

Training School RNA-Seq data analysis

Toulouse, March 6-8th, 2013

The RNA-Seq training school was held at ENSA Toulouse (France)



QualityFruit in partnership with the bioinformatic platform [GenoToule-Bioinfo](#) offered a training course for bio-informaticians and biologists aiming at familiarizing them with the analysis of sequences produced by second-generation sequencers and application on RNA-Seq data analysis.

This training session was designed to help you deal with sequences from the SGS (Second Generation Sequencing) particularly Illumina platforms (GAIIx, HiSeq). You will discover the new sequence file formats, learn about the usual biases of this data type and run different

kind of analysis such as spliced alignment on a reference genome, novel gene and transcript discovery, expression quantification of the genes and transcripts and statistical analysis to identify differentially expressed genes.

Program:

This training focused on practice. It was composed of three working days and four modules with a large variety of exercises.

Day 1: Wednesday, March 6th

10h - 12h: Registration

12h - 14h: Lunch

14h-14h30: Welcome talk by the Chair

14h30 – 16h: How to use the UNIX command line environment

16h-16h20: Coffee break at

16h20 – 18h30: How to use the UNIX command line environment (Continue)

18h30-20h30: French Wine tasting and local food.

Day 2: Thursday, March 7th

9h -10h30: RNA-seq data analysis: Sequence quality (theory + exercises)

1030h-10h50: Coffee break

10h50 -12h30: Spliced read mapping and visualisation (theory + exercises)

12h30 - 13h30: Lunch

13h30 - 15h30: Expression measurements (theory + exercises)

15h30 - 15h50: Coffee break at 16h-16h20

15h50 - 18h: mRNA calling (theory + exercises)

19h30-22h30: Social Diner at a restaurant

Day 3: Friday, March 8th

9h -10h30: Introduction to R environment

10h30 – 10h45: Coffee break

10h45 – 12h: RNA-seq data normalization and Identification of DE genes

12h - 13h30: Lunch

13h30 - 16h30: Data mining

16h30- 17h: Appraisal and departure

Organiser:

- Mohamed Zouine, GBF, INP/INRA Toulouse


Teachers:

- Christophe Klopp , Genotoul-Bioinfo, INRA, Toulouse
- Celine Noirot, Genotoul-Bioinfo, INRA, Toulouse
- Delphine Labourdette, Genotoul-Bioinfo, INRA, Toulouse
- Elie Maza , GBF, INP/INRA Toulouse
- Matthieux Lauvernier, GBF, INP/INRA Toulouse
- Antonio Granell-Richard, CSIC, Valencia.
- Maria Luisa Chiusano, University "Federico II" of Naples
- Mohamed Zouine, GBF, INP/INRA Toulouse

Participants :

Katharina Lang	University of Natural Resources and Life Sciences Vienna
Chrystalla Antoniou	Cyprus University of Technology
Jens Dudenhöffer	Julius Kühn-Institut, Institute for Grapevine Breeding
Miguel Ramos	Instituto Superior de Agronomia
Sonia Osorio	University of Malaga
Rafael Torres	Centro Nacional de Biotecnología
Martine Lemaire-Chamley	INRA-Bordeaux
Pierre-François Bert	INRA Univ Bordeaux

Efstathios Roumeliotis	Aristotle University of Thessaloniki
Maria Manioudaki	Mediterranean Agronomic Institute of Chania
Itay MAOZ	Agricultural Research Organization - the Volcani Center
Stefania Savoi	Udine University
Marco Pietrella	ENEA, Rome
Hamed Bostan	Dept. of Soil, Plant, Environmental, Naples
Mélanie Massonnet	University of Verona
Marianna Fasoli	University of Verona
Massimiliano Corso	University of Padova (Italy)
Olfa Zarrouk	Instituto de Tecnologia Química e Biológica
Gurgu Leontina	University of Galati, Romania

For any question, please contact  [Mohamed Zouine](mailto:mohamed.zouine@univ-bordeaux.fr).