Huvecpharma seeks stronger enzymes portfolio via Intrexon partnership

BY JOSEPH HARVEY

Bulgarian firm Huvepharma is to use fungal expression technology to develop animal feed enzymes.

The company gained access to this technology through a research collaboration with Hungarian biological engineering business Intrexon.

The two firms will investigate the feasibility of fungal expression for an unspecified target enzyme. Should the resulting additive come to market, it will be the first commercial results of Intrexon’s proprietary platform.

Huvecpharma said fungal systems are an ideal production platform for enzymes and other feed additives as they utilize economical fermentation processes, providing a high protein yield and substantial secretion capacity.

Adding enzymes to animal feed improves digestibility and allows greater nutrient absorption. This allows livestock producers to operate in a more economical and sustainable way.

The partnership will see Intrexon engineer optimized cell lines to produce the target feed enzyme, while Huvepharma will test the applicability of the cell lines in large-scale production of feed additives.

Based on the results of the collaboration, the two companies will also look for additional commercial opportunities for the fungal expression platform.

Importance of enzymes

Sofia-headquartered Huvepharma said the global feed additives market is estimated to exceed $20 billion by 2021 as demand for animal protein continues to increase.

“To meet these requirements, the nutritional value and the digestibility of animal feed needs to be improved which requires an efficient industrial production of enzymes and other protein-based additives,” the company noted. “Enzymes used to enhance the nutritional value of feeds were valued at over $1bn in 2015.”

Earlier this year, a study identified a higher use of in-feed enzymes due to the loss of shared-use antibiotics in the US. The study noted an increased use of enzymes, probiotics, prebiotics, oligosaccharides, organic acids and phytogenics.

With enzymes becoming an increasingly important part of the animal nutrition sector, several new faces have been making headlines in recent months.

In February, US firm Agrivida secured funding to help commercialize protein expression technology designed to simplify the process of enzyme production for animal nutrition. The company is selling its patented Grainzyme feed additive enzymes for poultry, swine, dairy and beef cattle.

In March, Boehringer Ingelheim Animal Health entered the poultry probiotic space by establishing a strategic collaboration with Danish firm Novozymes. The latter produces a range of in-feed enzymes – phytases, proteases and carbohydrases – for the livestock industry in collaboration with DSM.

USDA must ‘stop dragging its feet’ on animal welfare, says organic food firm

BY JOSEPH HARVEY

The USDA could be about to be feel the pressure of public scrutiny as it delays implementing new rules concerning animal welfare.

Bridgewater, New Jersey-based natural and organic meat company Applegate has poured scorn on the delay of the final Organic Livestock and Poultry Practices rule, which was set to take effect earlier this month but now could come into play during November.
Currently, the only animal care practices covered under an organic seal on meat and poultry products are the prohibition of antibiotics and the required use of pesticide-free and organic animal feed.

The new rule being proposed by the USDA addresses additional animal health care practices and living conditions such as establishing minimum space requirements for poultry. It also aims to ban alterations such as de-beaking of chickens and tail docking of hogs.

Applegate will air its support of the new rule via the Federal Register – the daily journal of the US government. The company is also urging consumers and organic producers in its own supply chain to lend their support as well.

A spokesperson for the firm told Animal Pharm it works with more than 279 organic livestock and poultry producers. The USDA is seeking public comment on the rule until June 9.

Steve Lykken, Applegate president, stated: “The USDA took a huge step forward last year by proposing a rule that would bring consumer expectations closer to reality by making animal welfare standards part of its requirements for organic certification.

"Now the department is again postponing the effective date of the rule, continuing to leave consumers confused and a growing organic industry at a disadvantage."

Applegate believes consumers have become confused by what ‘organic’ actually means in terms of animal treatment. The firm suggested “most people mistakenly expect the term ‘organic’ on a meat or poultry label to include some guidelines on animal care”.

“Enacting the final rule will be a benefit for both consumers and industry – it’s time for the USDA to stop dragging its feet,” Mr Lykken added.

Applegate is long-time advocate of welfare

Since 1987, Applegate has produced natural and organic products such as hot dogs, bacon, sausages, deli meats and cheese. The firm’s goods are produced with no antibiotics, growth hormones, beta agonists or genetically-modified organisms.

The company has long campaigned for humanely-raised meats versus what it calls “typical industry practices”. It cites the Five Freedoms of Animal Welfare – developed in the UK in the 1960s – as the foundation of humane animal treatment.

These five freedoms are recognized by groups such as the American Society for the Prevention of Cruelty to Animals. They are: freedom from hunger and thirst; freedom from discomfort; freedom from pain, injury or disease; freedom to express normal behaviour; and freedom from fear and distress.

The firm’s ideals are symptomatic of a general wave of consumer and industry scrutiny on the way food-producing animals are reared.

In Europe, a new animal welfare platform has recently been formulated. Elsewhere, Australian firm Animal Ethics is taking its pain relief products to a global market.

New rule described as ‘disastrous’

While animal welfare is becoming an increasingly hot topic globally, the adoption of the USDA rule is no foregone conclusion – several leading voices have pointed out its deficiencies.

