

HUMAN CELL ATLAS LATIN AMERICA



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**

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.

*Patricia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD
Dana Pe'er, PhD (Sloan Kattering Institute, USA)
Tallulah Andrews, PhD (University Health Network, CA)

Ana Palmero, PhD (National Ministry of Health, Argentina)

Alfredo Hidalgo-Miranda, PhD (INMEGEN, MX)*

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**

*Patricia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD
Shyam Prabhakar, PhD (Genome Institute of Singapore, SG)
Muzlifah Haniffa, PhD (Newcastle University, UK)

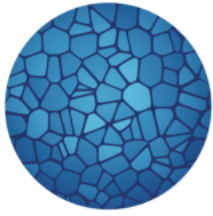
Enrique Sapena-Ventura, PhD (EMBL/EBI, UK)
Rasa Elmentaite, PhD (Wellcome Sanger Institute, UK)*

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**

*Patricia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD
Gerda Kildisiute, PhD (Wellcome Sanger Institute, UK)
Milos Nikolic, PhD (University of Edinburgh, UK)

Robert Amezcua, PhD (Fred Hutchinson Cancer Research Institute, USA)
Harikrishna Nakshatri, PhD (Indiana University, USA)*



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Day 4: Thursday, 29 April, 2021

11:00	Opening remarks	<i>Patricia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD</i>
11:15	Wiretapping cell-cell communication	<i>Nathan Lewis, PhD (University of California, San Diego, USA)</i>
12:15	Computational resources for inferring cell-cell communication	<i>Erick Armingol (University of California, San Diego, USA)</i>
13:15	Break	
14:00	Spatiotemporal Reconstruction of multicellular interactions from single-cell genomics data	<i>Qing Nie and Suoqin Jin, PhD (Univ. of California, Irvine, USA)</i>
15:00	Mapping the Human Liver Microenvironment in Health and Disease	
16:00	Break	<i>Sonya MacParland, PhD (University of Toronto, Canada)</i>
16:30	Project Design Discussion	

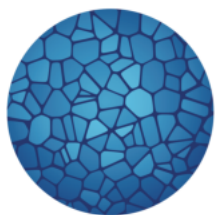
Day 5: Friday, 30 April, 2021

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

Second Week

Day 6: Monday, 3 May, 2021

11:00	Opening remarks	<i>Patricia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD</i>
11:15	Getting started with scRNA-seq analyses with Bioconductor	<i>Leonardo Collado, PhD (Lieber Institute for Brain Development, Johns Hopkins Medical Campus, USA)</i>
12:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
13:15	Break	
14:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
16:30	Break	
17:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>



HUMAN CELL ATLAS LATIN AMERICA



Day 7: Tuesday, 4 May, 2021

11:00	Opening remarks	<i>Patricia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD</i>
11:15	Dimension reduction and clustering	<i>Martin Peifer, PhD (University of Cologne, DE)</i>
12:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
13:00	Break	
14:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
16:30	Break	
17:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>

Day 8: Wednesday, 5 May, 2021

11:00	Opening remarks	<i>Patricia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD</i>
11:15	Interactive analysis environment for scRNA-Seq, based on Galaxy	<i>Pablo Moreno, PhD (EMBL/EBI, UK)</i>
12:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
13:00	Break	
14:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
16:30	Break	
17:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>

Day 9: Thursday, 6 May, 2021

11:00	Opening remarks	<i>Patricia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD</i>
11:15	Inferring cell-cell communication and interactions from single-cell transcriptomics	<i>Erick Armengol, PhD (University of California, San Diego, USA)</i>
12:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
13:00	Break	
14:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
16:30	Break	
17:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>

Day 10: Friday, 7 May, 2021

11:00	Opening remarks	<i>Patricia Severino PhD, Wilson A Silva Jr PhD, Enrique Hernandez-Lemus PhD, Vinícius Maracaja-Coutinho PhD</i>
11:15	Data visualization	<i>César Prada, PhD (University of Oxford, UK)</i>
12:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
13:00	Break with guest speaker	<i>Timothy Tickle, PhD (TERRA)</i>
14:00	Project Development (hands-on)	<i>Simultaneous Activities in Brazil, Mexico and Chile</i>
16:30	Break	



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Research Activities in Brazil, Mexico and Chile



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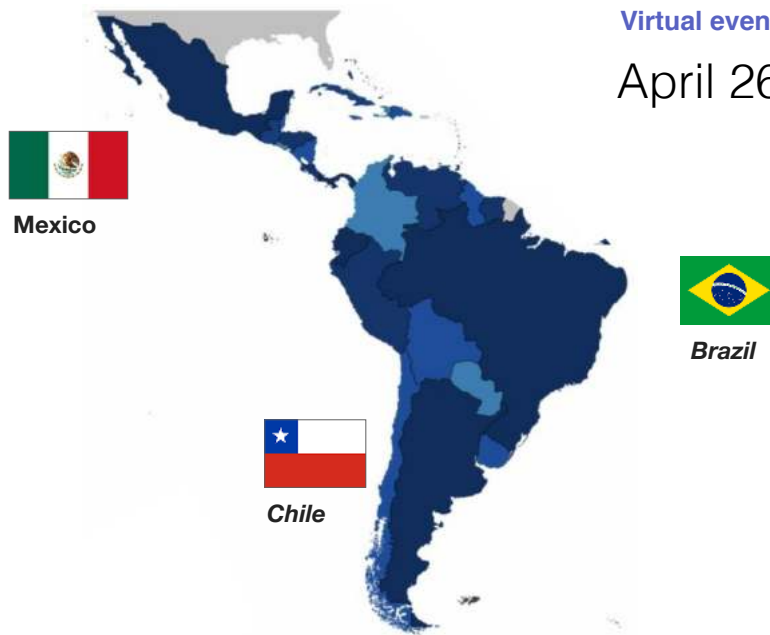
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Virtual event

April 26th to May 7th, 2021

Brazil-Chile-Mexico
HCA Tripartite Workshop

GMT-3



Organizing Committee

Enrique Hernandez-Lemus PhD
John Randell PhD
Kristine Schwenck Manager, Events and Projects, HCA
Patricia Severino PhD
Tracey Andrew Executive Administrator, HCA
Vinicius Maracaja-Coutinho PhD
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