

Highlights from the Animal Health Investment Forum Europe 2020

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Each year, Kisaco Research puts on a plethora of events for the animal health industry that range from start-up forums, microbiome congresses, nutrition events, petcare conferences, and digital veterinary summits. This year's headline partner was MSD Animal Health with associate partners Elanco, GHO Capital, Zoetis, Boehringer Ingelheim, IDEXX, and Argenta. In addition, this year marked the 5th anniversary of the Animal Health Investment Forum Europe (AHIF), located in London, UK, and was nothing short of impressive. Over 540 individuals attended the conference, with nearly 200 start ups represented, totaling to over 1,500 one to one meetings conducted. Overall, the event connects these young companies with financial investors and strategic corporate partners from 28 countries worldwide. For the investment forum, 20 emerging start-up companies took the stage to pitch their technologies to a panel of animal health experts. Those 20 companies were split in half to present in their own competition, with 10 pitching in the Companion Animal track and 10 pitching in the Production Animal track. Much like the years prior, the event was three days long, with the first day consisting of workshops put on by the likes of McKinsey Consulting and Zoetis, the second day filled with presentations and start-up pitching, and the last day compromised of industry expert discussions and the Vet Record Innovation Award.

The Start Ups: Companion Animal Track

This year's competition was fierce and varied with start ups from as young as incorporating the month before the competition, to more mature companies raising in excess of \$10 million for pipeline development. Each start up was allotted 7 minutes on stage to deliver an invigorating pitch to a panel of esteemed judges who then participated in a 3-minute rapid-fire question and answer session.

In the companion animal track, there was a heavy presence of monitoring and treatment of osteoarthritis in companion animals. Stonehaven Incubate spin out, Aniv8, showcased their pet wearable device which measures quality of motion vs. quantity of motion to identify pain from osteoarthritis. Polish start up, Bioceltix, has developed a process to isolate and deliver mesenchymal stem cells to



\$1.15 B

Global Veterinary Pain Management market

animals suffering from inflammatory disease, initially focusing on osteoarthritis in dogs. US-based ScoutBio presented their gene therapy technology which utilizes adeno-associated viral (AAV) vector to a deliver 'one-time' treatment for several indications like osteoarthritis, atopic dermatitis, and anemia.

The only equine focused start up to present was Swiss-based LiVET, with their rapid molecular point-of-care diagnostic test able to detect Strangles, EHV1+4, and Influenza in just 30 minutes from sample to result.

Anterra Capital spin-off, Animol, presented about its proprietary digital platform which significantly speeds up the process of small molecule and drug discovery, based on machine learning and algorithms. Similarly, Belgian based Genclis, presented about their technology which enables allergen independent desensitization in companion animals.

US-based start up Okava Pharmaceuticals, highlighted its innovative approach to revolutionize drug delivery for felines pre-diabetes (obesity) and diabetes for 6-months with a small implant. Along the same lines, Accessible Diagnostics presented about their product, Vet-Tab, which is a saliva-based glucose test strip read by a pet owner's smartphone.

In addition, there was a strong representation of oncology treatments as two start ups pitched about their distinct approaches to enhancing animal welfare and offering alternatives to the traditional treatment of radiation, chemotherapy, or surgery. US-based start up K9 Biotech has harnessed the power of a modified parainfluenza virus with transgenes to increase immune response to the virally infected cancer cells. German-based PetBioCell utilizes an animal's own dendritic cells to initiate an immune response, which has proven to double the life expectancy of a dog diagnosed with cancer.

6 million

New cases of cancer diagnoses in dogs each year in US



After a whole day of competing, the judges deliberated on the best presentation given by the start ups. Each company offered something unique and presented cutting-edge technology. However, the top spots were awarded to the companies which had clearly defined their value proposition, demonstrated a concise competitive advantage, had scientifically backed technology, and had the clearest presentation. It was narrowed down to K9 Biotech, ScoutBio, and PetBioCell. After close comparison, the judges decided that PetBioCell had the most realistic growth strategy, implementable technology, and was the best presentation overall. Co-founder and CEO, Simon Grammel, was presented with the Animal Health Investment Forum Europe 2020 Companion Animal Innovation Award and gave a short acceptance speech.

The Start Ups: Production Animal Track

Much like the Companion Animal Track, the Production Animal start ups also had 7 minutes of presentation time on stage and a 3-minute question and answer session with the judging panel.

For this track, vaccines and vaccine technology took center stage with 5 out of the 10 presenting companies pitching their innovations. Greek start up, Aquatic Biologics, presented about their autogenous vaccine technology which aims to reduce use of antibiotics in Mediterranean fish farms. Similarly, US-based Applied Life Sciences has married face recognition technology with precision vaccination technology to vaccinate day old chicks in an automated fashion.

Swiss-based start up, Malcisbo, described their glycoconjugate vaccines specifically targeting *Campylobacter* in poultry and pneumonia in pigs. Start up Virovet highlighted their success in raising nearly €6.3 million in a Series A to further develop its 4 swine vaccines based on their proprietary vaccine technology platform as well as 2 antiviral drugs. Lastly, Israeli start up, SynVaccine, debuted their CAD/CAM platform for the design and construction of viral based products used to improve the efficiency of vaccines and their production.

