares of common stock.

In May 2016, certain 2016 Unsecured Notes were surrendered as consideration for purchase of 124,000 shares of common stock in the Rights offering at the subscription price of $2.50 per share.

For the year ended December 31, 2016, the Company issued 630,935 shares of common stock upon the exercise of stock options and warrants for cash proceeds of $521.

13. Stockholders' Deficit – (continued)

There was a total of 131,733 detachable common stock warrants issued with the 2014/2015 Convertible Notes. The 2014/2015 Convertible Notes and warrants exist independently as separate securities. As the 2014/2015 Convertible Notes are measured at fair value, such notes are allocated a portion of the proceeds equal to their fair value with the remaining proceeds being allocated to the detachable warrants. The estimated aggregate fair value of the 2014/2015 Convertible Notes issued was determined to be $2,268 with the remaining $97 of proceeds allocated to the detachable warrants. The Company determined the estimated fair value of the 2014/2015 Convertible Notes using a lattice model. For the year ended December 31, 2016 and 2015, the Company recognized the changes in fair value on the 2014/2015 Convertible Notes of $0 and $671, respectively, within other income (expense), in the accompanying statements of operations and comprehensive loss.

During the year ended December 31, 2016, the Company issued an aggregate of 13,320 ordinary shares in net settlement of vested restricted stock units, valued at $295.

Rights Offering

In April 2016, the Company offered to the existing holders of shares of (i) its common stock and (ii) Series B convertible preferred stock, in each case, as of April 8, 2016 (the ''Record Date''), at no charge, non-transferable subscription rights, on a pro rata basis, to purchase shares of common stock at a subscription price of $2.50 per share (the ''Rights Offering''). In addition, the holders also had the right to purchase additional shares of common stock, if any shares remain unsubscribed. The Company offered subscription rights on 5,794,162 shares of its common stock. The Rights Offering was conducted as a private placement on a ''best efforts'' basis, with no minimum subscription required.

The subscription rights were initially exercisable beginning on April 8, 2016 and expiring on April 29, 2016 (the ''Subscription Period''). However, the Company reserved the right to extend the Subscription Period for up to two additional weeks. The Company extended the Subscription Period for one additional week. The Rights Offering closed on May 6, 2016.

The Company issued 2,478,486 shares of common stock and received aggregate consideration of $6,199 in the Rights Offering. The aggregate consideration received consisted of: (i) $5,284 in cash; (ii) $821 in consideration paid through the cancellation of $821 in outstanding principal amount (and related unpaid interest) under certain 2016 Unsecured Notes (as defined below) and the 2015 Unsecured Notes; and (iii) the extinguishment of $94 in amounts owed by the Company for services and related miscellaneous expenses. Such cash proceeds were used for working capital and general corporate purposes. As the Rights Offering was offered to certain existing holders of the Company's stock, the shares sold are treated as outstanding from the date of their issuance in the computation of loss per share, basic and diluted in future periods.

On December 8, 2016, in connection with its initial public offering, the Company issued 1,875,000 shares of common stock for net consideration of $12,633. In connection with the initial public offering, the Company issued to Roth Capital Partners, LLC, as underwriter, warrants to purchase an additional 187,500 shares of common stock.

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 $5,253 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 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.

(In thousands, except share and per share data)

14. Stock-based Compensation

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 of the Company. The Board of Directors approved an additional 1,000,000 shares of common stock for issuance under the 2015 Plan. 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 2015 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 2015 Plan. Unvested shares issued for option exercised early may be subject to a repurchase by the Company if the participant terminates at the original exercise price. Options under the 2015 Plan generally have a contractual term of five or ten years. Certain stock option awards provide for accelerated vesting upon a change in control or an initial public offering. As of December 31, 2017, the Company had 1,043,095 shares of common stock available for issuance under the 2015 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.

During 2017, the Company issued a total of 185,594 shares of common stock, valued at $252, for services performed.

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, 2016, were as follows:

	Employee	Non-Employee
Expected volatility	82.1%	N/A
Expected dividend yield	—	N/A
Expected term (in years)	3.25	N/A
Risk-free interest rate	1.83%	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, 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

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 size and stability, whose share prices are publicly available. The expected term of options granted to employees is calculated 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

(In thousands, except share and per share data)

14. Stock-based Compensation – (continued)

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.

