

SINGLE CELL WORK SHOP - Formation dispensé en anglais

Date & Horaire	26 au 27 septembre 2019 de 8H45 à 17H30
Lieu	Institut Imagine 24 Boulevard du Montparnasse, 75015 PARIS
Public visé	Ingénieur d'étude, Ingénieur de Recherche, docteur et postdoc
Programme	<p>1. <u>First day morning</u></p> <ul style="list-style-type: none"> - Introduction, historical background - Presentation of the different single-cell omics technologies - Focus on lipidic droplet-based technologies for highthroughput profiling of single cell transcriptomics - Experimental design: type of cells, number of cells, sequencing depth, sequencing cost - Key steps and quality control for library preparations - Library sequencing guidelines <p>2. <u>First day afternoon</u></p> <p>Practical demonstration on</p> <ul style="list-style-type: none"> - Single-cell suspension, counting and encapsidation - Use of Chromium system from 10X Genomics - Detailed discussion about the protocol for step-by-step library preparation <p>3. <u>2nd day morning - Computational analysis of single-cell RNA-seq data</u></p> <ul style="list-style-type: none"> - Overview of state-of-the-art "all-in-one" single-cell environments: Cell Ranger, Seurat, Scampy, Spring - Library normalization: Library-size, UMI, and Spike-in controls - Visualization - Clustering analysis - Differential expression - Pseudotime analysis - Data integration and batch effect correction <p>4. <u>2nd day afternoon - Practical computational analysis using Cell Ranger and Seurat pipelines</u></p>
Formateur	<ul style="list-style-type: none"> • Mickaël Ménager – PhD - Lab Director Team Atip-Avenir, Inserm Inflammatory Responses and Transcriptomic Networks in Diseases • Antonio Rausell, PhD - Group leader - Clinical Bioinformatics - Inserm
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