
Programme

Friday 4th July 2014

- 17.30 Residential registration commences at University of Surrey, Guildford
19.00 Conference dinner
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Saturday 5th July 2014

- 08.45 Registration opens
09.30 **Welcome and introduction to the Conference**
Stella Huyshe-Shires, LDA
- 10.00 **Current work in PHE around Lyme disease**
Tim Brooks, Public Health England
- 10.55 Coffee break
- 11.20 **Laboratory diagnostics: the pros and cons of different test systems**
Klaus-Peter Hunfeld, Central Institute of Laboratory Medicine, Frankfurt
- 12.10 **Circadian rhythms and sleep: implications for health and disease**
Derk-Jan Dijk, University of Surrey
- 13.00 Lunch
- 14.00 **Tick-borne Candidatus Neohhrlichia mikurensis in S Sweden; implications for the UK?**
Martin Andersson, Lund University
- 14.40 **Unravelling the natural transmission pathways of tick-borne pathogens in the UK**
Richard Birtles, University of Salford
- 15.35 Tea break
- 16.00 **The outer membrane of Borrelia; the interface between them and us**
Richard Bingham, University of Huddersfield
- 16.45 **Panel discussion**
Speakers and delegates
- 17.30 Conference closes
19.00 Post conference dinner

Speakers

Martin Andersson

***Tick-borne Candidatus Neoehrlichia
mikurensis in S Sweden; implications for the UK?***

Martin Andersson is an evolutionary biologist at the Lund University in Sweden. His research interests are ticks and tick-borne diseases, and especially co-infections with different infectious agents in ticks and reservoir hosts. He mainly works with *Borrelia* and the newly discovered tick-borne agent *Neoehrlichia*, and co-infections with these in rodent populations and *Ixodes ricinus* ticks in southern Sweden. He has also a research interest in multiple infections of *Borrelia* strains in ticks and reservoir hosts and possible interactions between such strains.

Richard Bingham

***The Outer Membrane of Borrelia;
The Interface Between Them and Us***

Dr Richard Bingham is currently a Senior Lecturer in Biological Science at the University of Huddersfield. After Richard's first degree at the University of Sheffield in 1999 he obtained a PhD in X-ray crystallography at the University of Leeds working for Professor Simon Phillips. Richard continued to work at Leeds studying protein structures and their interactions. Then in 2006 he moved to the University of York and worked as a Postdoctoral Research Fellow in the laboratory of Professor Jennifer Potts. He studied the interactions between bacterial surface proteins and fibronectin.

In 2008 Richard moved to the University of Huddersfield and began his own programme of research focusing on the surface proteins of *Borrelia* with the objective of furthering our understanding of this unique pathogen at the molecular level. Richard has been a rock climber for 20 years and enjoys the outdoors.

Richard Birtles

***Unravelling the natural transmission
pathways of tick-borne pathogens in the UK***

Professor Richard Birtles is a microbiologist at the Salford University School of Environment and Life Sciences. His work explores the strategies adopted by infectious agents, at the individual and population level, to persist in nature, in particular those microorganisms that are arthropod transmitted. These efforts have centred on organisms of public health and veterinary importance, including the tick-transmitted *Borrelia* and *Anaplasma* species, and flea and louse-transmitted members of the bacterial genus *Bartonella*.

Recent projects include examination of the adaptation of *A. phagocytophilum* and *B. burgdorferi* strains to specific transmission pathways within natural multi-host, multi-vector systems, and study of the molecular basis of arthropod exploitation by *Bartonella* species.

Tim Brooks

Current work in PHE around Lyme Disease

Dr Tim Brooks is Head of the Public Health England's Rare and Imported Pathogens Laboratory (RIPL). Following his medical training he worked briefly in the National Health Service as a trainee surgeon before joining the British Army. Returning to hospital medicine he became a pathologist and microbiologist developing an interest in dangerous pathogens, and research into therapeutics and vaccines for them.

RIPL provides the UK acute diagnostic facilities for a wide range of arboviruses, rickettsiae and viral haemorrhagic fevers, vector-borne diseases and zoonoses, including anthrax, tularemia and Q fever. Tim is one of the leading partners in the national Imported Fever Service, which offers a 24 hour service for acutely ill travellers arriving in the UK. RIPL is closely involved in the design, assessment and production of therapeutics and vaccines for some of these agents, and provides the surge capacity for diagnostics of major outbreaks of infectious diseases in the UK. RIPL is now also the home of the national Lyme disease specialist service, in keeping with the laboratory's role in vector borne zoonoses.

Derk-Jan Dijk

Circadian rhythms and sleep: implications for health and disease

Professor Derk-Jan Dijk is Director of the Surrey Sleep Research Centre and Director of Sleep Wake Research of the Surrey Clinical Research Centre. He has more than 30 years of experience in clinical sleep research. His current research interests include the pharmacological manipulation of sleep and cognition; the role of circadian rhythmicity in sleep regulation; identification of novel-biomarkers for susceptibility to the negative effects of sleep loss; understanding age and sex related differences in sleep physiology and sleep disorders.

Derk-Jan has published more than 160 research and review papers in the area of sleep and circadian rhythms and is invited frequently to speak at international sleep meetings and he has given opening and plenary lectures for the joint meeting of the Canadian Sleep Society, American Academy of Sleep Medicine and Sleep Research Society, The European Sleep Research Society and the Hong Kong Sleep Medicine Society.

Klaus-Peter Hunfeld

Laboratory diagnostics: the pros and cons of different test systems

Professor Klaus-Peter Hunfeld is Chief Physician of the Central Institute of Laboratory Medicine at the Northwest Medical Centre in Frankfurt am Main. As a medical microbiologist he has been working on infectious disease diagnostics for more than 15 years. He has authored and co-authored many papers on Lyme disease and other tick-borne diseases including "Antimicrobial susceptibility of *Borrelia burgdorferi sensu lato*: what we know, what we don't know, and what we need to know." in 2006.