THE SCIENCE OF HEALTHIER ANIMALS
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INTRODUCTION

THE SCIENCE OF HEALTHIER ANIMALS®

MSD Animal Health is the leading animal health company in the United Kingdom. We offer one of the industry’s most innovative portfolios to prevent, treat and control diseases across all major farm and companion animal species.

Our mission - THE SCIENCE OF HEALTHIER ANIMALS® - guides all of our work. Healthier animals mean a sustainable food supply, protection for humans against zoonotic diseases [spread between animals and people] and longer, happier lives for pets.

We know that veterinary surgeons, farmers, pet owners and other animal health professionals want to do the best that they possibly can for the animals they care for. And yet the challenges we face are wider, more complex and evolving faster than ever, not least being how animal health connects with our own. We are committed to providing the products, technologies, services and insights to help meet their needs.

We always remember that the work we do is essential to the safety and sustainability of food production, and to human health. We provide vital solutions that producers of all kinds of animals need for disease prevention and sustainable, efficient production.
Vaccinations in particular are crucial to improve the health and welfare of animals, reduce the need for antibiotics and help halt the spread of highly infectious pathogens.

The UK is a nation of pet lovers and our furry friends are important members of our families. Pets trust us, comfort us and provide invaluable companionship to millions of people across the country. We never forget how important our work is to these people and the animals they love. Vaccines that protect pets from dangerous and zoonotic diseases, medicines for age-related diseases, and more convenient and effective parasite control are all part of our mission to protect the health and well-being of our companion animals.

Whatever we do to help people and the animals in their lives, one thing is clear: no business or government can meet these challenges alone. We need and appreciate the joint effort, expertise and insight of all of our stakeholders, customers and partners.

Together we will continue to deliver our mission – THE SCIENCE OF HEALTHIER ANIMALS®.
**INTRODUCTION**

**Timeline**

**1843**
William Cooper produced a sheep dip preparation which could be standardised in composition and quality as well as easily stored, packaged and transported. Cooper’s work laid the foundation for our Animal Health business.

**1871**
Schering establishes the company Chemische Fabrik auf Actien, which adopts the name Schering AG in 1932.

**1933**
The founder’s son, George W. Merck, launches major new research laboratories in Rahway, New Jersey.

**1953**
The merger with Sharp & Dohme brings to MSD important new expertise in biologicals and vaccine research along with global distribution.

**1957**
A foundation is created to manage the company’s growing philanthropic endeavours.

**1851**
Dr Ernst Christian Friedrich Schering begins developing and selling pharmaceutical products in Berlin. Three years later, the company opened its first production facility.

**1891**
Leaving Darmstadt, Germany, George Merck arrives in New York and establishes Merck & Co., Inc. (The company is known as MSD outside of the USA and Canada.)

**1949**
Intervet is established in Boxmeer, Netherlands. The headquarters for the company remained there until 2012, before moving to New Jersey.

**1955**
The first edition of the company’s Veterinary Manual is published.

**1985**
New vaccine breaks through the levels of maternally derived antibodies that were present in puppies at 12 weeks of age, a revolution in the history of canine vaccines.

**1992**
The company received the National Medal of Technology, the highest honour awarded by the U.S. president to the nation’s leading innovators.

**1997**
New vaccine offers cross protection against pasteurella and clostridia - very common causes of sheep deaths.

**THE SCIENCE OF HEALTHIER ANIMALS®**
2000
In-feed treatment of sea lice on farmed salmon launched - improving economic viability and sustainability of salmon industry.

2003
Rabies vaccine launched in the UK and began the start of a collaboration with rabies eradication organisations. To date MSD Animal Health has donated more than 2.5 million doses.

2006
Revolutionary needle-free vaccinator introduced which delivers vaccines intradermally to pigs. This removes the pain of injection and is easier and safer for the operator.

