Zoetis has ended 2016 in very much the same vein it began the year – by making a significant addition to its portfolio of products for dogs.

The USDA has granted the company a license for Cytopoint, which is the first monoclonal antibody (mAb) therapy to be approved for the sustained control of clinical signs associated with canine atopic dermatitis.

The approval of Cytopoint follows US regulatory go-aheads for Zoetis’ Vanguard cr Lyme vaccine in January and its Simparica Chewables flea and tick treatment in February – both for dogs.

**Benefits of Cytopoint**

Cytopoint is a ready-to-use, sterile liquid injectable. It works by mimicking the activity of natural antibodies to selectively bind and neutralize interleukin-31 (IL-31) – a key cytokine involved in triggering itching in dogs. This interrupts the itch cycle in atopic dogs.

According to Zoetis, Cytopoint provides fast and effective relief of itching, which is “the hallmark sign” of atopic dermatitis in dogs. The product also offers sustained efficacy and convenience via one injection every four to eight weeks.

Zoetis originally received a conditional license for its Canine Atopic Dermatitis Immunotherapeutic in August 2015. Following this conditional licensure, the company collected feedback from dermatology specialists, a small group of general practice veterinarians and pet owners to prepare for full USDA green light for Cytopoint.

According to Zoetis, pruritus (itching) was prompting one-in-six veterinary office visits. About 15% of itchy dogs are diagnosed with allergic skin diseases.

**Building a strong canine offering**

Zoetis now has two fully-licensed products to help dogs deal with atopic dermatitis – the company is aiming to tap into a growth area of veterinary medicine by widening its product portfolio.

Cytopoint joins Zoetis’ Apoquel (oclacitinib tablet), which is the first Janus kinase inhibitor approved by the US FDA for veterinary use. It provides fast and safe itch relief for dogs at least 12 months of age that have symptoms associated with allergic dermatitis triggered by food, fleas or contact allergens, as well as atopic dermatitis.

Since Apoquel was approved for use in the US during 2013, the product has been a significant revenue generator for Zoetis. The product could soon be labeled a blockbuster due to its escalating sales. Zoetis is currently increasing the supply of Apoquel in the markets where it has already been launched, as well as taking it to new countries. This product surpassed $100 million sales in 2015 and Zoetis has previously told Animal Pharm long-term, peak sales will be “more than $300m”.

In Zoetis’ most recent financial results, it said sales of Apoquel were helping to drive a strong performance from its companion animal division.

Dr Catherine Knupp, the firm’s executive vice president and president of R&D, said: “Cytopoint results from our acquiring a deeper scientific understanding of the causes of allergic skin conditions in dogs at the molecular level and developing novel, targeted, effective treatments based on these new insights.

“Veterinarians have told us that allergic dogs and their owners have a variety of needs and we are proud to offer them two innovative solutions with Cytopoint and with our oral tablet therapy Apoquel. These first-in-class medicines give veterinarians effective, safe options to customize atopic dermatitis treatment for canine patients.”

Earlier this year, Zoetis gave Animal Pharm an insight into its dermatology strategy and the reasons why it has put significant investment into this space.
Virbac US manufacturing warning letter lifted, predicts brighter end to 2016

BY JOSEPH HARVEY

A warning letter regarding problems at Virbac’s US manufacturing site in St Louis has been lifted.

The French company received the official warning a year ago from the US FDA and has since worked to comply with the authorities.

Now the warning letter has been lifted, the site has recovered its current good manufacturing practice status. The Missouri facility can now file new registrations and variation files with the FDA.

Virbac has been bringing manufacture of various product lines back online throughout 2016 – it can now continue with transferring production of its Sentinel Spectrum antiparasitic to the St Louis site.

The problems at the St Louis facility had a significant impact on Virbac’s financial performance in 2015. Éric Marée, chairman of the Virbac executive board, said: “The lifting of the warning letter from our site in St Louis reflects the work carried out over many months to improve our quality system as well as the quality of our operational teams that we have today on site. We have worked diligently and closely with the FDA throughout this period to respond to the observations that followed the inspection of December 2014 and have considerably strengthened the quality culture of our site.”

Sales guidance for 2016

Virbac expects to report organic sales growth of around 4.5% during fiscal 2016. However, despite this figure falling at the lower end of guidance reported in September (4.5%-6.5%), it highlights a brighter end to a year in which Virbac has struggled.

The company’s guidance does not include the impact of foreign exchange rates, which has hurt Virbac over the course of the year. Sales over the first nine months of 2016 were flat. However, excluding the impact of exchange rates, growth for this period was 3%. The 4.5% guidance for the full year depicts a positive end to the year for Virbac.

The firm previously predicted 7% organic sales for fiscal 2016.

Merial tops monthly list of patent applicants

BY RICHARD NICHOLAS

In Animal Pharm’s monthly review of recently published patent applications, Merial has dominated, particularly in the fields of antiparasitics and vaccines.


Antiparasitics

In WO2016187534 Merial claims new cyclic depsipeptide compounds which have enhanced in vitro metabolic stability and/or improved anthelmintic activity. The inventors found certain modifications to the N-methyl leucine residues in the cyclic depsipeptide PF1022A significantly improved efficacy against endoparasites including Dirofilaria immitis, the cause of heartworm disease.

