

# ANIMAL HEALTH INVESTMENT Europe

26-27 February 2019 | London, UK

@AHInnovation #AHInvestEurope

We are proud to announce the 24 finalist companies selected to present at the 2019 Animal Health Investment Innovation Showcase.

 **ALGENEX**

 **APIOTIX Technologies Ltd.**

  
**basepaws**

 **BioTraceIT**

  
**credo**  
BIOMEDICAL

  
**dendro** pharm

  
**EKOGEA**

  
**embion**  
technologies

  
**FelCan Pharma**

  
**FOLIUM Science**

  
**HypoPet**

  
**Malcisbo**  
sweet vaccines

  
**NGS**  
SOLUÇÕES GENÓMICAS

  
**NORTHYDE**  
Improving livestock performance

  
**PANION**<sup>TM</sup>  
DEVELOPING ANIMAL HEALTH

  
**PerformaNat**  
feeding science

  
**PetMedix**  
ANTIBODY INNOVATION IN ANIMAL HEALTH

  
**Proteon Pharmaceuticals**

  
**purapep**

  
**REX**

  
**SIMINI**  
TECHNOLOGIES

  
**tropical animal genetics**

  
**VetNOW**  
TeleHEALTH. Anywhere. Anytime!

  
**VLPbio**  
The Vaccine's Company

Headline Partner:



Associate Partners:













Visit [www.animalhealthevent.com](http://www.animalhealthevent.com) for more information

# A Special Thank You to the **SELECTION COMMITTEE**

The Selection Committee members were responsible for selecting the showcase companies at Animal Health Innovation Europe 2019. Each member has a wide experience and knowledge within the industry and between them they leverage an exceptional understanding of emerging markets and new innovations in the industry.



**Charles Hoare**  
Head of European  
Healthcare M&A

**STIFEL**



**Matthias Hofer**  
Partner

 **Stonehaven**  
Consulting



**Julia Stephanus**  
Founder and President

 **avviare**



**Michael Hemprich**  
Head of Business  
Development

 **IDT**



**Maarten Goossens**  
Co-Founder  
and Principal

 **anterra** capital



**Martijn Adorf**  
Managing Partner

 **TERRANOVA**  
SYNERGISTIC NUTRITION



**Oliver Hardcastle**  
Junior Partner

 **Stonehaven**  
Consulting



**Jarne Ellenholm**  
Managing Partner

 **Copenhagen**  
**LIFE SCIENCE ADVISORS**  
-connecting science to market-



**Paul Dick**  
President

 **Pda**  
Paul Dick & Associates Ltd.



**Isaac Fraynd**  
Dealflow Manager

 **AQUA**  
**SPARK**

# Make the Right **CONNECTIONS**

## Our meeting mojo platform allows you to preschedule meetings with these exciting start-ups!

Animal Health Investment Europe is committed to bringing innovative and inspiring emerging companies together with partners looking to acquire and invest.

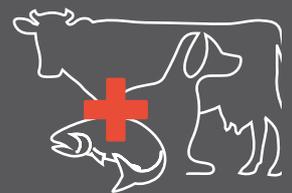
To ensure all our guests make the most valuable connections possible at the Summit, all attendees will have access to the **MEETING MOJO** platform, which allows you to create a bespoke meeting schedule, ensuring you connect with the industry stakeholders that are **most important** in building your business.

**MEETING MOJO** gives you access to the entire attendee list and allows you to message AND invite people to connect during the formal meeting sessions run throughout the day.

## Scheduled **MEETINGS**

### Who You Will Meet

- + Start-Ups & Early Stage Biotech Companies
- + Business Development Teams from International Pharmaceutical Companies
- + Leadership from Multinational Corporations
- + Mid to late-stage Health and Nutrition Companies
- + Global Distribution Leaders
- + Venture Capital and Private Equity Investors
- + Market Intelligence and Consultancy Providers
- + Universities and National Regulatory Bodies
- + Contract Research & Contract Manufacturing



Join the Finalists:  
**REGISTER TODAY**



# INNOVATION SHOWCASE FINALISTS

## - HEALTH -

12 companies pitching for investment for their products and technologies in animal health:



# INNOVATION SHOWCASE FINALISTS - HEALTH



## Claudia Jimenez

General Manager

**Algenex (Alternative Gene Expression)**



Series B+ company seeking £2-10 million

[www.algenex.com](http://www.algenex.com)

### Company Value Proposition

Alternative Gene Expression S.L. (ALGENEX) has developed CrisBio® technology, which consist in natural bio-reactors which have unique advantages for industrial production of any kind of recombinant protein, offering the most simple, cost-effective and scalable production technology up to date. CrisBio® has multiple advantages to obtain biotechnological high-tech products, with respect to classical production based on bioreactors.

### About the Speaker

Claudia has 20 years of experience and a proven record of accomplishment in corporate development, investor relations and communications. She started her career in corporate finance at WestLB AG in Germany, where she managed mergers and acquisition (M&A) projects across various industries. Following the completion of her MBA at Instituto de Empresa in 2005, she joined the biotechnology company TiGenix, taking responsibility for corporate development and leading the company's partnering efforts that culminated in a deal with Takeda worth up to €380M. Following the company's Nasdaq IPO, Claudia became responsible for investor relations and corporate communications until the completion of the acquisition of TiGenix by Takeda in 2018.

### Business Description

Algenex' business model is to partner (B2B model) with Vaccine Producers to develop and co-manufacture vaccines and share the profits arising from success. In this model, Algenex programs the proprietary baculovirus vector (TopBac) by genetic manipulation and packages and supplies the natural bioreactors (insect pupae). The industrialization of the technology will increase the competitiveness and production capabilities of Algenex' technologies, consolidating our business model as a provider of technologies related to the production of subunit protein-based vaccines for the animal health sector.

In the mid-term, Algenex aims to extend its capabilities to the manufacturing of human vaccines. biocompatible polymer materials which are able to block opioid drugs from passing the blood brain barrier. Additionally the carriers promote an accumulation of drugs in inflamed and tumour tissue due to the EPR Effect – tumour and inflamed tissue retain the encapsulated drugs better and healthy tissue excludes them.

By encapsulating and/or connecting already FDA approved opioid drugs to these materials the analgesic strength can be multiplied and at the same time side effects including addiction are eliminated.

Anti-inflammatory properties address additional applications and markets e.g. arthritis & arthrosis.

# INNOVATION SHOWCASE FINALISTS - HEALTH



## Jelena Šuran

Head of Department of Pharmacology and Toxicology  
**ApiotiX Technologies**



Pre-Series B company seeking up to £2 million

[www.apipet.eu](http://www.apipet.eu)

### Company Value Proposition

At APIOTIX TECHNOLOGIES we are dedicated to developing antibiotic phytochemical alternatives that are effective, sustainable and cost-effective. Our flagship product ApiMast is a first organic antibiotic alternative for treatment of mastitis in dairy cows that is to be registered as a veterinary medicinal product (VMP). ApiMast is an intramammary solution based on our proprietary, unique extraction and standardization technology.

### About the Speaker

Jelena Suran is a Head of Department of Pharmacology and Toxicology at the Faculty of Veterinary Medicine in Zagreb, Croatia. Her main activities include teaching Veterinary Pharmacology and monitoring the activity of national Center for VMP pharmacovigilance, while previously she evaluated part 3 (Safety and Residues) and part 4 (pre-clinical and clinical) of VMPs registration dossiers. For past ten years, she has been working on research and development of honeybee products for application in veterinary medicine, in collaboration with SME Hedera. She was a leader of EU project „Intramammary Propolis Formulation for Prevention and Treatment of Mastitis in Dairy Ruminants“ (2014-2016). This project led to the development of several formulations for mastitis treatment, under a common name – ApiMast, a flagship project of Hedera’s spin off animal health company- ApiotiX.