2007
Schering-Plough acquires Organon Biosciences, owners of Intervet.

2009
MSD and Schering-Plough merge to create a stronger, more diverse global healthcare company.

2011
Ken Frazier is appointed as Chairman and CEO.

2012
Launch of the first European tetravalent canine vaccine against leptospirosis covering against a wider spectrum of serovars responsible for this disease in dogs.

2014
MSD Animal Health leads the new generation of systemically active ectoparasiticides, the isoxazolines - creating the first product to provide 12 weeks tick and flea protection from a single oral dose for dogs.

2017
Release of breakthrough product to control red mite infestations in chickens. It is delivered through the drinking water - which removes the stress caused by conventional sprays and avoids farm workers' exposure to chemicals.

2017
First ever dual-construct turkey herpesvirus (HVT) vaccine released, offering protection against three important infectious diseases that threaten today's commercial poultry operations - Newcastle Disease, Infectious Bursal Disease and Marek's Disease.

2018
Launch of the first long lasting ectoparasite vaccine combined with broad spectrum worm protection, making it even easier to protect cats from parasites in a single dose.
PREVENTATIVE HEALTHCARE

Preventing Disease

At MSD Animal Health we know that preventing disease amongst animals is essential to improving their health and welfare. We can achieve this through a number of means, such as improving the use of vaccines, diagnostics and management practices; and better understanding and mitigating risks from the environment.

Antibiotics are used across the animal health industry for both livestock and pets, but increasingly awareness is being raised to reduce reliance on these vital medicines in order to maintain an effective treatment portfolio for generations to come. Our Time to Vaccinate initiative and Preventative Healthcare Challenge support the industry to do this without compromising animal health or welfare and by using a selection of management practices which focus on disease prevention strategies.
TIME TO VACCINATE
Through Time to Vaccinate, we work with stakeholders to raise awareness of the potential for vaccination to control or prevent infection across a range of key livestock diseases and as a result, produce healthier stock, improve efficiency and productivity, and reduce the need for antibiotics in the agriculture sector.

Our white paper, Time to Vaccinate – Looking Beyond Antibiotics, is a collaboration between leading animal health experts which provides a comprehensive analysis of the scientific evidence in favour of vaccination and other preventative healthcare measures, helping to reduce the need for antibiotics. It identifies opportunities to raise vaccination rates across the cattle, sheep and pig industries and is a call to policy makers to support farmers in looking beyond antibiotics.

Time to Vaccinate emphasises that there should be a focus on controlling infectious diseases through proactive and robust prevention programmes in which vaccines play a crucial role. Through the campaign, we hope that farmers and their veterinary surgeons feel empowered to make informed decisions about vaccination as part of their overall animal health plans.

PREVENTATIVE HEALTHCARE CHALLENGE
The Preventative Healthcare Challenge (PHC) is our nationwide campaign designed to place preventative healthcare and the well-being of healthy pets at the heart of vet practices’ everyday activity. The PHC focuses on developing the relationship between the vet and pet owner by establishing the vet practice as the primary source of advice and information for the owner on all aspects of pet healthcare. We are championing a truly holistic approach that goes beyond the widely recognised aspects of preventative healthcare such as vaccination and parasite control, to include all risk factors that impact on a pet’s health and well-being.
MSD Animal Health runs a number of disease awareness initiatives to support vets, farmers and pet owners to improve the health of animals in the UK.

BIG TICK PROJECT
In conjunction with the University of Bristol we conducted the largest ever veterinary study of ticks and tick-borne disease in the UK. The project aims to raise awareness about the dangers of ticks, tick-borne diseases and to educate pet owners on how to protect their pets from them.

BIG FLEA PROJECT
The Big Flea Project was launched following the success of the Big Tick Project. Vets were asked to examine five random dogs and cats per week for fleas and send in their results to the University of Bristol to analyse and record. Using these results the project aims to ensure that both vets and pet owners have all the information they need to fight the flea threat.