To date, the only marketed cyclic depsipeptide is Bayer’s emodepside, present in combination with praziquantel in the product Profender and with toltrazuril in Procox for treating gastrointestinal nematode and coccidial infections.

In two applications – WO2016174049 and WO2016174052 – Bayer claims combinations of halogen-substituted compounds from its CropScience division with ectoparasiticides, anthelmintics or anti-protozoal agents for controlling ectoparasites, helminths and/or protozoa on or in animals. The compounds show some intrinsic activity alone against ecto- and endoparasites.
Vaccines
In US2016333322 Merial claims an improved and simplified method for the rapid production of porcine circovirus type 2 (PCV2) for vaccine preparation. Traditional methods of virus production or amplification utilize the strategy in which non-infected cells are infected with the virus and then killed so as to release their viral content. Unfortunately, over repeated culture passages, the infectious titer of the virus decreases. The new method claimed by the inventors uses instead a persistently-infected cell line to amplify the virus. After the initial cell passage and infection, the method does not require subsequent infection of cells.

Merial has also submitted applications for two devices for spray-vaccination of poultry. In US2016338815 Merial claims a novel spray applicator device for administering vaccines or probiotics to young avians, such as one day old chicks. By adapting technology used in industrial spray coating, the inventors describe an apparatus which rapidly turns the spray nozzles on and off allowing the amount of vaccine delivered over time to be regulated without changing the droplet size. By adapting to the speed at which birds are transported along conveyers, the device should improve vaccination efficiency and reduce vaccine waste.

Meanwhile, in US2016332174 Merial claims a spray applicator with an extended range for delivering vaccines or probiotics in liquid form to poultry. The battery powered, hand-held device is capable of spraying birds at a distance of 5 to 10 meters, and is claimed to be able to treat 10,000 birds in less than about 20 minutes, based on using 5 to 10 liters of liquid.

Current spraying equipment has a restricted range requiring the user to be relatively close to the birds. Critically, the design of the new apparatus produces droplets of a uniform size, ensuring accurate delivery of vaccine to the eye and upper respiratory tract, and minimizing post-vaccinal reactions in the lungs.

Anti-infectives
In US2016324969 Zoetis claims a hydrogel composition comprising a water-soluble polyvinyl alcohol monomer which upon polymerization forms a physical barrier on the teat and udder surface or in the teat canal of a mammal such as a cow. The hydrogel barrier is effective for treating or preventing microbial infections such as mastitis. The composition is delivered to the teat by spray or infusion and the hydrogel is formed in situ using a free radical initiation system or redox reaction.

Currently a number of non-antibiotic bismuth subnitrate-based teat sealant products are marketed, and recently Bimeda claimed that its teat sealant Boviseal has helped to significantly reduce the incidence of mastitis in the Irish dairy herd.

Pirbright develops new CRISPR/Cas9 vaccine for Marek’s disease
BY MALCOLM FLANAGAN

Scientists at the UK’s Pirbright Institute have used genetic engineering to develop a more efficient and effective vaccine for Marek’s disease, which could pave the way for a new generation of poultry disease vaccines.

Pirbright said its vaccine will also be much quicker and easier to produce “with the potential to deliver multi-million-dollar savings for the UK and the global poultry industry”.

The Surrey-based Institute is in discussion with international poultry vaccine manufacturing companies about the potential commercial exploitation of this approach. Marek’s is currently controlled by vaccination and over 20 billion vaccine doses are administered worldwide each year.

Marek’s is a herpes virus infection of chickens with mortality reaching 100% in some flocks. It can also affect turkeys.

Turkey herpes virus (HVT) is widely used in the development of avian vaccines as a method of delivering elements of avian pathogens into birds to create the immune response that protects them against poultry diseases.

However, the technologies currently available for creating HVT recombinant vaccines are difficult and time consuming to use. In the case of Marek’s disease, the existing methods also hinder the level of protection the vaccines can offer. This is because poultry are only protected against a few strains of Marek’s disease virus, leaving them vulnerable to the most dangerous strains.

Advances in vaccine technology have facilitated the development of a new gene editing technique called ‘clustered regularly interspaced palindromic repeats/associated Cas9’ (CRISPR/Cas9), which enables greater speed and accuracy in targeting, cutting and editing gene sequences.
Dr Yongxiu Yao, a senior scientist working in the viral oncogenesis group at Pirbright, used the CRISPR/Cas9 technology to genetically modify HVT. She then inserted part of the Marek’s disease virus into it to generate a completely new genetically modified vaccine, which is capable of protecting against the most dangerous strains of the virus.

Dr Yao said: “This was a great opportunity to create a new generation of vaccines. HVT is widely used in the production of a variety of avian disease vaccines and genetically engineering it in this way has unlocked its potential to protect against all strains of Marek’s disease virus, as well as other dangerous avian viruses such as bird flu, which is also a danger to humans.

“More cost effective and efficient vaccines will help protect both avian and human health and potentially deliver major social and economic benefits in the UK and around the world.”

This Pirbright research was carried out in collaboration with the Wellcome Trust Sanger Institute and has been published in the International Journal of Vaccines and Technologies.