Senator Pat Roberts, chair of the Senate Agriculture Committee, has previously praised the USDA for delaying the rule.

“I hope the USDA will carefully consider its unintended consequences,” he said. “As I’ve heard time and time again from organic livestock and poultry producers – the folks who are most affected by its implementation – this rule is bad news for farmers, ranchers, and consumers. Organic consumers will see increased prices at the grocery store, family farmers will be put out of business and animal health will be put at risk, which will decrease food safety.”

Another organization against the new rule is the US' National Pork Producers Council, which says the regulation “would incorporate animal welfare standards that are not based on science and that are outside the scope of the Organic Food Production Act of 1990, which limited consideration of livestock as organic to feeding and medication practices”.

**ViroVet extends pipeline to small ruminants with GALVmed guidance**

BY JOSEPH HARVEY

Belgian firm ViroVet is to extend its vaccine pipeline to the small ruminant sector by collaborating with GALVmed. The company is working on a range of vaccines and antiviral drugs for endemic and epizootic viral livestock diseases in collaboration with the University of Leuven.
ViroVet’s proprietary technology platform allows it to produce “inexpensive modified live vaccines that can be tailor-made to maximize efficacy and minimize safety concerns, while removing any cold chain requirement”. The characteristics of the company’s vaccines make them suitable targets for developing markets, which suffer from a lack of affordable vaccines and an absence of cold chain infrastructure.

Dr Nesya Goris, co-founder and chief development officer at ViroVet, said: “Our technology allows us to rationally develop and consistently produce combination vaccines protecting against multiple diseases at the same time. Our vaccines are stable for weeks at temperatures of up to 50°C underpinning the truly disruptive nature of our vaccine platform.”

The new product development partnership will consider the technology’s potential future market – smallholder farmers in the developing world – through each stage of the collaboration’s exploratory work.

In Africa and the Middle East, the sheep and goat industry faces an uphill struggle against some deadly viral and bacterial diseases: Rift Valley fever; peste des petits ruminants; sheep and goat pox; and contagious caprine pleuropneumonia. These diseases are particularly troublesome for the millions of smallholder farmers in these markets for whom livestock is key to their wellbeing.

GALVmed has been working for some time to make vaccines, medicines and diagnostics available to smallholder livestock and poultry keepers in developing countries. The not-for-profit company is working with partners across a number of projects, including the Brucellosis Vaccine Prize.

The Edinburgh-based company’s work sees it partner with varying animal health experts. GALVmed has a roster of high-profile partners including Zoetis, MSD Animal Health and Ceva Santé Animale – a full list can be seen here. However, this latest partnership sees it collaborate with one of the industry’s younger firms.


Oasmia to create separate division dedicated to ‘staggering’ pet cancer opportunity

**BY JOSEPH HARVEY**

Swedish company Oasmia Pharmaceutical is separating its human and animal oncology divisions.

A New York-based investment bank is now considering options for Oasmia’s oncology products for companion animals – Paccal Vet and Doxophos Vet. These options include a spin-off, a public offering of shares in the US and strategic collaborations with animal health partners.

Oasmia said its vet oncology assets are valued in the range of $75-80 million, according to an independent valuation “by one of the big four accounting firms”.

As part of this strategic evaluation, Oasmia will move the veterinary assets to its wholly-owned US subsidiary. The Uppsala-based firm said this transfer will provide a solid financial foundation for further development and commercialization of the veterinary business in the US.

The company’s founder and chief executive Julian Aleksov told Animal Pharm: “The most important thing we wanted to achieve in making this decision was to effectively separate our human and veterinary oncology divisions.

“With no existing chemotherapy treatments currently on the market for general veterinary practitioners, we thought the timing was right and each deserved their own respective focus and resources. As both are on similar growth trajectories but in different markets, this separation allows us more flexibility.

“We enlisted our strategic partners in the accounting firm and the investment bank to help us evaluate our options. Thus, we may choose to spin off the entire division itself, or possibly consider a separate listing on one of the US exchanges.”

Oasmia reiterates cancer opportunity

The company highlighted the large potential market for its oncology products in the US. It cited a recent report from the Houston Technology Center, which said an estimated 13-25 million dogs are living with cancer in the US alone.
“Unfortunately, less than 20% survive longer than two years due to unsuccessful treatments, as well as the fact that there are only approximately 375 specialized veterinary oncologists in the country,” Oasmia said.

Earlier this year, Oasmia temporarily withdrew its US FDA approval for Paccal Vet “in order to lower the dosage to reduce side effects and improve comfort for companion animals, before resubmitting for review”.

The firm said: “This was a strategic move, as in the past, the product had only been available for use by specialized veterinary oncologists. Upon resubmission and what Oasmia considers likely approval, Paccal Vet would be available for use to the much broader approximately 42,000 general veterinary practitioners in the US.”

In addition, Oasmia’s other product – Doxophos Vet – is approaching the conclusion of its clinical study. The treatment has previously received Minor Use Minor Species (MUMS) designation from the FDA.

