Moredun leads global partnership to tackle fatal cattle disease

Moredun and NSA membership partnership

Moredun scholarship launched

www.moredun.org.uk
A very warm welcome to the winter edition of the Moredun magazine. November is a very busy time for Moredun as we are travelling the length and breadth of the UK on our annual Animal Health Roadshow where we discuss the latest scientific advances in helping to prevent and control diseases of livestock.

Moredun’s research leads to the development of novel diagnostic tools and vaccines to improve the health and welfare of livestock both in the UK and worldwide. I am delighted to have been appointed as Vice-Chair of the Board of GALVmed, the Global Alliance for Livestock Veterinary Medicines, which works to make livestock vaccines, diagnostics and medicines accessible and affordable to the millions of people in developing countries for whom livestock are a lifeline. The Board of GALVmed comprises individuals from across Africa, India and the EU who are committed to ensuring new technologies are identified, and new products developed and delivered to livestock keepers in resource-poor parts of the world.

GALVmed are also involved in a major new global partnership, led by Moredun scientists, to help develop a new vaccine to control a very serious disease, Haemorrhagic Septicaemia, affecting cattle, buffalo and camels across South and East Asia, Africa and South America; more information about this project is featured on page 8.

Moredun is keen to ensure that our research outputs are disseminated as widely as possible. One of our younger scientists recently embarked on a 6 week trip to India to demonstrate the use of new molecular technologies to help detect and track anthelmintic resistance in worm populations, see article on page 13. We are also delighted to be working with primary school teachers in Scotland in our new Science Sparks initiative where we are supporting scientific learning with some fun, hands on educational tools, see article on page 13.

More than half of all human diseases are zoonotic and prevention and control of such diseases requires a coordinated approach from the veterinary, environmental and public health areas. Moredun has formed a new cooperative network with a variety of partners to help tackle the problem of zoonotic disease; for more information please see article on page 6.

We do hope you enjoy the articles featured in this issue and thank you for your continued support.

Julie Fitzpatrick
Scientific Director and Chief Executive
Email reveals links to Moredun’s past

Moredun receives several emails each day through its website with requests for information on a range of livestock health issues. However, in July this year Moredun was contacted by Joanne Craig who had a very different query. Joanne had been researching her family tree and had found that her great grandfather had worked at Moredun some time ago and wondered if we had any information about him that we could share with her. We were delighted to learn that Joanne’s great grandfather was none other than Professor Sydney Herbert Gaiger, one of the founder members of the Moredun Foundation (then known as ADRA).

Professor Gaiger was one of ADRA’s very first chief investigators. Appointed in 1920, Professor Gaiger had a strong research interest in braxy and equine grass sickness. He was keen to highlight the work of ADRA to Scottish landowners so his first task, along with ADRA’s other chief investigator Thomas Dalling, was to visit every landed proprietor with livestock in Scotland to promote ADRA and to ask for their financial help – quite a formidable achievement in 1920! Over the next six years Professor Gaiger worked tirelessly developing Moredun’s research strategy and helping to secure the funds required to buy land and build the original Moredun Research Institute.

We were delighted to arrange for Joanne to visit Moredun in September where we shared pictures and stories about this great man. Professor Gaiger left Moredun in 1926 and sadly passed away in 1934, however there is little doubt that he played a significant role in the establishment of the Moredun Foundation and Moredun Research Institute and we are indebted to his dedication and determination.

Major new grant will help future vaccine development

Researchers at Moredun have secured nearly £1 million from the BBSRC and the Scottish Government to learn more about the immune systems of livestock to aid the development of sheep and cattle vaccines. Scientists from Moredun and the nearby Roslin Institute, with support from an industrial partner, AbD Serotec, will undertake detailed investigations of the immune responses of sheep and cattle, vitally underpinning the development of future vaccines. The team will be led by Moredun’s Professor Gary Entrican.