Marek’s disease is a highly contagious airborne pathogen that infects poultry, costing the industry globally around £1 billion ($1.23 billion) a year.

In May this year, a leading US expert on the disease in commercial poultry said the pathogen has been heavily under-reported globally by avian companies wanting to retain the value of their flocks.

Dr John Dunn, of the USDA’s Avian Disease and Oncology Laboratory, said a recent global survey by the agency indicated 40% of Marek’s outbreaks were either “never reported or not diagnosed in their own countries”.

Dr Dunn, who was speaking at Merial’s Global Avian Forum held in Barcelona, said only three surveyed reports from Poland, South Africa and Malaysia in the last year listed “frequent diagnosis” of outbreaks in chicken farms.

International poultry production has tripled over the last 20 years and the poultrymeat industry in the UK alone, is estimated to be worth £3.6bn each year to the economy, employing around 80,000 people.

**Studies show efficacy of Prevtec swine vaccine for diarrhea**

**BY SIAN LAZELL**

New research has demonstrated the efficacy of Canadian firm Prevtec Microbia’s Coliprotec F4 vaccine for pigs.

Enterotoxigenic Escherichia coli strains expressing F4 (K88) fimbriae (F4-ETEC) are one of the most predominant causes of post-weaning diarrhea (PWD) in pigs. F4 is an important antigen in the early stages of infection.

The studies evaluated the efficacy of Coliprotec F4 – a live oral *E coli* single-dose vaccine – to protect pigs against a F4-ETEC oral challenge at 3, 7 or 21 days post-vaccination (dpv).

Researchers found in pigs at least 18 days old, administration of a single dose of Coliprotec F4 via drinking water induces clinical protection against F4-ETEC within 7 days of vaccination, and protection is maintained until 21 dpv.

Protection was demonstrated by a significant reduction of pigs suffering from moderate to severe PWD, ileum (the final part of the small intestine) colonization by F4-ETEC and fecal shedding of F4-ETEC in infected pigs. Partial protection was observed after a challenge at 3 dpv.

The researchers said: “The 7-day onset of clinical protection was associated with an increase of anti-F4 Immunoglobulin M (IgM). Anti-F4 Immunoglobulin A induced from 10 dpv, along with anti-F4 IgM, were associated with the 21-day duration of protection. Significant correlations between serum and intestinal secretory anti-F4 antibodies were shown at 10 and 24 dpv.

“Finally, it is worth noting that, though not statistically significant, vaccinated pigs were heavier than control pigs at the end of all studies.”

The research was carried out by: the OIE Reference Laboratory for *Escherichia coli*, faculty of veterinary medicine at the Université de Montréal; Prevtec Microbia; German contract research organization Klifovet; and Elanco.

The European Medicine Agency’s Committee for Medicinal Products for Veterinary Use (CVMP) recently adopted a positive opinion for Prevtec Microbia’s Coliprotec F4/F18 vaccine and recommended it for marketing authorization.

Coliprotec F4/F18 – a lyophilisate for oral suspension – is indicated for the active immunization of pigs against *E coli* PWD. It also designed to reduce the fecal shedding of enterotoxigenic F4-positive and F18-positive *E coli*. 
Pharmaq secures Vietnam approval for fish vaccine

BY MALCOLM FLANAGAN

Norwegian aquaculture specialist Pharmaq has secured market authorization for a vaccine aimed at protecting pangasius in Vietnam’s fish farm sector.

Pharmaq said the fish vaccine Alpha Ject Panga 2 received marketing authorization from the Vietnamese Department of Animal Health and will be available for aquaculture customers in early 2017.

The Oslo-headquartered company described the move as “an important step for sustainable aquaculture in Vietnam”. The vaccine protects against the Edwardsiella ictaluri and Aeromonas hydrophila bacterias. The two bacteria “cause significant losses in the Vietnamese pangasius industry”, the company said.

Alpha Ject Panga 2 is an injection vaccine indicated to provide protection against two of the main diseases in the pangasius farming industry in Vietnam. Edwardsiella ictaluri causes white spot disease whilst Aeromonas hydrophila causes septicimia and hemorrhage. The diseases occur during the whole production cycle and are associated with a high level of mortalities among pangasius.

“Vaccination is an important step forward in controlling two of the major diseases in farmed pangasius in Vietnam and reducing the use of antibiotics. The vaccine is well documented through field trials conducted in close cooperation with our customers over the past few years,” said Pharmaq.

Dr Pham-Cong Thanh, country manager for Pharmaq in Vietnam, said: “The approval of the new vaccine is a great contribution to a more sustainable aquaculture industry in Vietnam. Behind this product are many years of research, development and documentation to ensure that the product provides a significant level of protection as well as being safe for the fish and the environment.

Pharmaq president Morten Nordstad added: “To achieve a more predictable and reliable fish production for pangasius, Pharmaq aims to continuously support the Vietnamese aquaculture industry towards more advanced fish health solutions in the prevention of diseases. The approval of this vaccine is an important step towards production of safe and healthy fish food in Vietnam.”

In April this year, Pharmaq launched a vaccine to control salmon rickettsial septicemia (SRS) syndrome in Chile. The company introduced Alpha Ject LiVac SRS to aid the Chilean salmon market, which is one of the most prominent aquaculture sectors globally. Pharmaq, said the protection of fish against SRS is a significant unmet need in Chile.

