



SEASONS GREETINGS!

MED-VET-NET NEWS

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This issue of Med-Vet-Net News relates zoonoses to this wonderful time of year, Christmas. There's an article describing the many different traditions of Christmas and the possible risks involved. We also have a tale of the microbial hazards of the famous nativity scene. Finally, the Project Management, Communications Unit and Administration Bureau Teams wish you all you hope for and great success in 2006!



Med-Vet-Net Communications Unit

Christmas Celebrations

The first year of Med-Vet-Net is now completed. A wonderful Christmas gift to the network, has been the "Good to Excellent" rating of this first year by the European Commission's external referee. This is a well-deserved recognition of all our efforts and a fantastic start to our work.

In our multinational and multicultural Med-Vet-Net community, the Christmas season has many images and presentations. Despite the differences between our countries, some aspects of this time of year are common to us all – most of us will eat too much, some of us will probably drink too much and hopefully all of us will forget about work and enjoy our families for a while.

Eating and drinking too much is a festive tradition, historically derived from times past when people fasted before religious celebrations. The traditional foods served on the holiday tables across Europe differ considerably. Most countries favour poultry meat for the main meal, though the media panic over avian influenza may well influence both the amount and the type of birds consumed this year. In the UK, over 10 million turkeys, along with 25 million Christmas puddings, will be consumed; in Denmark the favourite meat dishes are roast duck and goose while in Germany it tends to be goose followed by stollen; almost all Swedish families celebrate Christmas Eve with a smorgasbord including pickled fish, meatballs, baked ham and gingerbread; and in Poland carp, herring and noodles served with poppy seeds seem to be popular. Perhaps the most unusual Christmas food we came across was burned sheep's head in western parts of Norway!

With such a range of foods the risks of food poisoning at this time of year seem endless. With so much poultry consumption involved, *Campylobacter* and *Salmonella* would seem the most likely causes of the Christmas stomach upset (excluding of course the alcohol). Certainly the Food Standards Agency of the UK has stated that 20% of outbreaks of food poisoning are associated with poultry and these outbreaks are most frequent in December. Perhaps this is not surprising when over 10% of householders are cooking Christmas dinner for more than

10 persons, and cooking the Christmas turkey is the second most stressful activity at this time of year. Christmas shopping is the most stressful. However, as Prof Wegener explains (see next article) this seasonal trend in food poisoning is not Europe-wide and in Denmark there is no obvious association of salmonellosis and campylobacteriosis with December. Perhaps Danish alcohol consumption prevents bacterial colonisation but this seems an unlikely explanation when in the UK we are expected to consume 250 million pints of beer and 35 million bottles of wine this Christmas!

Salmonella and *Campylobacter* may not be the only foodborne risk. One of the traditional foods eaten in Norway and Poland at this time of year is fermented fish, which can carry *C. botulinum*. Cases of botulism associated with contaminated batches have been reported. In addition, as our Christmas foods become more adventurous, including game like wild boar and venison, the risks expand to trichinellosis and tuberculosis.

The zoonotic hazards of a modern Christmas are not confined to foodborne disease. The reindeer-drawn sledge of St Nicholas (or Santa Claus) can bring additional but potentially unwanted presents. Not only can reindeer be infected by brucellosis and papilloma virus, they are also vulnerable to rabies! The possible dangers of *E. coli* O157 by direct contact from reindeer has now led to a ban on the traditional Santa parade in some

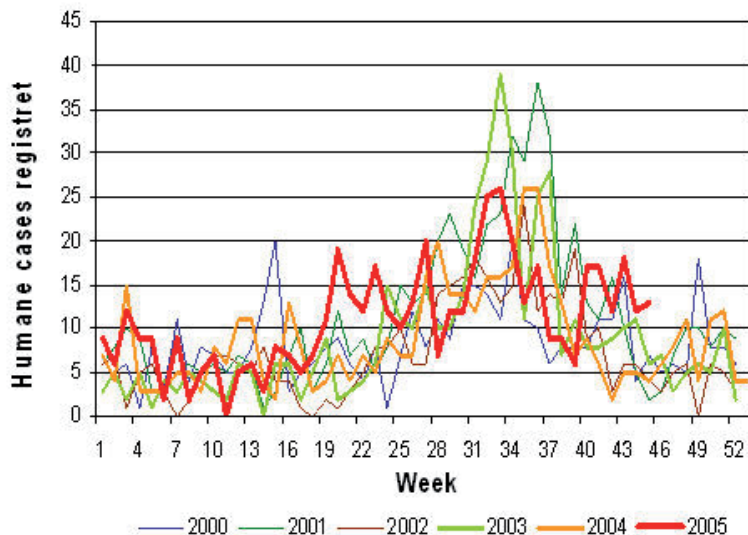
English towns. The robin, our favourite wild bird on Christmas cards, can be a reservoir of *Borellia sp.* and *Ehrlichia sp.* So please wash your hands after putting out those peanuts for the birds this winter!

