



senestech
Sound science. Effective solutions.

Dr. Loretta Mayer
Chair, CEO & Co-Founder
SenesTech, Inc. (Nasdaq: SNES)

THE EXECUTIVE INTERVIEW SERIES



LYTHAM
PARTNERS
INVESTOR RELATIONS

About SenesTech, Inc.

SenesTech has developed an innovative technology for managing animal pest populations through fertility control as opposed to a lethal approach.

The Company's first fertility control product, ContraPest[®], is marketed for use initially in controlling rat infestations. ContraPest's novel technology and approach targets the reproductive capabilities of both sexes, inducing egg loss in female rodents and impairing sperm development in males. Using proprietary bait stations, ContraPest is dispensed in a highly palatable liquid formulation that promotes sustained consumption by rodent communities. ContraPest is designed, formulated and dispensed to be safe for handlers and non-target species such as wildlife, livestock and pets, in a biodegradable product. In contrast, the historical approach to managing rodent pest populations, rodenticides, carries a high risk of environmental contamination and the poisoning of non-target animals, pets and children.

We believe our non-lethal approach, targeting reproduction, is more humane, less harmful to the environment, and more effective in providing a sustainable solution to pest infestations than traditional lethal pest management methods. There is currently no other non-lethal fertility control product approved by the Food and Drug Administration (FDA), or the Environmental Protection Agency (EPA), for the management of rodent populations. We believe ContraPest[®] will establish a new paradigm in rodent control, resulting in improved performance in rodent control over rodenticides, without the negative environmental effects of rodenticides.

ROBERT BLUM: So Loretta, rat birth control, how in the world did you come up with something like that?

LORETTA MAYER: [LAUGH] Well, that's not first time I've had that question. I'll tell you it really came from research that I was doing that required I have an animal model for menopause. The single largest characteristic of menopause, is that in menopause, humans are no longer reproductive. So, I needed an animal who was no longer reproductive, and was a model for humans, such as a transgenic mouse. We induced the infertility at an early age so we had enough time to study long term diseases like heart disease, osteoporosis and even ovarian cancer. So, I was able to do that with my post-doctoral mentor, Dr. Pat Hoyer, at the University of Arizona.

I was happily going down the road when we received a call from a group of scientists headed by Dr. Lyn Hinds in Australia. They came to us and said, if you could make rats in the rice fields of Asia, non-reproductive, you could reduce the damage to rice and feed hundreds of millions of people. That clearly was a very compelling challenge that was before us and that's exactly what we did.

Dr. Cheryl Dyer and I sat down and she put together a formulation that we could feed rats orally in the field, that was safe, safe for the environment, safe for the handlers, but caused their reproduction to stop. That's really where it came from. So, suffice it to say, that is innovation that comes from an idea, coupled with a need, and partnered up to solve a problem.

ROBERT BLUM: You just mentioned the rice fields and while we've had a good laugh at the pizza rat video the reality is rodents have a significant impact on the global food supply. Can you describe the impact?

LORETTA MAYER: Sure, so the impact I just described really was from data collected in Indonesia, Southeast Asia. Really most people don't realize that over 50% of the world's population depends upon rice for survival. That was our first entry into understanding food security. Now, food security really is defined as how much energy a person has to put in to every day feeding themselves and those that they're responsible for.

“The most stunning factor is that over 50% of the food grown in this world never reaches the table.”

That then takes you into understanding where the world food program is coming from. Over 20% of the ships at sea are carrying food and what is the most stunning factor is that over 50% of the food grown in this world never reaches the table. The role that rodents play is that they can, yes, consume that food in rice fields, actually in the fields. But the post harvest damage, that's consuming, defecating on it, urinating on it has the largest impact. That comes in storage locations. Then, of course, probably the most devastating is when our food is threatened by rodent-borne diseases and contamination from parasites.

So, to sum that up, anywhere we can increase the amount of food for the energy invested to the greatest number of people is what we must do for global food security.

ROBERT BLUM: Now, we've heard that rats are the number one cause of house fires, can you help us quantify the impact rodents have on infrastructure damage?

LORETTA MAYER: Sure, you have to realize infrastructure damage runs from something that can bring the world to a halt like a subway line, or slowly erode like the foundation of a historic building. The single largest cause of that is the rats need to gnaw. Most people don't realize that Rodentia comes from the Latin word “to gnaw.” If a rat does not gnaw or chew on something, the incisors of a rat will continue to grow and actually can grow through the skull.