In November last year, Zoetis, purchased Pharmaq for $765 million. Zoetis said it was keen to capitalize on “the fastest growing segment of animal health industry” and strengthen its offering of vaccines and pharmaceuticals for farmed fish.

Pharmaq recorded sales of around $76m in 2014 – around 70% of these revenues will have stemmed from vaccines. From 2005 to 2014, the firm’s top line posted a compound annual growth rate of 17%.

Closure of Voyce highlights tough competition in pet health monitoring space

BY JOSEPH HARVEY

US risk management specialist Intersections has closed its pet health monitoring business Voyce.

Chantilly, Virginia-based Intersections launched Voyce through its subsidiary i4c Innovations in 2014. Voyce is a band worn around a dog’s neck to monitor vital signs including heart and respiratory rates, as well as other wellness indicators such as activity, rest calories burned and more.

However, Voyce failed to meet revenue expectations. Its closure will allow Intersections to focus on its core identity and privacy protection services. Intersections said it will attempt to sell the Voyce assets as it winds down the business.
“Despite interest from leaders in the veterinary industry in the Voyce pet health monitoring technology, enrollment in the veterinary monitoring program was slower than expected and therefore the Voyce business was unable to achieve an acceptable level of revenue,” the firm said.

Michael Stanfield, chairman and chief executive of Intersections, added: “The Voyce venture was formulated to diversify Intersections’ opportunities. Efforts at Voyce have taken longer than expected and the time required to introduce such a breakthrough technology to the veterinary market was greater than anticipated.”

**Pet wearables is a crowded market**

The failure of Voyce does not necessarily indicate a lack of revenue opportunities in the pet health wearables space but instead an inability to break into a highly competitive market. Earlier this year, Californian market research firm Grand View Research predicted the pet wearables market will reach a value of $2.36 billion by 2022.

Recently, UK firm Felcana said veterinarians are missing out on good quality information about companion animals’ health – a deficiency wearable devices could help to combat. Felcana itself is aiming to launch its first pet wearable and develop a wider portfolio of smart devices.

US firm AGL Technology believes wearable devices for companion animals are at the forefront of innovation in animal health.

This year has seen PetPace, Animal Health Technologies and Fujitsu make notable launches in the companion animal wearables space.

**Irish biotech receives backing from U2, eyes animal health space**

**By Joseph Harvey**

Irish peptide technology firm Nuritas is to triple its workforce after closing a seed funding round featuring the rock band U2.

The Dublin-based company discovers peptides using artificial intelligence and DNA analysis. Nuritas’ primary market is human health but its approach is also applicable to animal health.

The company said it is developing a range of food-grade bioactive peptides for anti-inflammatory feed additives, antimicrobial topical sprays and canine dental health products.

“Animals commonly suffer from inflammation which lies at the base of many diseases, local infections, and tissue damage,” the firm said. “Currently there are very few effective products addressing these issues. With an increased importance placed on reducing antibiotic resistance, it is essential to find antibiotic alternatives for treating local infections in animals.”

The firm was founded in 2014 by mathematician and computational biologist Dr Nora Khaldi. In 2017, it will triple its workforce in Ireland to more than 60 as part of a major expansion plan.

**With or without ewe**

The company’s expansion strategy was made possible by the firm’s investors, which now include Bono and The Edge from U2 – the most recent Nuritas backers to be announced.

The workforce expansion will allow the company to boost R&D and business development, as well as grow its recently-established US operations in San Francisco.

Bono and The Edge were investors in the company’s €2 million ($2.1 million) seed funding round, which closed earlier this year. Other investors to feature in the round included Marc Benioff, the founder and chief executive of cloud computing specialist Salesforce.

U2’s singer and guitarist are serial investors and have previously put their money into Facebook and Dropbox.

Emmet Browne, chief executive of Nuritas, said: “Growing up in Dublin watching U2 gain global impact and recognition, makes today a really special occasion as The Edge and Bono are now helping us on a similar journey. Just as they started out performing in front of a small few and are now playing before a global audience of billions, we aim to do exactly the same with Nuritas.”
Zomedica seeks canine candidate approval

BY SIAN LAZELL

US animal health firm Zomedica Pharmaceuticals is pursuing its third investigational new animal drug (INAD) for a canine anti-infective.

The company has opened an INAD application with the US FDA’s Center for Veterinary Medicine (CVM) for ZM-007.

Products candidates ZM-007 and ZM-012 – the first product candidate Zomedica filed an INAD application for – are complementary oral formulations being developed for the treatment of diarrhea in dogs. Zomedica’s has another INAD application with the FDA for ZM-006, a candidate to target a metabolic disorder in companion animals.

The active pharmaceutical ingredient in ZM-007 and ZM-012 is metronidazole, an anti-infective that is not yet approved by the CVM for veterinary use. However, the firm said it is commonly prescribed by veterinarians for dogs using human-approved products. It explained the CVM requires the use of animal approved drugs when available over human-approved drugs in veterinary species.

ZM-007 is an oral suspension formulation being developed so veterinarians can accurately dose smaller dog breeds and puppies. Zomedica said it hopes ZM-007 will help to offset veterinarians’ reliance on compounding pharmacies for medication supply and bring associated pharmacy revenue back into the veterinary clinic. It added metronidazole suspension is one of the most frequently compounded drugs for dogs.