Oasmia said: “Doxophos Vet represents tremendous market upside in one of the leading cancer indications for dogs, lymphoma, which impacts approximately 200,000 dogs each year in the US alone.”

Professor Henrik Rönnberg, the company’s chief medical officer, commented: “The market trajectory for animal oncology products is staggering, with few products available for animal companions, and the families who care about them so much. We believe this step provides the division with the infrastructure it requires, opening up for financing of future sales and marketing activities so that we on a broad scale can capture the market.”

Genome sequencing project sheds light on rare feline diseases

BY SIAN LAZELL

US researchers are using a feline genome sequencing project to identify rare disorders in cats.

Through the 99 Lives Cat Genome Sequencing Consortium, scientists at the University of Missouri (MU) are using whole genome sequencing to identify genetic variants that cause rare diseases, such as progressive retinal atrophy and Niemann-Pick type 1.

Retinal atrophy is a group of progressive genetic disorders that cause degeneration and atrophy of the retina, leading to a decline in the quality of vision and in some cases blindness. Niemann-Pick type 1 is a recessive hereditary disease due to lack of the enzyme sphingomyelinase, leading to the accumulation of sphingomyelin within cells of the nervous system and organs including the liver, spleen, kidneys, lung and intestines – it is a fatal disease in domestic cats.

In one study – which signals the first use of precision medicine in feline health – MU researchers used whole genome sequencing and the 99 Lives consortium to identify a lysosomal disorder in a 36-week-old silver tabby kitten. They found the kitten had two copies of a mutation in the NPC1 gene – the causal gene of Niemann-Pick type 1.

The 99 Lives project was established at MU by Leslie Lyons, a professor of comparative medicine at the university’s college of veterinary medicine. The project has genetically sequenced over 50 felines, including DNA from cats with and without known genetic disorders. The database aims to identify DNA that causes genetic disorders and improve knowledge of how to treat diseases.

Prof Lyons said: “Genetics of the patient is a critical aspect of an individual’s health care for some diseases. Continued collaboration with geneticists and veterinarians could lead to the rapid discovery of undiagnosed genetic conditions in cats. The goal of genetic testing is to identify disease early, so that effective and proactive treatment can be administered to patients.”

The genetics space represents a strong opportunity to address unmet needs in animal health, and genome research is picking up pace across different species.

Earlier in the year, a leading aquaculture specialist explained genomics may be the best solution to tackling sea lice, a prominent problem in the global salmon industry.

UK firm Genus subsequently said its gene editing technology could help to develop disease resistance in pigs and in April, researchers at The Kennel Club Genetics Centre identified two inherited mutated conditions that badly affect the eyesight of pedigree dogs.

Additionally, an international scientific collaboration recently built a new goat genome which is the most complete established for any mammal to date.

It is also expected an international research project that has mapped out the genomics of indigenous African cattle for the first time will broaden knowledge to help safeguard the future of cattle production on the continent.
Number of animal health products approved in Japan declines

BY DR ATSUO HATA

Japan has seen a 50% reduction in the amount of newly-approved animal health products over the last year. The Japanese Ministry of Agriculture, Forestry and Fisheries (JMAFF) approved nine new animal drugs in 2016. This included six pharmaceuticals and three biologicals.

The total was half the amount of vet medicines approved in 2015. This number was also down on the 16 products authorized in Japan during 2014.

The majority of products approved for sale belonged to international companies, with Zoetis securing two Japanese authorizations over the course of the year.

### New animal drugs approved in Japan during 2016

<table>
<thead>
<tr>
<th>Company</th>
<th>Brand</th>
<th>Ingredient</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boehringer Ingelheim Vetmedica</td>
<td>ProZinc</td>
<td>Protomine zinc recombinant human insulin aqueous suspension</td>
<td>Reduction of high blood glucose and clinical signs associated with hyperglycemia in cats suffering from diabetes</td>
</tr>
<tr>
<td>DS Pharma Animal Health</td>
<td>Itravet Tablets 25,75</td>
<td>Itraconazole</td>
<td>Treatment of Malassezia pachydermatis in dogs</td>
</tr>
<tr>
<td>Eli Lilly Japan</td>
<td>Econosad</td>
<td>Spinosad</td>
<td>Elimination of chicken mites in poultry houses</td>
</tr>
<tr>
<td></td>
<td>Foltecol Plus S, L</td>
<td>Pimopendan+benazeptin hydrochloride</td>
<td>Treatment of chronic heart failure symptoms caused by mitral insufficiency in dogs</td>
</tr>
<tr>
<td>Kyoritsu Seiyaku</td>
<td>Starvax</td>
<td>Polyvalent bovine vaccine</td>
<td>Reduction of clinical sign of mastitis caused by Staphylococcus, Coaglase-negative Staphylococcus and E coli in cattle</td>
</tr>
<tr>
<td></td>
<td>Piscivac injectable 1nae+Irido</td>
<td>Fish vaccine</td>
<td>Prevention of beta-hemolytic streptococcus and iridovirus infection in red sea bream</td>
</tr>
<tr>
<td>Vaxxinova</td>
<td>Vax/On IBD-CA</td>
<td>Bivalent avian vaccine</td>
<td>Prevent infectious bursal disease (IBD) in chickens</td>
</tr>
<tr>
<td>Zoetis Japan</td>
<td>Bopriva</td>
<td>Gonadotrophin release hormone factor conjugated to diphtheria toxoid</td>
<td>Reduction of estrus behavior in cows</td>
</tr>
<tr>
<td></td>
<td>Draxxin-C</td>
<td>Tulathromycin</td>
<td>Treatment of bacterial pneumonia caused by Mannheimia haemolytica, Pasteurella multocida, Histophilus somni and Ureaplasma diversum in dairy cows</td>
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</table>