As you can see, despite the distractions of all the Christmas festivities, we cannot get away from our public health thoughts. Let us all anticipate that next year Med-Vet-Net will progress even further in our objective to control and prevent these disease problems.

Diane Newell and Claire Cassar

Christmas Bomb?

Nearly every year around Christmas time in Denmark, the media warn the public about the "Salmonella bomb". This "bomb" is the Christmas duck or goose that nearly every family eat for Christmas dinner. To Med-Vet-Net members it is no surprise that *Salmonella* can frequently be isolated from ducks and geese bought at retail. However, does this make the Christmas duck or goose a "Salmonella bomb"? Apparently not. The weekly numbers of human salmonellosis (see graph below) show no sign of an explosion, in fact they appear to be at the lowest level during the winter months. Knowing that Danes eat massive numbers of duck or goose for Christmas, and hardly any at all for the rest of the year raises some interesting questions: Are the *Salmonella* not pathogenic due to their good Christmas spirit, or does some other mysterious factor explain



Source: Statens Serum Institut

The number of cases of salmonellosis in Denmark do not rise in December

Med-Vet-Net People

Annemarie Käsbohrer is the Thematic Representative for the Epidemiology Thematic area.

Annemarie is a veterinarian, with a doctoral degree in Veterinary Medicine from the Free University of Berlin, Germany. She is a specialist in microbiology and epidemiology. Since 2003, she has been a member of the European College of Veterinary Public Health.

Annemarie has worked as a practitioner, mainly dealing with livestock, before working at the Federal Health Office in Berlin in a research group developing diagnostic techniques for different bacterial species, especially spirochetes. Changing to the WHO Collaborating Centre for Veterinary Public Health at the Veterinary School of Hannover, Annemarie was responsible for several epidemiological studies on the prevalence of zoonotic bacteria in humans and animal populations as well as in control strategies for Salmonella. For a period of ten years, from 1994 to 2004, she worked in the Community Reference Laboratory for the Epidemiology of Zoonoses at the Federal Institute for Health Protection of Consumers and Veterinary Medicine (BgVV) which was reorganised to the Federal Institute for Risk Assessment (BfR) in 2002. She was responsible for the management of the zoonoses reporting system in the European Union and the drafting of ten Community Zoonoses Reports. In addition, she was involved in several working groups of the European Commission and the European Food Safety Authority drafting several monitoring schemes for zoonotic agents and related documents. She regularly gives training in biometrics and epidemiology at the Faculty for Veterinary Medicine at the Free University of Berlin.

Annemarie's main areas of scientific interests are food safety and quantitative risk assessment. She is very interested in improving data quality resulting from monitoring and surveillance programmes for the purposes of risk assessment and the use of the information for food attribution modelling and evaluating risk management options. Since the beginning of 2005, she has been working in the division Infection Epidemiology and Zoonoses at the BfR mainly dealing with the coordination of monitoring programmes based on the zoonoses directive at national level. She is the institute representative of BfR in Med-Vet-Net.



Annemarie Käsbohrer

decorated walls of some rich merchant's chapel. In reality, the barn would have been cold, dirty and smelly. Worse, it would be heavily contaminated with animal faeces; a microbiologically hazardous environment for a newborn baby. This hazard would be amplified by the close animal contact; the legend states that both the donkey and oxen kept the baby warm with their breath.

The zoonotic hazards from domesticated animals, though well-known today, may have been even more common two millennia ago, when animal welfare and health were of little concern to their owners. Most of the donkeys in this region of the world would have been infected (as many are today) with anthrax. Nasal secretions dripping from the oxen were likely to contain *Mycobacterium bovis*. Herd animals like sheep and goats, frequently carried the agents of toxoplasmosis and brucellosis. Pigs acted as intermediate hosts of Cestodes. Dogs and cats harboured ticks and fleas as well as various worms and hydatid cysts. Rabies was common. Even the commensal animals, like rodents, living off the discards of human life constituted a zoonotic hazard. Our expert colleagues, undertaking a modern hazard assessment, would undoubtedly rate this as an extremely high-risk environment in which to give birth and nurse a newborn. And yet, in some parts of the world, infants are born and grow up in such conditions. Amazingly, many of them even reach adulthood!