On the other hand, ZM-012 is a tablet formulation being developed to replace the large, bitter tasting human-approved generic tablet prescribed by veterinarians. Zomedica said its canine-specific tablet is designed to maximize compliance and maintain affordable regimens.

Zomedica’s chief medical officer, William MacArthur, said: “It is commonly recognized that metronidazole is one of the clinical veterinarian’s most preferred anti-diarrheal treatments for dogs.

“Our goal with these formulations is to give veterinarians full confidence that the medication they are using to treat their canine patients is indeed safe and effective rather than relying on data from human trials.”

Ann Arbor, Michigan-based Zomedica recently reported a wider net loss for Q3 2016, as it ramps up its efforts to build its companion animal business. Net loss totalled around $1 million following higher R&D expenses and general costs.

Aptimmune collaborates with Iowa University

BY JOSEPH HARVEY

US vaccine company Aptimmune Biologics is to fight viral swine diseases by strengthening its partnership with the Iowa State University Veterinary Diagnostic Laboratory (ISU-VDL).

The agreement allows the university to use Aptimmune’s patented ZMAC cell line to isolate porcine reproductive and respiratory syndrome virus (PRRSV) from diagnostic samples.

Aptimmune’s ZMAC cell line “is derived from porcine alveolar macrophages, the cell naturally targeted by PRRSV and is especially sensitive to PRRSV infection”.

By gaining access to the firm’s technology, the university will be able to achieve greater success of PRRSV isolation from diagnostic samples. This in turn will allow veterinarians and pig producers to include the most relevant field-based PRRSV strains in the creation of autogenous vaccines.

Dr Phillip Gauger of Iowa State University said: “We have begun work with the ZMAC cell line and very soon they will be utilized at the ISU-VDL for routine diagnostic use. PRRSV costs the US swine industry more than $1 billion annually, so the long-term impact of our collaboration can be significant.”

Champaign, Illinois-based Aptimmune is developing a range of mucosal vaccines for the costliest viral diseases in the US swine industry. The company’s vaccines under development are for PRRSV and swine influenza. The firm has an ongoing relationship with the ISU-VDL, in which it has utilized its diagnostic services.
Aaron Gilbertie, chief executive of Aptimmune, said: “Our business strategy has always been producer-focused and results-driven. This collaboration with Iowa State is a big step forward in developing effective new vaccines that will help veterinarians and producers maintain herd health and boost profitability.”

Aptimmune said it aims to launch its first swine mucosal vaccines at the beginning of 2017. Founded in 2010, the company predicts annual revenues of around $50 million by 2020. Last month, the firm bagged funding from an agriculture technology business accelerator.

FAO tries to resolve PRRS in Myanmar

BY MALCOLM FLANAGAN

Myanmar’s serious problems with porcine reproductive and respiratory syndrome (PRRS) have been investigated by two expert FAO teams in an attempt to try and stem heavy losses in the country’s swine sector.

The endemic PRRS problems also threaten the livelihoods of Myanmar’s backyards farmers who rely on pig rearing for family survival. One investigative team was led by FAO veterinary specialist Dr Ken Inui and the other by Professor Robert Morrison of Minnesota University.

The FAO said PRRS “is considered to be the swine disease with the largest economic impact for the pork industry at the global level, generating large losses to the commercial sector and also threatening backyard farmers’ livelihoods”.

Dr Inui visited several Myanmar pig farms in September this year and also reviewed laboratory PRRS test results with technical staff at the Yangon Veterinary Diagnostic Laboratory.

He found, in general, Myanmar government tests for PRRS were working well. Based on PRRS virus molecular epidemiology, he concluded that samples analyzed in 2016 probably did not represent a new introduction of PRRS but showed continued circulation of the strain since 2011.

Minnesota Uni’s work

Prof Morrison visited Myanmar in November to review relevant information about the PRRS epidemiological situation and the high-risk farming and marketing practices through a stakeholder workshop and field visits to commercial and backyard farms. Prof also visited slaughterhouses in the Yangon and Mandalay regions.

Prof Morrison met members of the Myanmar Livestock Federation, commercial producers, backyard farmers, traders, slaughterhouses, private veterinarians, laboratory staff and members of the Myanmar parliament regarding potential solutions to eradicating PRRS.

The Rome-based FAO said research data by the two experts will help to create a much needed PRRS control strategy for the country. In addition, vaccination, animal movements, biosecurity, and zoning approaches to control swine diseases were identified as crucial for controlling PRRS.

A final FAO debriefing took place on November 9 in the presence of Dr Khin Zaw, permanent secretary to the minister of agriculture livestock and Irrigation.

“Prof Morrison's debriefing provided policy options to the Myanmar authorities. These included PRRS vaccination in Myanmar, in order to decrease the economic losses associated with the disease, and the importance of improving biosecurity to reduce the incidence and prevalence of PRRS in the country,” said the FAO.

“These recommendations will help Myanmar officials design an effective PRRS control strategy. To support Myanmar’s authorities on the implementation of its new PRRS control strategy, a second mission with Dr Morrison is programmed early in 2017.”