### Business Description

We have developed extensive portfolio of natural, honey-bee based products for farm and companion animals. The application range of these products is wide; from intramammary product ApiMast, to feed additive ApiComplex. Our flagship product, ApiMast, is a truly disruptive product that unveils a new, non-existent market of subclinical mastitis treatment and which replaces the existing clinical mastitis market treatment with a combined market potential estimated at 3,5 billion EUR per annum in EU only.

### Core Technology or Product

A sophisticated extraction and standardization process enables precise bio-compounds dosing and efficacy measurement while in the same time retaining positive safety and toxicity profile. By that we are able to effectively use natural antiinflammatory and antibacterial properties of honey-bee and plant products and help improve human and animal health in a sustainable way.

# INNOVATION SHOWCASE FINALISTS - HEALTH



## Sofiane Bennacer

Business Development Manager  
**Credo Biomedical**



### About the Speaker

Sofiane Bennacer is Business Development Manager for Credo Biomedical, who develops, accurate, rapid and affordable molecular diagnostic platforms at POC to provide advanced medical care to the mass. Prior to joining Credo Biomedical, Sofiane Bennacer was the CEO of Biomedic Consulting, a business and marketing consulting firm for biotechnology companies, where he successfully supported the international expansion and fundraising of multiple companies and start-ups in Asia and Globally. Sofiane started his journey in biotechnology at Medmira Inc. in Canada, and transitioned into various roles of increasing responsibility in strategic business development and marketing for both animal and human health companies.

Series B+ company seeking £2-10 million

[www.credobiomed.com](http://www.credobiomed.com)

### Company Value Proposition

To empower veterinarians with powerful diagnostic tools and help them make the right diagnosis directly at the clinic. By providing Nucleic Acid Tests at similar price level to rapid tests and with the accuracy of laboratory testing, we aim to enable veterinarians to make critical decisions faster and with more confidence.

### Business Description

Credo Biomedical develops, and manufactures innovative, cost-effective, and rapid Molecular Diagnostic solutions at the Point-of-Care (POC) in the area of animal health (canine, feline, ruminants, swine, poultry).

Aware of the necessity to develop rapid and affordable diagnostic solutions for the veterinary industry, we are striving to offer an accurate alternative to existing practices combining the laboratory accuracy with the rapid tests speed and price.

### Core Technology or Product

Our strong in-house R&D and Manufacturing teams developed a proprietary Nucleic Acid diagnostic platform allowing the prevention and early detection of infectious diseases in both companion animals and livestock.

The CREDO CUBE is a Point-of-Care diagnostic platform for the amplification and detection of nucleic acid sequences from a variety of sample types (whole blood, faeces, oral fluid, etc..). Using a proprietary real time Polymerase Chain Reaction (PCR) technology, the CREDO CUBE performs the detection of numerous pathogens and targets from sample to result in less than 30 minutes.

This means the dream of owners taking their pets into the vet clinic, get the diagnosis of the problem, and get treatment in the same visit is possible. In the case of livestock, a traveling vet can perform diagnosis and offer treatment in the same visit.

# INNOVATION SHOWCASE FINALISTS - HEALTH



## Dr. Sam Dylan Moré

CEO

**DendroPharm**



### About the Speaker

Dr. Sam Dylan Moré founded DendroPharm in 2013 to improve the quality of life of patients both human and animals. DendroPharm has developed and licensed a platform technology for tailored nanomaterials. These novel excipients enable drugs to penetrate the skin and accumulate drugs in inflamed or tumour tissue. One of newest and ready for licensing products is a non-addictive selectively peripherally acting analgesic. This „nano-Opiate“ comes with the 2-8 fold strength of morphine but without central side effects. Additional technology for transdermal protein delivery is developed.

Prior to founding DendroPharm Dr. Moré has been working four years at the Institute of Molecular Science in Okazaki / Japan as post-doc and project leader building a project at the interface of lipid rafts, cell signal transduction and surface science. After joining Mitsui & Co. as Senior Scientific Manager Dr. Moré was responsible for business development and marketing for nanotech products in Europe. From 2002 to 2013 Sam Moré was working as consultant for various SME life science companies and as quality management expert and head of quality assurance for Infineon/Quimanda, TUEV Sued, Daimler AG and ABX advanced biochemicals.

Series B+ company seeking £2-10 million

[www.dendropharm.de](http://www.dendropharm.de)

### Company Value Proposition

We have developed an analgesic drug nanotech platform technology that solves the US opiate crisis and which offers a not controlled non-addictive medication for strong to moderate pain.

### Business Description

Highly analgesic pain killer with strength up to 8 fold of morphine – non-addictive, anti-inflammatory and with a classification as non-narcotic substance.

DendroPharm uses the unique properties of biocompatible polymer materials which are able to block opioid drugs from passing the blood brain barrier. Additionally the carriers promote an accumulation of drugs in inflamed and tumour tissue due to the EPR Effect – tumour and inflamed tissue retain the encapsulated drugs better and healthy tissue excludes them.

By encapsulating and/or connecting already FDA approved opioid drugs to these materials the analgesic strength can be multiplied and at the same time side effects including addiction are eliminated.

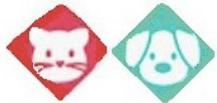
Anti-inflammatory properties address additional applications and markets e.g. arthritis & arthrosis.

### Core Technology or Product

DendroPharm developed a scaled up process to manufacture dendritic nanomaterials and combines them with various opiates. Preclinical proof of concept have been established for three different NanoOpiates™, among them morphine. By using an animal model for acute inflammation an up to 8 fold increase of analgesic strength and the elimination of side effects were demonstrated.

The safety of the used polymeric nanomaterials has been accessed in a first in-vitro and in-vivo testing with excellent results.

# INNOVATION SHOWCASE FINALISTS - HEALTH



FelCan Pharma

## Dr Bevyn Jarrott FelCan Pharma



### About the Speaker

Bevyn Jarrott is the author of 220 original scientific publications as well as several authoritative reviews, book chapters and patents. He graduated with a B Pharm First Class Honours degree and then completed a Ph.D. at the University of Cambridge in Biochemical Pharmacology under the supervision of Dr Leslie Iversen, FRS. He was then appointed a Senior Lecturer in Clinical Pharmacology at the University of Melbourne, Australia and then Reader from 1984-92. He developed RIAs for Clonidine, Lisinopril, Mexiletine and Azepevole and became experienced in the design, implementation and analysis of phase 1 and 2 clinical trials of INDs. From 1992-2003, Bevyn Jarrott was a Professor in the Department of Pharmacology at Monash University. In 2004, he relocated to the Howard Florey Institute at the University of Melbourne as a Professorial Fellow in order to work full time on drug discovery projects. Since 2014, he changed to an Honorary Professorial Fellowship at the Florey Institute in order to concentrate on commercializing three patents on which he is a co-inventor.

Professor Jarrott's research is directed at the design and development of novel drugs to treat neurological and ischemic diseases. The emphasis is on design of novel drugs which can be evaluated and patented to protect intellectual property. This is done in collaboration with Professor Spencer Williams of the School of Chemistry, University of Melbourne.

Series B+ company seeking £2-10 million

[www.felcanpharma.com](http://www.felcanpharma.com) (under construction)

### Company Value Proposition

In the Western world, owners of companion pets (mainly cats and dogs) are willing to pay high prices for drugs that clearly relieve the pain and suffering from degenerative disorders that are a feature both of ageing and also inbreeding of strains. The major disorders are joint arthritis, heart and kidney failure and epilepsy. Ideal drugs are those that can be given in food pellets once a day and improve the health and behaviour of the pets thus justifying the costs to the owners.