Outside of the vaccine landscape, the other production animal technologies were based on diagnostics, nutrition, and biological modulation. US-based start up Advanced Animal Diagnostics (AAD) pitched about their platform which is a fully integrated real-time, point of care diagnostic information system which consists of data, hardware, and tests specifically designed for livestock animals. To combat the culling of 7 billion male chicks annually, Soos Technology wowed the audience with their AI-guided egg-incubation system which controls the environmental conditions that affect the sex development process of poultry embryos.

US-based Resilient Biotics presented about their next-generation discovery platform which aims to develop microbiome products to decrease the use of antibiotics used in production animals. Canadian-based start up Glysantis showcased its nanoparticle platform technology which has applications in immunomodulation leading to potential anti-viral and anti-bacterial applications with their current focus in aquaculture and poultry. Swimming in the same direction is Israeli-based start up Aquinovo, with the company's short proprietary peptides increasing average weight and survival rate of fish.



50% of the presenting companies had vaccine technology

“The Animal Health Investment Forum Europe is the premier investment forum showcasing the most exciting investment opportunities in animal health and nutrition. It connects those business with financial investors and strategic corporate partners”

-Kisaco Events

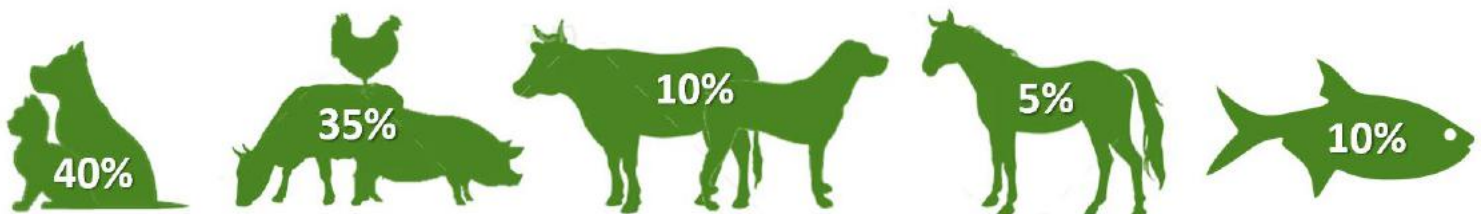
Much like the Companion Animal track, the judges discussed the pros and cons of each technology and each presentation. After much deliberation, the final companies were narrowed down based on a clear product description, defined market need, scalability, and overall best presentation. The final winner of the Animal Health Investment Forum Europe 2020 Production Animal Innovation Award was given to Dr. Phil Whiting from Glysantis.



The Start Ups: An Overview

When looking at the start ups as a whole, there is an impressive range of capabilities, expertise, and innovation showcased in both companion and production animals. Though the companies were broken up into two categories, there were still some interesting insights that can be ascertained. Not surprisingly, companion animal technologies and production animal technologies were nearly equally represented. However, there were 2 platforms specifically who noted that their technologies (drug discovery and vaccine design) could be used for both companion and production animals. Similarly, companies like K9 Biotech and ScoutBio claimed that their products could be used for human application someday, giving them a unique position to leverage non-traditional resources.

Only one company that presented at the forum was focused solely on equine and two companies had technologies specific to aquaculture. These demographics are interesting to examine as they show that though the platforms and products may start in a target species or category, they have ability to be used in other areas of not just animal health but human health as well. For an industry that has experienced breaking away from its parent market of human health, this could potentially entice traditionally human health investment firms and organizations to take another look at these promising start ups.



Normally, when taking a look at the geographic areas most of the animal health start ups come from, there is large skew of North American and UK companies. This year was somewhat different, in that no UK companies appeared for the pitch competitions in either the Companion Animal nor the Production Animal track. This could be due to the fact that at last year's event nearly 1/3 of the presenting start ups were UK companies, and most of them have gained enough momentum to not need to pitch again this go around. Per usual, a majority of the start up companies hailed from North America, with 9 companies coming from the US and one from Canada.

Across the pond, the start ups were scattered from all over Europe and the Middle East with two start ups coming from Belgium, one from Germany, one from Poland, one from Greece, two from Switzerland, and three from Israel.



Out of all the start ups, nearly 55% were looking to raise up to €2 million in financing for pipeline development and team expansion, while the other 45% of the companies were looking to raise €2-10 million.

Though we have just highlighted the 20 presenting companies at the forum, on the attendance roster, there were over 200 start up companies which signed up for the conference. Unfortunately, some 30 delegates were unable to come, as travel bans were strictly implemented across their regions due to the widespread outbreak of the Coronavirus. Other start ups that attended the forum ranged just as much as those who presented. Companies with technologies like alternative to antibiotics, insect protein, prebiotics, pet wearables, cannabis therapy for pets, monoclonal antibodies, POC diagnostics, quality of life monitoring systems, and aquaculture innovations were all present at the event; going to show just how diverse the animal health industry is becoming.

Overview of the Conference

The three-day conference offered a variety of networking opportunities and educational presentations given by industry leading experts from the top companies around the world. The pre-conference meetings of the event are normally reserved for young companies who are wanting to dive deeper into understanding what the industry needs as well as some one-on-one facetime with some of the biggest players in the game. The first official day of the conference sees the presenting companies pitch for the Innovation Award with a mix of different talks from industry leaders, with the second and final day having more discussions, with the Vet Record Innovation Award announced and a closing ceremony.