The FAO estimates there are 10.5 million pigs in Myanmar. PPRS is also known as blue ear disease in the region.

Earlier this month neighboring Vietnam reported outbreaks of PRRS. Vietnam has been ramping up efforts to deal with animal disease outbreaks after the country suffered from bouts of extreme weather.

Evonik to end Asia Pacific distribution deal

BY MALCOLM FLANAGAN

German feed additive and chemical producer Evonik is to end its distribution partnership with Danish probiotics and enzyme producer Chr. Hansen in the Asia Pacific region.

Evonik said it wished to end its cooperation agreement with the Danish bioscience firm because it wants to expand the reach of its own feed additive products, which it is now producing locally in Singapore. The distribution agreement will end on December 31.
Evonik had been a distributor for Chr. Hansen’s probiotic feed additives for swine and poultry feed in the region since 2012.

Dr Emmanuel Auer, the head of the Animal Nutrition Business Line at Evonik, said: “We enjoyed a highly trusting partnership with Chr. Hansen but want to be active in the probiotics market with our own products in the future.

“We aim to offer the most comprehensive range of solutions for healthy and sustainable animal nutrition by including probiotics.

In October this year, Evonik said it would invest more than €500 million ($544 million) in a new Singaporean production facility that will make a key feed ingredient for Asian markets.

The plant will have the capacity to produce 150,000 tons of DL-methionine, an amino acid sold by Evonik under the brand name MetAMINO. The company said the facility would be built alongside its existing plant on Jurong Island, adding that it should be up and running by 2019.

Klaus Engel, the chairman of the executive board at Evonik, said the investment came in response to a rapid increase in Asian demand. The new plant will not only produce methionine, but also all strategically important precursors to guarantee product quality and supply security.

Evonik acquired the probiotics business of the Spanish company Norel in the summer of 2016. The transaction added two probiotic animal nutrition products to Evonik’s feed amino acids portfolio: Ecobiol for broilers, and Fecinofor piglet breeding. More products are expected to follow further expanding Evonik’s own probiotics range.

Probiotics are living microorganisms, which are administered with the feed and have been proven to show health-promoting effects in the gastrointestinal tract of animals. They play an important role in livestock breeding as natural alternatives to antibiotics and antibiotic growth promoters.

EFSA ranks biosecurity measures for H5N8 control

The European Food Safety Authority (EFSA) said strict enforcement of biosecurity is the most effective way to prevent the introduction of the highly pathogenic influenza virus A (H5N8) into poultry farms.

EFSA experts have identified and ranked a set of biosecurity measures that can be implemented in different areas of a farm that are classified as high or low risk. These include poultry houses or places where feed is stored.

The suggested H5N8 preventative measures include curbing contact between wild birds and poultry, indoor housing of birds, and keeping geese and ducks separate from other poultry. The EFSA recommends the development of biosecurity guidance tailored to the needs of individual farms, preferably before an outbreak.

The European Commission asked Parma-based EFSA to deliver urgent scientific advice on the effectiveness of protection measures currently in place to prevent further spread of the deadly H5N8 virus.

EFSA said when affected wilds birds are detected, monitoring of poultry should be applied to a geographical area defined by the habitat and flight distance of the affected birds. Moreover, competent authorities should raise awareness among farmers of biosecurity measures in such areas.

In addition, EFSA said passive surveillance such as the reports of dead birds is the most effective way to detect the virus in wild birds and poultry.

Finally, testing samples from species of wild birds previously not known to be affected by the virus and from areas where the virus has not been yet reported is useful to determine the geographical spread of the virus in wild birds.

The request follows the outbreaks of the virus reported among wild birds and poultry across Europe since the end of October 2016. In early December, the Commission began consolidating measures to stem the tide of outbreaks in Hungary, Germany, Austria, the Netherlands, Denmark, Sweden, France and the UK.

Germany – one of the worst-hit countries – culled another 30,000 turkeys and ducks at the weekend after the virus was detected on two more farms.

Some 21,600 turkeys were culled on a farm in Soest in North Rhine Westfalia and 9,500 ducks were culled on a farm in Moeser in Saxony-Anhalt following H5N8 outbreaks.

“EFSA experts will deliver a further scientific opinion on avian influenza in 2017. The scientific opinion will assess the risk of other avian influenza viruses entering the EU, analyze biosecurity measures for turkeys and ducks and evaluate the mechanisms responsible for the mutation of low pathogenic avian influenza to high pathogenic avian influenza viruses,” said EFSA.
Funding approved for IRC scientific secretariat

BY SIAN LAZELL

The International Research Consortium (IRC) on Animal Health is to receive funding for a new scientific secretariat.

The funding has been approved by the Horizon 2020 EU Framework Programme for Research and Innovation. Horizon 2020 is the biggest EU research and innovation program, providing around €80 billion ($83 billion) of funding over seven years from 2014 to 2020.

The IRC builds on the work of the Global Strategic Alliances for the Coordination of Research on the Major Infectious Diseases of Animals and Zoonoses (STAR-IDAZ) project, an EU-funded initiative to globally coordinate animal health research.

The IRC secretariat’s objective is “to deliver measurable advances in the control of animal diseases through the alignment of both public and privately funded animal health research around the world”.