### Business Description

FelCan Pharma is a 'start-up' drug design company using state-of-the-art medicinal chemistry and molecular pharmacology to develop novel, patented drug candidates specifically for cats and dogs. Three patents have been obtained that give exclusivity for novel drugs to treat cats and dogs that have been diagnosed either with joint arthritis or congestive heart failure, or acute kidney disease or epilepsy. Not many drugs are available to treat any diseases in cats because they cannot readily metabolise drugs in the liver to water soluble metabolites that are then excreted in urine. We have therefore designed drugs that do not need to undergo this metabolism pathway. The business will be to progress the drug candidates from the laboratory by scaling up synthesis to kilogram quantities required for undertaking oral formulations suitable for safety pharmacology and phase 1 and 2 clinical trials in cats and dogs with these disorders.

### Core Technology or Product

In the USA, there are approximately 80 million companion dogs and ~ 70 million cats. Our drug candidate for arthritis potently and selectively inhibits cyclooxygenase-2 enzyme thus blocking inflammation and pain associated with arthritis. Unlike existing cyclooxygenase-2 inhibitors, our drug has the additional property of a dithiolethione group that reduces gastrointestinal bleeding which is common with the marketed drugs. Our second drug has a novel action to block ischemic damage that is a feature of heart and kidney disease by quenching free radicals that trigger the death of cells. Our third drug which is a potent neuronal sodium channel blocker has been found to be effective in blocking epileptic seizures in three different rodent models of epilepsy. It therefore is an attractive candidate for treating idiopathic epilepsy that is common in inbred strains of dogs and cats.

# INNOVATION SHOWCASE FINALISTS - HEALTH



HypoPet

## Professor Dr. Martin F. Bachmann

CSO and Co-founder

**HypoPet AG**



### About the Speaker

Martin Bachmann, Professor at the Universities of Bern and Oxford is a pioneer and world leader in VLP-based vaccines who possesses a unique combination of academic excellence, industry acumen and entrepreneurship. Martin received his PhD from the Institute for Experimental Immunology, Zurich, in the laboratory of Nobel Laureate Prof. Dr. Rolf Zinkernagel. He has more than 20 years of experience in drug research and development and has established a vast and renowned network of industrial and academic partners. He is the founder of Saiba GmbH and formerly worked for Cytos Biotechnology AG as CSO. One of his projects that was co-developed with Novartis is currently being tested in a late phase clinical registration study involving 690 patients. Martin has more than 250 peer reviewed publications and is listed as an inventor on more than 50 patents.

Series B+ company seeking £2-10 million

[www.hypopet.ch](http://www.hypopet.ch)

### Company Value Proposition

HypoPet is a Swiss biotech company engaged in the research, development, manufacture and licensing of therapeutic vaccines for major unmet needs in companion animal medicine; allergy, inflammation, pain, cardiovascular and metabolic disease and cancer.

### Business Description

HypoPet has developed and patented a recombinant virus-like particle vaccine platform, which can be used to induce long-lived antibodies that specifically target key molecules that drive chronic diseases. With our technology we aim to leverage the profound success achieved with human monoclonal antibodies into cost-effective treatments for pets.

We have established a broad product portfolio. Our lead product candidates, a vaccine for rendering cats less allergic to humans (for which we received the 2013 Swiss Technology Award and an Innovation Development Grant) and a vaccine for treating CAD are out-licensed.

### Core Technology or Product

HypoPet's core therapeutic vaccine technology is an optimized virus-like particle (VLP) derived from the cucumber mosaic virus. The VLPs are recombinantly produced in *E. coli* and engineered to incorporate immunological features that enable strong antibody responses; repetitive structure, particulate nano-scale geometry, T-cell help and activation of innate immunity.

Multiple copies of any disease-related target-molecule can be attached onto this VLP scaffold. Thus, the potent underlying immunogenicity of the VLP is imparted onto the target antigen. Our GMP manufacture is modular and a 50 L scale process makes enough VLP for 1.0 mio doses.

Our vaccines induce strong target-specific antibody responses in cats, dogs and horse. HypoCat, an allergy vaccine targeting Fel d 1, is in pivotal studies, our CAD vaccine has PoC and our pain vaccine is in target species studies.

# INNOVATION SHOWCASE FINALISTS - HEALTH



## Bruno Oesch

CEO

**Malcisbo AG**



Series B+ company seeking £2-10 million

[www.malcisbo.com](http://www.malcisbo.com)

### Company Value Proposition

Malcisbo's unique biotechnology platform is based on glyco-engineering technologies, generating effective glyco-conjugate vaccines for unmet medical needs. Our first platform-derived product is a chicken vaccine against *Campylobacter* to reduce bacteria in chicken gut and thereby reducing exposure of humans and as a consequence prevent food poisoning. Our patent-protected vaccine offers comprehensive protection against all *Campylobacter* species and serotypes, a major market requirement.

### About the Speaker

**2010 – now:** Board of directors, management of Malcisbo AG (CEO), R&D veterinary vaccines

**2005 – now:** Executive Chairman Neurotune AG; R&D of medication to improve synapses

**1996 – 2010:** Chairman, Co-CEO, CSO of Prionics AG; development and sales of BSE diagnostic test

**1990 – 1996:** Assistant professor at the Brain Research Institute, University of Zürich

**1987 – 1990:** Postdoc UCSF with Prof. Stanley Prusiner, work on prions

**1982 – 1987:** PhD with Prof. Charles Weissman, cloning of prion protein gene

### Business Description

The livestock industry in Europe and worldwide is increasingly challenged by bacteria causing diseases in farm animals and - if zoonotic - ultimately causing human food poisoning, reducing productivity and thus also causing enormous economic damage. Usually, bacteria are combatted by antibiotics. As antibiotic resistance has reached alarming levels all over the world, alternative solutions are needed. Vaccines have been proven to be one of the most effective pillars of prevention, however, there is a lack of available and effective vaccines against many bacterial diseases.

### Core Technology or Product

Our glyco-engineering platform facilitates the presentation of specific glycans on surfaces of vector bacteria, which allows generating vaccines against a variety of bacterial diseases. Briefly, the principle of our platform technology is that gene clusters for the synthesis of the target carbohydrate are transferred into bacterial vaccine strains. Vaccine strains are modified to abolish part or all of their endogeneous carbohydrate biosynthesis. This creates free sites to add carbohydrates of pathogenic bacteria. By this, non-pathogenic bacteria can become the carrier of pathogen specific carbohydrates and present them as immunogens to the host animal after vaccination.

The first product in development is a vaccine to reduce *Campylobacter* in chickens, thereby reducing the exposure of humans which causes food poisoning. The second product is a vaccine against *Actinobacillus pleuropneumoniae*, a bacterium causing substantial losses in the pig industry.

# INNOVATION SHOWCASE FINALISTS - HEALTH



## **Polyana Tizioto** Director **NGS Soluções Genômicas**



### **About the Speaker**

Dr. Polyana Tizioto, Director of NGS Genomic Solutions since 2016, has a degree in Biological Sciences and a Masters and PhD in Science, Genetics and Evolution. She was a Ph.D. visiting student and postdoctoral fellow at the University of Missouri, USA.

Dr. Polyana Tizioto has experience in obtaining and analyzing Next Generation Sequencing data. She approved grants and published 33 scientific papers on molecular genetics applied to production and animal health in peer-reviewed international journals that have 373 citations.