Animal domestication, is well-recognised as a crucial component of the evolution of man from hunter-gatherer to industrial entrepreneur and space explorer. However, evidence is accumulating that animal domestication has negative, as well as positive, impacts.

Our ancestors initiated the process of domestication about 10,000 years ago by taming wolves to create a hearthside and hunting companion. At about the same time, nomadic populations started utilising herd animals, like reindeer, as partly captive sources of food and clothing. With the exploitation of grains for agriculture, humans became more sedentary, and animal domestication began in earnest. Cattle, sheep and goats were domesticated first about 8,000 years ago, quickly followed by pigs and horses (7,500-6,500 years ago). Chickens were only relatively recently domesticated (about 1,500 years ago); which suggests some artistic licence by the medieval painter of the nativity scene.

It seems that, far before the nativity, the lives of humans had become integrated with, and highly dependent on, those of our domestic animals. As

this conundrum? Your guess is as good as mine.

Please note: Exactly the same situation can be observed for *Campylobacter* but the Danish press don't know how to spell that difficult name.

Henrik Wegener



Salmonella Bomb - the christmas duck can be dangerous!

Birth in a Stable: a Hazard Analysis

It's the early weeks of December, and my Christmas card features a medieval painter's vision of the nativity scene 2005 years ago. In this painting, proud parents and angels fondly look on while animals jostle to get close to the baby in the manger lit by a star high above. The manger is located in a wooden barn attached to an inn. A donkey stands to one side of the manger and the oxen the other side. The innkeeper apparently also kept a few chickens and geese, and probably a pig. In one corner of the picture a dog keeps watch, but the innkeeper's cat seems more interested in hunting mice. Along the roof timbers a number of wild birds line up to gaze down on the scene. In another corner a young shepherd carries a newborn lamb to offer as a gift and outside there are camels, presumably tethered by the visiting wise men.

This is a carefully arranged and sanitised image, prepared for the



a consequence, humans behaviour changed, which in turn had a significant impact on human health¹. For example a herd of animals needs to be close to water and this increased the risk of water-associated human diseases like malaria. Animal domestication led to larger human settlements, resulting in poor sanitation. The use of animals for transport increased human movement, enabling the importation of disease from other regions. Perhaps most importantly, the prolonged and close contact between humans and domestic animals, provided an increased opportunity for microbes to jump species and the risk of emerging disease. This is consistent with evidence that the process of domestication directly correlates with the increasing number of diseases common to both domestic animals and man². As man has intensified animal production the opportunity for disease transmission has increased still further and many of our food animals are now produced in regions of the world with hygiene standards, which would have been familiar to the family of the baby born 2005 years ago. Now, as then, public health can only be improved by understanding the problems, developing cohesive and realistic control strategies, and then by communicating that knowledge to key stakeholders. Like the shepherds and wise men in the nativity story, the multidisciplinary and multinational teams developed within Med-Vet-Net, are aiming to protect the vulnerable and then spread the word far and wide. Unfortunately our modern communication systems do not have the impact of a host of angels as messengers, and so we need to disseminate our knowledge more proactively in the future and this is a major objective of 2006. Of course, a bright star lighting our way would always help.

Diane Newell

References

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Project Management

First year success

I am very pleased to announce the outcome of the external referee's report on the First Year of Med-Vet-Net Activities. There were many encouraging and complementary comments throughout this report and overall the network received the highest rating of "Good to excellent". In addition, the scientific plans for the next Joint Programme of Activities have been accepted with minor modifications. We now await the EC approval of our financial report and plans, which should be completed by the end of January 2006. This is a major milestone and a significant achievement for our network. It recognises the hard work and tenacity of the research, project management and administrative teams.

Well done to everyone!

Expanding influence

At the end of November 2005, 11 Med-Vet-Net delegates attended the first EUUS-SAFEFOOD meeting in West Virginia. Attendance from external delegates from Ireland, Germany and the Czech Republic was also funded. The US delegates were from a number of US academic institutes and all were part of FSRRN (www.fsrrn.net) a food safety network funded by the USDA. The mechanisms of collaboration between the two networks, were discussed, and plans for joint meetings and short term missions established. The minutes of the meeting will be available soon.