Pre-Conference: Workshops for Start Ups

One of the workshops conducted consisted of operational strategies given by world renown consulting firm, McKinsey & Company. In this workshop, consultants discussed the best practice in manufacturing, supply chain, and procurement. This seminar was different than the others at the forum in that this talk was designed for more mature companies (annual revenues of > £50M). The focus of this discussion was making sure the most efficient and lean methods were being implemented in these larger companies with transparency, tracking, and monitoring being at the driving forces behind evidence-based decision making.



Another workshop offered, was from MSD Animal Health, who was also the headline sponsor of the event. In this talk, MSD's Animal Health Ventures team discussed how partnering with the company works, and how they have expanded their scope of traditional business development. MSD discussed case studies of some of their past investments and the strategy used in the recent acquisition of Antelliq. The deal was closed in April of 2019 with MSD making a cash payment of €2.1 billion for acquisition, as well as taking on the company's €1.15 billion debt. This move positioned MSD as the global leader in animal health digital tracking, traceability, and monitoring technology for livestock and companion animals. The workshop shared methods on scaling for start up companies based on Antelliq's success in dairy monitoring.



Well-known German CRO, Klifovet, gave a presentation discussing go-to-market strategies through different product categories and regulatory pathways. Any biotech or animal health start up knows that one of the biggest hurdles in getting a product to market, is making sure you are compliant with local, national, and international standards. This becomes especially true if one has a pharmaceutical or novel product which must be approved via USDA, FDA, or EMA. In addition, with the enactment of the GDPR (General Data Protection Regulation), companies who collect data on their platform must be compliant to ensure privacy and correct data protection requirements are being met. Navigating these waters can be especially tricky with a start up who may not have the expertise on their team. The Klifovet team discussed the regulatory requirements for animal health products such as novel therapies and novel feed additives, as well as incentives and business models for developers.



Zoetis was the next big animal health company to put on a workshop for the start ups, which was focused around making companies attractive candidates for partnerships. The Zoetis team had members there from their International Business Development team, including Executive Vice President and President of International Operations, Mr. Robert Kelly, as well as flying in their Senior Vice President of Global Business Development from the United States, Ms. Rimma Driscoll. The team gave an overview of the Zoetis portfolio as well as what the key factors are for a successful partnership with the animal health giant. After, the room was divided into teams and given case studies to analyze. Each table had to 'market' and 'pitch' a given product to solve a current problem facing the animal health industry. The presentation ended with the team discussing Zoetis' dogma of the continuum of care for animals, and how the companies in the room could best partner with the firm.



Argenta, the world's only combined CRO and CMO for animal health, finished the day with a discussion about clinical outsourcing. The talking points addressed in this workshop were the pathways bringing a molecule to market, strategies on bringing in external partners, diagnostic implementation, and the geographical differences in validation claims. The company discussed how their value lies in the expertise in research and development they offer, while companies working with Argenta can benefit from their scalability and certainty of cost. Argenta also explained their manufacturing capabilities and how an efficient and streamlined supply chain is one of the most crucial parts of any business, especially those in animal health.



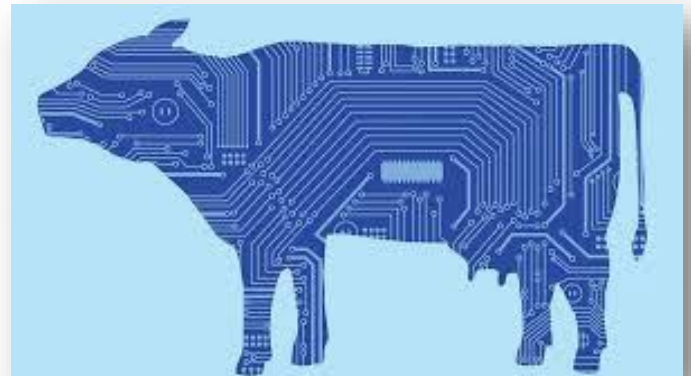
Conference Day One

As MSD was the headline sponsor for the event, members from their executive and business development teams hosted majority of the conference while giving speeches themselves. Starting off the discussions was the Head of Animal Health Ventures, Stephen Murray along with Matteo Ratti, VP of Global Marketing and Smart Data Solutions. Both spoke about the shifting dynamic of the Animal Health industry with an emphasis on advanced digital and tech solutions to monitor, predict, and detect onset of diseases in companion and production animals.

The Digital Renaissance of Animal Health

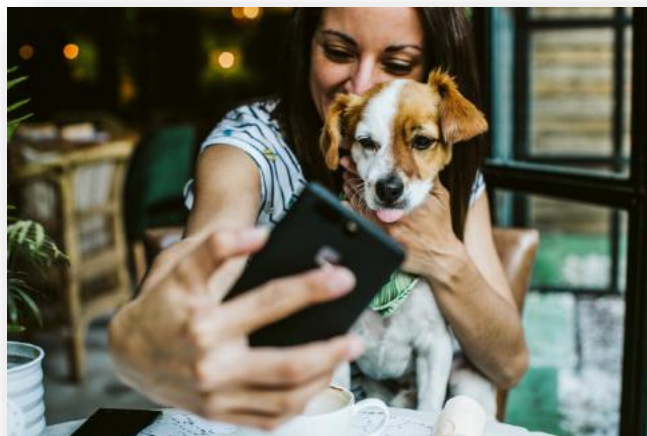
As has been seen in the industry as a whole, the traditional model of animal health was that of a reactive model. Companies were focusing on creating products to treat animals after they become ill or infected. With the humanization of pets, transfer of zoonotic diseases, and rising concern with animal welfare becoming hot topic issues, the face of the industry has been forced to shift into a proactive model. This requires companies to be inventive and create products that prevent animals from getting sick in the first place. The introduction of technology in the animal health sector, is one of the key tools to sling the industry into the 21st century. Stephen alluded to these changing dynamics, as well as offering MSD's acquisition of Anteliiq as an example of the company's commitment to moving closer to a detect and prevent business model.