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

	Number of Options	Weighted Average Exercise Price Per Share	Weighted Average Remaining Contractual Term (years)	Aggregate Intrinsic Value[1]
Outstanding at December 31, 2015	2,124,334	$ 0.50	6.4	$4,249
Granted	200,000	$ 7.98	5.0	$ 34
Exercised	(621,602)	$ 0.73		
Forfeited	(210,849)	$ 0.50		
Expired	(14,583)	$15.00		
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	5.0	$ —
Exercisable at December 31, 2017	1,304,845	$ 1.25	5.0	$ —

(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 $0.72 and $8.15 per share for each of the years ended December 31, 2017 and 2016 respectively.

The weighted average grant date fair value of options granted to employees for the year Ended December 31, 2017 was $4.62 per share.

The stock-based compensation expense was recorded as follows:

	Year Ended December 31,	
	2017	2016
Research and development	$ 377	$ 403
Selling, general and administrative	3,351	2,966
Total stock-based compensation expense	$3,728	$3,369

The allocation between research and development and selling, 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 $142 for the years ended December 31, 2017 and 2016, respectively, for stock options granted to non-employees.

In June 2016, the Company entered into an employment letter agreement with its chief executive officer which replaced the previous employment agreement dated October 16, 2013. At the same time, the Company entered into an employment letter agreement with its president and chief research officer that contained similar features and terms which replaced her previous employment agreement dated October 16, 2013. By entering into the employment letter agreements (the ''2016 agreements'') and accepting the signing bonus, the chief executive officer and the president and chief research officer (collectively, the ''executive officers'') waived all rights to receive any compensation amounts provided for in the previous employment agreements.

14. Stock-based Compensation – (continued)

The 2013 agreements, among other provisions, provided for a signing bonus of $1,000 on the acceptance and signing of such agreements. Upon the signing of the 2013 agreements, the Company recorded a deferred compensation obligation as an undiscounted noncurrent liability, in the amount of an aggregate $2,000 for the amount of the signing bonuses, since the payment of such obligation was not reliably determinable. The amount was classified as a noncurrent liability as an event that makes the payment due and payable had not occurred.

In June 2016, the Company reversed the deferred compensation obligation of $2,000 to additional paid in capital which is in the period the terms of 2016 agreements were accepted and replaced the previous employment agreements. As such, the executive officers, whom are also principal stockholders, have forgiven the compensation that was previously earned and due under the 2013 agreements.

The 2016 agreements, among other things, provide for an annual base salary which may be adjusted periodically and, upon signing of the 2016 agreements, a signing bonus was payable within one business day after the signing the 2016 agreements. In addition, the 2016 agreements provide for an annual incentive bonus with a minimum target value equal to a certain stated percentage of annual base salary; however, any incentive bonus is determined at the discretion of the Board of Directors.

The 2016 agreements also provide for the grant of the award of restricted stock units (RSU) representing the right to receive 220,000 shares of the Company's common stock. The RSU award will vest and be settled over a three-year period, with one- third of the units vesting on the twelve-month anniversary of the date of grant, and the remaining units vesting in equal quarterly tranches over the following twenty-four months of continuous service.

Upon a sale of the Company, the 2016 agreements provide for a bonus of (a) 1% of the amount of the net sales price of the Company that is $100,000 or less, plus (ii) an additional 0.5% of the amount of the net sales price of the Company that is more than $100,000, payable in cash or other proceeds payable to other stockholders in such Company. Under the terms of her agreement, the executives shall be entitled to this change of control bonus if the change of control transaction occurs within 12 months following the termination of the executive's employment by the Company without cause (as such term is defined in the 2016 agreement excluding death or disability) or within 12 months following the executive's resignation for good reason (as such term is defined in the 2016 agreement), provided that the executive remains in compliance with the confidentiality and other ongoing post-termination obligations under the 2016 agreement.

In the event of termination without cause or resignation for good reason (as such terms are defined in the 2016 agreements) or upon death, all base salary and benefits for a period of twelve months following the effective date of such termination will be payable. Also, any earned but unpaid annual bonus, and all outstanding equity awards will accelerate immediately upon the date of termination.