KEEPING BRITAIN’S HORSES HEALTHY (KBHH)
We are dedicated to minimising the risk of illness and disease in the one million horses stabled throughout Britain. KBHH is a national campaign aiming to bring together the vet, yard owner and horse owner to ensure that best practice is shared and adopted. By providing equine vets and horse owners with support and resources, we aim to improve preventative healthcare and its practices amongst Britain’s horses.
DISEASE? NOT ON MY FARM!
Disease? Not on My Farm! is an initiative that encourages farmers to take a positive attitude to disease prevention on farm. The initiative aims to increase disease prevention by encouraging farmers to work with their vet to assess the risk of disease for their stock; prevent disease by reducing these risks; and improve overall health, welfare and productivity on their farm.

PROJECT LAMB
Project LAMB (Loss Avoidance for Maximum Benefit) is an initiative designed to promote a proactive approach to flock health planning, helping to sustain a healthy flock of sheep. It offers help, advice and information to the UK’s sheep farmers to help them produce healthy lambs; focus on flock well-being; reduce time and resources needed to treat sick sheep; and meet the demands of both the consumer and the food chain.

CALF HEALTH CHECKLIST
Improved calf health leads to reduced losses and improved growth rates which can improve farm profitability and job satisfaction. The Calf Health Checklist is a tool designed to help vets work closely with farmers to improve calf health on farm. The checklist records and scores calf health performance across key areas, allowing the vet and farmer to easily identify the strengths and weaknesses of a rearing unit’s environment and processes. This information is then used to develop a workable action plan to improve overall calf health on farm.
RUMINANTS

Cattle

All those involved in the livestock industry are responsible for the health, welfare and productivity of food-producing animals, and for the quality and safety of the food that these animals produce.

At MSD Animal Health we work closely with farmers, vets and governing bodies to create a sustainable, healthier and more efficient future for farming.

Beef and dairy production is big business for UK farmers and there are various challenges that they face in maintaining healthy cattle. With fewer natural resources and changes in our climate, it is important to develop sustainable solutions that farmers can use to increase productivity and ultimately, protect the future of farming.

MSD Animal Health’s commitment to cattle farming starts at the youngstock phase. Bovine respiratory disease (BRD) and scour are two prominent diseases which can be hugely detrimental to calf development and farm productivity. We provide preventative solutions through products and guidance to support farmers in keeping their youngstock healthy.

Bovine viral diarrhoea (BVD) and infectious bovine rhinotracheitis (IBR) are two highly contagious viral diseases posing a risk to animal health and welfare, and to farm productivity. BVD and IBR cause symptoms such as decreased milk yields and poor fertility, and cost the UK cattle industry millions of pounds every year. MSD Animal Health is committed to supporting farmers to implement preventative healthcare strategies which will reduce the risk of BVD, IBR and other diseases from spreading on farm.

Our innovative tools, in-house expertise and broad product portfolio for youngstock and adult cattle enable farmers to produce healthy stock, maximise productivity and gain good returns. By focusing on preventative healthcare strategies and biosecurity, MSD Animal Health is dedicated to reducing the risk of diseases (that impact meat and milk yields) from spreading within UK herds.

THE SCIENCE OF HEALTHIER ANIMALS®
“Cattle can convert fibrous feedstuffs that aren’t digestible by humans into high quality milk and protein”
British lamb is in high demand so it is crucial for farmers to keep a healthy flock.

It has become increasingly important for the sheep industry to provide consumers with high quality, ethically sourced lamb which upholds transparency across the entire food chain, particularly for animal health and welfare standards.

MSD Animal Health helps sheep farmers to sustain healthy and effective lamb production by providing innovative solutions to prevent diseases commonly found in UK flocks. Our extensive range of products and services helps farmers to improve productivity and efficiency whilst maintaining good animal welfare.

Sheep lameness is a common condition which is prevalent in UK flocks, costing the industry millions of pounds per year. Sheep lameness and other widespread diseases are a major concern for both animal welfare and farm profitability. Our broad product portfolio and in-house technical expertise ensures that we can support sheep farmers to mitigate the risk of preventable diseases.