The Moredun Foundation and National Sheep Association (NSA) announced an exciting new collaboration at their AGMs this year. From September 2011, NSA members will become complementary associate members of The Moredun Foundation, receiving as a matter of course the invaluable Moredun technical newssheets on a range of animal health issues, as well as its regular members magazine.

Commenting on the agreement between the two organisations, Chairman of NSA Council Jonathan Barber said “the role of the Moredun Foundation is an incredibly important one and this new partnership will enable more sheep producers to gain access to the vitally important technical information produced at Moredun that will undoubtedly enhance their flock management”.

Chief Executive of the Moredun Foundation, Professor Julie Fitzpatrick commented, “Moredun is very pleased to have strengthened its links with the National Sheep Association in this way. The NSA does an outstanding job representing the interests of its several thousand sheep farmer members and this affiliation will greatly strengthen Moredun’s existing links with the livestock industry.”
News

Moredun honours ‘outstanding veterinary scientist’

The Moredun Foundation was delighted to award an honorary fellowship to Dr Hugh Reid at its AGM in September.

Hugh Reid worked at Moredun Research Institute for over forty years and in that time has made a significant contribution to our understanding of viruses that affect livestock not just in the UK but around the world. Whilst at Moredun, Dr Reid produced over two hundred scientific publications and is renowned internationally for his knowledge of louping ill, malignant catarrhal fever (MCF) and orf. He was awarded an MBE in 2002 in recognition for his services to animal health.

At the ceremony John Ross, Chairman of the Moredun Foundation, praised Dr Reid for his contribution, not just to the work of Moredun, but to the global livestock industry; “Hugh Reid is one of the most outstanding veterinary scientists of his generation. While his career has been spent unravelling the complexities of viruses of veterinary importance, he has made a much wider contribution in terms of ecology, land use and animal welfare.”

Focus on porcine disease models

Moredun Scientific is a commercial arm of the Moredun Group and provides contract research and testing services to the animal health industry.

The company has an extensive portfolio of validated experimental models of disease which are used to provide services to their clients to evaluate the efficacy of a wide range of veterinary medicinal products, including vaccines, anti-infectives, and anti-parasitics.

There is an increasing interest in porcine models as the relatively high prevalence of infectious production diseases remains an issue for the pig industry. Production diseases of economic importance have been widely disseminated in pig breeding pyramids via live pigs and semen, exemplified in recent years by the porcine reproductive and respiratory syndrome virus (PRRSv) and porcine circovirus Type 2 (PCV2).

Moredun Scientific has validated experimental disease models available for a range of porcine pathogens including PRRSv, *A. pleuropneumoniae* and *Salmonella* species.

In addition, models for *Streptococcus suis* and *Mycoplasma hyopneumoniae*, which cause respiratory disease in pigs, are under development.

For further information contact Moredun Scientific: info@moredun-scientific.com

2011 Christmas cards still available

Don’t forget to order your Moredun Christmas cards this year. ‘Feeding Time’ has been especially commissioned by Moredun from leading British artist Richard Macneil. This stunning card is only available to buy through Moredun so if you want to send a truly unique Christmas card this year, place your order soon whilst stocks last.

Visit our online shop at www.moredun.org.uk/shop to view and buy from our range of diaries, calendars, books and gifts or call 0131 445 5111 to place your order over the phone.

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Pentlands Science Park: investing in the future and engaging with the community

Pentlands Science Park (PSP) first opened its doors in 1995 and although the site has retained a very attractive appearance in terms of the buildings and landscaping, PSP is investing in infrastructure to ensure that the facilities and systems continue to operate efficiently and effectively for Moredun and its tenants.

The Building Management System (BMS) is the heartbeat of the Park and controls all key equipment to ensure that safe working environments (heating/ventilation/pressure/etc) are maintained. A new BMS is currently being installed to replace the existing system which was reaching the end of its useful life. The new BMS will provide the tools to enable even better control of these systems and should make a useful contribution to our goal of improving energy efficiency as part of our Environmental Management System for which an attractive icon has now been designed.