In recognition of his continued support and cooperation, and to resolve a dispute regarding whether his options appropriately expired in the first quarter of 2016, in July 2016, the Company's Board of Directors agreed to issue to its former chief executive officer 120,000 shares of the Company's common stock. The expense of $300 associated with this full and final settlement was recorded in the year ended December 31, 2016.

At December 31, 2016, the total compensation cost related to non-vested options not yet recognized was $4,503, which will be recognized over a weighted average period of four years, 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.

(In thousands, except share and per share data)

14. Stock-based Compensation – (continued)

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, 2015	—	$ —
Granted	474,720[1]	$1.57
Vested	(19,290)	$8.10
Forfeited	—	$ —
Outstanding as of December 31, 2016	455,430	$0.76
Granted	117,885[2]	$6.95
Vested	(282,344)	$1.75
Forfeited	(3,086)	$ —
Outstanding as of December 31, 2017	287,885	$1.86

(1) 440,000 restricted stock units were granted and issued on September 30, 2016 with a weighted average grant date fair value of $0.50 and vest 1/3 on the first anniversary of grant and the remaining balance quarterly over the subsequent 8 quarters. 19,290 restricted stock units were granted on December 19, 2016 with a weighted average grant date fair value of $8.10 and vested immediately. An additional 15,430 restricted stock units were granted on December 19, 2016 and fully vest on the first anniversary of grant. The Company accounts for the restricted stock units as equity-settled awards in accordance with ASC 718. The total fair value of restricted stock units vested during the years ended December 31, 2017 and 2016 was $494 and $156, respectively.

(2) 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.

15. Income Taxes

Tax Rate Reconciliation

The income tax benefit differed from the amounts computed by applying the federal statutory income tax rate of 34% to pretax income from operations as a result of the following:

	Year Ended December 31,	
	2017	2016
Income tax benefit at statutory federal rate	$(4,176)	$(3,723)
Increase (reduction) in income taxes resulting from:		
Nondeductible expenses	7	7
Fair value adjustment on convertible notes	—	2
State and local income taxes, net of federal income tax benefit	(566)	(505)
Federal valuation allowance	4,169	3,714
State valuation allowance	566	505
	$ —	$ —

(In thousands, except share and per share data)

15. Income Taxes – (continued)

Significant Components of Current and Deferred Taxes

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets are presented below:

	At December 31,	
	2017	2016
Deferred tax assets:		
Deferred rent	$ 29	$ 25
Deferred revenue	—	—
Federal and state net operating loss carryforwards	17,013	10,818
Stock-based compensation	9,234	4,831
Compensation accruals and other	(5)	553
Total deferred tax assets	26,271	16,227
Valuation allowance	(26,222)	(16,144)
Net deferred tax assets	49	83
Deferred tax liabilities:		
Total deferred tax liabilities	(49)	(83)
Net deferred tax asset (liability)	$ —	$ —

In assessing the realizability of deferred tax assets, management considers whether it is more-likely-than-not that some portion or all of the deferred taxes will not be realized. The ultimate realization of deferred tax assets is dependent upon the generation of future taxable income during the periods in which those temporary differences become deductible. Management considered the scheduled reversal of the deferred tax liabilities including the impact of available carryback and carryforward periods and does not believe it is more-likely-than-not the Company will realize the benefits of the deferred tax assets. Accordingly, a valuation allowance has been recorded against the deferred tax assets. The valuation allowance increased by approximately $10.1 million for the year ended December 31, 2017 and decreased $1.1 million for the year ended December 31, 2016.

At December 31, 2017 and 2016, the Company had federal and state net operating loss carryforwards of $44.1 million and $34.0 million, respectively. The state loss carryforwards began expiring in 2016 and the federal loss carryforwards will begin expiring in 2023, unless previously utilized.

Utilization of the net operating loss carryforwards may be subject to a substantial annual limitation due to the ownership change limitations provided by Section 382 of the Internal Revenue Code and similar state provisions. Generally, in addition to certain entity reorganizations, the limitation applies when one or more 5% stockholders increase their ownership, in the aggregate, by more than 50% percentage points over a 36-month time period testing period, or the beginning the day after the most recent ownership change, if shorter. The annual limitation may result in the expiration of net operating losses and credit before utilization.

