

Animal Health: Delivering Solutions to Achieve a One Health World

Effective prevention and control of infectious diseases at the animal-human-ecosystem interface is essential. It will help combat the spread of diseases in animals and humans, ensure a safe and secure food supply, and foster a more sustainable society. The World Organisation for Animal Health (OIE) reports that at least 60% of all human infectious diseases have their origin in animals, and that increased transparency of animal health situations globally can contribute to better public health.

The animal medicines industry shares this view and it is one that has also been recognised by the European Commission and other international bodies in recent policy decisions – such as the 2016 EU Regulation on transmissible animal diseases and the 2017 EU One Health Action Plan against Antimicrobial Resistance. These *One Health* policies will have a role to play in how we address the emergence of multi-species health concerns and the spill-over of infectious diseases, and will ensure that appropriate control and prevention measures are taken.

The *One Health* approach prioritises quality of life for humans and animals and recognises that healthy animals mean healthy people and a healthier planet. But what does this mean in practice and what steps need to be taken by the different sectors involved in order to realise the One Health vision?

Animals and Humans are Mutually Dependent

As people, we depend on animals for companionship, assistance and leisure as well as for food and other products, such as wool and leather. No matter how well we care for our animals, just like us, animals get sick and we have a responsibility to care for them and provide them with the correct care and treatment they need in order to get better. Our entire food chain could simply not function without animal medicines to prevent and treat disease. Without these medicines it would be impossible to raise livestock or to care for family pets and assistance animals while maintaining public health.

Farmers, vets, the food industry and pet owners rely on the animal medicines industry to keep animals healthy and protect their welfare. Thanks to the health protection that their solutions provide, we are able to raise livestock efficiently and effectively and to produce quality, animal products such as milk, meat and eggs that form some of the essential ingredients of a nutritious diet.

The reciprocal relationship between animal health and people's lives today can be even better understood when we consider that over the past three decades, approximately 75% of new emerging human infectious diseases have been zoonotic, meaning they can pass from animals to people. This was certainly the case with recent diseases such as Middle East respiratory syndrome-coronavirus (MERS-CoV), severe acute respiratory syndrome (SARS), and Zika virus, which have hit news headlines across the globe. Preventing and controlling zoonotic disease is essential in

protecting people and animals and is a core priority for the animal medicines industry.

In sum, medicines which keep animals healthy also keep people healthy, allowing for close companionship with pets and ensuring sustainability throughout the food chain from farms and the rural economy, right through to the food products we buy and consume every day.

Innovation is Essential

The sheer variety of species and range of diseases and treatments means that innovation in animal medicines and vaccines is crucial. Not only is it vital for the sustainability of European agriculture, but for the sustainability of our whole society. Finding a balance between the interests of animals and people is essential. Certainly we have a responsibility to use veterinary medicines correctly and indeed, 24% of all medicines sold in Europe are vaccines used to prevent disease and suffering in animals. As outlined in the EU Animal Health Strategy (2009–2013), we believe that prevention is better than cure in ensuring the health of both humans and animals.

Keeping ahead of the curve and being prepared to respond to new diseases and strains that emerge is an ongoing challenge for society and the animal medicines industry. Our increasingly global economy and food chain means that we are facing new threats, such as African swine fever and lumpy skin disease, and the avian flu variants on a regular basis. These need to be managed efficiently and effectively in order to maintain optimal health for all species.

And health is not the only concern here. Control measures imposed, such as the culling of animals, and the ensuing carcass management and risk reduction practices, can have an impact on the environment. Other associated costs, such as trade restrictions or bans placed on selling animal produce after disease outbreaks, can also have a major impact on the wider economy.

The recent emergence of lumpy skin disease (LSD), for example, led to the culling of around 6000 animals in Greece in 2016 alone. And at the height of the disease's spread in Europe, affected countries registered up to 200 outbreaks, which led to significant economic losses – due to drops in milk production and reduced quality of skins – and the death of up to around 15 per cent of the affected herds, according to the United Nations Food and Agriculture Organisation (FAO).

Following mass vaccinations, the European Food Safety Authority reported that the LSD outbreak in Europe was contained in April 2017, but authorities in Albania, Greece and Macedonia have been reporting a disease resurface in recent months. With such outbreaks, the importance of animal disease knowledge and the availability of preventive tools and widespread implementation of control measures are essential, along with the ever-important monitoring of disease occurrences. In the case of LSD, the FAO is recommending that countries that have not been affected by the disease so far but are considered at risk, need to

carry out risk-based vaccination to avert the spread of the disease, which can have devastating consequences for farmers, particularly for smallholders.