This is a survival need. They will gnaw on anything that has the right texture. So, when I say that most people say, yeah I've seen where they would gnaw through a piece of wood or their favorite is the coating on wires. If you think about gnawing on those wires, exposing of the wire you now have a short that is ready to ignite. But I also want you to know that they can gnaw through concrete and I have personally seen them gnaw through steel and aluminum cages in various parts of the world. This need to gnaw creates tremendous damage. That can present itself in building erosion to infrastructure damage.

I hope you've seen that movie, MouseHunt, where a single mouse took an entire historic house to the ground. A little exaggerated and great comedy, but the basic reality and physiology of the animal is there. They must gnaw.

ROBERT BLUM: The New York City Health Department recently determined that someone died due to a very rare disease carried by rodents, leptospirosis. Are we seeing increased problems in diseases carried by rodents?

LORETTA MAYER: That's an excellent question. It's very difficult to say we're seeing more, maybe we're seeing more reporting of it. But what I can tell you is that the host for these diseases such as salmonella, leptospirosis, hantavirus and of course the most recent that we're personally involved with, the rat lung worm disease, those are all emerging when rodent populations increase.

I will tell you from recent data that where we have climate change events, such as in tropical locations, we have trees that are going through additional fruiting seasons. We have vegetation that is growing with increased water and increased temperature. This favors reproduction and growth of rodents. So for example, the rat lung worm disease which exists in tropical locations and probably the most current reports of that are coming from the state of Hawaii, and there's now a report in Florida. It's in 30 countries around the world. Let me describe the cycle. The rat is the host of the lung worm. The rat will defecate, and then a secondary species like a snail or a slug consumes the feces, they then deposit that on fresh fruits and vegetables, that people then ingest. Then this lung worm is into the human system. It actually lodges in the vasculature but moves into the brain and its effects are devastating and often fatal.

I often have said that the rat has wiped out Europe twice, and that's true. Because the rat carried the flea that is infected with *Yersinia pestis* known as the Black Plague. Once a disease presents, of course, we have to treat it. But we need to get to the root cause, and that's the rodent, the host, and the reproductive capacity of those rodents.

So are we seeing an increase? We are definitely seeing an increase in rodent populations and it would not be surprising if that is what is adding to the increase in reporting of these rodent borne diseases.

ROBERT BLUM: There have been a number of articles in the news lately about rodenticide impacting the environment including one recently in New York affecting the raptor population. Can you describe how ContraPest can help alleviate the residual impact on non-target species?

LORETTA MAYER: Sure, I think in one word, safety. The current strategy for managing rodents involves the use of lethal rodenticide or poisons if you will. There is a system of bioaccumulation. When a rat would eat a poisoned bait, that bait would accumulate in the rat tissue.

If a raptor eats that rat, or say a scavenger eats that carcass, that poison is going to transfer to the predator. If you think about it, what you want to do is control your rat population without having a compound that can be transferred to the predator. ContraPest is cleared by the rat in approximately 15 minutes.

Therefore, the opportunity for any amount of an active to be transferred to the predator is significantly reduced but then it reduces to a near zero probability effect because of the low concentration of the active ingredient in ContraPest. So, in this situation what you have is control of the rodent's reproduction, reduce the rodent population and do not impact those secondary species.

Probably some of the larger issues are when poison is broadcast either by helicopter or large deployment in open areas. This is what we really want to avoid. We want to eliminate any threat to our wildlife through transfer of a rodent control product.

ROBERT BLUM: We've been trying to get rid of rats forever. Why hasn't it worked?

LORETTA MAYER: Well, Robert, I usually would refer you to a BIO100 class because you're never going to get all of them and it only takes 2 to reproduce. The facts are if you take 2 breeding rats, and they're going to have a successful breeding life of somewhere between 6 to 10 months and you measure the numbers of pups that those rats would deliver, and then the inter-breeding of those pups, you're going to see that those 2 individuals can contribute up to 15,000 progeny to their population.

With that kind of breeding machine, which is what they are, it's hard to get ahead of it by killing. Since you're never going to kill all of them, this is what's going to happen and as resources become available, their reproduction will be synced to that growth.