Source: JMAFF

### Additional indications of existing animal drugs in Japan for 2016

<table>
<thead>
<tr>
<th>Company</th>
<th>Brand</th>
<th>Ingredient</th>
<th>Indication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Matsuoka Pharmacy</td>
<td>Mvac</td>
<td>Fish vaccine</td>
<td>Prevention of beta-hemolytic streptomycin infection in Filefish in addition to Olive flounder</td>
</tr>
</tbody>
</table>
European experts have called for warnings to be included in the product information on moxidectin-based treatments.

Issues concerning the persistent, bioaccumulative and toxic (PBT) properties of the anthelmintic drug were reported to the European Medicines Agency’s Committee for Medicinal Products for Veterinary Use (CVMP) by German authorities.

The CVMP assessed the risk moxidectin poses to the environment after being administered to cattle, sheep and horses. After analysing laboratory studies, the committee said moxidectin “fulfils the criteria for a PBT substance, and the use of veterinary medicinal products containing the substance is posing a risk to aquatic and sediment organisms and to dung fauna”.

The CVMP also suggested moxidectin-based products remain an effective and important therapeutic option in the treatment of internal and external parasites in cattle, sheep and horses.

“Therefore, in order to reduce and prevent as far as possible the identified risks for aquatic and sediment organisms and dung fauna, the committee recommended risk mitigation measures and warnings to be included in the product information,” it stated.

The committee further concluded: “A targeted sampling in the environment following the use of veterinary medicinal products as a pour-on solution containing 5mg moxidectin per ml or as a solution for injection containing 100mg moxidectin per ml in beef cattle on pasture is necessary in order to obtain a better understanding of the actual environmental exposure, and, consequently, recommended conditions to the terms of the marketing authorisations.”

Finally, the CVMP noted the overall benefit-risk balance for moxidectin products remain positive if the suggested changes in the product information and conditions to the marketing authorizations are taken into account.

Moxidectin features in a host of antiparasitic products. Recently, Bayer Animal Health purchased Boehringer Ingelheim’s Cydectin (moxidectin) bovine and ovine endectocide products in the US. The deal was finalized in January.

US consumer products firm Church & Dwight has acquired livestock probiotics specialist Agro BioSciences in a $75 million deal.

The acquisition includes a contingent payment of up to an additional $25m based on business performance milestones.
Wauwatosa, Wisconsin-based Agro BioSciences produces custom probiotics for the poultry, cattle and swine industries. The firm’s annual sales are around $11m. Church & Dwight said it expects Agro BioSciences to “grow rapidly to meet the growing demand for probiotic products to maintain the health and productivity of animals in an antibiotic-free environment”.

The deal is complementary to Church & Dwight’s existing animal productivity business – it is the parent company of Arm & Hammer Animal Nutrition.

Princeton, New Jersey-headquartered Arm & Hammer said the acquisition enables it to become “a worldwide leader in providing both microbial and nutrition solutions and services supported by an unmatched research and development pipeline”.

Recently, Boehringer Ingelheim estimated the veterinary probiotics market will grow from being worth around €3.5 billion ($3.8 billion) in 2016 to a size of €9.6bn in 2030. Boehringer struck a significant agreement with Novozymes that enabled it to enter the poultry probiotic space.

Both Church & Dwight’s deal and Boehringer’s partnership with Novozymes highlights the growing trend for leading animal health firms to develop more natural products. Probiotics are naturally-occurring, live microbes that can improve the gut flora of animals.

Boehringer noted: “Rising global consumption of meat and legislative and consumer-driven curbs on the use of antibiotics as growth promoters in animal farming have increased demand for alternatives such as probiotics.”

At the beginning of 2017, a new study identified an increased use of probiotics directly fed to animals by livestock and poultry producers as a response to the loss of shared use antibiotics in the US.

Krka expects improved results in coming quarters

BY JOSEPH HARVEY

Slovenian generics manufacturer forecasts an improved performance from its animal health business in the next three quarters of 2017.

The firm recently recorded a 19% decline in animal health turnover during the first quarter of the year.

However, a spokesperson for the Novo Mesto-based business told Animal Pharm: “The main reason for higher sales in the first quarter of 2016 was the launch of the milbemycin blockbuster on several markets in the EU. In the first quarter of 2017, no other launch was so significant. In the upcoming months, sales are expected to exceed the 2016 level.”

