1st Human Cell Atlas Latin America Single Cell RNA-seq Data Analysis Workshop
A hands-on Introduction to single-cell analysis
APRIL 26th to MAY 7th, 2021

First Week
Day 1: Monday, 26 April, 2021
11:00 Opening remarks and Welcome
11:15 Introduction to single cell analysis and the Human Cell Atlas
12:15 Cellular Heterogeneity in Liver and Drivers of Disease
13:15 Break
14:00 Ethical issues and governance of biobanks. A perspective from Latin America
15:00 Single cell sequencing and cancer: heterogeneity, diversity in normal and tumor tissues
16:00 Break
16:30 Project Design Discussion

Day 2: Tuesday, 27 April, 2021
11:00 Opening remarks
11:15 Data quality analysis, filtering, normalization and error corrections
12:15 Navigating single cell transcriptomics data
13:15 Break
14:00 Public repositories for single cell genomics and transcriptomics
15:00 Cells of the human gut mapped through space and time
16:00 Break
16:30 Project Design Discussion

Day 3: Wednesday, 28 April, 2021
11:00 Opening remarks
11:15 Dimensionality reduction and clustering in scRNA-seq
12:15 M3K: An efficient software for preprocessing RNA-seq datasets
13:15 Break
14:00 Pseudotime and gene trajectories
15:00 A single cell atlas of the healthy breast and its relevance to breast cancer
16:00 Break
16:30 Project Design Discussion

The times below reflect GMT-3 (Greenwich Mean Time -3). Be sure to double check your Calendar to ensure you are joining the meetings at the right time for your country.
Day 4: Thursday, 29 April, 2021
11:00 Opening remarks
Patrícia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD
11:15 Wiretapping cell-cell communication
Nathan Lewis, PhD (University of California, San Diego, USA)
12:15 Cell-cell communication databases
Erick Armingol (University of California, San Diego, USA)
13:15 Break
14:00 Spatiotemporal Reconstruction of multicellular interactions from single-cell genomics data
Qing Nle and Suoqin Jin, PhD (Univ. of California, Irvine, USA)
15:00 Mapping the Human Liver Microenvironment in Health and Disease
Sonya MacParland, PhD (University of Toronto, Canada)
16:00 Break
16:30 Project Design Discussion

Day 5: Friday, 30 April, 2021
11:00 Opening remarks
Patrícia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD
11:15 Exploring and standardizing single cell multi-omics to build a robust atlas
Jay Shin, PhD (RIKEN, Japan)
12:15 Extracting knowledge and insights from publicly available scRNAseq data
Helder Nakaya, PhD (University of Sao Paulo, Brazil)
13:15 Break
14:00 Spatial transcriptomics - Imaging meets single cell biology
Musa Mhlanga, PhD (Radboud University, Netherlands)
15:00 Building and using a Human Kidney Cell Atlas
Menna Clatworth, PhD (University of Cambridge, UK)
16:00 Break
16:30 Project Design Discussion

Second Week
Day 6: Monday, 3 May, 2021
11:00 Opening remarks
Patrícia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD
11:15 Getting started with scRNA-seq analyses with Bioconductor
Leonardo Collado, PhD (Lieber Institute for Brain Development, Johns Hopkins Medical Campus, USA)
12:00 Project Development (hands-on)
Simultaneous Activities in Brazil, Mexico and Chile
13:15 Break
Simultaneous Activities in Brazil, Mexico and Chile
14:00 Project Development (hands-on)
Simultaneous Activities in Brazil, Mexico and Chile
16:30 Break
Simultaneous Activities in Brazil, Mexico and Chile
17:00 Project Development (hands-on)
Day 7: Tuesday, 4 May, 2021

11:00 Opening remarks

11:15 Dimension reduction and clustering

12:00 Project Development (hands-on)

13:00 Break

14:00 Project Development (hands-on)

16:30 Break

17:00 Project Development (hands-on)

Day 8: Wednesday, 5 May, 2021

11:00 Opening remarks

11:15 Interactive analysis environment for scRNA-Seq, based on Galaxy

12:00 Project Development (hands-on)

13:00 Break

14:00 Project Development (hands-on)

16:30 Break

17:00 Project Development (hands-on)

Day 9: Thursday, 6 May, 2021

11:00 Opening remarks

11:15 Cell-cell interactions and communication

12:00 Project Development (hands-on)

13:00 Break

14:00 Project Development (hands-on)

16:30 Break

17:00 Project Development (hands-on)

Day 10: Friday, 7 May, 2021

11:00 Opening remarks

11:15 Data visualization

12:00 Project Development (hands-on)

13:00 Break with guest speaker

14:00 Project Development (hands-on)

16:30 Break

17:00 Results presentation and closure
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Virtual event

April 26th to May 7th, 2021

Brazil-Chile-Mexico

HCA Tripartite Workshop

GMT-3

Organizing Committee

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John Randell PhD
Kristine Schwenck Manager, Events and Projects, HCA
Patricia Severino PhD
Tracey Andrew Executive Administrator, HCA
Vinícius Maracaja-Coutinho PhD
Wilson Araújo Silva Jr PhD

Scientific Committee

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Enrique Sapena Ventura PhD
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