The Royal Academy of Engineering Innovation Scholarships recognized her at the final pitch session of their workshop in November 2017. To develop research and innovation, she receives support from the São Paulo Research Foundation (FAPESP) and Illumina Brazil.

**Pre-Series B company seeking up to £2 million**

[www.ngsgenomica.com.br](http://www.ngsgenomica.com.br)

### **Company Value Proposition**

NGS Genomic Solutions is a technology-based company dedicated to research and development in the area of genomics applied to animal health and production. The company uses next-generation sequencing (NGS) applications for microbiome identification and diagnosis as well as antibiotic susceptibility to support effective treatment and management strategies for disease control and increased production.

### **Business Description**

Our business model is to partner with pharmaceutical companies, veterinarians, and probiotic and prebiotic producers. We have developed a portfolio of DNA tests (MastitisScan, MilkScan and ChickenScan) that sequence the microbial DNA present in a sample to support the development of strategies to improve animal health and nutrition, thereby increasing the economic viability of food production and safety.

We are building a large database covering changes in microbial composition in mastitis and performance of chicken production. Our database contains information on thousands of bulk milk samples that present distinct patterns in microbiota and somatic cell count as well as hundreds of differently performing chicken intestine samples.

We are especially presenting MastitisScan, which is a culture-independent DNA sequencing screen that can define all pathogens causing clinical and subclinical mastitis in one test. Mastitis pathogens are generally identified with methods based on culture media; however, more than 30% of clinical and subclinical mastitis samples are false negative. MastitisScan is an extremely sensitive and accurate DNA sequencing test, being a diagnostic tool and decision criterion for the prevention and treatment of clinical mastitis as well as monitoring microbial trends in dairy farms.

### **Core Technology or Product**

MastitisScan is a DNA test that identifies bacteria with great precision and sensitivity. Our technology extracts DNA directly from milk samples and sequences a specific genomic region that functions as a barcode, capable of identifying all species of bacteria that cause mastitis. Information on mastitis causing pathogens is extremely important for targeted treatments and antibiotics. This information reduces the risk of selecting an incorrect treatment, preventing the spread of contagious pathogens to other cows and presence of residues of antibiotics in milk. This technology currently works, and our company has raised US\$ 200,000 to apply this technology and monitor large dairy farms in Brazil. Routine monitoring of bacteria obtained from bulk milk tanks can be an important tool for detecting farm-level trends in antimicrobial resistance.

# INNOVATION SHOWCASE FINALISTS - HEALTH



REX

## Amado Guloy

CEO

Rex Animal Health



### About the Speaker

First generation Filipino American, VC-backed scientist turned intellectual property guy turned entrepreneur specializing in business development, strategic planning and partnerships for companies in various industries.

Notable honors: Techstars and Startup Battlefield alum, Link Foundation Graduate Fellowship, Ludo Frevel International Crystallography Award

Primary Responsibilities as CEO of Rex Animal Health

- Developing algorithms for processing clinical and genomic data as also head bioinformatician/data scientist
- Handled all outside relations with pharmaceutical customers, livestock producer customers, investors, press, etc.
- Internal operations from hiring employees, customer-vendor relationships, HR, and finances

Serves on Advisory Boards for:

- SB27 Implementation in California
- Health Informatics Steering Committee in KC

Series B+ company seeking £2-10 million

[www.rexanimalhealth.com](http://www.rexanimalhealth.com)

### Company Value Proposition

At Rex, we help livestock producers optimize yields and manage disease in their herd using machine learning. Our software solutions are a simple, intuitive platform for:

- Disease Tracking
- Disease Forecasting
- Clinical Decision Support
- Antimicrobial Resistance Surveillance
- Drug Efficacy & Outcomes
- Breeding & Performance Support

In addition, our lab performs cutting-edge research in gene modelling and disease pathways:

- **Genetic Modelling:** Model genes associated with various agronomic indicators (feed conversion, marbling, dairy quality, breeding viability, etc.) and genes associated with disease resistance and susceptibility.
- **Assess Disease Threat:** Identify and monitor viral, bacterial, and fungal pathogens on the farm to increase your level of biosecurity and to assess potential disease threat.

### Business Description

We are the world's first precision animal husbandry platform that provides actionable insights from gathering and standardizing data from the herd for improved yields and healthier animals. Our proprietary algorithms and datasets gives us unique insights on how to help livestock producers manage disease, give better breeding and performance benchmarking decisions by combining insights gained from our genetic tests that reveal the effects of epigenetics and potential disease risk genes within the herd.

# INNOVATION SHOWCASE FINALISTS - HEALTH



## **Pravin Kini** CEO and CO-founder **Tropical Animal Genetics**



Series B+ company seeking £2-10 million

[www.taggnx.com](http://www.taggnx.com)

### **Company Value Proposition**

We aim to advance animal-sciences using genetics, gene-editing and automation to create a sustainable and food-secure future for humanity. Our disruptive species-agnostic In Vitro Breeding Platform (IVBP) aims to deliver increased yields and resilience across livestock species. IVBP eliminates the need for traditional selective breeding methods by rapidly fixing desired traits in food-producing animals. IVBP is the future of affordable & sustainable animal protein production.

### **About the Speaker**

Dr Pravin Kini, M.D. specialised in human reproductive medicine and built up a successful private practice as a co-Founder of a chain of IVF clinics across India and the Middle-East in partnership with the "Bourn Hall Clinic".

Dr Kini has combined the rigours of human medicine with genomics and assisted reproduction technologies to create a revolutionary species-agnostic animal breeding platform, known today as the In Vitro Breeding Platform (IVBP) the heart of Tropical Animal Genetics (TAG). Dr Pravin Kini is the Co-Founder and CEO of Tropical Animal Genetics (TAG).

### **Business Description**

IVBP is a species-agnostic technology initially targeting the dairy industry. India's milk market is currently worth \$100bn and set to reach \$150bn within several years, requiring sustainable productivity gains. We have already started to migrate from artificial-insemination to embryo-transfer technology. TAG currently has over \$ 20M in contracts with ongoing revenues from this sector to deploy the IVBP platform. In addition to India, we will enhance market-reach to support existing genetics companies which have limited breeding capabilities. We have further plans to expand into developed countries which are seeking genetic diversity to improve the quality and costs of organic produce

### **Core Technology or Product**

In Vitro Breeding Platform (IVBP) is a result of over 4 years of R&D by our top-notch team of engineers and geneticists. IVBP applies genomic analysis of parental lines & algorithms to combine traits into an improved embryo which can be further enhanced via gene editing. Using additional Assisted Reproductive Technologies, we can prototype the product rapidly. This leads to a significant reduction in multiplication time to market launch and higher ROI by enhancing natural disease-resistance, improving productivity & animal welfare. In addition, IVBP 2.0 is in development for 2 economically important species, Poultry and Shrimp, to create and multiply enhanced lines by combining IVBP with Germ Cell Transplantation.

# INNOVATION SHOWCASE FINALISTS - HEALTH



**Dr. Apryle Horbal**  
President  
VetNOW



**Pre-Series B company seeking up to £2 million**

[www.vetnow.com](http://www.vetnow.com)

### Company Value Proposition

Veterinary and Animal health organizations have been slow to take advantage of the standardization than other industries that have capitalized on driving common processes, reducing unintended variability, and ensuring consistency in experience by developing care pathways. VetNOW takes a comprehensive approach to the limited version of Tele Health currently practiced and produces a more resilient Vet to Client experience while promoting cultural change and sustainability.

