SincellTE Workshop

4th Workshop Single-Cell 2022

Single-Cell : Transcriptomics, Spatial and Multi-Omics (sincellTE)

9 - 14 Janvier 2022, Station Biologique, Roscoff, France

Course overview

This workshop focuses on the large-scale study of heterogeneity across individual cells from a genomic, transcriptomic and epigenomic point of view. New technological developments enable the characterization of molecular information at a single cell resolution for large numbers of cells. The high dimensional omics data that these technologies produce raise novel methodological challenges for the analysis. In this regard, dedicated bioinformatics and statistical methods have been developed in order to extract robust information.

The workshop aims to provide such methods for engineers and researchers directly involved in functional genomics projects making use of single-cell technologies. A wide range of single cell topics will be covered in lectures, demonstrations and practical classes. Among others, the areas and issues to be addressed will include the choice of the most appropriate single-cell sequencing technology, the experimental design and the bioinformatics and statistical methods and pipelines. For this edition, new courses/practicals will focus on spatial transcriptomics, cell phenotyping and additional multi-omics.

Audience

This course is directed towards engineers and researchers who regularly need to undertake single-cell data analysis as well as PhD candidates and Postdocs in computational biology or bioinformatics that are interested in the development of methods and pipelines for high dimension single-cell data analysis.

Working environment

Unix command will be used for bioinformatic analysis, and R programming language for statistical analysis.

Requirements

Participants must have prior experience on NGS data analysis with *everyday use of R* and *good knowledge of Unix* command line. Before the training, participants will be asked to familiarize themselves with the processing and primary analyses steps of scRNA-seq datasets with provided pedagogic material. Study material : *Already working on his/her own single cell dataset is not mandatory.*

Registration

Deadline: September 15th 2021 (participants selection: October 20th, 2021). As the number of participants is limited (**30 participants**), the steering committee will retain candidates on the basis of the information inquired on the registration form.

Complementary Information and registration:

http://www.france-bioinformatique.fr/en/evenements/sincellTE_2022

Registration fees. A) Academy/University: 650€HT=780€TTC   (fee covered for CNRS personnel if the workshop is sponsored by CNRS. Information available mid-december 2021); B) Private sector: 1.750€HT=2.100€TTC. The registration fee includes accommodation and meals.

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