In the last newsletter I mentioned two submitted proposals awaiting review. Unfortunately, neither proposal was funded, but the hard work and good intentions of the people involved to help expand our network activities, are acknowledged.

Getting together

There were a number of Workpackage (WP) meetings over the last month. I was pleased to attend the WP9 meeting on *E. coli* in Rome. As usual the meeting was extremely well organised by Alfredo Caprioli's team. Although all Med-Vet-Net partners were well represented, it was a pleasure to see so many external experts attending from all over Europe. In particular, contacts were made with representatives from our sister Network of Excellence, EADGENE (www.eadgene.org). We are now planning to expand on these preliminary contacts and look for opportunities to collaborate in the future.

Christmas Greetings

This is the second Christmas of Med-Vet-Net. A year ago we could not have envisioned the success or the impact of our work within just 12 months. The fact that we've successfully completed our first Science Communication internship is a great example of how good the opportunities for personal development are within the network. Your project Management Team (Diane, Claire and Linda) want to thank you all for the hard work, friendship and collaboration over this year, and wish you a happy holiday and a similar success in 2006.

Diane Newell

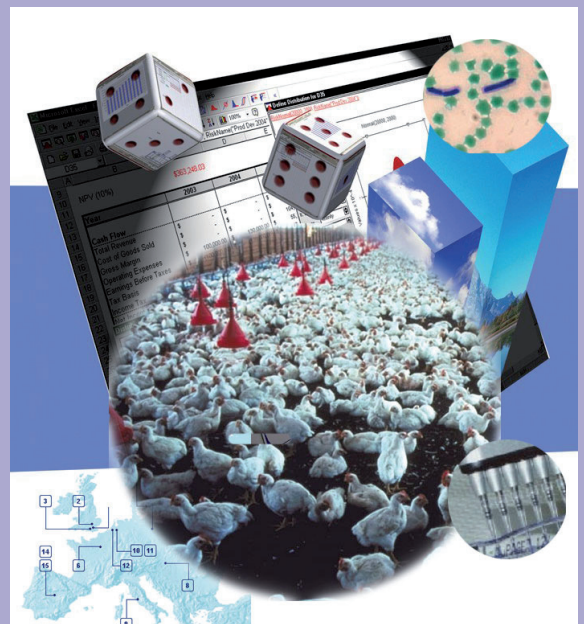
Microbial Risk Assessment Training Course

1 – 3 February 2006, RIVM, The Netherlands.

Course co-ordinators: Emma Snary (VLA), Danilo Lo Fo Wong (DFVF) and Arie Havelaar

In the veterinary public health field, risk analysis (of which risk assessment is a component) is still a relatively new discipline. Its methodology is being used by national governments and the EU to identify, assess, communicate and manage risks relating to food safety. Within MVN a large differential in the risk assessment capabilities between institutes has been identified and therefore a training course has been proposed to address this. The course aims to familiarise participants with the concept of food safety risk analysis, but will focus on microbial risk assessment (MRA). The course will consist of both formal lectures, computer sessions and group work so trainees will gain some practical experience of developing MRAs. Due to the need for computer facilities a maximum of 20 trainees can enrol and it is hoped that this will consist of one or two trainees per institute, with an emphasis on those institutes with very little or no risk assessment expertise. Suitable candidates will be interested in MRA, have good numerical and communication skills and be familiar with Microsoft Excel. More details, including the workshop programme, are available on the MVN website at: www.medvetnet.org/mraworkshop.

Deadline for registration: **31 December 2005**
Please forward this information to all relevant persons in your institute that could benefit from this course.



ADMIN BUREAU UPDATE

Second payment from the Co-ordinator to Partners

Following delivery of the annual financial reports, the Admin Bureau was able to make adjustments to budget allocation and calculate the amount of 40% to distribute to each partner. All adjustments were made in collaboration with each partner institute and the second payment was transferred during week 50 so that the money reaches partners' bank accounts before Christmas.

Sustainability of the Network

Choosing a status which is relevant for Med-Vet-Net is an important task of the Virtual Institute, on which sustainability of the network greatly depends. On 1 December 2005, the status study began with a kick-off meeting at AFSSA. The Santexcel team were present, together with André Jestin and Arnaud Callegari as Med-Vet-Net Representatives. Objectives of the meeting were to introduce the team of consultants to the contracting authority, present overall organisation and activities of Med-Vet-Net, validate the methodology of the study, and define ways of interaction between Santexcel and Partners of the Network.