The Company files a federal income tax return. For taxable years ending before 2012, the Company is no longer subject to U.S. federal examination; however, the Internal Revenue Service has the ability to review years prior to 2014 to the extent the Company utilizes tax attributes carried forward from those prior years. The statute of limitations on the Company's state filings is four years.

16. License and Other Agreements

Neogen Corporation

In May 2014, the Company entered into an exclusive license agreement with Neogen Corporation (''Neogen''), which agreement was subsequently terminated in January 2017. Under the terms of the license agreement, the Company granted an exclusive license to Neogen to (i) use the Company's intellectual property (''IP''), consisting primarily of the ContraPest technology and (ii) manufacture, distribute and sell commercial rodent control products in the United States and certain U.S. territories, Canada and Mexico. Under the terms of the licensing agreement, the Company was required to submit an application to the United States Environmental Protection Agency (''EPA'') for approval of ContraPest, complete two agricultural field trials that support commercial feasibility for use of the product, and submit such studies and results to Neogen for their approval. The application to the EPA was submitted in August 2015, and the EPA granted registration approval for ContraPest effective August 2, 2016. The first field trial was completed, but never approved by Neogen. With respect to the second trial, the EPA indicated to the Company that it would be more efficient to wait until the product was approved rather than applying for an additional experimental use permit. Given that the EPA has granted registration approval, the Company is now preparing to commence the second field trial.

The Company received nonrefundable, upfront license fee payments, totaling $488. The remaining license fee of $162 was to be paid when Neogen formally accepted the Company's report on its study of the field trials. The Company has determined that the license does not have stand-alone value, therefore, the license fees of $488 are deferred and recognized, on a straight-line basis, from May 2014, the effective date of the agreement, over the estimated related period of performance through December 2016, which includes the acceptance by Neogen of the Company's study for the field trials that support commercial feasibility for use of the product.

For each of the years ended December 31, 2017 and 2016, the Company recognized revenue of $0 and $186, respectively, under the licensing agreement. At December 31, 2017 and 2016, the deferred revenue amounted to $0. Any changes in the estimated period of performance wound have been accounted for prospectively as a change in estimate.

In addition, Neogen was obligated under the licensing agreement to pay additional consideration to the Company consisting of future fixed-amount of contingent milestone payments (i.e. post-regulatory approval license fees) of up to an aggregate of $3 million, and sales-based royalties on the net sales of licensed products by Neogen, as well as its affiliates and sub licensees. The Company did not receive or earn these potential contingent consideration payments as the milestone events to receive such post-approval license fees and sales based royalties were not achieved prior to the termination of the agreement. The agreement was to expire upon the later of (i) the expiration of last patent included in the licensed IP; or (ii) the tenth anniversary of the effective date of the agreement (i.e. May 2024).

On January 23, 2017 we entered into a termination agreement (the ''Settlement Agreement'') with Neogen. Pursuant to the Settlement Agreement, the parties agreed to (a) terminate the existing Exclusive License Agreement between us and Neogen dated May 15, 2014 (the ''License Agreement''), with neither Neogen or us having any further obligations thereunder (other than certain confidentiality obligations); (b) dismiss with prejudice the court action filed by Neogen in the District Court for the District of Arizona on January 19, 2017 (the ''Court Action''), as further described below; and (c) mutually release any and all existing or future claims between the parties and their affiliates related to or arising from the License Agreement or the Court Action. As part of the Settlement Agreement, we agreed to pay to Neogen upon the execution of the Settlement Agreement an aggregate of $1.0 million in settlement of all claims.

In May 2014, the Company entered into a service contract with the City of Somerville, Massachusetts (''Somerville'') whereby the Company agreed to provide services and/or supplies in connection with conducting a rodent population study through field trials for Somerville. The total contract amount was not to exceed $215 for the services rendered and/or supplies received. Through an amendment to the contract, the contract was extended to December 31, 2016. Services under the contract are now complete. The Company has recognized revenue for services rendered under this contract of $132 during the year ended December 31, 2016 in other revenue in the statements of operations and comprehensive loss.