### About the Speaker

Dr. Apryle Horbal is a Veterinary Medical Doctor and Member of the Royal College of Veterinary Surgeons. She has extensive training and experience in the field of equine dentistry, oral surgery, and upper airway disease. Apryle received her Bachelor of Arts cum laude in Biological Basis of Behavior in 2007 from the University of Pennsylvania. She then went on to qualify for her Veterinariae Medicinae Doctoris, also from the University of Pennsylvania in 2011. Upon completion of this veterinary degree, she went on to complete an internship in large animal medicine, surgery and ambulatory practice at Texas A&M University's Veterinary Medical Teaching Hospital in 2012. Apryle also completed a residency in Equine Dentistry at the University of Edinburgh from 2013-2016, where she also received her Masters of Philosophy degree via research thesis into the infundibular defects of equine maxillary cheek teeth.

Upon completion of her residency program, Apryle returned to the US, opening a small animal and equine emergency and referral center in Pittsburgh, Pennsylvania. This hospital served as the proving ground for the start of the VetNOW Virtual Care initiative, to perfect clinical workflows and implementation in a real-life busy veterinary hospital while setting the highest of clinical standards. While still practicing equine surgery clinically, Apryle has moved on from the operations of the hospital to focus solely on the development of the Virtual Care Continuum to optimize animal health.

### Business Description

VetNOW provides the first to market Virtual Care Continuum for the Veterinary industry. We afford a new opportunity for Veterinary clinics and Veterinarians of all varieties to gain access to a global market and maximize the financial strength of their business. Our platform improves access to first rate, quality care for animals and their owners. The market demanding these services, and we are filling an enormous unmet need that as of now, has been physically impossible to achieve. We increase the value of our customers' software implementation through workflow solutions that maximize efficiencies and minimize environmental impact. Our platform improves client retention and reduces costs to clients while improving the standard of care.

### Core Technology or Product

Our technology is centered around a complete telehealth software platform which is fully interoperable and incorporates the 'Seven Layers of TeleHealth' recognized by the AVMA and American Telemedicine Association. VetNOW has also developed implementation protocols in both specialty and general veterinary practice scenarios (standardized, detailed, white-boarded, workflows) which allow the seamless integration of telehealth into the daily practice of veterinary medicine.

# INNOVATION SHOWCASE FINALISTS - HEALTH



## Francisco Manuel Reyes Sosa Business Development Manager VLPbio



### About the Speaker

Francisco M. Reyes Sosa is Business Development Manager of VLPbio, a Spanish biotechnology firm that develops novel products in the field of animal health, based on chimeric virus-like particles. He is the responsible of strengthen and extend this portfolio, across species, geographies and indications, willing to take on board more partners to accelerate developments and market new products.

Prior to joining VLPbio, Francisco has accumulated more than 15 years in the R&D Biotechnology sector transitioned into various roles of increasing responsibility since the completion of his PhD in biochemistry at the University of Seville.

Series B+ company seeking £2-10 million

[www.vlpbio.com](http://www.vlpbio.com)

### Company Value Proposition

VLPbio is a pioneer biotechnology company focused on research and development of chimeric virus like particles (Ch-VLP's).

### Business Description

VLPbio is a technological company that develops novel vaccines against high-impact diseases in the veterinary sector using proprietary technology based on chimeric virus-like particles that act as an antigens-display platform specifically designed for each pathology which generates an immune response.

### Core Technology or Product

We have several products in our development pipeline based in our technological platform. Our new vaccines for Gumboro, FMD, BVDV, PRRSv or Swine circovirus and our product for immunocastration are trying to cover the main diseases for the production animals but others target diseases and species (equine and companion animals) could also be faced using our platform.

# INNOVATION SHOWCASE FINALISTS

## - NUTRITION -

**NEW for 2019** 8 companies pitching for investment for their products and technologies in animal nutrition:



# INNOVATION SHOWCASE FINALISTS - NUTRITION



**Anna Skaya**  
Founder and CEO  
**Basepaws**



## About the Speaker

Anna Skaya is the Founder and CEO of Basepaws, a pet genomics company based in LA. She has extensive expertise in consumer genomics and in parallel in growth marketing, digital brands, and strategic business development. Prior to starting Basepaws in 2016, Anna was the CEO of Groupon Russia where she had full P&L responsibility. She has a degree from UCLA and Basepaws is her 4th company.

Pre-Series B company seeking up to £2 million

[www.basepaws.com](http://www.basepaws.com)

## Company Value Proposition

Basepaws is building a new pet health brand focused on genetics and personalized nutrition. Our first consumer product is the CatKit, the world's first DNA test for cats and we are actively working on R&D for other products and pets.

## Business Description

Basepaws is a pet health and genetics company. We created the first consumer DNA test for cats and are expanding our offering to other pets and other tests, including microbiome, cancer testing and nutrition. Basepaws is building the largest database of pet health data on the planet while giving owners insights about their pets. We work closely with owners, veterinarians, breeders, shelters and pet nutrition companies, and will use genomic data in a variety of fields including pet nutrition and therapeutics.

## Core Technology or Product

Our products are built on proprietary cost-saving sequencing technology which combines low coverage whole genome sequencing with the specificity of amplicon approaches. Our tests are available online, and soon through the vet and breeder channels, and we are expanding our business to focus on additional channels of revenue.

# INNOVATION SHOWCASE FINALISTS - NUTRITION



## Mary Keenan

International Business Development  
**EKO GEA**



**Pre-Series B company seeking up to £2 million**

[www.ekogea-int.com](http://www.ekogea-int.com)

### Company Value Proposition

Our unique prebiotic tool (BCx) directly and effectively supports the microbiome. Specialised mechanisms feed and protect microbial populations, creating robust proliferation and microbial diversity to meet the challenges of AMR, young animal health, nutrient optimisation, and production profitability. Application of our prebiotic offers the co-benefit of lowering the environmental impact of animal feeding operations to provide a genuine sustainable solution within the animal health sector.

### Business Description

The critical role of the microbiome is accepted, but few tools directly benefit gut health. BCx is an ideal culture media, a prebiotic biostimulant that uniquely feeds and protects microbes. It creates vast, diverse armies that metabolise nutrients and waste. BCx provides multiple layers of beneficial microbial response, first via ion exchange, and then by uniquely feeding microbes. BCx promotes microbial activity via two distinct molecules:

- Polyuronic acid - huge biological ion exchange capacity plus gelation to disperse nutrients
- Oligosaccharides - a rich source of this unique microbial food, rarely found in nature
- BCx also provides a full range of trace elements that further support microbial health.

### Core Technology or Product

BCx is 100% *Ascophyllum nodosum* marine algae but should not be confused with other algae products or products with an algae component. Our unique biological extraction method isolates and extracts our fragile, target molecules intact, allowing for exceptional prebiotic mechanisms. BCx cannot be replicated or reverse engineered and is protected by its trade-secret status. Although BCx is fully developed and ready-for-market, it is very early stage in its commercial development. Funding is required for clinical trials to designate it as a regulatory-approved prebiotic and validate its efficacy as a gut-health functional solution to address production, disease therapy, fertility, skin/coat issues, and antibiotic-resistance challenges.

# INNOVATION SHOWCASE FINALISTS - NUTRITION



## Georgios Savoglidis

CEO

**Embion Technologies**



### About the Speaker

Georgios combines over 10 years technology experience in biotech and chemical engineering in the bio-renewables field with over 10 years business experience in various activities within his family's SME. He holds a PhD in Chemical Engineering.

Pre-Series B company seeking up to £2 million

[www.embiontech.com](http://www.embiontech.com)

### Company Value Proposition

Embion - producing affordable prebiotics for greater animal health and performance using sustainable food side-stream feedstocks.