These sentiments were echoed when digital scientist and AI pioneer Inmaculada Martinez took the stage to speak on data influenced decision making in animal health. Ms. Martinez told the story how digital insights have transitioned from scenario planning for the oil and gas industry in the 70's to medical prediction and precision diagnosis today. She gave background about the ever evolving 'Internet of Animals', where wearable technologies married with AI and machine learning algorithms can create data points on things like location, feeding, temperature, rumination, movement, sleep, and breathing. These metrics can be taking together as a collective to discover insights and drive evidence-based decisions. The key issue, she noted, was making sure these data files were "AI ready", meaning reduced noise and in a standardized, transmissible form. Through her research, she has been able to measure chronic pain in a dog's facial expression and prove that happy/social cows produce more milk than their less social counter parts. Ms. Martinez claimed that the Internet of Animals can be achieved, as long as the hardware and software are correctly developed to give 'AI ready' data for analysis.



Bringing Pet Care Into the Millennial Age

Following on the message of incorporating technology into the world of pet care, managing director of Sure PetCare, David Hallas, gave a data packed presentation of the market and opportunities surrounding pet tech. It should not come as a surprise that the millennial pet owner is becoming the largest group to own pets and has a high willingness to spend on their pets. In fact, Mr. Hallas reported that millennials will spend as much money on a pet's birthday present, as they would on their best friend's birthday present. This group also spends more than any other age group on their pets and are more motivated to provide holistic care for their pet. In addition, the millennial market is a prime target for pet apps and tech, as they grew up with a subscription-based service model and is an easily accepted form of payment.



When looking at the driving forces behind the need for pet tech, the two biggest factors noted were safety and security. This does not just mean that the pet doesn't get lost or run away, this means that pet owners do not want their pet to feel lonely while the owner is away at work or running errands. The main metrics pet owners are most concerned about are:

- Pet's safety
- Pet's wellbeing during owner absence
- Pet's behavior
- Pet's separation anxiety
- Pet's food and water intake
- Pet's hygiene



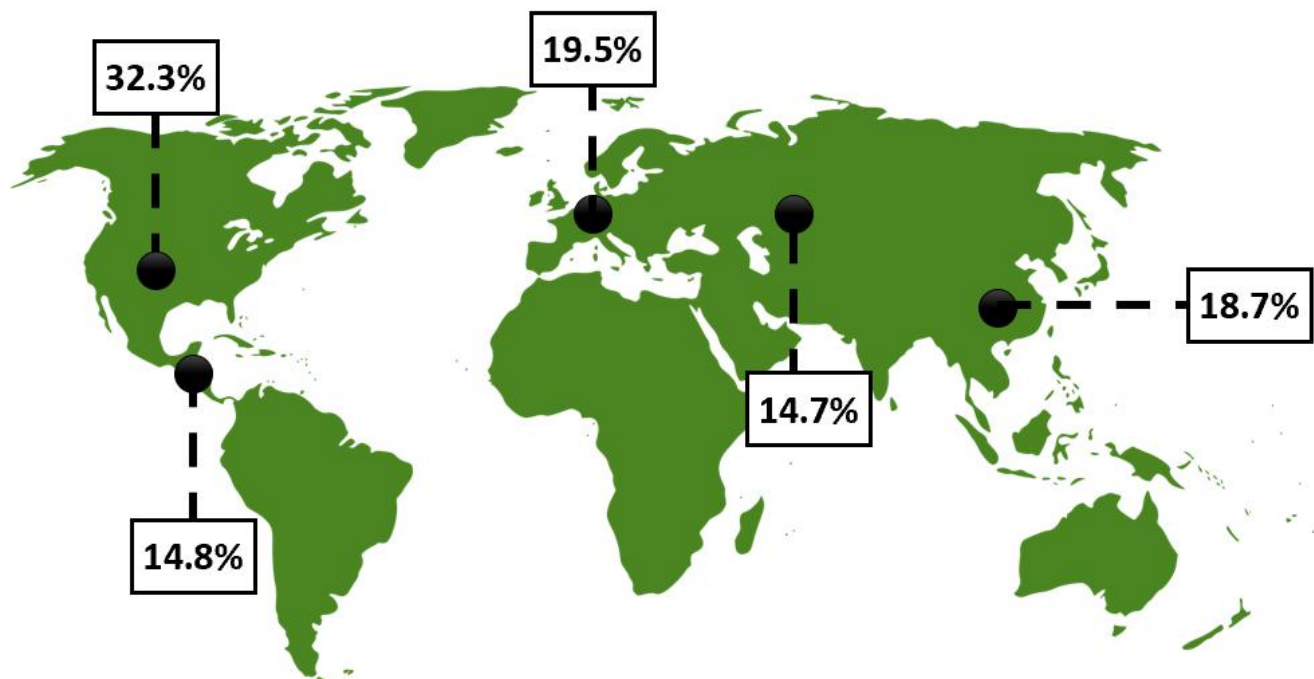
35% of dog owners reported their pet's behavior was the biggest problem pet tech should solve