16. License and Other Agreements – (continued)

Somerville

In May 2014, the Company entered into a service contract with the City of Somerville, Massachusetts (''Somerville'') whereby the Company agreed to provide services and/or supplies in connection with conducting a rodent population study through field trials for Somerville. The total contract amount was not to exceed $215 for the services rendered and/or supplies received. Through an amendment to the contract, the contract was extended to December 31, 2016. Services under the contract are now complete. The Company has recognized revenue for services rendered under this contract of $132 during the year ended December 31, 2016 in other revenue in the statements of operations and comprehensive loss.

University of Arizona

In 2005, the Company entered into an exclusive license agreement with the Arizona Board of Regents of the University of Arizona (''University'') to in-license certain patents and other intellectual property to be used in the 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 the 4-vinyl cyclohexene diepoxide to deplete ovarian follicles in individual mammals and reproduction of mammals. The license agreement gives the Company exclusive rights to commercialize products based on this intellectual property. The University owns the patent rights, but the agreement requires the Company to pay all costs incurred by the University in maintaining and perfecting the patent rights. In exchange for the intellectual property, the Company paid the University a nonrefundable fee of $5, agreed to reimburse the University for its patent costs, pay milestone payments totaling up to $75 upon the achievement of certain research, development and regulatory milestones. In addition, the University is entitled to royalty fees of 5% of net sales of the licensed product and sublicensing royalty income of licensed product.

In June 2015, the Company and University executed an amended and restated exclusive license agreement. The amendment reduced the milestone payments to totaling up to $50,000 upon the achievement of certain research, development and regulatory milestones and royalty fees from 5% to 2% of net sales of licensed product and 4% of any sublicensing royalty income of licensed product. As consideration for the amended terms, the Company entered into a warrant purchase agreement whereby the University was granted a warrant to purchase 15,000 shares of common stock, with an initial fair value of $53. The warrant was exercisable upon grant and for a term of five years from the effective date of the amendment.

The license agreement will terminate with last-to-expire patent licensed under the agreement which extends to 2026. The Company may terminate the agreement or the grant of rights under the agreement, at any time, upon ninety days prior written notice to the University. Future milestone payments are considered to be contingent consideration and will be accrued when probable of being paid. At December 31, 2017 and 2016, no milestone payments were probable of being paid and it is not likely in the near future.

Bioceres/INMET S.A. Agreement

In January 2016, the Company entered into a services agreement with Bioceres, Inc. (''Bioceres''), a wholly-owned subsidiary of Bioceres S.A., a leading agricultural biotechnology company in Argentina, and its Argentinean subsidiary, Ingenieria Metabolica.

S.A. (''INMET'') to develop a production method for synthetic triptolide, the main ingredient in ContraPest. The Company also entered into an agency agreement with INMET whereby the Company appointed INMET as its exclusive agent to seek regulatory approval for and conduct pre-sales and marketing of its product, ContraPest, in Argentina. The Company and INMET have also agreed to manufacture and distribute its product in Argentina and other countries, as mutually agreed, through a newly formed entity.

The term of the service agreement is for two years. The service agreement can be terminated at any time upon written notice by either party for any reason. The term of the agency agreement with INMET is the earlier of: (i) when the Company and INMET incorporate the joint venture entity in Argentina or (ii) January 2018. These agreements were renewed for an additional year, through January 2019.

17. 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 suit in the U.S. District Court for the District of Arizona against the Company and Roth Capital Partners, LLC, The suit 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; that the Company breached the lock-up agreement and tortuously interfered with prospective business advantage. New Enterprises is seeking monetary damages, including compensatory damages, punitive damages, and attorney's fees. The Company believes there is no basis to any of the claims, and intends to vigorously defend itself, including seeking appropriate counterclaims.

Neogen Settlement Agreement

On January 23, 2017, the Company entered into an agreement (the ''Settlement Agreement'') with Neogen Corporation (''Neogen''). Pursuant to the Settlement Agreement, the parties agreed to (a) terminate the existing Exclusive License Agreement between us and Neogen dated May 15, 2014 (the ''License Agreement''), with neither Neogen or the Company having any further obligations thereunder (other than certain confidentiality obligations); (b) dismiss with prejudice the court action filed by Neogen in the District Court for the District of Arizona on January 19, 2017 (the ''Court Action''), as further described below; and (c) mutually release any and all existing or future claims between the parties and their affiliates related to or arising from the License Agreement or the Court Action. Prior to the notice of filing received by SenesTech, the Company was unaware that any action was contemplated or actioned and was proceeding with all elements of the agreement in good faith. All communications prior to the complaint indicated that Neogen also was proceeding in good faith to execute on the agreement.