PSP has also acquired new Planned Maintenance software which will allow us to develop a more efficient maintenance and repair system and, crucially, cut down on the paper trail which currently exists. PSP has a team of five maintenance engineers and it is important that time spent on maintenance and repair is maximised and the new system should improve efficiency and service.

Pentlands Science Park continues to be at the centre of both the scientific and the local community. PSP remains an active stakeholder in the Edinburgh Science Triangle project hosting regular business breakfasts, project meetings and participating in the making of excellent videos featuring PSP, the wider science park locations and some of the tenants. At a local level, PSP was represented at the Roslin Fun Day in September where the “Name the Moredun Cow” competition went down well with the kids.

Park Manager, George Walker, was delighted to be elected President of the Midlothian and East Lothian Chamber of Commerce in August and PSP again sponsored an award at the annual Chamber Enterprise and Awards evening which was held at the Roslin Institute building this year. The Park continues its excellent relationship with Midlothian Council and the world leading animal bioscience capacity at Easter Bush has resulted in the Council developing an Action Plan to support the development of the sector, now a key driver of economic development activity in Midlothian.

Finally PSP hosted a visit from Waikato Innovation Park in October and it is the intention to explore opportunities for collaboration between the strong agricultural science bases in both Scotland and New Zealand.

PSP remains an active stakeholder in the Edinburgh Science Triangle project hosting regular business breakfasts, project meetings and participating in the making of excellent videos featuring PSP, the wider science park locations and some of the tenants.

Peter Maxwell (centre) of Waikato Innovation Park demonstrates his rugby world cup allegiance to PSP Park Manager, George Walker, and Edinburgh Science Triangle Chair, Malcolm Bateman on his recent visit.
More than just numbers: Moredun Director takes on additional food security role

Moredun and the University of Glasgow are pleased to announce the secondment of Professor Julie Fitzpatrick to the post of Professor of Food Security within the College of Medical, Veterinary and Life Sciences at the University.

Professor Fitzpatrick will combine this new role with her existing role as Scientific Director of Moredun Research Institute and CEO of the Moredun Group. The secondment presents a unique opportunity for Scotland to lead the way in research and delivery of solutions to help tackle the global issue of food security by developing a collaborative framework for future work together.

Professor Anna Dominiczak, Head of the College of Medical, Veterinary and Life Sciences at the University of Glasgow, said: “We are delighted to welcome Professor Fitzpatrick to the University of Glasgow to take up this new and exciting challenge.” She added, “Food security is becoming an increasingly important focus for the world’s governments and scientists and through Professor Fitzpatrick and our partnership with Moredun we aim to play a leading role in addressing this crucial issue.”

Research

Sustainable worm control in cattle – Moredun survey investigates anthelmintic resistance levels in UK herds

In 2010 researchers at Moredun conducted a survey on cattle farms across Scotland, from the Scottish Borders to Orkney, and determined that there were signs of anthelmintic resistance against the ivermectin-based products in the common cattle gut worm Cooperia. Moredun is now expanding its survey and is seeking the help of farmers across the UK with herds of greater than 30 animals to help with this project. British farmers have been aware of the problem of anthelmintic resistant worms in sheep and goats for many years now – research has lead to guidelines about the effective control of roundworms in sheep being established and promoted through initiatives like the Defra backed SCOPS (Sustainable Control of Parasites in Sheep) and Moredun’s ACME message. A lot less is known however, about the current status of anthelmintic resistance in roundworms of cattle.
It is important for livestock producers, suitably qualified persons and animal health advisors to give serious consideration to the impact of intensive worm control programmes.

Treating cattle with an anthelmintic to kill gut worms at housing is standard practice for UK farmers. Moredun scientists are therefore keen to collect faecal samples from cattle across the UK that are due to be treated with an ivermectin product, however farmers who have already treated their cattle can still take part in this survey. Participants will be supplied with a detailed survey form as well as a sample kit containing everything they need to collect faecal samples and a FREEPOST address to return the samples to Moredun.