18% of dog owners reported their pet's food/water intake was the biggest problem pet tech should solve



20% of cat owners reported their pet's behavior was the biggest problem pet tech should solve

32% of cat owners reported their pet's food/water intake was the biggest problem pet tech should solve



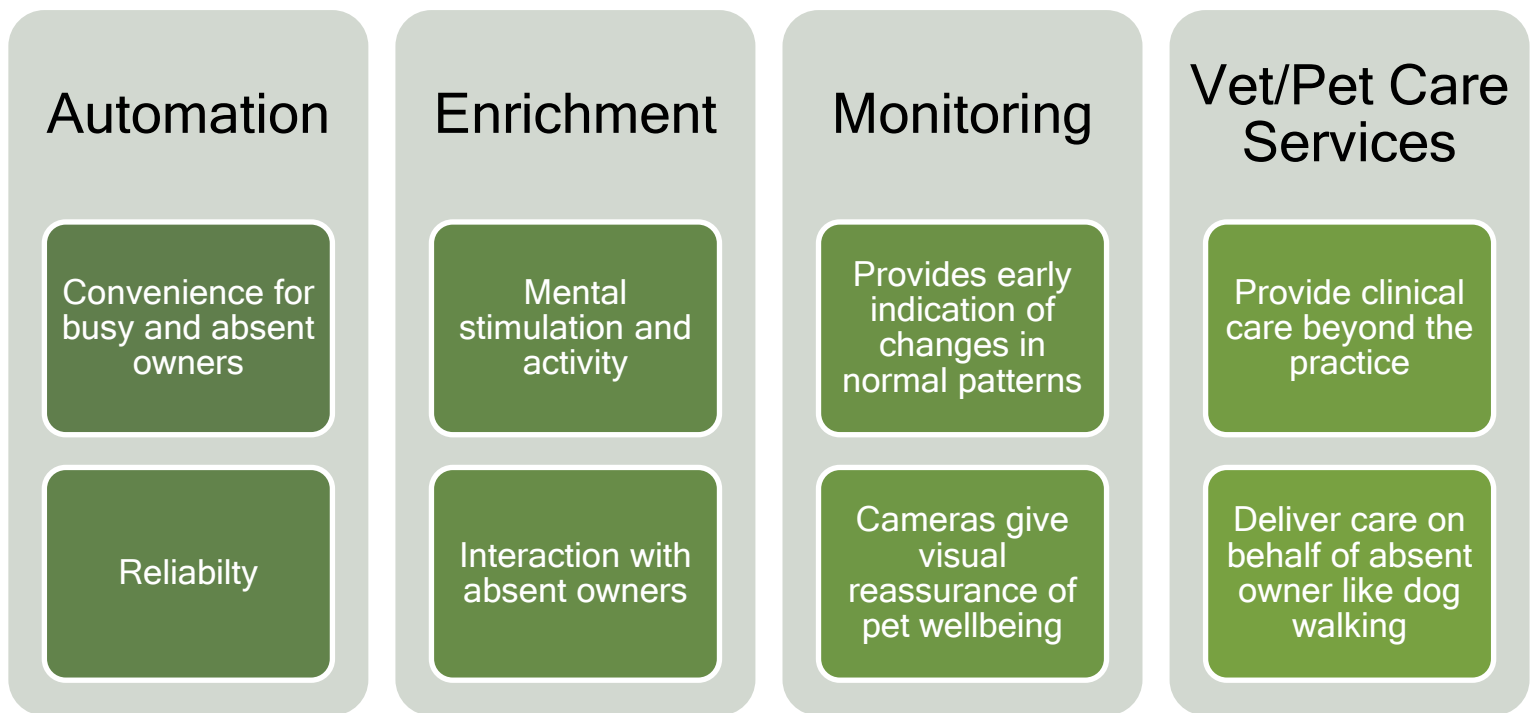
In the United States alone it is estimated that the Pet Wearable market is worth \$500 million ranging from devices, locators, sensors, and monitors with the accompanying AI and software. From a global perspective, North America takes a lion's share worth of the market owning nearly 32.3%, followed closely by Europe at 19.5%. Latin America and the Middle East/Asia have similar numbers around 14.7% with Asia Pacific gaining traction at 18.7%. The pet tech market is expected to grow double digits annually with estimated shipment revenues being 314 million for 2020 with 5,977,000 unit sales to dealers.

When looking at the growth drivers of the industry, Mr. Hallas noted that cost and simplicity are at the forefront the pet owner's mind. The top drivers which create the purchase decision for pet owners are cost, simple to use, durability, ease of cleaning, and brand identity. For households with incomes below \$75,000 a year, cost plays a significant factor than households with incomes greater than \$75,000 per year (i.e. 66% vs 53%). Interestingly, it was noted that the ease of cleaning a pet tech product is more important to cat owners vs dog owners, 66% vs 53% respectively.