Under the terms of the agreement, the Company agreed to make a one-time payment in the amount of $1,000 in settlement of all claims and termination of all existing contracts between the parties. Both Neogen and the Company further agreed to drop any and all legal complaints, claims or threat of litigation for failure to perform under the previous contractual relationship.

Although notice of the legal action by Neogen and the subsequent agreement to terminate existing agreements with Neogen, occurred after December 31, 2016, as per the provisions of FAS 5 Loss Contingency, included in the financial statements of the Company at December 31, 2016 is a $1,000 charge to selling, general and administrative expenses and a corresponding accrual of contract cancellation settlement agreement related to this agreement.

Resolution of Dispute

In recognition of his continued support and cooperation, and to resolve a dispute regarding whether his options appropriately expired in the first quarter of 2016, in July 2016, the Company's Board of Directors agreed to issue to its former chief executive officer 120,000 shares of the Company's common stock. The expense of $300 associated with this full and final settlement was recorded at December 31, 2016.

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, 2017, the gross amount of office and computer equipment, and research equipment and the related accumulated amortization recorded under the capital leases was $485 and $102, 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 thousands, except share and per share data)

17. Commitments and Contingencies – (continued)

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.

On November 16, 2016, we leased an additional 1,954 square feet of research and development space, also in Flagstaff. This lease expires on November 15, 2018. The lease 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 and accordingly, the Company records the difference between the cash rent payments and the recognition of rent expense as a deferred rent liability.

Rent expense was $312 and $234 for the year ended December 31, 2017 and 2016, respectively. The future minimum lease payments under non-cancellable operating lease and future minimum capital lease payments as of December 31, 2017 are follows:

	Capital Leases	Operating Lease
Years Ending December 31,		
2018	96	258
2019	88	221
2020	67	—
2021	56	—
2022	28	—
Total minimum lease payments	$335	$479

	Capital Leases
Less: amounts representing interest (ranging from 7.75% to 11.58%)	$ 63
Present value of minimum lease payments	272
Less: current installments under capital lease obligations	70
Total long-term portion	$202

18. Subsequent Events

On February 20, 2018, New Enterprises, Ltd. (“New Enterprises”), filed suit in the U.S. District Court for the District of Arizona against the Company and Roth Capital Partners, LLC. The suit 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; that the Company breached the lock-up agreement and tortuously interfered with prospective business advantage. New Enterprises is seeking monetary damages, including compensatory damages, punitive damages, and attorney’s fees. The Company believes there is no basis to any of the claims, and intends to vigorously defend itself, including seeking appropriate counterclaims.

NeoVenta Solutions, Inc.

On February 7, 2018, we mutually terminated our marketing, sales and distribution agreement with NeoVenta Solutions, Inc.

In January 2018, the Company net issued 24,364 shares of common stock for the net settlement of restricted stock units that vested during the period and 13,900 shares for a cashless exercise of vested common share options.

Also in January 2018, The Company issued 37,162 shares of common stock to a certain Board member in net settlement of Board compensation accrued at December 31, 2017.

In February 2018, the Company net issued 32,625 shares of common stock to a former executive of the Company as part of their separation agreement, which accelerated the vesting of certain restricted stock units.

The Company has evaluated subsequent events from the balance sheet date through March 30, 2018, the date at which the financial statements were issued, and determined that there were no other items that require adjustment to or disclosure in the financial statements.

Item 9. ***Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.***

None.

Item 9A. ***Controls and Procedures.***

Evaluation of Disclosure Controls and Procedures

We maintain disclosure controls and procedures that are designed to ensure that the information required to be disclosed in the reports that we file or submit under the 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, 2017, 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, 2017.

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, 2017. 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, 2017 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, 2017, 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 2018 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 2018 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 2018 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 2018 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 2018 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 2018 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 2018 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 2018 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, 2017 and 2016.