Milbemycin is a broad spectrum antiparasitic. It features in treatments such as Elanco’s Interceptor and Krka’s generic Milprazon (milbemycin oxime and praziquantel). The Slovenian firm said Milprazon was one of its top-five selling products in the first quarter of 2017.

Krka also attributed its poor first-quarter performance to a decline in sales of animal health products in western Europe.

If Krka is to see an improvement in the performance of its animal health business over the rest of 2017, the firm will have to go some way to achieve the double-digit growth in revenues it scored in 2016.

Alltech’s latest acquisition targets Montana firm

BY JOSEPH HARVEY

Alltech has once again boosted its animal nutrition capabilities through an acquisition, this time of Montana-based WestFeeds for an undisclosed fee.

Through this purchase, Alltech gains manufacturing facilities in Billings and Great Falls, as well as retail outlets in Billings, Dillon, Great Falls, Lewistown and Miles City. While Westfeeds has a local focus, its products can also be purchased in Wyoming and Idaho.
The firm specializes in minerals, proteins and feeds for food-producing animals, as well as pet food. WestFeeds’ general manager Jerry Begger will continue to lead the company.

This represents Alltech’s sixth acquisition in two years as it builds its global portfolio. In 2015, it purchased Minnesota-headquartered animal nutrition company Ridley. In the same year, Alltech gained Norwegian feed firm Produs and Canadian feed manufacturer Masterfeeds.

In 2016, Alltech added two companies to its business – US firm Ranch-Way Feeds and Dutch company Coppens International.

While Alltech’s purchases have helped it broaden the geographic span of its feed empire, other deals have been more targeted. The acquisition of Coppens and Produs helped Alltech grow its aquafeed offering. Alltech has previously said aquafeed is the fastest-growing sector of the expanding global animal nutrition industry.

**Innova fund to have animal health interest**

**BY JOSEPH HARVEY**

US venture capital firm Innova Memphis is to use investment from its latest fund to stoke early-stage companies across different agricultural sectors, including animal health.

The Innova Ag Innovation Fund IV is a $31 million platform focusing on investments “anchored in rural America”. Innova said the fund will work with national farm organizations and other partners to identify companies with high growth potential in the agricultural technology sector.

More specifically, the fund will focus on technology-based solutions “to solve real-world problems faced by today’s farmers”.

While Innova Ag Innovation Fund IV will look to fund opportunities in areas such as farming technology, crop production and chemicals management, it will also apportion its time to seeking early-stage businesses in the food security and animal health industries.

Investment for the fund came from Farm Credit Mid-America, AgriBank, AgStar Financial Services, CoBank, Farm Credit Bank of Texas, Farm Credit Services of America, FCS Financial and Farm Credit of Western Arkansas.

Innova has made investments in the agtech sector and human health sector before – the company’s portfolio can be seen [here](#). However, it has yet to make its debut financing in the animal health sector.

**Nutreco to boost US presence with $30m site**

**BY MAX GREEN**

A subsidiary of Dutch feed producer Nutreco plans to build a $30 million feed additives plant in the US.

Micronutrients, a business acquired in 2015 by Nutreco, said the new facility will be located in New Castle, Indiana.

The new facility will allow Micronutrients to increase its production of hydroxy trace minerals, which are sold under the Intellibond brand. Micronutrients said it plans to break ground on the new plant in late 2017, paving the way for operations to begin in early-to-mid 2019.

“Indiana was originally chosen in 1994 as it was the home base for the overall corporation,” said Ted Moore, vice president of operations at Micronutrients.

“Continued expansion in Indiana, specifically New Castle, is for an entirely different reason. While there is something to be said for having current operations nearby, the primary reasons for the New Castle location decision were the cooperative nature of the state and local governments and, most importantly, the quality workforce that is available in Indiana.”

The Indiana Economic Development Corporation offered Micronutrients up to $500,000 in conditional tax credits based on the company’s job creation plans.

The new plant further establishes Nutreco’s position in the US after it purchased Hi-Pro Feeds, a company with operations in western Canada and south west US, earlier this year.

Max Green is the Meat and Livestock editor for Agra Europe, a sister publication of Animal Pharm.
Tech driving animal health market value, says report

BY SIAN LAZELL

According to new research, the global animal health market is expected to hit $58.4 billion by 2025. This would mean the industry will have doubled in size over the course of 10 years from 2015, according to Animal Pharm estimates. Should this figure be reached in 2025, the industry will have experienced yearly growth of around 5% per year.

A report by Research and Markets claims the value of the animal health sector is particularly being driven by technological advancements in veterinary care, including information networks for identifying emerging diseases.

It added that veterinary health information systems, especially in developed economies, are expected to provide high growth potential in future. The report explained data generated in veterinary clinics and real-time analysis of information can be shared via these internet-based systems with other researchers and clinicians.