Maintaining existing solutions to address regular disease occurrences is important, and ensuring that new tools to address new diseases are available to vets, farmers and pet owners, is vital. The world evolves, and so do bacteria and pathogens. Diseases travel, mutate, jump species, new ones are born, and some have as yet not been able to be treated. This means that the existing medicines available need to be handled responsibly – as little as possible, as much as necessary. However, it also means that the European and global animal health industry needs to keep developing new and innovative products.

It is also crucial to understand where the gaps in knowledge lie, and to know how to prioritise research. In Europe, DISCONTTOOLS (www.discontools.eu) was set up to do just that. It is a platform, initially funded by the EU, and led by AnimalhealthEurope (at the time IFAH-Europe), which started in 2008 to help drive the delivery of new and improved diagnostics, vaccines and pharmaceuticals to improve our ability to control animal diseases. Deploying new technologies in the animal health area as rapidly as possible is another of the platform's objectives and it is developing a blueprint for the identification and evaluation of new technologies.

The use of biotechnology and cutting-edge research means that in the future, new vaccines can be developed – e.g. against diseases for which it is currently impossible to vaccinate. It will allow more effective and simple ways to protect animals against two or more diseases with just one product, enabled through a wide variety of administration routes (water, baits, air spray, eye inoculation, intra-nasally, through skin (needle-free), etc). The use of biotechnology will also provide improved stability of animal health products which can reduce the need for the cold chain, which in turn means that more animals can be included in vaccination programmes in developing countries – thereby helping to eradicate diseases, increase food availability and secure the livelihood of farmers.

However, finding solutions to meet our One Health vision requires an environment which stimulates innovation. At the moment it takes between eight and 10 years to bring a product to market. This is speeded up in cases of disease outbreaks, where the authorities and regulators can cut through the paperwork and red tape, and much-needed vaccines, for example, can be on the market in two years. However, even then there are limits, as the products are only given temporary licences to deal with the outbreak.

The administrative burden involved in bringing veterinary medicines and vaccines to the market under the current EU regulatory framework is, to put it bluntly, not stimulating innovation and needs to be addressed.

Strong Legislation can Bring Speed and Wider Treatment Options

So how do we safeguard and encourage innovations to protect and promote this virtuous circle? Well, we need to start with a positive and encouraging legislative environment and a regulatory process that safeguards consumers. This is vital to ensure innovation and the availability of animal medicines which protect both animal and human health. It is also essential in driving business performance and contributing to a vital industry.

AnimalhealthEurope and its members are working alongside the EU institutions to ensure that the industry can operate in an environment which is well managed and regulated and which gives companies the confidence to invest in the development and marketing of new products and technologies. In Europe, we have a well-established system where veterinary medicines only reach the marketplace after thorough testing to assure their efficacy, safety and quality, and of course after review by the relevant government authorities.

This process is currently under review and the revision of the regulations on Veterinary Medicinal Products and Medicated Feed promise to be very supportive of the One Health, One Europe approach. The updated legislation must streamline procedures and so relieve some of the administrative burden while also speeding up the whole process of bringing innovations to market. The intention must be to foster innovation and prompt a wider choice of treatment options – supporting the animal health industry to innovate more and supporting a wider availability and scope of treatments.

The animal health industry in Europe is committed to delivering on its objectives to further invest in innovation to ensure the availability of a reliable arsenal of animal medicines for more sustainable prevention and treatment of animal disease. This can be aided, of course, by the European institutions who are working to ensure that the forthcoming legislation on animal medicines and medicated feed will meet the objectives set out by the European Commission, which are to:

- Increase availability of veterinary medicines in all markets, for all species;
- Reduce administrative burden;
- Improve the functioning of the internal market;
- Address the public health risk of antimicrobial resistance (AMR).

Fostering innovation through a more harmonised system, where resources are invested in R&D instead of in administrative tasks, will be an important first step. It will mean that new medicines can be developed to fill the gaps in animal treatment options that at present either don't exist or are not available in certain markets. By putting in place more efficient procedures to authorise medicines in exceptional situations, this paves the way for greater preparedness in the case of disease outbreaks in the future.

This has got to be good news for all of Europe's citizens, whether they have skin, feathers or fur, and whether they walk on two legs or four.



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With membership covering 90% of the European Market, AnimalhealthEurope represents innovators and generics alike, as well as large, medium-sized and small companies.

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