B. Statements of Operations and Comprehensive Income (Loss) for the years ended December 31, 2017 and 2016.

C. Statements of Stockholders' Equity for the years ended December 31, 2017 and 2016.

D. Statements of Cash Flows for the years ended December 31, 2017 and 2016.

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				
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				

Exhibit Number	Description	Filed or Furnished Herewith	Incorporated by Reference			
			Form	Filing Date	Exhibit	File No.
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 30, 2018 By: /s/ Loretta P. Mayer, Ph.D.

Loretta P. Mayer

Chair of the Board, Chief Executive Officer and Chief Scientific Officer

Date: March 30, 2018 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 30, 2018, 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/ Cheryl A. Dyer, Ph.D. **Cheryl A. Dyer, Ph.D.**	President, Chief Research Officer and Director
/S/ Grover Wickersham **Grover Wickersham**	Vice-Chair of the Board
/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

Exhibit 21.1

SUBSIDIARIES OF THE REGISTRANT

The following is a list of subsidiaries of the registrant as of December 31, 2017.

Name	Jurisdiction of incorporation or organization
NONE	

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Registration Statement No. 333-215026 on Form S-8 of our report dated March 30, 2018, relating to the consolidated financial statements of SenesTech, Inc., for the years ended December 31, 2017 and 2016, which appear in this Annual Report on Form 10-K of SenesTech, Inc. for the year ended December 31, 2017.

/s/ M&K CPAS, PLLC

www.mkacpas.com
Houston, Texas
March 30, 2018

Exhibit 31.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO RULE 13(a)-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934

I, Loretta P. Mayer, Ph.D., certify that:

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

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

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

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

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

   (b) Intentionally omitted pursuant to the last sentence of Exchange Act Rule 13(a)-14(a);

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

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

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

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

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

Dated: March 30, 2018

/s/ Loretta P. Mayer, Ph.D.

Loretta P. Mayer Ph.D.
Chair of the Board, Chief Executive Officer and Chief Scientific Officer

Exhibit 31.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO RULE 13(a)-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934

I, Thomas C. Chesterman, certify that:

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

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

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

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

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

   (b) Intentionally omitted pursuant to the last sentence of Exchange Act Rule 13(a)-14(a);

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

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

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

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

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

Dated: March 30, 2018

/s/ Thomas C. Chesterman

Thomas C. Chesterman
Chief Financial Officer and Treasurer

Exhibit 32.1

CERTIFICATION OF CHIEF EXECUTIVE OFFICER PURSUANT TO 18 U.S.C. SECTION 1350

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Loretta P. Mayer Ph.D., Chair of the Board, Chief Executive Officer and Chief Scientific Officer, certify that:

1. To my knowledge, this report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. To my knowledge, the information contained in this report fairly presents, in all material respects, the financial condition and results of operations of SenesTech, Inc.

Dated: March 30, 2018

/s/ Loretta P. Mayer, Ph.D.

Loretta P. Mayer, Ph.D.
Chair of the Board, Chief Executive Officer and Chief Scientific Officer

Exhibit 32.2

CERTIFICATION OF CHIEF FINANCIAL OFFICER PURSUANT TO 18 U.S.C. SECTION 1350

Pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, I, Thomas C. Chesterman, Chief Financial Officer and Treasurer, certify that:

1. To my knowledge, this report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and

2. To my knowledge, the information contained in this report fairly presents, in all material respects, the financial condition and results of operations of SenesTech, Inc.

Dated: March 30, 2018

/s/ Thomas C. Chesterman

Thomas C. Chesterman
Chief Financial Officer and Treasurer

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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

Directors
- Loretta P. Mayer, Ph.D. – Chair of the Board, CEO and Chief Scientific Officer, SenesTech, Inc.
- Grover T. Wickersham – Vice-Chair of the Board, CEO, Eastside Distilling, Inc.
- Cheryl A. Dyer, Ph.D. – President and Chief Research 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
- Matthew K. Szot – CFO and Treasurer, 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 - Strategic Planning

Annual Meeting
Our annual meeting of stockholders will be held on Tuesday, June 12, 2018 at 10:00 a.m., local time, at the Little America Hotel, Ponderosa Room, 2515 East Butler Avenue, Flagstaff, AZ 86004.

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.

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 "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, Inc.
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Flagstaff, AZ 86004

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928-779-4143