ROBERT BLUM: Recently, the city parks in Paris had to be shut down due to rat infestation. The issues seem to be far reaching. When will your product be available in Europe?

LORETTA MAYER: Well, I will tell you from a strict regulatory standpoint, like any other product, somewhere between three and five to seven years. But like any other need, if there is a special, local need that requires an intervention such as ours, I believe we could probably be out there helping those folks within a year's time on a permanent basis.

Full registration in Europe to the best of my knowledge is going to be three to five years. If, however, they have huge problems with resistance to other strategies which they do in Paris, that's the largest geographic area where rats have developed a resistance to poison, it may be sooner. It all depends on the needs.

ROBERT BLUM: Now, various cities have recently banned the use of rodenticides. Do you see this as a trend?

LORETTA MAYER: Well, actually yes, we are. Because what we're seeing is it's stemming from this secondary poisoning of other animals and whether it's wildlife species like mountain lions in California or raptors in Central Park, it boils down to being very personal, which is having dogs and cats that are pet animals killed through secondary poisoning.



The facts are if you take 2 breeding rats [...] you're going to see that those 2 individuals can contribute up to 15,000 progeny to their population.

Consumers are beginning to ask the question. We've been killing for decades, actually probably longer than that, and we're really not getting ahead of this curve. It's not working. If we, the consumers, speak out, there will be an opportunity for people to solve this problem with a higher level of science. What we're seeing is that this rejection of the paradigm of killing is gathering steam in the public arenas. Which as you know that demand will drive a commercial solution.

ROBERT BLUM: Now, who are these ideal customers for and how big is the market for this product?

LORETTA MAYER: Well, those are a couple of good questions. The ideal customer for ContraPest is anyone who has a rodent problem. But you need to refine that a bit more.

I'm giving you information that is coming from the tremendous influx of calls that we're receiving as ContraPest is becoming a little wider known. These are people who absolutely cannot use poison strategies around exotic animals like zoos or research facilities, or around livestock that have the opportunity to be exposed to a poison rat that they might consume.

These are people who are ideal for us, because we can solve their problem. We can work hand in hand with them and go through that product learning cycle. As far as the size of this market, rodenticide markets globally have been estimated in the billions, but are they in the single digit billions or the double-digit billions? We've seen estimates as high as \$45 billion. It's hard to really get a handle on that because, for example, some customers don't want to come out there and say, I spend X dollars a year on controlling rats, because it basically says I have a rat problem. That's how the public would perceive it. So, it's hard to get a handle on the size of that market.

I think the other thing is it's impossible right now to get a handle on how big the market can be because we're dealing with customers who have never been able to buy poison. So, they would never be in that annual sales number ever because they have to use alternate strategies. The market, is in the billions.

THE EXECUTIVE INTERVIEW SERIES

Featuring SenesTech, Inc.
(Nasdaq: SNES)



ROBERT BLUM: We recently saw that they were trying to gun down wild boars from helicopters in Texas. Does your product work on animals other than rodents?

LORETTA MAYER: Yes, it does. This product so far has been tested in several mammalian species. We've done work with Texas A&M looking at the blunting and complete blocking of reproductive capacity in wild boar. We have data in canine, a large study using one of our active ingredients on the Navajo Reservation with very high success.

We know that both actives are extremely efficacious in mice. I mean obviously, my initial work was published in mice. And we have some promising data in marsupials, possum and wallabies. So yes, it will work in other species. It must be formulated specifically for that species, so for example, canines are seasonal breeders, rats breed nonstop, so how you formulate it, when you put it out, those types of use patterns have to be designed for.

Also, when you're looking at something like the wild boar and you know where it targets other communities like on islands, you know you would need to formulate your product so that you can broadcast it from helicopter. So, there's all these opportunities to design the

product, and it's using it in an animal that you want to control, because they're a pest species, or maybe using it in an animal like a dog or a cat, where you'd like to have an alternative to a spay or neuter surgery.

So the pipeline is very deep, and we're excited to have so many people interested in it and that's what we look forward to in the future, getting ContraPest out there in use, getting fertility control before the public, and moving in to other species that really could benefit from fertility control.

ROBERT BLUM: Loretta, thank you so much for your time today and participating in this addition of the Lytham Partners Executive Interview Series.

LORETTA MAYER: It was a pleasure, Robert, anytime. Thank you.