Therefore, the authors of the report presume there will be a “significant improvement in the overall penetration rate of animal health products” due to more efficient monitoring of disease prevalence. The report believes increased disease monitoring will fuel demand, as well as boost revenue “to unprecedented heights”.

The report also expects vaccines to have a “lucrative growth rate”, due to a significant increase in the pet population. In fact, it states the companion animal market is expected to grow at an “exponential rate”, largely because of the benefits associated health benefits for humans that own pets.

In 2015, North America held the largest stake in the global animal health market due to the local presence of established pharmaceutical companies, working towards extensive commercialization of their respective products.

However, the report projects Asia Pacific to grow at an “exponential” compound annual growth rate, due to an urgency to curb the high incidence of zoonotic diseases and management of disease outbreaks in the region, including swine flu and Ebola.

The report additionally stated the key players will look to employ sustainability strategies, such as expanding their portfolios to “gain competitive advantage”. It cited Merial’s deal with Zoetis in March last year as an example. The agreement saw Merial and Zoetis sign an exclusive marketing and distribution agreement for the latter’s medicines and vaccines for dairy cattle in India.

EU reveals new Animal Welfare Platform

BY MAX GREEN

After a three-month selection process, the European Commission has revealed the make-up of the EU’s new Animal Welfare Platform which holds its inaugural meeting early next month.

A total of 75 members have been chosen, ranging from large intergovernmental groups to European meat industry bodies and non-governmental organizations. The platform features 10 animal welfare organizations, including Compassion in World Farming, Eurogroup for Animals and Humane Society International.

The initiative also includes a similar number of meat, dairy and aquaculture groups, such as the Association of Poultry Processors and Poultry Trade in the EU, meat processing body Citravi and the European livestock and meat trading union, the European Livestock and Meat Trading Union.

Other members include umbrella EU farm lobby Copa Cogeca and the Federation of Veterinarians of Europe, while the feed sector is represented by industry body FEFAC. The European Food Safety Authority is also represented but the European Parliament is not.

Balance sought

During the selection process, the European Parliament’s Intergroup for Animal Welfare raised concerns over this lack of representation for members of European Parliament (MEPs). While supportive of the new platform, the group also warned against allowing a “predominant group of stakeholders” to “misuse” the platform for their own purposes, stressing that the final composition should be “truly balanced” to reflect the key objective of promoting animal welfare.
In a debate in March, EU Health and Food Safety Commissioner Vytenis Andriukaitis said the platform would bring in people with “real know-how on the ground”. He then explained that horizontal rules preclude MEPs from being full members of the platform.

Additionally, 10 independent experts are included on the platform – as are large international organizations like the UN Food and Agriculture Organisation, the World Bank and the OIE. Each EU member state has its own representative while Switzerland has observer status.

**Focus on implementation**

The EU executive in January adopted the creation of the platform, which aims to improve standards across the EU without resorting to new legislation, after laying out the plans in November 2016.

The European Commission said the new platform will push for better application of EU animal welfare rules through the exchange of best practices, the development of voluntary commitments by businesses and the promotion of EU animal welfare standards at global level.

Some MEPs and campaign groups believe this approach is too weak, calling instead for new legislation and a follow-up to the EU’s 2012-2015 animal welfare strategy.

The new platform will hold its inaugural meeting on June 6 in Brussels. The full list of members can be found [here](#).

Max Green is the Meat and Livestock Editor for Agra Europe, a sister publication of Animal Pharm.

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**ECO shares surge after results forecast**

**BY JOSEPH HARVEY**

Shares in UK firm ECO Animal Health have jumped to their highest ever valuation after the company predicted a strong full-year financial performance.

The company’s shares reached 565p each on the London Stock Exchange’s Alternative Investment Market – the highest price in 15 years of trading.

The New Malden-based firm now has a market capitalization of around £325 million ($420 million).

ECO prompted this surge in share price with a statement suggesting: “The group is likely to exceed the market expectations for revenue and significantly exceed the market expectations for pre-tax profit for the year ended March 31, 2017.”

The company will report its full-year results on June 30, 2017. ECO will be looking to maintain the strong showing it recorded for the first half of the year, when it posted a 20% improvement in sales. ECO’s growth is being driven by demand for its lead product Aivlosin – a medicated feed additive formulation for food animals.

ECO is growing turnover by taking Aivlosin to a wider international customer base. The most recent approvals for Aivlosin were in Mexico, Brazil and Thailand.

A range of the top UK animal health firms are experiencing high share process at the moment, largely due to solid financial performances. Earlier this year, Animal Pharm reported how ECO, Animalcare and Dechra Pharmaceuticals – all specialists in veterinary generics – are performing well.

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**RUMA adopts EMA antibiotics list**

**BY SIAN LAZELL**

The UK’s Responsible Use of Medicines in Agriculture Alliance (RUMA) has officially adopted the EMA’s list of highest priority critically important antibiotics (CIAs).

CIAs included on the list have been identified as such because of their degree of risk to human health should antimicrobial resistance develop after their use in animals.