The secretariat will be collaboratively run by a group of organizations including: the UK Department for Environment, Food and Rural Affairs; the OIE; CAB International; the Biotechnology and Biological Sciences Research Council; and IFAH-Europe.

The IRC will focus on animal diseases including foot-and-mouth disease and brucellosis, and other issues linked to animal health such as antimicrobial resistance.

The scientific secretariat will be located at the OIE’s headquarters in Paris and provide literature reviews and gap analyses to thematic working groups, in addition to logistically supporting the scientific committee and executive committee.

STAR-IDAZ IRC has funders and programme owners from Europe, Asia, Australasia, the Americas, Africa and the Middle East, in addition to international organizations and the representatives from veterinary pharmaceutical firms. These organizations have collectively committed a total budget of around €2bn to invest over a five-year period to 2021.

So far, 16 organizations from 12 countries have signed to be part of the consortium. They have agreed to coordinate their research programmes to tackle their research needs, share findings and investigate new animal health strategies for at least 30 priority diseases, infections or issues.

The strategies will include candidate vaccines, diagnostics, therapeutics, other animal health products, procedures and key scientific tools to support risk analysis and disease control.

Roxane Feller, secretary general of IFAH-Europe, said: “Animal diseases are a massive threat, not only to food safety and security, but also to public health through the risk of food-borne pathogens or diseases that are transmissible from animals to people.

“IFAH-Europe is committed to playing a key role in the newly-established secretariat for the IRC with the shared vision of prioritising research activity to accelerate innovation in the field of animal health.”

Dr Monique Eloit, OIE director general, commented: “OIE standards recognized by the World Trade Organization for the safe international trade of animals and animal products must be based on the most recent scientific advances as highlighted in the 6th OIE Strategic Plan 2016-2020.

“I am very pleased to host the scientific secretariat at OIE Headquarters and further strengthen the link between research and the preservation of animal health.”

Professor Nigel Gibbens, UK chief veterinary officer, added: “In an environment of financial challenge and increasing global disease threats, the work of the STAR-IDAZ IRC to coordinate research activities is essential to maintaining laboratory capability and ongoing development of innovative solutions to protect animal and human health.”

New COO appointed by GD Animal Health

BY MALCOLM FLANAGAN

Dutch veterinary research organization GD Animal Health has selected a new chief operating officer (COO).

Deventer-based GD Animal Health said Kris Van Malderen has been appointed to the position of COO and starts work on January 1 next year. He will also join the GD Animal Health boards of directors.
In his new position at GD Animal Health, Mr Van Malderen will focus on business operations. Mr Van Malderen is currently an adviser to the president and COO of the engineering and environmental consultants, the Antea Group, which is based in Maarssen.

Previously Mr Van Malderen served as division director at international engineering and environmental consulting firm Antea Group and as head of Antea Belgium. GD said Mr Van Malderen has “a vast amount of experience in international management, improvement of operating efficiency and business operations including company strategy, human resources, legal affairs and risk management”.

Mr Van Malderen graduated in the field of environmental management from Wageningen University, and subsequently undertook various postgraduate management programs.

In August this year, GD published poultry research shows chicken gut health is under constant attack from several viruses at once and seriously affects the performance of broilers.

The research by GD showed some chickens were suffering from four intestinal viruses at the same time, though two or three was more common.

GD has a staff of 400 and annual turnover of €55 million ($57 million).

Ridley recalls cattle feed product

BY SIAN LAZELL

US firm Ridley Block Operations has initiated a voluntary recall of a single batch of its Ultralyx 24% + 3% Mag Composite Block.

The beef cattle feed product – indicated as a source of protein, energy, minerals and vitamins – is being recalled because it contains elevated levels of non-protein nitrogen (NPN) that may be harmful to beef cattle.

The US FDA said beef cattle exposed to the affected batch may exhibit rapid breathing, tremors and slight incoordination followed by severe lack of coordination, excessive salivation and labored breathing. These animals eventually lose the ability to stand and if not treated, will generally die within four hours.

The FDA added if any beef producers observe animals that have consumed product from the batch and have any of these symptoms, they should contact their local veterinarian for assistance.

The affected product is labeled Ultralyx Nutritional Supplements 24% + 3% Mag Composite Block for Beef Cattle on Pasture and the batch number is HB01088454 and item number is 10636. It was manufactured on August 26, 2016, and packaged in 200-pound plastic tubs.

A single distributor in Tennessee purchased the entire batch subject to recall, before the product was resold to form supply dealers in Kentucky, Tennessee, Virginia, West Virginia, Georgia and North Carolina.

A farm located in Virginia reported nine beef cows died after having access to the affected batch of cattle feed.

The FDA said samples from the batch were tested after a customer complaint and found to contain elevated levels of NPN. Tubs associated with this batch contain a quantity of the feed ingredient urea, a nutritional source of NPN, that exceeded formulated specifications.

It said: “Cattle producers who have purchased Ultralyx 24% + 3% Mag Composite Block labeled as batch number HB01088454 should discontinue use of the product and return any unused tubs to the place of purchase for a refund of the purchase price. Producers should contact their veterinarian for assistance if their cattle have consumed from tubs of batch number HB01088454.”

