

Bioinformatics workshop - Introduction to NGS data analysis: from raw data to intelligible output

13, 14 and 15 of March 2019

Josep Carreras Leukaemia Research Institute (Badalona, BARCELONA, Spain)

Local organisers: Roberto Malinverni, David Corujo, Sarah Hurtado-Bagès,
Marguerite-Marie Le Pannéer

PROGRAM*		Tuesday 12	Wednesday 13	Thursday 14	Friday 15
Morning	09:00 -12:00		Bioinformatic Lectures I & II Linux environment, main data formats, retrieving data and pre-processing	Bioinformatic Lectures III & IV Introduction to RNA-seq and ChIP-seq analysis: alignment, read counts, peak calling and statistics	Workshop III Hands-on exercises and Q&A
	12:00 -13:00		Keynote Lecture I: TBA	Keynote Lecture II: TBA	Bioinformatic Lecture V Data visualisation
			Lunch	Lunch	Lunch
Afternoon	14:30 - 17:30	Arrivals	Workshop I Hands-on exercises related to the topics covered during the morning session	Workshop II Hands-on exercises related to the topics covered during the morning session	Departures

*Tentative program, subject to changes.

- **Keynote lecturers:**
 - Ana Rojas (CABD, Spain)
 - TBA

- **Lecturers:**
 - Izaskun Mallona (University of Zurich, Switzerland)
 - Salvador Casaní (BioBam, Spain)
 - Mireia Ramos (IGTP, Spain)
 - Bernat Gel (IGTP, Spain)
 - Roberto Malinverni (IJC, Spain)
 - TBA

- **Objective:** This course is an introduction to the bioinformatics analysis of NGS data (mainly focused on techniques with standardized analysis such as ChIP-Seq and RNA-Seq). Rather than teaching programming fundamentals, the course will be taught focused on a workflow-oriented approach. We want to give a general understanding of the steps and tools involved in the analysis of NGS data. We aim for the participants to get familiar with several available tools to implement their own strategies for NGS data analysis.

- **Who should attend:** this workshop is aimed at bench-based PhD students and postdoctoral fellows using NGS techniques, without or with little experience in bioinformatics analysis. Prior knowledge of programming (any language, basic knowledge) is a plus but not strictly required.
- **Main topics:**
 - Linux environment
 - Data formats
 - Retrieving data
 - Pipelines
 - Working with an external computing cluster (SGE)
 - Quality Control and filtering
 - Alignment
 - Visualization
 - Statistics (in R language)
- **Places available:** 20 (15 COST travel and accommodation grants).
- **Venue address:**

Josep Carreras Leukaemia Research Institute
IJC Building, Campus ICO-Germans Trias i Pujol
Ctra de Can Ruti, Camí de les Escoles s/n
08916 Badalona, Barcelona
Spain
[Google Maps](#)

- **How to apply**

To apply for this course, fill in the [registration form](#). The application deadline is **11th of February 2019**. Notification of acceptance will be given shortly after the deadline.

The workshop will include both lectures and hands-on training sessions, please note that participants **must bring their own laptop**.

15 PhD/Master students will be awarded a COST travel & accommodation grant. Please do not forget to **specify in the registration form that you are part of the EpichemBio COST** action in order to apply for this grant.