Dr Dave Bartley is one of the scientists involved in this survey. He commented, “It is important for livestock producers, suitably qualified persons and animal health advisors to give serious consideration to the impact of intensive worm control programmes. Producers also need to be aware of the possibility of anthelmintic resistance particularly in Cooperia species and to consider the use of faecal egg counts to assist in identifying the best-practice choice of anthelmintic to administer to the animals in their care.”

It is hoped that this survey will generate information about the species of gut worms that are currently found in UK cattle and about the level of infection. Moredun researchers also hope to determine how effective ivermectin is against UK cattle gut worm populations. This information will help support knowledge based practices that may reduce selection pressure for anthelmintic resistance in gut worms in cattle and provide advice on appropriate use of anthelmintics.

Moredun Scholarship launched!

As part of its charitable activities, the Moredun Foundation has established a scholarship scheme to provide an opportunity for individuals in the UK to pursue a short term project to broaden their education and experience in areas relating to livestock health and welfare and the agricultural industry.

Moredun recognises the value of education, experience and travel to improve understanding of the farming and livestock industries and to encourage innovative and diverse contributions to Moredun’s mission to prevent and control the infectious diseases of livestock.

Three awards of up to £1000 each will be made in 2012. The projects may involve travel, work experience, science or the arts. Individuals must be over the age of 18 years and Moredun members in order to apply. Applications will open on Tuesday 13 December and close on 29 February 2012.

All projects must be completed by 31 August 2012.

For more information please visit the Moredun website www.moredun.org.uk/scholarship or email scholarship@moredun.org.uk

Orkney Agricultural Discussion Group

Three scientists from Moredun were delighted to visit Orkney earlier this year to take part in the Orkney Agricultural Discussion Group. Fiona Kenyon, Stewart Burgess and Lee Innes discussed the latest research on controlling gastrointestinal worms, sheep scab and abortion in cattle. The meeting was hosted by Willie Stewart and John Copland and was attended by farmers and vets across the islands.
Controlling zoonotic diseases in animals and man
Cooperative Network Launched

Moredun is internationally renowned for its research expertise in zoonotic infections and strives to develop effective treatment and preventive strategies to control these problems in both livestock and man.

May 2011 saw the launch at Moredun of a new cooperative network to help tackle zoonotic infections and disease. The network aims to bring together individuals and groups from academia, policy, government agencies, industry, veterinary and public health bodies to facilitate inter-disciplinary initiatives and innovative approaches to reduce the impact of zoonoses.

Zoonoses are diseases or pathogens transmitted between animals and people and can involve a wide range of infectious agents, including parasites, bacteria, viruses, fungi and prions. Zoonotic pathogens may be transmitted by direct contact or through contaminated food or water supplies. Around 62% of all known human pathogens are zoonotic and 75% of emerging diseases are zoonotic. Common zoonoses include: campylobacteriosis, cryptosporidiosis, escherichia coli, giardiasis, toxoplasmosis, Lyme disease and avian flu.

The keynote address at the launch meeting was given by Dr Roger Sokol, Director of the New York State Department of Health’s Bureau of Water Supply Protection. Dr Sokol is responsible for the regulatory supply of over 10,000 public water supplies in New York State. In his presentation Dr Sokol described their experience of protecting the watershed that provides 9 million people with 1.1 billion gallons of unfiltered drinking water every day.

Dr Sokol commented, “I applaud Scotland in establishing a cooperative research network focusing on zoonotic pathogens. I believe strongly in a cooperative approach and bringing different stakeholder groups together to focus on delivering effective control and prevention strategies. The cooperative

Enterohaemorrhagic serotype E. coli 026:H11 adhering to primary bovine rectal epithelial cells.
watershed management approach taken in New York is an excellent example of how such an approach can really deliver results.*

The keynote talk was followed by three further presentations from Margaret McGuinness, Public Health Manager, Scottish Water, Dr Rachel Chalmers, Head of the UK Cryptosporidium Reference Unit, Public Health Wales and Professor Dom Mellor, University of Glasgow and Health Protection Scotland.