At MSD Animal Health we are constantly striving to find ways to make the lives of our UK sheep farmers easier. By working with key partners in the veterinary profession, as well as animal health advisors and governing bodies, we aim to minimise animal health challenges to increase efficiency and productivity on UK sheep farms.
“What is more iconic than spring lambs bouncing in the British countryside?”
COMPANION ANIMALS

Cats & Dogs

At MSD Animal Health we understand the importance that cats and dogs have in the lives of their owners.

We believe that pets deserve the best care - they keep us happy, healthy and love us unconditionally. From trusted companions to energetic playmates, our cats and dogs are dedicated friends and beloved family members.

Our pets give to us selflessly - day after day - but they also depend on us. To care for our cats and dogs, it’s important to provide proactive, preventative healthcare to keep them in great condition and offer key treatments for when they are not at their best.

Initiatives such as the Big Tick and Flea Projects are crucial in educating pet owners about the risks that parasites pose to our furry friends and what we can do to protect them. Through our in-house veterinary expertise and innovative portfolio of veterinary pharmaceuticals, vaccines and health management tools - we provide pet owners and vets with trusted solutions for each stage of life that our cats and dogs experience.

MSD Animal Health values the essential role that vets play in caring for our cats and dogs. Through several of our programmes, we provide veterinary professionals with valuable resources to support them in achieving our shared goal of ensuring that all pets live happy and healthy lives. Our commitments include partnering with StreetVet, a non-profit organisation that offers free veterinary care to pets whose owners cannot afford private vet fees; and supporting Dogs for Good, an accredited charity who train assistance and community dogs, as well as showing families how to build a valuable relationship with their precious pets.
“At MSD Animal Health, we trust our vets and love our pets”
COMPANION ANIMALS

Horses

For us, the horse is special. Majestic and beautiful, they have been invaluable throughout history. Horses provide transportation, companionship and competition, serving us nobly during war and peace. They deserve the best care.

Many people throughout the UK are actively involved with horses, either professionally or for pleasure. At MSD Animal Health we are constantly striving to improve the health, welfare and performance of the UK’s horse population by reducing the risk of illness and disease.

Our portfolio extends beyond products and includes a suite of educational resources available to both veterinary practices and horse owners alike. Through initiatives such as Keeping Britain’s Horses Healthy, we educate horse owners on disease areas and reinforce the relationship between the horse owner and their vet.

We have made it our mission to reduce the risk of illness and disease to Britain’s horses by focusing on the benefits of preventative healthcare and encouraging its adoption amongst owners. By engaging nationally and locally with vets, horse owners and livery yards, we will celebrate and recognise the role our national stable continues to play.

MSD Animal Health is committed to progressing our scientific understanding of equine immunology and disease processes. Our continued investment in new and innovative products ensures that we can continue to minimise illness and disease in the one million horses stabled throughout the UK.
“Horses are amazing and it’s our job to keep them that way”
INTEGRATED LIVESTOCK

Aquaculture

The UK produces around 200,000 tonnes of aquaculture annually. Salmon and trout are two of the most commonly farmed species of fish, with Atlantic salmon production in Scotland dominating UK aquaculture harvest tonnage and value.

The demand for fish protein is rising. Farmed fish is becoming more important to meet this demand, and to protect wild fish. Fresh fish is the fastest growing protein source in the UK, making it important for fish farmers to produce nutritious fish in a sustainable and responsible way.

At MSD Animal Health we are passionate about providing market-leading products and dedicated technical support to help drive forward higher standards in fish health and welfare management.

Fish, like all animals, are susceptible to viral and bacterial diseases as well as parasitic infections. An important viral disease affecting Atlantic salmon is Pancreas Disease, which can cause loss of production and mortality, therefore decreasing a fish farm’s profitability. Our range of products and solutions helps farmers to effectively manage fish health, welfare and safety at key points in the production cycle, and therefore mitigate the risk of disease on their farms.

