6 November 2017
Stockholm Waterfront Conference Centre

One Health - we are in this together - Viral and bacterial diseases/conditions at the animal-human interface

12:40 – 12:50 Arrival of participants with their lunch

12:50 – 13:00 Welcome notes
Dr Ines Steffens, Editor-in-chief, Eurosurveillance

13:00 – 13:10 Introduction and moderation
Dr Johanna Takkinen, ECDC, Stockholm, Sweden

13:10 – 13:35 Intrinsic and extrinsic factors for the emergence of zoonotic viruses at the animal-human interface
Professor Sylvie van der Werf, Head of the Molecular Genetics of RNA Viruses Unit at the Institut Pasteur, she is also Director of the coordinating center of the National Reference Center for respiratory viruses, the WHO National Influenza Center (Northern-France) and the WHO H5 reference laboratory. Furthermore she is Director of the department of Infectiology-Microbiology of the Doctoral School Bio-Sorbonne Paris Cité.

Pr. van der Werf is a member of several professional bodies and societies: American Society of Microbiology, European Society of Clinical Microbiology and Infectious Diseases, International Society for Influenza and other Respiratory Viruses and the European Scientific Working group on Influenza. She is regularly requested to serve as an expert on various committees of international organizations such as the WHO and the ECDC.

Pr. van der Werf’s research interests have been focused on respiratory viruses since 1996, particularly dealing with molecular epidemiology and molecular genetics aimed at the identification of determinants of influenza virus evolution, species specificity and sensitivity to antivirals. She is the author of over 160 scientific papers. She was awarded the Georges Zermatti price in 2006 and nominated “Chevalier de l’Ordre des Palmes Académiques” in 2009.

13:35 – 13:40 Q&A

13:40 – 14:05 Antimicrobial stewardship in livestock and companion animals: the why and the how
Professor Luca Guardabassi, Department of Veterinary Clinical Microbiology, University of Copenhagen, Copenhagen, Denmark / Director One Health Center for Zoonoses and Tropical Veterinary Medicine, Professor of Clinical Microbiology, Ross University School of Veterinary Medicine, St Kitts, West Indies

14:05 – 14:10 Q&A

14:10 – 14:30 Discussion and closing remarks by the moderator

Pr Sylvie van der Werf
Pr. van der Werf is a Professor at the University Paris Diderot where she is responsible for a master program in Immunology, microbiology, virology and infectious diseases. The Head of the Molecular Genetics of RNA Viruses Unit at the Institut Pasteur, she is also Director of the coordinating center of the National Reference Center for respiratory viruses, the WHO National Influenza Center (Northern-France) and the WHO H5 reference laboratory. Furthermore she is Director of the department of Infectiology-Microbiology of the Doctoral School Bio-Sorbonne Paris Cité.

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Dr Johanna Takkinen
Dr. Johanna Takkinen, DVM, is Head of programme Food- and Waterborne Diseases and Zoonoses in the European Centre for Disease Prevention and Control. Leading this programme since 2006, which covers over 20 bacterial, viral, parasitic and prion diseases, she has developed a deep interest to understand and explore the epidemiology of these diseases in EU/EEA, applying “One Health” approach. Dr. Takkinen has a special degree in food- and environmental hygiene from the Faculty of Veterinary Medicine at the University of Helsinki and a Master of Public Health from the Nordic School of Public Health (NHV) in Sweden in 2005. Dr. Takkinen was recognised de facto Diplomate for Food Science at the European College of Veterinary Public Health.

Pr Luca Guardabassi
One Health microbiologist specialised in antibiotic resistance and antibiotic therapy. He graduated in veterinary medicine at Pisa University in 1994 and obtained his PhD in microbiology at the Royal Veterinary and Agricultural University in Denmark in 2000. Diplomate of the European College of Veterinary Public Health (ECVPH) since 2005, he is currently affiliated professor at the University of Copenhagen. His research focuses on any aspects of antibiotic resistance, ranging from molecular epidemiology of resistant bacteria and resistance genes of clinical relevance to drug discovery. His publication record includes over 130 peer-reviewed articles and 6 book chapters. He is the founder and chair of the ESCMID Study Group of Veterinary Microbiology, founder and member of the Veterinary Committee for Antimicrobial Susceptibility Testing, and member of the One Health Committee of the World Small Animal Veterinary Association.
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The connection between the environment, food, animals and humans with respect to human well-being, sustainable development and health is intuitive. The ‘One Health’ concept encompasses a multidisciplinary, holistic approach to sustain the health and well-being of humans and animals as well as their living environment.

One Health has gained increasing attention and importance in the past years owing to the continued growth of the world’s population, predicted to be 9 billion by the year 2050, the opportunities and challenges of a technology-driven, interconnected world, as well as man-made and other changes in our environment that influence the emergence and re-emergence of communicable diseases and conditions.

Over 70% of infectious diseases are of zoonotic origin. These diseases cross the species barrier, and direct or indirect contacts between humans and animals may lead to outbreaks of (severe) diseases in humans, which has been exemplified during the emergence of Middle East respiratory syndrome (MERS), avian influenza and the recent increase of listeriosis. To understand the drivers of their emergence and to prevent and control such diseases, adequate detection methods, surveillance, treatment and prevention measures including behavioural guidance based on an interdisciplinary approach, are required.

A strong link between animals, humans and the environment has also been established for antimicrobial resistance. Use of antimicrobials in animal husbandry has led to the emergence of various resistant pathogens such as *Escherichia coli* and *Salmonella* spp. with a transmission route that may also involve the environment. A pertinent recent example is the newly detected plasmid-mediated colistin resistance conveyed by mcr-1 to mcr-5 genes.

The seminar will focus on the interplay of changes in pathogens in animals one the one hand and outbreaks or spread of resistant pathogens in humans on the other. After an introduction by Dr Johanna Takkinen, Professor Sylvie van der Werf will talk about viral zoonotic diseases and point out intrinsic and extrinsic factors influencing the dynamics of spillover from animals to humans. Professor Luca Guardabassi will then speak about the need for antimicrobial stewardship in animals and highlight the possible role of companion animals in the direct transmission of resistant pathogens to humans resulting from their close physical contact.

There will be room for discussion and we encourage the audience to comment and share views.

Eurosurveillance is a European peer-reviewed scientific journal devoted to the epidemiology, surveillance, prevention and control of communicable diseases, with a focus on topics relevant to Europe. The entire content is open access and free of charge for both readers and authors.

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