Lists of highest priority CIAs published by the WHO, the US FDA and the EMA vary, causing debate over which ones should be observed. RUMA said it made the decision to adopt the EMA’s list following discussions with its members and the Veterinary Medicines Directorate, which follows the EMA’s recommendations itself.
Under the concept of One Health, the decision means the UK farming industry should aim to reduce the use of fluoroquinolones, third and fourth generation cephalosporins, and colistin. These antibiotics should only be used when no other product will be effective.

RUMA said these antibiotic groups will also be a key focus for its ‘Targets Task Force’ which is due to report goals for reducing antibiotic use in each livestock sector in October this year. The Targets Task Force was proposed by RUMA after the O’Neill Review on Antimicrobial Resistance’s final report was published in May 2016. The UK government responded to the O’Neill report by backing the move for industry to develop its own sector-specific targets, asking for these to be confirmed by the end of 2017.

John FitzGerald, secretary general of RUMA, said: "The conclusion is that in the UK, the list of highest priority CIAs should reflect the recommendations of the EMA’s Antimicrobial Expert Group.

“This group, comprising a wide range of specialist European organizations, has made its recommendations after examining the impact the use of antibiotics in animals has on public and animal health in the EU, and measures to manage the possible risk to humans. Most importantly, the EMA’s recommendations are re-assessed as new science emerges.

“However, in some cases particular sectors may choose to add other classes of antibiotics where they feel additional monitoring is needed.”

RUMA said sales of antibiotics on the EMA’s highest priority CIA list represent a small proportion of the 56mg/PCU total antibiotic use in livestock.

According the UK government: “The mg/PCU is a unit of measurement developed by the EMA to monitor antibiotic use and sales across Europe, which has also been adopted by the UK in its national reports.

“PCU refers to the ‘Population Correction Unit’ and takes into account the animal population as well as the estimated weight of each particular animal at the time of treatment with antibiotics.”

RUMA said UK veterinary sales data show the industry had already shown improvement in cutting the sales of both fluoroquinolones and third and fourth generation cephalosporins between 2014 and 2015.

Colistin sales were static during the same time but the figure was around 10% of the EMA’s recommended level of use. RUMA added voluntary restrictions at the end of 2015 – following the development of resistance to colistin internationally – mean that 2016 sales data, to be published at the end of the year, should show reductions in colistin use.

Ceva gets authorization for combination vaccine

BY JOSEPH HARVEY

Ceva Santé Animale has been granted new claims in Europe to use its Cevac Ibird and Cevac Mass L vaccines in combination against infectious bronchitis virus (IBV) in chickens.

Together, these two vaccines offer nine weeks of immunity against IBV for broilers and layers.Ceva pointed out this timeframe is crucial, as up to 40% of broilers are now reared for 8-9 weeks.

The French firm said evolving consumer demand “for more taste from ethically-reared birds” has prompted poultry producers to adapt the way they rear their birds. Ceva said combined vaccination will simplify programs for layer pullets with less re-vaccination required during the rearing period.

Ceva’s combination spray vaccine is also able to reduce the virus load in the trachea. The company’s head of poultry marketing, Dr Pascal Paulet, explained: “Achieving simple disease protection through vaccination is no longer enough, the new standard means that today’s vaccines must also be capable of reducing overall disease pressure by minimizing circulation of field viruses.”

The new claims for the IBV vaccines give added weight to the firm’s Cevac portfolio, which is being used to tackle IBV globally. Earlier this year, Ceva’s US business launched a new live monovalent poultry vaccine – Cevac IBron – to combat the Georgia strains of IBV in poultry.

Ceva vaccines are also being used to tackle avian influenza in countries such as Mexico.
Jaguar revenues pushed up by Elanco deal

BY SIAN LAZELL

Jaguar Animal Health has recorded revenues of $0.82 million in the first quarter of 2017.

The figure is a massive increase on Q1 2016, when revenues totalled $38,146. The total recorded in Q1 2017 consists of $74,544 in product sales and $747,866 in collaboration revenue. Jaguar signed a deal with Elanco for its Canalevia treatment for chemotherapy-induced diarrhea in dogs in January – one such deal which had played into its collaborative revenues.

More recently, Jaguar entered an exclusive evaluation period with a ‘leading multinational animal health pharmaceutical firm’ for Equilevia – Jaguar’s product candidate for equine gastric ulcer syndrome.

In the first quarter last year, Jaguar’s revenue only came from products sales.

R&D expenses were down 28% to $1.25m in Q1 2017, whilst total operating expenses and the San Francisco-based firm were up 26% to $4.7m. Net loss also increased by 18% to $4.7m.

As of March 31, 2017, Jaguar had cash and cash equivalents totalling $1.2m. During the same time last year, this figure stood at $7.2m.

Jaguar recently selected a new chair for its scientific advisory board. Dr Pravin Chaturvedi has been appointed chair of Jaguar and Napo Pharmaceutical’s combined scientific advisory board, following the expected close of the proposed merger of the firms.

Dr Chaturvedi has been involved in the development of seven drugs, including Napo’s Mytesi, which Jaguar will gain access to upon completion of the proposed merger.