FDA to finalize bioequivalence study guidance

BY SIAN LAZELL

The US FDA has issued final draft guidance to help standardize data recommendations associated with in vivo blood level bioequivalence (BE) for veterinary pharmaceuticals.

‘Guidance for Industry (GFI) #224: Bioequivalence: Blood Level Bioequivalence Study’ is designed to create a harmonized definition of bioequivalence, list factors that should be considered when developing scientifically sound blood level bioequivalence study designs, and provide information that should be included in a blood level BE study report.
The FDA said GFI #224 supports its work with the Veterinary International Conference on Harmonization, an international program aimed at harmonizing technical requirements for veterinary product regulation.

The guidance states: “The International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products (VICH) strives to eliminate repetitious and unnecessary testing through harmonization of regulatory recommendations for the registration of veterinary products, a goal that undoubtedly leads to a reduction in the number of animals used for product development and registration.”

The FDA previously opened a 60-day public comment period for on GFI #224 on September 24, 2014. The full draft guidance can be found here.

Avian influenza detected on UK farm

BY JOSEPH HARVEY

Avian influenza has been located in around 5,000 turkeys on a farm near the north-eastern UK town of Louth.

Avian flu is currently sweeping across Europe, putting pressure on poultry producers during the pre-Christmas period. As part of this current wave of outbreaks, which began in November, this is the first incidence of avian flu in the UK.

The turkeys at the Lincolnshire farm were infected with the H5N8 strain and have died. The remaining birds will be humanely culled.

The UK’s Department for Environment, Food and Rural Affairs (Defra) has put in place a 3km protection zone and a 10km surveillance zone around the farm.

Poultry producers in the UK have been told to house their birds, where practicable, maintain biosecurity and remain vigilant.

In a joint statement, the British Veterinary Association and the British Veterinary Poultry Association said: “We’d like to emphasize that the risk to public health from this strain is very low and that the Food Standards Agency has made clear that there is no food safety risk to consumers, with thoroughly cooked poultry and poultry products still safe to eat.

“The quick identification of the suspected case and swift precautionary measures to contain the disease illustrate the ongoing importance of a robust veterinary surveillance system.”

The UK is the latest country to record an outbreak of avian flu in the last two months. In mainland Europe, Poland and France have recently been struck by the disease, while Japan is also suffering.

Texas vet shortage sparks cash offer

BY MALCOLM FLANAGAN

The Texas Animal Health Commission (TAHC) is accepting nominations for areas of Texas experiencing a severe shortage of veterinarians that work in food animal medicine, rural private practice or public practice.

Any veterinarian who successfully applies to work in a veterinary-deprived area of Texas in 2017 will receive $25,000 worth of student debt paid-off annually by the Austin-based TAHC. The general offer by the TAHC will last until January 17, 2017.

The TAHC vet inducement scheme is part of the USDA’s National Institute of Food and Agriculture Veterinary Medicine Loan Repayment Program (VMLRP). The scheme will last for three years.

The VMLRP focuses on three types of veterinary practice and will accept nominations in each category:

- Type I shortage: A veterinarian is needed to spend at least 80% of time working food animal species in a private practice setting.
- Type II shortage: A veterinarian is needed to spend at least 30% of time working on food animal species, and providing veterinary services in a rural (remote or economically depressed) area in a private practice setting.
- Type III shortage: A veterinarian is needed to work in public health, laboratory, local or state government veterinary work, meat inspection or epidemiology.
In September this year, the serious shortage of animal health professionals in parts of Texas led to the Amarillo City Council announcing it would build a new veterinary college in Amarillo to address the issue.

The Amarillo City Council approved a $15 million grant from the Amarillo Economic Development Corporation (AEDC) to Texas Tech University for building of the proposed veterinary college.

The grant was approved at an Amarillo City Council meeting on recommendation from the AEDC. It is a major step forward for Texas Tech’s vision of “enhancing rural and large-animal veterinary medicine by providing an innovative model focused on improving animal health in the heart of the beef and dairy cattle industry”.

The new veterinary college is expected to add 100 highly skilled jobs and approximately $10m in annual labor income to Amarillo’s economy.

**Brucellosis outbreak in southern Belgium**

**BY MALCOLM FLANAGAN**

There has been an outbreak of bovine brucellosis in southern Belgium.

One dairy cow proved to be positive for brucellosis out of a susceptible dairy herd of 236 cows in the Bertrix area of Belgium, which is adjacent to Luxembourg.

The area has been quarantined and farm premises disinfected. Vaccination is prohibited with no further treatment of affected animals. All cows will likely be culled.

Local animal health officials believe the cows were infected by interaction with wild boars who are endemic hosts to the disease. Blood samples have been taken and the relevant samples sent to the National Veterinary Laboratory in Brussels for further analysis.

The last recorded outbreak of brucellosis in Belgium was in 2013.

Brucellosis has been cited by the STAR-IDAZ veterinary research group as a disease which is in need of improved vaccine technology. Dr Alex Morrow of the UK farm ministry Defra said there had been no progress in brucellosis vaccines in the last decade.

Only recently, vaccine innovators were encouraged to apply for a $30 million multi-stage prize designed to result in the development of an efficacious, safe and viable vaccine to protect smallholder farmers against brucellosis in small ruminants.