Announcement

Host:pathogen interactions. Application of computational methods to Leishmania and other pathogens”

WORKSHOP

NOVEMBER 16th AND 17th FIOCRUZ RIO DE JANEIRO

UK Brazil partnership

At:

Instituto Oswaldo Cruz, FIOCRUZ

Auditório Emmanuel Dias Pavilhão Arthur Neiva

Researchers, undergraduate and graduate students are welcome to register and submit an abstract for poster presentation until October 23th. Poster sessions will allow a fruitful environment for discussions and exchange among scientists and students concerning different aspects of host:pathogen interaction using omics.

Registration is free. Attendees from other states or countries are very welcome, but organization will not cover travel expenses and accommodation. The workshop is supported by Newton Fund, FAPERJ and FIOCRUZ.

Registration: to register use the link below and follow the instructions

http://goo.gl/forms/CG9mVGx7bi

Aims and scope:

To discuss molecular, cell and immunobiology of Leishmania parasites (and other intracellular pathogens) and their interaction with the mammalian host.

To discuss state-of-the-art in vivo imaging, advanced meta-approaches of genomics/transcriptome and novel concepts in computer modelling of infection to drug development and the understanding of pathogenesis of leishmaniasis and other intracellular pathogens.

This will allow established investigators and early career scientists to interact and will offer the opportunity for people with common research interests to develop new projects
Invited Speakers: Paul Kaye (University of York), Jon Timmis (University of York), Nick Dickens (University of Glasgow), Mark Coles (University of York); Alberto D’Avila (FIOCRUZ), Fábio Passetti (FIOCRUZ), Christian Probst (FIOCRUZ), Juliana Trindade (UFES), Amy Goundry (University of Glasgow), Mariana Boité (FIOCRUZ), Mariana Boroni (INCA), Patrícia Veras (FIOCRUZ), Michael Sammeth (UFRJ), Ana Paula Lima (UFRJ), Milton Ozório Moraes (FIOCRUZ).

Organizing Committee: Jeremy Mottram (University of Glasgow), Ana Paula Lima (UFRJ); Milton Ozório Moraes (FIOCRUZ), Elisa Cupolillo (FIOCRUZ), Mariana Boité (FIOCRUZ), Gabriel Melim Ferreira (FIOCRUZ).

Program (Short Version)

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Monday 16th November: Training session for early career researchers (Fiocruz, Rio)

09.30 – 10.15: Dr Paul Kaye. A multiscale model to minimise animal usage in leishmaniasis drug development

10.15 – 11.00: Dr Jon Timmis Computational modelling for immunology

11.00 – 11.30: Coffee

11.30 – 12.15: Dr Nick Dickens: Approaches to analysing genomic data for kinetoplastids

12.15 - 13.00: Dr Mark Coles Combining Computational Modelling with Experimentation to Understand Immune System Function

13.00 – 14.30: Lunch

YOUNG INVESTIGATORS ORAL PRESENTATIONS

14.30 – 14.50: JULIANA TRINDADE (UFES) Study of Natural Miltefosine-Resistance Mechanism in Leishmania (L.) infantum Isolates from Visceral Leishmaniasis Patients with Different Treatment Outcomes

14.50 – 15.10: AMY GOUNDRY (UNIVERSITY OF GLASGOW) Leishmania major inhibitor of serine peptidase modulates host immune responses

15.10 – 15.30: Mariana Boité (FIOCRUZ) What are the genetic basis for all the different phenotypes we observe among Leishmania Viannia strains?
15.30 – 15.50: MARIANA BORONI (INCA) "Spliced leader trans-splicing in Schistosoma mansoni" 

15:50-16:15- coffee break

16:15 – 17:15 - Practical demonstration: Exploring Leishmania: host interaction with in-silico tools (Dr Jon Timmis)

In this practical demonstration a simple web-based tool that provides a stochastic simulation of the immune system response to Leishmania will be shown: the formation of a granuloma. The simulation is based on a stochastic petri net (details of which will be covered earlier in the day). The simulation has a number of parameters, which will be explored and the effect on the progression of a granuloma observed. In addition, interventions will be performed with simple drug effects on the host and changes in the ability of the immune system to respond will be observed. A worksheet will be provided that will step you through the execution of the model and various intervention strategies.

17.15 – 18.15: Poster session

Tuesday 17th November: Host-pathogen interactions. Application of computational methods to leishmaniasis and other pathogens (Fiocruz, Rio)

Session 1: The host

09.30 – 10.00: TURAN URMENY (UFRJ) "Transcriptomics of the heat shock response in Trypanosoma cruzi"

10.00 – 10.30: FABIO PASSETTI "Proteogenomics in cancer and neurological disorders"

10.30 – 11.00: MICHAEL SAMMETH (UFRJ)

11.00 – 11.30: Coffee

11.30 – 12.00: PATRICIA VERAS (FIOCRUZ, Salvador) "Identification of Molecular Markers Associated with Severity and Transmission in Canine Visceral Leishmaniasis (CVL)"

12.00 – 12.30: ANA PAULA LIMA (UFRJ) "Host serine peptidase in Leishmania infections: friends or enemies?"

12.30 – 14.30: Lunch

Session 2: The pathogens

14.30 – 15.00: ALBERTO DAVILA (FIOCRUZ, Rio) "Improved orthologous databases to ease protozoan targets inference"

15.00 – 15.30: CHRISTIAN PROBST (FIOCRUZ/Paraná) "T. cruzi genomics"

15.30 – 16.00: MILTON MORAES (FIOCRUZ, Rio) "Host molecular and genetic signatures in leprosy and tuberculosis"

16.00 – 16.30: Coffee ❄️ CLOSING SESSION
16.30 – 18.30: Closed session for Newton members only (milestones and progress)