Norbrook introduces dog pain relief tablets to US

BY JOSEPH HARVEY

UK company Norbrook Laboratories has grown its Carprieve (carprofen) portfolio in the US by launching a chewable tablet version of the drug onto the market.

Norbrook sells Carprieve Injection and Carprieve Caplets in the US. It has added a flavored chewable tablet, which recently received US FDA approval.

Carprieve Chewable Tablets provide veterinarians with an easy-to-administer option for the relief of pain and inflammation associated with canine osteoarthritis. The product is a generic non-steroidal anti-inflammatory drug (NSAID) and is also indicated for the control of postoperative pain associated with soft tissue and orthopedic surgeries in dogs.

It is a generic version of Zoetis’ Rimadyl (carprofen) pain relief product. According to Jonathan Whitt, marketing manager for Norbrook’s companion animal division in the US: “Carprofen is one of the most widely prescribed NSAIDs used in the management of joint pain associated with osteoarthritis as well as post-operative pain associated with soft tissue surgeries like spaying, neutering and dental procedures.

Newry, Northern Ireland-based Norbrook is currently aiming to expand its product portfolio in the US. In January, the firm added a new national sales manager for its US division.

While the US is a particular area of focus for Norbrook, the company is currently expanding its business worldwide.

A spokesperson for Norbrook told Animal Pharm: “We are investing across the business globally. Projects include a new laboratory block completed on one manufacturing site in Newry and another due for completion later this year. We are also investing in our IT systems, our manufacturing suites and in new product development.

“For Carprieve Chewable Tablets, we have invested in both new manufacturing and packaging equipment to help demonstrate our commitment to growing our companion animal product portfolio in the US.”

In fiscal 2016, Norbrook reaped the benefits of its global expansion. In North America, sales increased by 16%. North America accounts for 28% of Norbrook’s annual revenues.
Pirbright says PPRV poses increasing threat

BY MALCOLM FLANAGAN

The UK’s leading animal disease research body the Pirbright Institute said peste des petits ruminants virus (PPRV) is posing an increasing threat to sheep and goats in Europe.

The Surrey-based institute said coordinated vaccine strategies are urgently needed to combat the spread of PPRV, a neglected but devastating livestock disease. PPRV, also known as goat plague, is a highly contagious disease which can have a mortality rate as high as 90%. Cattle and pigs can be affected too but tend not to develop clinical signs.

Pirbright said PPRV is now prevalent throughout Asia, the Middle East and Africa. It has been targeted for eradication by 2030 by the FAO and the OIE.

Although it remains unclear why the spread of PPRV has been so persistent since its discovery in West Africa in 1942, Pirbright scientists have concluded the lack of a coordinated vaccine strategy has enabled the virus to spread so that it now poses a real risk to Europe via contaminated vehicles returning after transporting animals.

To help improve their understanding about the progression of the virus, Pirbright researchers analyzed the spread of PPRV from eastern Africa to the Maghreb region of North Africa. They isolated and characterized the virus from outbreaks on two farms in northern Algeria in October 2015 and sequenced its full-length genome. Researchers then compared this to the circulating strain of the virus within northern and eastern Africa, as well as globally.

Their analysis revealed one particular lineage of the virus spread along known animal movement routes from east Africa into northern Africa. The presence of the same virus in subsequent outbreaks in Algeria, Morocco and Tunisia suggests a continual regional circulation, despite mass vaccination efforts in Morocco.

This research was funded by the Biotechnology and Biological Sciences Research Council and the European Commission. Professor Satya Parida, study leader and head of the vaccine differentiation group at Pirbright, said: “PPRV is a neglected disease and has inconsistent vaccination strategies, coupled with porous national borders in the North Africa region where there is significant illegal animal trade.

“This has enabled the virus to persist and spread. Safe and effective vaccines are available for PPRV and there is an urgent need for a more coherent approach to vaccination both regionally and globally.

“The continuous circulation of PPRV in the Maghreb region of North Africa and its recent move towards the northern part of Algeria and Morocco approaching Gibraltar and the extensive trade links with Europe (Spain, France and Italy), has increased the risk of an incursion into Europe and is a significant concern.

“The strict regulation of live animal imports into Europe means the risk of incursion in this way is unlikely, but the transport of animals from Europe to the Maghreb region, particularly towards the end of religious festivals like Ramadan means there is a chance the virus could be transmitted via returning trucks used for transporting animals, and possibly through illegal meat imports. Therefore, the effective cleaning and disinfection of vehicles used to transport livestock is essential before they return to Europe, as well as strong customs and quarantine control at sites of entry to Europe from North Africa.”

In 2015, the global cost of eradicating PPRV was estimated at between $7.6 billion and $9.1bn over a 15-year period. Dr Jonathan Rushton, then professor of animal health economics at the UK’s Royal Veterinary College, calculated the figures after analyzing the cost to 99 countries involved in the program, which was agreed at an earlier FAO/OIE International Conference for the Control and Eradication of PPRV in Abidjan, Cote D’Ivoire.