Could vaccination be the answer?

Speaking at the annual ‘Science for Life’ lecture organized and hosted by Moredun in June, Dr Andrew Potter from Vaccine and Infectious Disease Organization International Vaccine Centre (VIDO-InterVac) in Canada, highlighted some of the research that is being done to develop effective vaccines against a range of food and water borne pathogens. Escherichia coli, Salmonella enterica and Campylobacter jejuni were just three of the pathogens that Dr Potter spoke about controlling through vaccination. This research is particularly topical due to the large E Coli outbreak this year in Germany, which has killed seventeen people so far and left hospitals in the north of the country struggling to cope as nearly 2,000 people in Germany alone are thought to have been infected.


The meeting was attended by a wide range of different experts from research institutes, universities, Government, industry, Health Protection Scotland, Food Standards Agency Scotland, Quality Meat Scotland, Scottish Water, National Pathogen Reference Laboratories, land managers and other interested parties.

This initiative was developed from a meeting held last year at Moredun Research Institute to discuss how to tackle food and water borne pathogens. Following this meeting a steering group comprising Professor Chris Spray (UNESCO Centre for Water Law, Policy and Science, University of Dundee); Professor Charlotte Maltin (Quality Meat Scotland); Dr Anna Whyte (Food Standards Agency Scotland); Professor David Smith and Professor Lee Innes (Moredun Research Institute), was formed to take forward the proposals from this workshop.

Professor Chris Spray commented, “We are delighted to launch this network building on the aspirations and enthusiasm generated by participants in the original forum. The strength of this network will be the diversity of expertise and experience that we can bring to bear to tackle zoonoses within an integrated and holistic framework.”
Research

Moredun leads global partnership to tackle fatal cattle disease

Over a number of years scientists at Moredun have developed extensive experience working with a range of pathogens responsible for causing pneumonia in cattle and sheep, including the bacterium *Pasteurella multocida*. This cutting edge science approach has resulted in Moredun researchers securing a grant of over £1 million from the Wellcome Trust to develop a new vaccine to help control another deadly disease caused by *P. multocida* in cattle and buffalo in India.

Haemorrhagic septicaemia (HS) is an endemic disease that affects cattle, buffalo and camels across South and South-East Asia, Africa and South America. Transmission of *P. multocida* is airborne and infection leads quickly to systemic disease causing death of the animal within 24 hours. In India, it is estimated that HS is responsible for approximately half of all cattle and buffalo deaths. The disease is a significant economic problem for resource-poor farmers who rely on these animals for meat, milk, draught power, manure and heat.

A consortium led by Moredun Research Institute and including scientists from the University of Glasgow and the Indian Veterinary Research Institute (IVRI) plans to develop and test a new vaccine for this disease over the next three years. It has recruited the help of Inocul8, GAlVmed and Indian Immunologicals Ltd (III), three organisations with the commercial experience required to get a new vaccine licensed and manufactured in India.

The lead scientist in this consortium, Dr Chris Hodgson from Moredun, is optimistic that this project will be a success. He commented: “The first step involves us attenuating or weakening the causative bacterium so that it is unable to cause disease. The weakened bacterium will be incorporated into a prototype vaccine which will be tested in the UK and trialed in buffalo and cattle across India to determine its effectiveness at controlling this disease.” He added, “Current vaccines for Haemorrhagic septicaemia give protection for between six and nine months. This improved vaccine is anticipated to be more cross-protective, easier to administer and to give much longer duration of immunity, factors that will have a huge impact on the effective control and prevention of this disease.”

