5th CIIE Symposium
Life in cells, hosts, and vectors:
How do parasites maximize fitness across scales?

29th November 2011
Lecture Theatre 3, Ashworth Labs, Edinburgh
All-day event
Hosted by the Centre for Immunity, Infection, and Evolution
Organisers: Nicole Mideo and Sam Brown

This symposium is organised by the Centre for Immunity, Infection, and Evolution (CIIE), a Wellcome Trust-funded initiative with the remit to connect Evolutionary Biology to Immunology and Infection research and gain an interdisciplinary perspective on challenges to global health.

The aim of this symposium is to bring together researchers from diverse disciplines to address a central question in infectious disease biology: How do parasites maximise fitness across a range of biological scales? Although parasite fitness is often equated with between-host transmission, such a simple assumption overlooks the fact that transmission is a consequence of processes acting on a number of different scales and across vastly different environments. Our programme brings together researchers whose work looks across these scales to understand why and how parasites ‘do what they do’, covering a range of different systems – from bacteria to helminths – as well as integrating theoretical and empirical approaches.

Programme:

9:30  Nicole Mideo (University of Edinburgh): Introduction
9:45  Olivier Restif (University of Cambridge): Is Salmonella trapped in the closet? The coming-out of an intracellular pathogen
10:15 Sarah Reece (University of Edinburgh): Putting within-host ecology into parasite biology: strategic decision-making?
10:45-11:30 Coffee Break
11:30 Toni Aebischer (Robert Koch Institute): Life in cells: From a proteomic parts list to an interpretation of the habitat of Leishmania in macrophages
12:00 Andy Fenton (University of Liverpool): Dances with worms: the evolution of pathogen virulence under coinfection
12:30-14:00 Lunch
14:00 Sam Brown (University of Edinburgh): Virulence dynamics across multiple environments
14:30 Ville Friman (University of Exeter): Protist and phage enemies and the evolution of virulence in opportunistic bacterial pathogens
15:00 Alvaro Acosta-Serrano (University of Liverpool): The blood pact: African trypanosomes use tsetse serpins to evade mammalian complement in the fly
15:30-16:00 Coffee Break
16:00 Joanne Webster (Imperial College): How do schistosomes optimize fitness across scales and changing environments?
16:30 Mark Brown (Royal Holloway, University of London): Dynamic transmission, host quality and population structure in a multi-host parasite of bumblebees
17:00 Discussion, drinks, and nibbles

Please register at http://ciie.bio.ed.ac.uk