MSD Animal Health is committed to providing preventative healthcare solutions and minimising the impact of disease among farmed salmon and trout. We work with stakeholders within the UK aquaculture industry to develop holistic, sustainable strategies to promote fish health and welfare and secure a productive and profitable future for the UK’s fish farmers.
“The aquaculture industry is continuously developing new specialist technologies to improve its environmental sustainability”
INTEGRATED LIVESTOCK

Poultry

Poultry accounts for nearly half of all meat eaten in the UK and collectively we consume over 10 billion eggs annually. The British poultry industry provides consumers with safe, nutritious and affordable food that is produced in an ethically and environmentally-friendly way.

MSD Animal Health is committed to providing the UK’s poultry producers with innovative approaches to prevent and tackle disease. Our portfolio of products and services helps farmers to mitigate the risk of disease and improve flock performance and productivity whilst upholding good standards of animal health and welfare.

Newcastle Disease (ND), Infectious Bursal Disease (IBD) and Marek’s Disease (MD) are three highly infectious diseases in poultry which affect a range of systems, including the nervous, respiratory, immune and reproductive systems of many species of domestic and wild birds. These highly contagious infections affect the health, welfare and productivity of poultry birds and can result in huge economic losses for poultry producers. To preserve the health and well-being of poultry and minimise production losses, we offer products and services that prevent the spread of parasitic, viral, and bacterial diseases within flocks.

To best meet the industry’s needs, we partner with our customers to improve disease prevention and overall flock conditions. We provide expert advice, training, flock health monitoring and auditing to vets, farmers and vaccinating teams to support the uniform and consistent administration of our vaccines and parasite control products, thus maximising the impact that they have.
“Today’s poultry industry demands innovative approaches to emerging diseases”
INTEGRATED LIVESTOCK

Pigs

Across the UK, there are millions of pigs that need protecting from diseases that threaten their health and welfare, and the quality of the pork that they produce.

The UK produces over 900,000 tonnes of pork each year. The pig industry serves mainly British consumers; however the international demand for British pork is increasing and contributes around £300 million to the UK’s pig industry. Thus, it is highly important for pig farmers to produce ethically sourced, nutritious pork for both domestic and global markets.

The UK is a world leader in pig welfare standards and MSD Animal Health is committed to ensuring that the UK’s pig farmers can maintain this high quality production. We provide innovative products and tools that pig farmers need to mitigate the risk of disease in their pig units and operate profitably.

Our extensive product portfolio includes a unique needle-free vaccinator, which allows specific vaccines to be administered directly into the pig’s skin. This makes vaccine administration easier and more efficient, saves time for farmers and minimises discomfort for the pig.

Pig respiratory disease poses a particular threat to the economic growth of the pig industry by reducing growth, increasing medication costs and raising mortality rates. It is caused by the interaction of many different pathogens and management factors, making it a complicated disease to analyse and control. MSD Animal Health leads the way in pig respiratory disease prevention and control by providing vaccines, diagnostic tools and technical support to deliver the best solutions across the UK.

MSD Animal Health works with vets, farmers and government bodies to secure a sustainable, profitable and healthy pork supply, with a strong focus on achieving excellent welfare standards.
“The UK is a world leader in pig health and welfare standards”
At MSD Animal Health we take our responsibilities to society extremely seriously and see them as key business priorities. We are involved in a number of initiatives in which our scientific expertise, products and people can really make a difference to everyday lives.

RABIES ERADICATION PROGRAMMES
Thousands of people around the world die from rabies annually, many of them children. MSD Animal Health is helping to reduce the risk of this 100 per cent preventable disease by donating our NOBIVAC® rabies vaccine to vets to vaccinate dogs across Africa and Asia.