Dr Richard Mole from Inocul8, a subsidiary of Moredun focused on the translation of its science added: “This project represents how applicable Moredun’s science is to real world problems and represents another example of how work at Moredun is being translated into products that will have a significant impact for the farming community, in this case in South Asia and beyond.” He continued, “We already have a manufacturing partner in India that is working alongside us to ensure the smooth and rapid transition of the vaccine into the market.”
Jaagsiekte (OPA) – myth or deadly foe?

Jaagsiekte is a disease that is far too familiar to many UK sheep farmers and yet some have not even heard of it. The disease, also known as ovine pulmonary adenocarcinoma (OPA), is an infectious lung tumour affecting sheep that is usually first seen as breathing difficulties and loss of condition, with death following days to weeks later. Some affected animals, but not all, produce fluid from their lungs which can be seen flowing out through their nostrils when they put their heads down (Figure 1). This fluid is full of the virus that causes the disease, namely Jaagsiekte sheep retrovirus (JSRV), and therefore is a rich source of infection for other sheep.

It can take months to years from infection with the JSRV virus until clinical signs are seen. In this time the lung tumour can grow to fill a large proportion of the lungs (Figure 2). However it is often only when the animal is put under stress that the lack of lung function becomes noticeable.

There is no treatment for OPA, but veterinary investigation of any sick or very thin sheep is important as the same clinical signs may be caused by other diseases which could be treatable with antibiotics.

Level of disease in UK is underestimated

A randomised survey of 125 flocks estimated that up to a third of flocks in Scotland may carry the JSRV virus, although very few reported ever having noticed the disease in their sheep. Whilst the survey was limited to Scotland it is clear that the disease is found in sheep right across the UK and indeed in most sheep producing countries. In some flocks more than half the sheep may be infected with JSRV. Fortunately, many infected animals never develop the disease. However, these apparently healthy, infected animals may be able to introduce OPA into new flocks.

Control measures

The best way to prevent a flock getting OPA, (and many other diseases too) is to ensure strict biosecurity such as running a closed flock and having appropriate fencing to avoid contact with neighbours’ sheep. Sheep identified with OPA should be removed from the flock immediately. Any areas contaminated with lung fluid should also be disinfected. It is likely that JSRV can spread in the air, in the same way that flu can spread in humans, therefore close contact between animals aids the spread of the virus. The virus may also be transmitted to lambs through milk.

The research

The focus of Moredun’s research in OPA is to understand the disease and also to develop a better diagnostic test for this condition. Moredun is very grateful for donations of OPA-affected sheep. The OPA research group are also interested to hear from farmers with affected sheep as they are trying to build up a more accurate picture of how the disease behaves in different flocks. Your anonymity is assured. Please contact Chris Cousens or David Griffiths on 0131 445 5111.

A randomised survey of 125 flocks estimated that up to a third of flocks in Scotland may carry the JSRV virus, although very few reported having noticed the disease in their sheep.
Out and About

Taking animal health messages to the masses

Originally formed by farmers for farmers, Moredun has always maintained a close working relationship with the farming community. We continue to be very active in this area of knowledge exchange to ensure that our research remains rooted in the practical needs of livestock farming today.

Moredun vets and research scientists had a very busy summer, attending a total of seven agricultural events throughout the UK in order to engage with UK producers and help them to make an informed choice about disease control on their farms.

Moredun is world renowned for its research into the infectious diseases of sheep and attended three specialist sheep events over the summer months: Welsh sheep, which was held in Machynlleth in May, North sheep, which was held in Hexham in June and NI sheep which was held in Ballymena in July. All three events attracted thousands of sheep producers and Moredun’s team of vets and sheep health specialists spoke to lots of farmers at each event about controlling and preventing a range of disease threats to their flocks. Researchers from Moredun also took part in animal health seminars at these events to discuss control options for health problems like sheep scab and liver fluke.

