

DBEM Lab Talk

Wednesday 9 March 2016

16:00-17:00

PRC Room 6202

Speaker

Dr Joanne Lello, FEM Marie-Curie Fellow & Cardiff University Senior Lecturer

Joanne's research focus is on the ecology and epidemiology of infectious disease, and in particular, how parasite species (from worms to viruses) may drive one another's dynamics. She has a particular focus on how to detect interaction among parasites in natural systems and in using mathematical approaches to both understand and predict the dynamics of complex systems. Jo is 9 months in to a 15-month Marie Curie-Skłodowska fellowship here at FEM. Jo wants to encourage people from other disciplines to attend the talk as she has a strong interest in interdisciplinary research and asked me to add this personal note.

"I'm particularly keen to meet people from other groups and get to know about the work going on there. I hope that some of the concepts and approaches I discuss in my talk will be of interest beyond the parasitology / ecology audience.

I have asked that the talk be scheduled for late afternoon as **I would like to encourage as many of you as possible to come down to the local bar after the talk (in good UK tradition)**. I'd very much like to use this as an opportunity to get to know more of my colleagues here at FEM. Drinks will be followed by dinner somewhere for those hardy few that may be interested."

Title

Ripples in the pond. Do macroparasite-host interactions drive transmission of Hanta virus and LCMV?

Abstract

Select any population of animals and you will find that it plays host to a wide range of endemic parasite species. Ectoparasites and gut helminths make up a large portion of this endemic parasite pool, yet these parasites are often considered of lower importance than microparasitic infections. However, endemic infections are potentially capable of changing the demography of host populations, and in turn host demographic change can greatly affect the transmission of parasites (both micro and macro). In this talk I will present preliminary results from The Marie Curie-Skłodowska Fellowship **PARACORT: The role of macroPARAsite COinfection in Rodent-borne microparasite Transmission**. Alpine rodents are responsible for both the spread of human transmissible diseases and for significant damage to agricultural crops. We will present evidence that the macroparasites in this alpine system substantially rodent life-history and hence demography. Further, we demonstrated that these demographic changes can alter the transmission of Hanta virus and LCMV (Lymphocytic Choriomeningitis Virus). We will also present the future directions of the project and discuss the potential for co-ordinated rodent and disease control strategies.

Contact

frederic.baldacchino@fmach.it