Institute Representatives are the main contacts for each Partner Institute with Santexcel. They may also introduce the consultants to any other appropriate contacts at their institute, such as Legal Officers.

The duration of this study has been revised and extended to the end of February 2006, in order to allow time for the Partner Institutes to consider and validate propositions of status.

The Admin Bureau would like to take this opportunity to wish all Med-Vet-Net participants every happiness and success for Christmas and the New Year.

Admin Bureau

EXTERNAL CONGRESS

Epidemiology and Vaccines SfAM Winter Meeting. The Royal Society, Carlton House Terrace, London, UK 5 January 2006

This one day meeting includes a variety of aspects of vaccine use and epidemiology; from MMR to Bioterrorism vaccines. A plenary session, including a presentation of avian flu will be followed by two parallel sessions;
A. Postcodes to Pandemics - including TB vaccines and the effects of climate change
B. Current Vaccine issues - including MMR

and bioterrorism vaccines. Further information and online booking are available at www.sfam.org.uk/janmeet.html or email: meetings@sfam.org.uk

Life Science Exhibition 18 January 2006, Genome Campus, Hinxton, Cambridge, UK

This exhibition displays advanced tools and methods for DNA, RNA, protein analysis and immunological techniques. Please visit: www.regonline.co.uk/genome

The International Conference on Emerging Infectious Diseases, Atlanta, Georgia, USA 19-22 March 2006

The conference brings together public health professionals to encourage the exchange of scientific and public health information on global emerging infectious diseases issues. Major topics include current work on surveillance, epidemiology research, communication and training, bioterrorism, and prevention and control of emerging infectious diseases, both in the United States and abroad. ICEID2006 would be a great opportunity to share your research with the scientific community. Please visit <http://www.iceid.org>

International Symposium on Emerging Infectious Diseases, Atlanta, Georgia, USA 22-24 March 2006

Major themes of the symposium include:
- The Convergence of Human and Animal Health
- Threats and Challenges Facing Human and Animal Health
- Lessons Learned from Past
- Opportunities for the Future
- Risk management and Communication
For more information please visit: <http://www.isezconference.org/>

International Symposium on Salmonella and Salmonellosis Saint Malo, France 10-12 May 2006

Major themes of the symposium include:
- Detection, identification, typing
- Interactions between hosts and bacteria
- Immune response
- Ecology and animal epidemiology
- Ecology and public health
- Antimicrobial resistance
- Control and risk assessment
Please visit : http://www.zoopole.com/ispaia/i3s2006/org_en.php

Third International Conference on Antimicrobial Agents in Veterinary Medicine (AAVM) Orlando, Florida, USA 16-20 May 2006

The topics of the meeting are:
-Pharmacokinetics and Pharmacodynamics
- Antimicrobial susceptibility and resistance
- Clinical research and therapy
- Antibiotic treatment of mastitis
- Analytical methods and techniques
- Environment, food safety and regulatory aspects
- Future of antimicrobial therapy
Please visit: <http://www.aavm2006.com>

106th General Meeting of the American Society for Microbiology Orlando, USA 21-25 May 2006

This conference will be held in the Orange

County Convention Center in Orlando. The scientific program will feature nearly 300 individual colloquia, symposia, roundtable discussions, award lectures, and poster sessions.

For more information please visit: <http://www.gm.asm.org/7200.shtm>

4th International Veterinary Vaccines and Diagnostics Conference (IVVDC) Oslo, Norway 25-26 June 2006

The conference provides an excellent opportunity to meet-colleagues and be updated on recent progress and future perspectives in the fields of vaccinology and diagnostics.

The IVVDC has become an important meeting place for regulatory authorities, pharmaceutical companies and the scientific community.

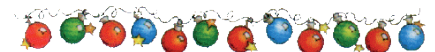
Please visit: http://www.vetinst.no/inet_eng/index.asp?strUrl=1002147i&topExpand=&subExpand=

IDRN Courses in Methods in Molecular Microbiology

Royal Free & University College Mmedical School, Hampstead Campus, London

24 March-3 April 2006

The course will include a day of practical demonstrations as an introduction to basic molecular techniques for medical microbiology, a 3 day hands on course using essential molecular methods, and a one day seminar series on the application of molecular techniques in infectious diseases. Please visit: <http://www.idrn.org/researchworkshops.php>



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Med-Vet-Net is a European

Network of Excellence on

Zoonoses Research

Visit <http://www.medvetnet.org>