Some of the key business benefits of the pet tech market which Mr. Hallas highlighted was improved client loyalty, building of recurrent revenue streams, and creating trust. By establishing an idea of lifelong monitoring for one's pet, this can prove to be a type of preventative medicine as well as becoming the gold standard of care for a pet. As mentioned before, most customers are already accustomed to a subscription-based payment system with engagement leads that can lead to selling and marketing opportunities. The average lifespan of subscription-based users is roughly 17 months. The app offered through Sure Petcare enables data driven alerts, app based messaging, telemedicine features, and allows owners to have priority appointments with preferred

veterinarians. Lastly, by creating a new channel for veterinarians to connect with the owner, a feeling of familiarity and trust can be created between product, pet, pet owner, and veterinarian.

Mr. Hallas then went on to describe the pet tech landscape with the main products of the market being pet doors, wearables, feeders, fountains, cameras, litter boxes, interactive toys, telemedicine, and app-based services. The difference most noticed between cat and dog owners, is that cat owners were more interested in feeder and doors, where as dog owners were more concerned with activity and anxiety. Pet owners will pay for four main features:



One of the key metrics that dog owners were most concerned with was the amount of sleep their dog was getting each night. As most dogs sleep the same time their owners do, it makes it impossible for the owners to know if the animal is sleeping well; a prime indication for quality of life for the dog. This metric, paired with feeding frequency, can alert a pet owner of an issue if the dog is getting less sleep and eating less than normal.

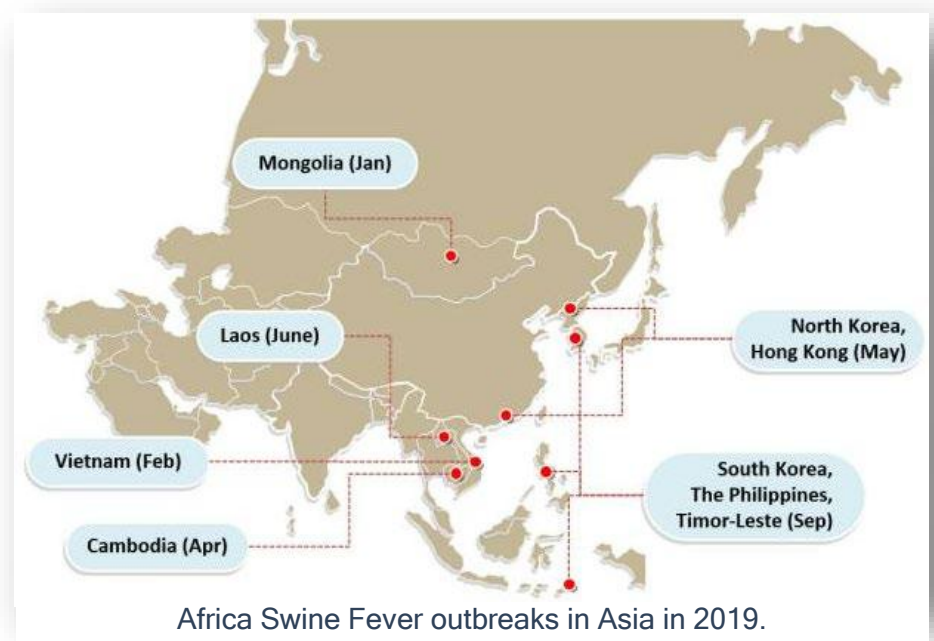
Mr. Hallas mentioned that some of the success factors for pet tech relies on solutions that can easily scale, have multiple competencies, have a large engaged customer base, and must have a team with technical expertise. The pet tech should solve real-world problems with no disruption to normal life while also having a user-friendly interface that gives a personalized experience for each pet.

Mr. Hallas finished his presentation by highlighting how the future of pet tech is a connected digital ecosystem that helps connect pet owners with their care providers. Whether it is calories burned,

sleep quality, location, or diet the pet tech market should be looking not to replace veterinary care but improve it.

The Threat of ASF

The second half of the morning focused on one of the greatest threats to the swine industry; the African Swine Fever (ASF). The recent ASF outbreak has been on the forefront of everyone's mind for the past two years, as the virus has resulted in over 1.5 million pigs culled in China alone, sending shock waves through the global production markets. ASF is an extremely contagious hemorrhagic viral disease of domestic and wild pigs, and although it does not post a risk to human health, the mortality rate among swine can be as high as 100%. Since the Ministry of Agriculture and Rural Affairs (MARA) in China confirmed its first ASF outbreak in Liaoning Province on August 3, 2018, it is estimated that within one year nearly 5 million pigs in Asia have died or been culled. The Chinese government revealed there has been a 26% year-on-year decline in the national pig herd numbers with retail pork prices raising by 47%, contributing to a 10% increase in the food price index.



The group identified one of the problems with the outbreak as the lack of credible reporting. Most of the time, reporting an ASF outbreak is a political decision, and since reporting can't be enforced, one must rely on the OIE to serve as a central place of outbreak monitoring. Some of the upside consequences of the outbreak has been seen on the Western front, as the EU has experienced a 20% increase in its pork exports with the US increasing its pork exports to China by nearly 50%.

The group discussed how there is no current vaccine for the virus, however, there are steps pork producers can take to help mitigate their exposure such as minimizing contact with other swine farms and disinfecting equipment, facilities, vehicles, and personnel regularly. Organizations like the USDA and the Pirbright Institute are working to develop a vaccine, with the most promising claim coming from the Harbin Veterinary Research Institute. On March 6, 2020 the Chinese entity claimed they have developed a vaccine against ASF that has been proven to be safe and effective

in a lab setting. Though these strides in R&D are welcomed advancements, the group estimated it may take another year or two until we see these vaccinations commercially produced and available. Most of the currently available vaccines in animal health stimulate the host's immune system to make antibodies against viral structural proteins, however, ASF is a large and complex virus with two coatings and several different ways of entering cells, making vaccination development extremely challenging.