### Business Description

The adoption of prebiotics for animal microbiome nutrition to drive animal health and productivity has been limited by

- i. cost
- ii. limited performance of existing prebiotics

Embion's ground-breaking technology addresses both challenges.

### Core Technology or Product

Embion has developed a unique, patented form of catalysis, proven at 5 litre reactor scale in the laboratory, and about to commercialise at pilot facility scale.

Using food side-streams, the sustainable process is effectively agnostic on biomass source, targeting available materials rich in desired oligosaccharide types. Further, the embedded catalyst is reusable, with simplified purification steps.

By addressing both animal and human nutrition, Embion may leverage insights across species for the development of increasingly targeted prebiotics creating a positive impact on the microbiome.

Poultry field trials are in progress around the world to demonstrate economic returns with other species being targeted.

# INNOVATION SHOWCASE FINALISTS - NUTRITION



FOLIUM Science

## Edward Fuchs

Chief Executive and Co-Founder

**FOLIUM Science**



### About the Speaker

Executive leader in the global food industry, within private equity owned United Biscuits and ARYZTA AG driving supply and corporate development.

Pre-Series B company seeking up to £2 million

[www.foliumscience.com](http://www.foliumscience.com)

### Company Value Proposition

One of the biggest stories of modern times is the overuse of antibiotics and the development of antimicrobial resistance. FOLIUM Science is developing a new technology that will help solve part of the issue. With game-changing, patented science that harnesses naturally occurring mechanisms to selectively remove unwanted pathogenic and spoilage bacteria, FOLIUM Science is working to deliver solutions for increased productivity at all points in the food and agriculture value chain.

### Business Description

FOLIUM Science leads the way in bioscience technology for the healthy biotic era. We are interested in microbiomes and the potential to enhance and modulate these environments, however biomes are immensely complex and the scientific community is now gaining a better understanding of what a healthy biome looks like.

FOLIUM's Guided Biotics™ act to maintain healthy animals when added to animal feed or drinking water by selectively reducing those unwanted bacteria. Our Guided Biotics™ can form a major tool in the armoury of animal production improvement and biosecurity systems. It can also be used in plants by stimulating growth and selectively removing plant pathogens that can create significant waste in world crops and by removing spoilage organisms that cause reduced shelf life of produce.

### Core Technology or Product

Folium's GUIDED BIOTICS are precision patented tools that selectively remove unwanted bacteria by cutting bacterial DNA and triggering enzymatic self-digestion within the cell. The GUIDED BIOTICS target only the bacteria that impact the well being of their host to restore the natural balance of the healthy microbiome. Our Guided Biotics deliver exquisitely specific target RNA molecules which guide natural enzymes to cut bacterial DNA only at that specific site, triggering other natural enzymes to degrade the DNA causing loss of viability.

FOLIUM is currently focused on animal nutrition and welfare, including poultry, swine, cattle and aquaculture but sees potential for applications in plants as a bio-stimulant or novel form of seed protection.

# INNOVATION SHOWCASE FINALISTS - NUTRITION



## Tangai Marega Founder Northhyde Life Sciences



Pre-Series B company seeking up to £2 million

### Company Value Proposition

Northhyde Life Sciences aim to pioneer IoT driven precision animal husbandry for the approximately 21-30 million small ruminants livestock through application of neural sensor networks. This translates to an annual average of US\$1.5 billion unmet need. AI based machine learning and control systems for early disease or distress detection instrumental to the company's long-term success. We are a pioneer R&D enterprise to introduce a scalable high class end to end optimal sustainable solution to our clientele.

### Business Description

In Sub-Saharan Africa, the adoption of IoT based animal nutrition focused husbandry and productivity is in the infancy stage. This is impeded by:

1. Unavailability of precise data owing to lack of data gathering systems for cost management precision.
2. Lack of precision data results in under productions mechanisms
3. Research and development in the field of small animals is backward
4. Farmers losses financially due to low yields.

Northhyde team boasts a cross disciplinary team experienced in innovative R&D with expertise in IoT application. An application combined with genetics and microbiodata goat/sheep farming in Southern Africa. Northhyde R&D efforts in the animal husbandry sector in Africa run parallel to the initiatives undertaken elsewhere in other continents. This will be the first pioneering innovation to be tested and implemented at the Northhyde farm.

### Core Technology or Product

We aim to advance animal-sciences using gut microbiome research integrated system that utilise an array of neural sensor networks, to perform precise and comprehensive monitoring of the physical space and parameters; data acquisition and communication. The acquired data would be analysed in real time and utilised in the decision making and support elements in form of actuators that would control the variable parameters of concern in the physical space occupied by the goats. The data would be routed to Remote Monitoring and Control Stations, for access by remotes experts and users. The parameters of concern are: diet, feeding habits, disease/vector monitoring, breeding cycle monitoring, Body condition scoring monitoring and security. The system would attain precision reproduction through monitoring, and controlling, the physical space's (primarily loafing areas) key parameters such lighting intensity, and weather conditions

### About the Speaker

Tangai has 15 years clinical management experience in human healthcare delivery with a keen interest in operational research. Current reviewer with the National Institute of Health Research (NIHR). Started his career in banking and finance at then BCCI in Zimbabwe, where his role involved international payments and settlements, corporate treasury risk management. Following the completion of his MBA at the Buckinghamshire New University, UK in 2006, he continued working for the NHS, taking responsibility for clinical practice development through evidence-based research. This ignited a keen interest in life sciences research towards human health improvement.

Due to his special interest in human health improvement, animal health equally became an indispensable area in his research interests, therefore founded Northhyde Life Sciences.

Our team and technology partners combine Laboratory Science, Veterinary Science, Agricultural Science, Health Economics, Marketing, Computer Science and Electronic Engineering towards a complete animal lifecycle management that goes to the cloud platform.

# INNOVATION SHOWCASE FINALISTS - NUTRITION

**PerformaNat**  
feeding science

**Hannah Braun**  
Co-Founder, COO  
**PerformaNat GmbH**



## About the Speaker

Hannah Braun is a Co-founder and COO of PerformaNat GmbH, a science backed venture in the field of animal nutrition. The company develops feed additives to balance the need for productivity to feed a growing global population with animal welfare and health. Hannah holds a university degree in Veterinary Science and a PhD in Biomedical Science. She has been working in basic science at the veterinary physiology department of the Freie Universität Berlin for several years and contributed to more than 20 scientific publications. She is specialized in physiology and gut health of pigs and ruminants which contributes to PerformaNat's inventions in this segment.

Series B+ company seeking £2-10 million

[www.performanat.de](http://www.performanat.de)

## Company Value Proposition

PerformaNat is a Berlin based biotech startup company that develops new animal nutrition additives to increase and maintain animal health. We identify and characterize new compounds using our own technology. We develop patented products from this that can be used to prevent metabolic disorders and support the immune system, including products that support the animal in critical phases, such as after calving or during weaning.

## Business Description

Consumers worldwide want plentiful, sustainable protein in their food. The need for sustainably produced animal protein is driven by strong demographic developments. We are developing value propositions for key market segments dairy, poultry and swine. PerformaNat is developing feed additives applications with a positive impact on animal health based on a patented platform technology.

By using the potential of phytogetic compounds involved in essential cell functions we find solutions for the challenges of advanced animal nutrition.

We are focused on the development of products supporting the physiological processes of the animal's metabolism. The first products of PerformaNat are positively influencing Hypocalcemia in dairy cows around calving.

## Core Technology or Product

The core technology & capabilities are based on the TRP channel knowledge on impact of compounds on electrolyte transport and gene expression in a model – allowing targeted screening and delivery of compounds (mainly phytogetic, plant extracts) that affect animal health and performance.

