

VECTOR-BORNE DISEASES IN THE UK: BIENNIAL MEETING 2018

The John Innes Centre,
Norwich Research Park

Monday December 3rd until Tuesday December 4th 2018.

DRAFT PROGRAMME

Sponsored by –



MONDAY DECEMBER 3RD

INTRODUCTION

- 9.45 Registration and coffee
- 10.15 Welcome to the JIC Saskia Hogenhout
Meeting arrangements John Stephenson

SESSION 1 - EMERGING VECTOR BORNE DISEASES

Chair - Matthew Baylis

- 10.30 Mike Wilson (National Museum of Wales)
"Xylella in Europe and Threats to Agriculture and Horticulture in the UK and the Role of the Possible Vectors"
- 11.00 Alain Kohl (University of Glasgow)
"Arboviruses and antiviral RNAi pathways in mosquito cells: the domino effect"
- 11.30 Heather Ferguson (University of Glasgow)
"The changing ecology of African malaria vectors and its implications for vector control"

OPEN PAPERS

- 12.00 Rebecca Corkill (John Innes Centre)
"Early embryonic development in *Bemisia tabaci*"
- 12.15 Lara Harrup (The Pirbright Institute)
"Can we predict emergence and spread of Culicoides-borne arboviruses in Europe according to genetic drivers of vector competence?"

12.30 - 13.30 Lunch

With poster session 1 (even numbers), including displays on network activities (e.g. Connected, Gnatwork, BOVA, Antivec, InfraVec II, Vectorbase, Global Vector Hub) - TBC

SESSION 2 - DISEASE AND VECTOR SURVEILLANCE

Chair – Simon Carpenter

13.30 Lisa Reimer (Liverpool School of Tropical Medicine)
"Innovative approaches to xenomonitoring for vectorborne disease"

14.00 Gary Foster (University of Bristol)
"A new look ;-) at vector-borne plant viruses: mirage or real?"

Open Papers

14.30 Caroline Millins (University of Glasgow)
"Island, Habitat Type and Vegetation Density affect Tick Abundance in a Lyme Borreliosis Hot-Spot in Scotland"

14.45 Kayleigh Hansford (Public Health England)
"Public Health England's digital Tick Awareness Toolkit – delivering key public health messaging at the local level"

15.00 - 15.30 - Tea/Coffee

SESSION 3 - DIVERSITY AND GENOMICS

Chair – Saskia Hogenhout

15.30 Mark Blaxter (University of Edinburgh)
"The dynamic evolutionary histories of nematode-Wolbachia association"

16.00 Alekos Simoni (Imperial College, London)
"Development of gene drive solutions to control Anopheles gambiae mosquito populations"

Speakers on General Policy

16.30 Daniel Bausch (United Kingdom Public Health Rapid Support Team)
"Emerging zoonoses and pandemic threats"

16.50 Helen Roberts (Department for Environment, Food and Rural Affairs)
“The interaction between the scientist and the policy maker. An example of vector-borne diseases”

17.10 Nicola Spence (Department for Environment, Food and Rural Affairs)
“New and Emerging Vector-borne Diseases of Plants”

Open Papers

17.30 María del Mar Fernández de Marco (Animal and Plant Health Agency)
"Complete Usutu Virus Genome Sequences Derived Directly from Clinical Samples by using a Multiplex PCR-based Whole Genome Sequencing Method"

17.45 Thomas Mathers (John Innes Centre)
“Comparative Analysis of 21 Aphid Genomes to Gain Insights into the Evolution of Grass Feeding and Extreme Host Range Expansion”

18.00 - SESSION ENDS

19.00 - Drinks reception and dinner at the Sainsbury Visual Arts Centre (walking distance from Conference Centre and Broadview Lodge)

TUESDAY DECEMBER 4TH

9.00 Late registration and coffee

SESSION 4 - EPIDEMIOLOGY AND MODELLING **Chair – Jolyon Medlock**

09.30 Roman Biek (University of Glasgow)
"Environmental and Evolutionary Determinants of Bluetongue Virus Emergence and Spread"

Open Papers

10.00 Laura Tugwell (The Pirbright Institute)
"The Impact of Cold Temperatures on the Winter Activity of Adult Culicoides Biting Midges"

10.15 Francesco Baldini (Glasgow University)
"Prediction of Malaria Vector Demographic Traits through Mid-Infrared Spectroscopy and Machine Learning"

10.30 Stan Marée (John Innes Centre)
"Mathematical Modelling Reveals the Inevitability of Meso-scale Spatial Patterning in Pathogen-Vector-Host Systems"

10.45 Toby Bruce (Keele University)
"Opportunities to Break the Disease Cycle by Managing the Vector"

11.00 - 11.30 – Tea/Coffee

SESSION 5 - VECTOR-PATHOGEN-HOST INTERACTIONS

Chair – Toby Bruce

- 11.30 Lauren Cator (Imperial College, London)
"The Behavioural Ecology of Mosquitoes"
- 12.00 Karin Darpel (The Pirbright Institute)
"The Host-vector-pathogen Interface of Culicoides-borne Bluetongue Virus"

Open Papers

- 12.30 Sam Mugford (John Innes Centre)
"Aphid Effector Proteins in the Suppression of Host Plant Immunity"
- 12.45 Trisna Tungadi (University of Cambridge)
"Jasmonic Acid is Important in Cucumber mosaic virus Induced Aphid Resistance in Arabidopsis thaliana"
- 13.00 Ben Makepeace (University of Liverpool)
"Multi-locus Sequence Typing of Ixodes ricinus and its Symbiont Candidatus Midichloria mitochondrii across Europe Reveals Evidence of Local Co-cladogenesis in Scotland"
- 13.15 Barry Atkinson (The Pirbright Institute)
"Genetic Approaches to Reducing Vector Competence of Aedes aegypti for Mosquito-Borne Viruses"

13.30 - 14.30 Lunch

With poster session 2 (odd numbers), including displays on network activities (e.g. Connected, Gnatwork, BOVA, Antivec, InfraVec II, Vectorbase, Global Vector Hub) - TBC

SESSION 6 - VECTOR AND DISEASE CONTROL

Chair – John Stephenson

14.30 John Carr (University of Cambridge)
“Viral Manipulation of Plant-Vector Interactions”

Workshop

15.00 Introduced by Anthony Wilson (The Pirbright Institute)
“Defining Minimum Standards for Reporting Insect Infection Studies”

16.00 Closing remarks

16.30 – MEETING CLOSES