Moredun regularly attends specialist beef events too, and this summer Moredun took a team of cattle health specialists to Beef Expo in Newark and the Scottish Beef Event in Fochabers and spoke to producers about cattle health issues such as BVD, Johne’s disease, pneumonia, MCF, parasite control and bleeding calf syndrome.

The Royal Highland Show in June however was Moredun’s largest and most successful event and our animal health centre was busy for all four days of the show. Moredun welcomed lots of high profile visitors to its large marquee on the Thursday and Friday, and hosted a wine reception on the Friday evening which attracted over 100 guests. On the Saturday and the Sunday of the show, Moredun operated a thriving drop-in education centre focused on promoting our work to the general public.

In October, Moredun was delighted to be one of the main organising partners of the Winter Beef Management Event, held at Balbuthie Farm in Fife, courtesy of John Cameron, Moredun’s Honorary President.

This high profile event attracted beef farmers from across Scotland, Northern Ireland and the North of England and the day was full of practical demonstrations on subjects including cattle health, bedding, nutrition and feeding.

Vets and researchers from Moredun hit the road in November on a massive ten date Animal Health Roadshow. Working in partnership with AHVLA and with support from QMS, HCC, Novartis Animal Health and Pfizer Animal Health, these events covered subjects including worm control, liver fluke, sheep abortion, cattle pneumonia, sheep scab, cattle abortion and cryptosporidiosis. The events also achieved AMTRA CPD accreditation and attracted such large audiences that many meetings operated at standing room only!

Moredun was delighted to be one of the main organising partners of the Winter Beef Management Event.
Tale of Two Squirrels

To mark National Red Squirrel Week, Moredun’s The Tale of Two Squirrels exhibition was on display at the Royal Botanic Garden Edinburgh with fun activities for all the family. During the first weekend of October (Saturday 1st and Sunday 2nd), Moredun’s science communicators were on hand to chat to the public about the plight of the red squirrel. The exhibition aims to raise awareness of the threats to Scotland’s native red squirrel population and highlights Moredun’s work on the squirrelpox virus which causes a devastating disease in the reds.

For more information about Moredun’s work on the squirrelpox virus please visit our website: www.moredun.org.uk/research/research-&-moredun/skin-&-mammary-gland-diseases/squirrelpox

High Flyer

Maggie Bennett from Moredun’s communication team reached new heights back in July when she completed a wingwalk and raised over £1500 for Multiple Sclerosis Society Scotland.

During her ten minute flight she endured various twists, turns, dips and dives at 500 feet up, as the aircraft reached speeds of over 150mph. Maggie, a self confessed adrenalin junkie, reported that she thoroughly enjoyed it – and didn’t find it scary at all! She said “It was just like an extreme roller coaster 500 feet up in the air. I was more worried about collecting flies in my teeth or being hit by some migrating geese during the flight!” She was however left nursing a sore throat due to the amount of cheering and whooping she did during the flight.

Maggie would like to thank everyone who supported her and donated some of their hard earned money to Multiple Sclerosis Society Scotland – the donation will make a huge difference to their work and the families they support.

Congratulations

Moredun is delighted to announce that Dr Lee Innes, Director of Communications and Principal Scientist, was recently awarded an Honorary Professorship by Heriot Watt University, in recognition of her part in the valuable collaborative work between the two institutions.
Focus On...

Moredun staff activities: from walking around the globe to growing moustaches!

The Moredun Group employs over 200 people and recognises the very valuable contribution that they make to its success. Moredun is committed to providing a safe, secure and enjoyable working environment for its staff and was delighted to achieve a silver award from Investors in People Scotland in 2010, the very first research institute to have reached this standard.

Moredun has an active Healthy Working Lives Group that helps raise awareness of health issues through appropriate activities.

Increasingly sedentary nature of today’s modern workforce. It achieves this by challenging employees to walk over 10,000 steps per day.

Global Corporate Challenge – getting fit and having fun!