Our TRP channel technology allows to investigate several ingredients' impact on key customer needs, and first trial data prove the hypothesis.

PerformaNat's core technology can be applied to multiple species. The first PerformaNat product is an enhanced calcium bolus as part of a milk fever prevention strategy which reduces costs and improves animal welfare.

# INNOVATION SHOWCASE FINALISTS - NUTRITION



## **Matthew Tebeau** Chief Operating Officer **Proteon Pharmaceuticals**



### **About the Speaker**

Matthew Tebeau is the Chief Operating Officer of Proteon Pharmaceuticals where he is responsible for the company's strategy, partnership collaborations and mission/vision. Matthew has over 25 years of leadership experience with a specialization in organizational development. He has investment, governance and advisory experience in technology, life sciences, as well as business and consumer services. Matthew is a graduate of Dartmouth College and has completed executive programs in leadership and innovation at Harvard Business School and IMD.

Series B+ company seeking £2-10 million

[www.proteonpharma.com](http://www.proteonpharma.com)

### **Company Value Proposition**

Proteon's bacteriophage-based products are an effective alternative to the use of antibiotics in livestock farming and aquaculture. Our products prevent and eliminate targeted bacterial disease, improving food safety, increasing economic efficiency and enhancing environmental sustainability. They have no side effects, leave no residue and are safe to use on animals and humans. Importantly, Proteon's products significantly reduce the risk of anti-microbial resistance.

### **Business Description**

Proteon uses precision biology for microbiome protection, improving animal and human health, increasing environmental sustainability and eliminating the unnecessary use of antibiotics.

Our products address important unmet needs in the aquaculture, poultry and dairy industries. Bacterial disease results in major – multi-billion dollar – economic costs for the livestock farming industry. Further, the overuse of antibiotics leads to antimicrobial-resistant bacteria, creating multi-tiered food safety, human and environmental risk. Reducing this risk is now a major challenge recognized by the agricultural industry. However, for many bacterial diseases, few economical and effective alternatives exist. Proteon focuses on developing products that antibiotics, and currently available alternatives, have not been able to effectively solve.

We solve these problems by targeting bacterial diseases using carefully selected, developed and tested bacteriophage cocktails. Our products, with efficacy rates approaching 100%, address these critical unmet market needs. Our first products were launched in late 2018, targeting diseases in poultry and aquaculture. Delivered as feed additives, they are easy to use and proven suitable for sustained industrial application.

### **Core Technology or Product**

Proteon has built a phage-platform technology to discover, develop and deliver bacteriophages as a means of bacterial control in aquaculture, poultry, and dairy. Our platform is based on precision biology, combining genomics, bioinformatics, materials engineering and molecular biology to identify, test and select appropriate bacteriophages. We identify bacteriophages in nature, use AI to model performance, and choose phages that can be developed for industrial production. We then engineer the phage solution to assure appropriate delivery to the environment while maintaining their natural and organic classification. We have also developed a proprietary production methodology that allows for cost efficient production and scaling. Our first products have been registered as feed additives and developed with non-dilutive EU grants. Proteon now has an R&D team of 43 research scientists, including 10 with PhDs, and have filed or received more than 10 patents.

# INNOVATION SHOWCASE FINALISTS - NUTRITION



## Geralf Zimmermann

Business Development

**purapep**



Pre-Series B company seeking up to £2 million

<https://purapep.de/>

### Company Value Proposition

purapep helps dogs and cats to live a long and vital life by using natural whey protein hydrolysates. The products contain special bioactive peptides which support the maintenance of a healthy cardiovascular system in cats and dogs. Our supplements are part of the daily balanced nutrition which supplies the pet in addition to bioactive peptides with essential amino acids. purapep products serve as a natural prevention and therefore closes the gap between nutrition and medication and support a long and vital life for cats and dogs.

### About the Speaker

Geralf Zimmermann is responsible for the whole marketing process of purapep, especially sales is his main focus. Prior to joining purapep, Geralf had diverse positions at industry companies starting as Technical Sales Manager after his studies of industrial engineering. After his switch to the dairy industry in 2011, to Unternehmensgruppe Theo Müller, he first gained experienced as product manager and how to manage the whole go to market process of a private label product. In 2012 he changed to the position as Key Account Manager for dairy fresh products. Within the next 3 years he doubled the sales volume of his customers, leading retail companies in Germany and Europe. After this successful period Geralf changed position to the department for dairy commodities to get more sales volume responsibility. In addition he got responsibility for the sustainability of one of the biggest locations of the group of companies. Finally the opportunity to set up a own company in the pet industry led Geralf to purapep.

### Business Description

purapep is marketing new feed supplements based on natural whey protein hydrolysates. Cardiovascular problems are common in senior and geriatric cats and dogs. There are hardly any natural products that can help to maintain a healthy cardiovascular system. purapep bridges the gap between nutrition and medication. The products are suitable for pets who are predisposed or with subclinical symptoms before administration of cardiovascular medications is necessary.

In Europe there are approximately 50-70 million dogs and cats that could benefit from the use of purapep.

### Core Technology or Product

purapep invented and patented a technology to produce special, bioactive peptides based on natural whey proteins. The effect of the peptides has been investigated in many years of research. The product is a powder, which is filled in sticks for daily usage or in cans as a stock pack and is manufactured together with an industrial partner on a large scale.

Marketing is due to launch in spring 2019.

The focus of further development will in particular be on livestock (especially pigs) and horses that are also expected to experience health benefits from receiving supplements of purapep.

# INNOVATION SHOWCASE FINALISTS

## - TRANSLATIONAL FROM HUMAN HEALTH -

**NEW for 2019** 4 human health companies present their innovations for possible applications in animal health:



# INNOVATION SHOWCASE FINALISTS - TRANSLATIONAL FROM HUMAN PHARMA



## Deborah Dullen

President & CEO  
BioTrace IT



### About the Speaker

Deborah is the co-founder of the BioTraceIT™ team, formed in 2014. She brings over twenty years of experience in both the biotech and medical device fields with expertise in business development, sales, R&D, and global market entry. Deborah has a broad background from devices with J&J DePuy-Synthes to pharmaceutical, proteomics and genomics with Applied Biosystems and Eli Lilly.

Working with thousands of sales individuals she has participated and led multiple product launches and developed market strategies resulting in blockbuster products and a broad global business network. Deb has founded other successful start-ups, including Imtakt Corporation, a top research consumable company in Asia-Pacific. Deb's thoughts about medical device start-ups, "Nothing good comes easy, but my whole career has been in healthcare and helping others is worth it."

Series B+ company seeking £2-10 million

Website: [www.biotraceit.com](http://www.biotraceit.com)

### About the Technology:

#### Instantaneous, Real-time, Acute and Chronic Pain Measurement

Researchers, veterinarians, and healthcare providers have an objective way to measure pain aiding their efforts to better understand treatments, patient responses, and effectiveness of interventions.

Realizing the nuance of individual pain experienced by patients, and the reaction to treatment, allows for optimization of interventions that lead to improved pain states, healing, and ultimate wellness for the millions affected by pain.

BioTraceIT™'s patented technology has been independently proven to effectively quantify pain in canine, equine, feline, and human patients. Skin-mounted sensors process a direct pain biosignal generated by the nervous system. From prep to clean up in five minutes.

Research has demonstrated the capacity of PainTrace® to differentiate between acute and dull pain, and to measure the duration and magnitude of pain.

Proprietary speech-recognition and data analytics software makes BioTraceIT™ and PainTrace® a powerful system. We measure pain, track pain levels, compare demographics, medical history, and outcomes.