It is estimated that if ASF was to hit the US, in a worst-case scenario, the economic impacts could range from \$4 billion to \$8 billion per year. These figures were calculated using the model below assuming if supply in the US fell from 10%, 25%, or 50%, foreign buyers reduced their quantity demanded by 100%, and US consumers reduced their willingness to pay by 10%.

Change in Price of ...	Reduction in U.S. Pork Quantity Supplied		
	10%	25%	50%
Retail Pork	-3%	-1%	4%
Farm Hogs	-12%	-2%	15%
Change in the Well-Being of (Billion \$/year) ...			
Foreign Consumers	-\$1.35	-\$1.40	-\$1.33
U.S. Consumers	-\$4.28	-\$5.70	-\$8.00
U.S. Producers	-\$4.28	-\$5.57	-\$7.46

Conference Day Two

The second day of the forum started off with the judging for the Veterinary Record Innovation Award. This award aims to recognize those who have contributed to the development of evidence-based veterinary medicine (EBVM) and/or its application in clinic. The presenters were judged by a panel that decided which company brought about the most significant change or improvement in the veterinary practice.

Vet Record Innovation Award

This year, three individuals were selected to present their technologies. The first presenter, was Carol Dobson from Vet Card. Her technology is a combined savings plan, payment plan, and debit/credit card that can help uninsured clients pay for their veterinary care. The Vet card is

designed to fit within current healthcare plans and aims to reduce the number of unpaid bills for veterinarians.

The second presenter was Fiona Lovatt from Flock Health Club. This is a proactive network of sheep farmers and veterinarians where discussions can be facilitated and booking of farm visits and practical trainings can be done. The farmer benefits from the peer-to-peer learning guided by veterinarians at the center, driving better preventive care, health, and welfare for sheep.

The last presenter was Alastair Mair from Vetnapp, an anesthetic chart application. Vetnapp offers a replacement to the outdated handwritten anesthesia notes and can record other patient data such as procedure performed, drugs administered, monitoring of equipment, and other physiological parameters during anesthesia. The app has been designed to work for all species and can be utilized by both general practitioners and specialists.

The judging panel consisted of three of the most well-known and revered veterinarians in the industry: Simon Doherty (Sr. VP of the British Veterinary Association), Lord Trees (Crossbench Peer/Chairman of Moredun Research Institute), and Gundrun Ravetz (Head Veterinary Officer, Simply Health Professionals). After some deliberation, the judges narrowed down the winner of the Vet Record Innovation Award for 2020 to Alastair Mair of Vetnapp for the most useful product that has the potential to improve quality of care for veterinarians worldwide.



Trends and Patterns in Animal Health

The rest of the day was filled with talks from globally known experts and several different topics relevant to the industry in 2020. Following on their previous workshop, McKinsey & Company gave a presentation about value creation in animal health. The firm spoke about trade disruption, disease outbreaks, and shifting consumer preference as some of the biggest challenges facing the industry. Touching on last year's report, the group mentioned that the industry must be on the look out for 'black swan' events that could drastically change the industry.

The McKinsey team identified three events, known as "Black Swan" events, which could happen and would completely shift the face of the animal health industry:

- Entry of Amazon or another firm into the industry
- CRISPR disease resistant animals
- Exponential growth of forecasted trends



The overall trajectory for the animal health sector seems positive and it is predicted to continue enjoying YOY growth. The McKinsey team identified four segments to further gain traction and add \$2 billion to \$4.5 billion worth of value by 2022.

Giving insight into customer buying habits, ex-COO of Google Europe, Ben Legg, spoke about the Google perspective on customer's loyalty and adoption. As the percentage of online purchases for pet products increases dramatically, their online activity and behavior will be critical to track. Ben spoke about how it is essential for online retailers to develop strategies to enhance levels of customer adoption and build brand loyalty. One of the key takeaways from his speech was to connect with a customer in a way that builds trust through 'meaningful online experiences', while also collecting insight on buying habits for analytics and prediction of future purchasing decisions.

Innovations, Opportunities, and Business Strategies

The second half of the day was split into companion animal and production animal tracks with a focus on innovation. The audience heard from BI about the strategic drivers of change in companion animal health, such as the changing dynamic of pet owner and veterinarian relationship from in-person to virtual/online. MSD gave a talk about scaling a company, using Antelliq as an example of building from 5,000 devices a year to 5 million devices a year. Two panels followed these discussions, one about how top companies think about growth and addressing unmet needs in companion animals, and the other about the investment landscape for animal agtech.

The companion animal discussion was made up of experts from Zoetis, IDEXX, and BI hosted by Dr. Silke Birlenbach from Pegasus Life Sciences consulting. The group discussed agtech regulatory pressures, societal changes, and consumer expectations that the industry is facing. New technologies are being explored such as digital startups, diagnostic companies, and nutrition. In addition, it was addressed how companies are having to navigate the waters of the changing landscape of the veterinary world with consolidation in practices and the growing importance of internet channels and online presence.