FORGING THE LINK
MSD Animal Health is committed to raising awareness of the association between the non-accidental injury of animals frequently observed by vets, and the abuse of children or others in the home. The Links Group is a national working group aiming to raise awareness of the connection of violence. Our company joins leading authorities such as the RSPCA, NSPCC and Women’s Aid, educating those in the veterinary profession of this tragic link through seminars, educational booklets and contributions to existing resources such as the RCVS Guide to Professional Conduct.
MSD ANIMAL HEALTH RESEARCH BURSARY
For over 25 years, the MSD Animal Health Research Bursary has been dedicated to supporting the future of the veterinary profession through research. We provide bursaries for the best research projects proposed by veterinary students, student/qualified veterinary nurses, and companion animal and ruminant veterinary surgeons respectively.

BRAVECTO® CARE PROGRAMME
The BRAVECTO Care Programme aims to improve the lives of cats and dogs around the world. As part of the UK launch of our BRAVECTO Care Programme, we are working with StreetVet, a non-profit animal welfare organisation that provides free veterinary care to pets whose owners cannot afford private veterinary healthcare.

NOBIVAC® VACCINE PROGRAMME
The NOBIVAC Vaccine Programme provides free vaccinations to veterinary practices across the UK to vaccinate dogs and puppies for a number of accredited charities, including:

- Canine Partners
- Medical Detection Dogs
- Hearing Dogs for Deaf People
- DOGS for Good
- supportdogs
- Pedigree in Disability, Dog A.I.D.
MSD Animal Health is committed to providing a reliable supply of high-quality, safe and effective medicines and vaccines across the globe.

Animal diseases and issues can change rapidly. To ensure a quick response to local, regional and global diseases and concerns, MSD Animal Health has a presence in multiple markets around the world. Our facilities, along with those of our external contractors, suppliers and partners, make up an integrated, interdependent global manufacturing network in which our UK production facilities play a vital role.

In the UK we operate production facilities in Milton Keynes, Newbury and Graveley. Currently we produce over one billion doses of inactivated bacterial vaccines and live attenuated parasitic vaccines which are distributed to more than 50 countries globally.

We invest heavily in state of the art production facilities. Our latest development has been a new vaccine production facility in Milton Keynes.

Our commitment to product quality and safety procedures underpin our freedom to operate and are essential to our role as a global healthcare leader. We operate to current EU GMP (Good Manufacturing Practice), which ensures that the products we manufacture are of a consistent high quality, are appropriate for their intended use and meet the requirements of the marketing or clinical trial authorisation. We have also received multi-registrations for our Environment, Health and Safety management systems, including BSI PAS 99 certification which demonstrates the high levels of efficiency and compliancy that we adhere to.
Human Health

MSD is a top five global pharmaceutical company that has researched, developed and manufactured human medicines in the UK for over 80 years from our sites in Cramlington, Hoddesdon, Maidenhead, Scotland and London. Our heritage is rich in pioneering discoveries and medical milestones... our future promises even greater things.

Scientific invention is at the heart of what we do and today we are at the forefront of some of the world’s most urgent global population challenges, including oncology, hepatitis C, antibiotic resistance, Alzheimer’s disease, Ebola and cardiovascular disease.

Our people are our greatest asset - whether creating medicines to address the world’s most urgent health challenges, developing technology-based healthcare solutions, or ensuring a steady supply of essential vaccines, they all embrace the spirit of invention... relentlessly seeking innovative, novel and intelligent ways to help ensure healthier, happier lives for patients across the UK.

We create powerful partnerships because we know we can change the world but we can’t do it alone. Our much-valued collaborations with the NHS, leading universities, cutting-edge research bodies and non-profit organisations are inventing ways to transform healthcare in the UK and around the world.

We do it all for patients, their families, their friends – their lives. For us, vaccines and medicines are the greatest of inventions... the power they have to save, improve and extend the lives of individuals is immeasurable.

That’s why we’re ALL about “Inventing For Life”.

THE SCIENCE OF HEALTHIER ANIMALS®