# INNOVATION SHOWCASE FINALISTS - TRANSLATIONAL FROM HUMAN PHARMA



**Lars Thunberg**  
Chairman of the Board  
**Panion Animal Health AB**



## About the Speaker

Lars Thunberg, born 1966, is a co-founder of CombiGene and chaired its board during the period Aug. 2013 to Oct. 2014. He has for many years served as board member or chairman of several companies, including some listed on the stock market. He has been the chairman of Panion since the beginning and is one of the largest share owners. Lars holds an MSc in Business Administration and Economics from Stockholm University and Lund University.

Series B+ company seeking £2-10 million

Website: [panion-animalhealth.com](http://panion-animalhealth.com)

## About the Company

“At Panion we want to improve the quality of life for animals suffering from chronic diseases. We are convinced that gene therapy has promising prospects.” - Anja Holm, CEO

Panion Animal Health's aim is to develop and commercialize a gene therapy treatment for dogs with drug refractory epilepsy based on CombiGene AB's technology and platform. In addition, Panion aims at inlicensing or acquiring other, similar assets, i.e. animal health applications of human health development projects or products.

We want to improve the quality of life for animals with chronic diseases and we are convinced that gene therapy holds the promise for the future. To move from science to business requires knowledge, competence, determination, and financing. Since November 2016, the board and management have developed the business plan, gained access to relevant preclinical and clinical data, finalised a safety study in dogs and held meetings with competent authorities for veterinary medicines in EU and USA.

Panion's first project will be a treatment for dogs with epilepsy by developing the canine application of CombiGene AB's human epilepsy project. However, Panion's business strategy extends beyond that and includes the acquisition and in-licensing of other, similar assets.

# INNOVATION SHOWCASE FINALISTS - TRANSLATIONAL FROM HUMAN PHARMA



**Dr Thomas Weaver**  
CEO  
PetMedix



## About the Speaker

Tom enjoys creating value in new projects, particularly early stage companies. Previous experiences include being a founding scientist in Hexagen Genetics LTD (acquired by Incyte PLC), Geneservice Limited (acquired by Source Bioscience PLC), and Congenica LTD and Next Gen Diagnostics LLC (both still private). He has more than 20 years of experience in technology development, specializing in genomic based research and drug discovery, as well as commercial expertise in building and managing multifunctional teams and developing business in the EU, USA and China.

Pre-Series B company seeking up to £2 million

[www.petmedix.co.uk](http://www.petmedix.co.uk)

## Company Value Proposition

PetMedix is a Cambridge, UK based early stage pharmaceutical company with global ambitions to become the world leader in innovative antibody-based therapeutics for the companion animal market. We will deliver the first transgenic mouse platform capable of producing therapeutic-quality antibody drugs fully adopted to the target companion animal.

## Business Description

PetMedix has an advanced and validated technology solution that is well placed to take advantage of a large and growing market opportunity. PetMedix platforms are based on the same technology as the Kymouse™, developed by Kymab, but with important differences - the Ky9 mouse produces antibodies for dogs and the Felyne mouse produces antibodies for cats. PetMedix's Ky9 and Felyne engineered mouse platforms represent a superior technology that is better, faster, and more cost effective than previous technologies. Our experienced team and implementation strategy will enable numerous high value therapeutic antibodies to be developed rapidly for a variety of conditions. We estimate that companion animal blockbusters by PetMedix are achievable and will yield peak sales of \$100m+ per antibody per indication.

## Core Technology or Product

PetMedix's platform will introduce the world's best monoclonal antibody technology to companion animals. The core platforms are mice engineered to contain a repertoire of dog (or cat) immunoglobulin variable regions inserted upstream of the endogenous mouse constant regions for both the antibody heavy and light chains. The completely assembled Ky9 and Felyne mice will have a complete and fully functional immune system. Based on the experience with Kymab's Kymouse platform it is anticipated that antibodies with drug-like properties can be directly isolated from the PetMedix platforms following routine immunisation with a relevant antigen.

Patents have been filed to protect the inventions, and an exclusive commercial licensing deal has been agreed in principle with the Wellcome Trust Sanger Institute. PetMedix holds trademarks for PetMedix™, Ky9™, and Felyne™.

# INNOVATION SHOWCASE FINALISTS - TRANSLATIONAL FROM HUMAN PHARMA



**Carl Damiani**  
President  
Simini Technologies



## About the Speaker

Mr. Damiani founded Simini Technologies in 2017 to develop human health innovations as veterinary products. The Company has a robust pipeline with a leading atopic dermatitis drug candidate in development and four commercial products to launch in 2019. Prior to founding Simini, Carl was the former President and COO of Transition Therapeutics, a NASDAQ listed human-focused biotechnology company acquired by OPKO Health in September 2016.

Pre-Series B company seeking up to £2 million

[www.simini.com](http://www.simini.com)

## Company Value Proposition

Simini Technologies' mission is to mine the human health universe for animal health products. The Company is developing a novel topical cyclosporine product that has demonstrated rapid onset efficacy in a Phase 2 study of human atopic dermatitis together with a low systemic cyclosporine exposure to create a unique drug candidate in canine atopic dermatitis. Simini's commercial anti-infective products are aligned with initiatives to reduce antibiotic use in animal health.

## Business Description

Simini's lead program, SMN-023 addresses the two main unmet needs for canine atopic dermatitis.

(1) Maintenance Therapies are dosed when flares have subsided. These therapies provide 3 benefits: (a) prolong flare-free periods, (b) give more time for skin to heal resulting in less severe flares from a subsequent allergic challenge, and (c) fewer overall flares. There are no approved maintenance therapies for canine AD.

(2) Adjunct Oclacitinib Therapy: When owners step down oclacitinib doses from twice to once daily, an estimated 50-70% of dogs rebound in symptoms. This rebound effect creates an opportunity to add SMN-023 to deliver improved efficacy, without the safety risks (as SMN-023 leads to low systemic levels of cyclosporine).

## Core Technology or Product

The SMN-023 program checks all the boxes for drug development:

- Active ingredient - cyclosporine: demonstrated efficacy as an oral therapy for 15+ years in canine AD
- SMN-023 is formulation patent protected to 2031
- No Generic Threat: No approved topical cyclosporine products for human or animal health use
- SMN-023 Human Clinical study of mild atopic dermatitis demonstrated:
- Fast efficacy onset (7 days), statistically significant efficacy, no safety signals or concerns, low systemic cyclosporine levels
- Human User Safety Established
- Scalable & GMP cost-effective production achieved
- CMC - 3 large (commercial) batches on long term stability
- Convenient Application - Easy to Use Spray - twice weekly
- Low Cost of Goods

Can't Join us in February?

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**Booking is now open for all events in the series.**

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**ANIMAL HEALTH  
INVESTMENT USA**

10-11 April 2019

**Boston, USA**

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**ANIMAL  
MICROBIOME  
CONGRESS EUROPE**

September 2019

**London, UK**

[animalmicrobiomecongress.com](http://animalmicrobiomecongress.com)



**ANIMAL  
MICROBIOME  
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13-14 March 2019

**Kansas City, USA**

[AnimalMicrobiomeCongressUSA.com](http://AnimalMicrobiomeCongressUSA.com)



**AQUACULTURE  
INNOVATION Europe**

10-11 September 2019

**London, UK**

[aquaculture-innovation.com](http://aquaculture-innovation.com)



**ANIMAL HEALTH  
INNOVATION ASIA**

5-6 November 2019

**Tokyo, Japan**

[animalhealthasia.com](http://animalhealthasia.com)