The production animal track saw a panel on individuals from Anterra Capital, TechAccel, Paine Schwartz Partners, and the Yield Lab all discussing hot areas of investment. Not surprisingly, aquaculture was identified as an area where animal health can discover great opportunity. It was also mentioned that insect protein has started to gain traction not as just a protein alternative for human consumption but also for animal consumption. The foodtech and agtech start up industry raised nearly \$20 billion in 2019, a 250% increase over five years. In 2019, the mealworm farming startup out of France, Ynsect, raised an impressive \$125 million in Series C funding, breaking all European agtech records to date. The use of funds are going to build what the company said would be the world's biggest insect farm combining sensors, automation, data analysis, and predictive modeling technology. As far as what investors are looking for in young companies, it echoed what was discussed last year.

Top features VCs look for in a start up:

- People
 - Who are the team and what are their qualifications? What is the reputation of board members? Is the CEO the right person to be leading the company?
- Technology
 - Is the science sound? What is protecting it? What evidence do you have?
- Risk profile
 - What are the competitors doing? What is the regulatory pathway?
- Economic potential
 - What is the market value? Who are your customers and are you conscious of their needs?
- Business Model
 - How will you make money? Is it sustainable?

The rest of the discussions on the companion animal track covered topics from presenting your start up company, ramifications of the consolidation of veterinary practices, leveraging wearable devices, telemedicine, and venture capital investing in petcare. Experts from Stonehaven incubate, Sorrento Therapeutics, Agile Sciences, Barclays, Guggenheim Partners, Digitals Ventures, Avviare Consulting, Destination Pet, the British Veterinary Association, Pawsquad, FristVet, and BioTraceIT all expanded upon their knowledge in their respective areas, giving the audience true insights to the past, present, and future of companion animal health.

Similarly, the production animal track ended the day with a variety of discussions from microbiome modulation, animal welfare strategies, digitization of agriculture, sustainable aquaculture, and developments in livestock genetics. This forum saw experts speak from the Department of International Trade, Nutreco, Evonik, Trendlines Agrifood Tech Fund, HealthforAnimals, NOAH, Elanco Animal Health, BioPlix Inc, Zoetis, Seafood Innovation Cluster, The Center for Aquaculture Technologies, Pharmaq, ViAqua, and Agrei-EPI Center.

There were several novel trends presented at this year's forum, as well as several relevant and reoccurring ones. I encourage all of those who are involved in some way or another with the animal health industry, from graduate students studying signaling pathways in ruminants to high schoolers working as a vet techs in their home town clinic, to attend as many animal health conferences as possible. There are so many career opportunities as well as industry networking prospects that happen during these events which cannot be found anywhere else in the world. It gives research scientists validation of their work and students education on career paths as well as the industry as a whole that is not taught in school. If you are start up and were not able to make this investment forum in Europe, the Kansas City Animal Health Corridor will be having their Investment Forum this September, as well as other industry conferences (links below).

Let's continue being adventure capitalists and turn research into return.

Other events in Kisaco Research's Animal Health Portfolio:

Animal Health Investment Digital Webinar Series: Opportunities for Animal Health in the Age of COVID-19, 21 April, 3pm BST: <https://www.crowdcast.io/e/animal-health-in-the-age/register>

Animal Health Innovation LatAm, Virtual Event, 19-20 August 2020: <https://animalhealthlatam.com/>

Animal Health Investment USA, Boston, 12-13 October 2020: <https://animalhealthinvestusa.com/>

Animal Health Innovation Asia, Tokyo, Japan, 25-26 November 2020:
<https://www.animalhealthasia.com/>

Animal Health Investment Europe 2021, London, UK, 23-24 February 2020:
<https://animalhealthevent.com/>

For more information on any of these events, contact Sarah Rowlands at
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Start Up Overview

Company	Technology Area	CA/PA	Geography
Accessible Diagnostics	Glucose Monitoring Tab	Companion Animal	USA
Animol	Small Molecule and Drug Discovery	Companion and Production Animal	USA
Aniv8	Wearable Device for OA	Companion Animal	USA
Bioceltix	Stems Cells for OA	Companion Animal	Poland
Genclis	Antibody Production Platform	Companion Animal	Belgium
K9 Biotech	Viral Oncology Therpay	Companion Animal	USA
LIVET	POC Diagnostic	Equine	Switzerland
PetBio Cell	Dendritic Cell Oncology Therapy	Companion Animal	Germany
Scout Bio	Gene Therapy Treatment	Companion Animal	USA
Okava Pharmaceuticals	Drug Delivery Platform	Companion Animal	USA
Advanced Animal Diagnostics	POC Diagnostic	Production Animal	USA
Applied LifeSciences & Systems	Vaccine Delivery System	Production Animal	USA
Aquatic Biologicals	Autogenous Vaccine Platform	Aquaculture	Greece
AquiNovo	Feed Additives	Aquaculture	Israel
Glystantis	Nanoparticle Platform Technology	Production Animal	Canada
Malcisbo	Glyco-Platform Vaccine	Production Animal	Switzerland
Resilient Biotics	Microbiome Discovery Platform	Production Animal	USA
Soos Technology	AI Egg Incubation System	Production Animal	Israel
Synvaccine	CAD Viral Platform	Companion and Production Animal	Israel
ViroVet	Vaccine Technology Platform	Production Animal	Belgium