Earlier this year, thirty-five Moredun employees took part in the world’s largest health initiative, the Global Corporate Challenge (GCC). The GCC aims to combat the growing health risks associated with the increasingly sedentary nature of today’s modern workforce. It achieves this by challenging employees to walk over 10,000 steps per day.

Five different teams of Moredun staff wore pedometers for 16 weeks over the summer and recorded their daily steps on the GCC website. Swimming and cycling distances could also be converted into steps. This activity was converted to an overall distance and the team’s progress was plotted along a virtual tour of the world. The more active the team, the further they progressed on this virtual journey.

In total, these thirty-five Moredun employees walked a staggering 24,050 miles over the sixteen week period, an average of 15,603 steps each per day. The winning team, The Moredun Wanderers, managed to clock up over 5,200 miles between them over the sixteen weeks – that’s 45 miles a week per team member!

Eating cake, looking silly and supporting health charities

In October, Moredun was pleased to support the ‘World’s Biggest Coffee Morning’ in aid of MacMillan Cancer Support. Staff came together over a cup of coffee and enjoyed delicious home baking which was very kindly donated by various members of staff and raised £280.

October also saw ‘Wear it Pink Day’, which is part of the Breast Cancer Campaign. Moredun staff were encouraged to wear something pink for the day, whether it was top to toe in pink, a feather boa or pink socks and make a donation towards the campaign. Pink cakes were also on sale throughout the day and a raffle was organised and in the end over £150 was raised.

And as this magazine goes to press, another group of brave / foolish men from Moredun are half way through ‘Movember’ – a month long moustache growing competition which aims to raise money for men’s health charities (specifically prostate & testicular cancer). Last year twenty-one men from Moredun attempted to grow the most ludicrous looking moustaches for this very worthwhile cause and raised over £2500 (as well as a few funny looks and comments) as a result.

The Moredun Wanderers walked from New Zealand to Mutnovsky volcano in Russia on their 5,200 mile virtual trek around the globe.
Anthelmintic resistance – finding solutions to a global problem

Sustainable worm control is a major concern to the livestock industry around the world as a result of the development and spread of drug resistant parasites. Research at Moredun is helping to establish a clearer picture here in the UK, but what about tackling the potential global problem of anthelmintic resistance?

Scientists from Moredun have been sharing their knowledge of worm control strategies with scientists, farmers and vets in the Tamil Nadu region of India as part of an international collaboration between the Madras Veterinary College, University of Pretoria (South Africa), University of Calgary (Canada) and the University of Bristol (UK).

In India, where the health, welfare and productivity of sheep and goats is so vital to the health and livelihoods of the population, improving worm control strategies will be a major step forward for resource-poor farmers. Anthelmintic drugs have been used widely in India for many years and there are many generic products on the market, however, the current status of resistance to these drugs is largely unknown.

Earlier this year, Dr Alison Dicker, a parasitologist at Moredun, embarked on a 6 week trip to India to participate in a field study to evaluate the status of anthelmintic resistance in sheep and goats. During her trip, Alison demonstrated Moredun’s diagnostic techniques to staff at Madras Veterinary College, as well as undertaking farm visits and talking to local farmers about sustainable worm control strategies.

Alison commented “This study is looking at resistance against three different types of drugs namely Albendazole, Levamisole and Ivermectin. We found that the incidence of worm infections was relatively high in sheep and goat populations in this region of India despite regular deworming. It was fantastic to support the local farmers and vets as they embark on this important project and to share our experiences of combating worm infections in the face of increasing anthelmintic resistance.”

Alison’s trip was part of the three year RISCNET project, which is part of the CIDLID programme. CIDLID (Combating Infectious Diseases in Livestock for International Development) supports the greater understanding of how to combat diseases of domesticated livestock that affect livelihoods in developing countries. The programme is run and funded by the Department for International Development (DFID) and the Biotechnology and Biological Sciences Research Council (BBSRC), with input from the Scottish Government.