

BIOINFORMATICS TRAINING COURSE
of the LabEx 'PARAFRAP'
Montpellier, January 5th – 9th, 2015
Laboratory of Parasitology-Mycology, Faculty of Medicine,
University & CHU of Montpellier / CNRS UMR 5090 / IRD 224

Organised by Pr. David ROOS and Pr. Patrick BASTIEN
with the assistance of Slavica STANOJCIC and Yvon STERKERS

Instructors : Pr. David ROOS (University of Pennsylvania, USA), Omar HARB (EuPathDB, University of Pennsylvania), Suzanne WARRENFELZ (EuPathDB, University of Athens, Georgia, USA), Cameron MCPHERSON (URA 2581 "BIHP", Institut Pasteur, Paris)

Speakers (by alphabetical order) : Frédéric BRINGAUD (CNRS UMR 5536 "RMSB", University of Bordeaux), Toni GABALDON (Center for Genomic Regulation, Barcelona), Omar HARB (EuPathDB, University of Pennsylvania), David HORN (University of Dundee, UK), Jose Juan LOPEZ RUBIO (CNRS UMR 2724 "MiVEGEC", University of Montpellier), Pr. David ROOS (University of Pennsylvania, USA),

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Schedule, ParaFrap Bioinformatics Course, Montpellier, 5-9 January 2015

	Monday 05/01/2015	Tuesday 06/01/2015	Wednesday 07/01/2015	Thursday 08/01/2015	Friday 09/01/2015
8 am	<i>Students arriving Sunday (or Monday morning < 8:30am)</i>				
9 am	Workshop Welcome, Overview <i>Bastien, Harb, Warrenfeltz, MacPherson, Roos</i>	Browser Exercises - II Interpreting RNAseq data <i>Roos, et al</i>	Mapping Exercises - II Interpretating mapping results <i>Harb, et al</i>	Lecture Pattern recognition, Regular expressions <i>Omar Harb</i>	Lecture Designing (pathogen) genome databases <i>David Roos</i>
10 am	Student presentations Who are you, and what are your interests? <i>5-10 min each</i>			Sequence Exercises Motif Searches, Genomic Colocation <i>Harb, et al</i>	Data Integration Exercises - I Complex queries <i>all instructors</i>
11 am	Tea/Coffee	Tea/Coffee	Tea/Coffee	Tea/Coffee	Tea/Coffee
12 noon		Report on results, discuss <i>all students</i>			
1 pm	Lunch	Lunch	Lunch	Lunch	Lunch
2 pm	Lecture Introduction to Genome Infor- matics & EuPathDB databases <i>Omar Harb</i>	Mapping Exercises - I Mapping RNAseq data <i>Warrenfeltz, et al</i>	Lecture Gx Technologies & Applications <i>JJ Lopez-Rubio</i>	Lecture Population genetics datasets <i>David Roos</i>	Research Lecture Bioinformatics of organismal diversity <i>Toni Gabaldon</i>
3 pm	Gene Page Exercises GeneID, BLAST, Text searches <i>Warrenfeltz, et al</i>		Functional Genomics - I Transcriptomics & Proteomics <i>Warrenfeltz, et al</i>	Genetics Exercises SNPs, Population genetics <i>MacPherson, et al</i>	Data Integration Exercises Group projects <i>all instructors</i>

4 pm		Lecture Phylogeny & Orthology <i>David Roos</i>			
	<i>Tea/Coffee</i>	<i>Tea/Coffee</i>	<i>Tea/Coffee</i>	<i>Tea/Coffee</i>	<i>Tea/Coffee</i>
5 pm	Browser Exercises - I Alignments, Comparative Genomics <i>MacPherson, et al</i>	Orthology Exercises Phyletic pattern queries <i>Harb, et al</i>		Pathway Exercises Metabolism & Pathways <i>Warrenfeltz, et al</i>	Report on results, discuss <i>all students</i>
			Functional Genomics - II Host response datasets <i>Harb, et al</i>		
6 pm					
7 pm					
8 pm	<i>Dinner</i>	<i>Dinner</i>	<i>Dinner</i>	<i>Dinner</i>	<i>Closing Dinner</i>
	Research Lecture Biology & genomics of host-pathogen interactions <i>David Roos</i>	Research Lecture <i>Plasmodium</i> gene regulation and population diversity <i>JJ Lopez-Rubio</i>	Research Lecture Identification and roles of transposons in Trypanosomatid genomes <i>Frederic Bringaud</i>	Research Lecture Functional genetic screens in trypanosomes <i>David Horn</i>	<i>Students departing Saturday</i>