ROBERT BLUM: Thank you.

About The Lytham Partners Executive Interview Series

Lytham Partners continues its commitment to partnering with the next generation of innovators by offering micro- and small-cap executives the opportunity to communicate their story to a wide spectrum of investors - in their own words. By addressing the most important issues, the Executive Interview Series aims to help companies increase their exposure to the audience they most desire, while providing investors the additional level of due diligence they demand.



PHOENIX
3800 North Central Ave.
Suite 750
Phoenix, AZ 85012
Office 602.889.9700
Fax 602.889.9696
www.lythampartners.com

NEW YORK
750 Third Avenue
9th Floor
New York, NY 10017
Office 646.829.9700
Fax 646.829.9701
info@lythampartners.com

SenesTech, Inc. Disclaimer

This document contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended and such forward-looking statements are made pursuant to the safe harbor provisions of the Private Securities Litigation Reform Act of 1995. "Forward-looking statements" describe future expectations, plans, results, or strategies and are generally preceded by words such as "may," "future," "plan" or "planned," "will" or "should," "expected," "anticipates," "draft," "eventually" or "projected." You are cautioned that such statements are subject to a multitude of risks and uncertainties that could cause future circumstances, events, or results to differ materially from those projected in the forward-looking statements, including the risks that actual results may differ materially from those projected in the forward-looking statements as a result of various factors and other risks identified in our filings with the Securities and Exchange Commission. All forward-looking statements contained in this press release speak only as of the date on which they were made and are based on management's assumptions and estimates as of such date. We do not undertake any obligation to publicly update any forward-looking statements, whether as a result of the receipt of new information, the occurrence of future events or otherwise.

Lytham Partners, LLC Disclaimer/Disclosures

Services: Lytham Partners, LLC ("Lytham") provides a range of investor relations services to its clients. The particular services provided vary by client and may change from time to time. No Investment Advice: Lytham is not a registered broker-dealer, registered investment adviser or financial adviser, nor does it hold itself out to be. All materials presented on this website and/or publications or presentations released by Lytham to the public through this website, email, or any other means of transmission are not to be regarded as investment advice, do not constitute an endorsement of the company, and are only for informative purposes. Before making a purchase or sale of any securities mentioned on this website or in Lytham's publications or presentations, Lytham strongly encourages and recommends consultation with a registered securities representative. This website and/or publications or presentations released by Lytham to the public through this website, email, or any other means of transmission do not constitute an offer to purchase or sell securities, and is not to be construed as a representation of an offer or a solicitation of any offer by Lytham or its client companies to purchase or sell any security. Lytham or any of its affiliates, members, employees, clients, officers, directors, and/or their respective families may from time to time purchase or sell, as agents or principals, or otherwise hold positions in, securities of its client companies, and are free to buy or sell those positions at will. Any such positions may be increased or decreased from time to time in the future without notice. Any information or opinions expressed in this website and/or publications or presentations released by Lytham are subject to change without notice. Compensation Information: Lytham is compensated by SenesTech, Inc. for providing investor relations services. The compensation provided to Lytham is as follows: \$7,500 per month plus reimbursement for certain expenses, and Lytham currently has options to acquire 5,250 shares. Information Sources and Forward-Looking Statements: The information contained in this website and/or publications or presentations about Lytham's clients was obtained from materials available to the general public, including the clients' filings with the SEC, documents included on the client's websites, information provided by the client or from other publicly available sources deemed reliable by Lytham. Lytham does not represent or guarantee the accuracy or completeness of this information. This information is subject to change without notice and Lytham assumes no responsibility to update the information, except as required by law. The information contained in this website and/or publications or presentations about Lytham's clients may contain "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995 ("Reform Act"), as well as Regulation FD. These statements may involve risks and uncertainties that could cause actual results to differ materially from the forward-looking statements. Factors which could cause or contribute to such differences are detailed in the company's public filings with the United States Securities and Exchange Commission, if available. Forward-looking statements speak only as of the date the statement was made. Neither the company nor Lytham undertakes, and specifically disclaims, any obligation to update any forward-looking statements. The company claims the protection of the safe-harbor for forward-looking statements contained in the Reform Act. Any performance data quoted represents past performance of the company. There is no guarantee of comparable future results; current performance may be higher or lower.