Single Cell Genomics
INCA - Rio de Janeiro, Brazil. 9 - 15 August 2024

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Time	Friday 9 August	Saturday 10 August	Sunday 11 August	Monday 12 August	Tuesday 13 August	Wednesday 14 August	Thursday 15 August
8.30		Tissue Dissociation for High Quality Single Cell Suspensions (PS)	Plate-based scRNA-seq & Smart-seq2 overview (LC)	SmartSeq2 - Amplifying the cDNA (LC)	Quality control of cDNA (PP & PS)	Technology Comparison & 10X Genomics Protocol Break Down (PS)	Lab Debriefing
9.00		Tissue Dissociation (PP)	SmartSeq2 protocol breakdown - Converting RNA to cDNA (ALS)	SmartSeq2 - Amplifying the cDNA with PCR (LC, ALS, FA, DC)	Bioanalyser Challenge (PP & PS)	10X - Chip Loading & GEM collection (PS, DM & LL)	Project Development (MB, YCA, VMC, BC, JB, GR, LS, AR) (Room 221 - COAGE)
9.30		Tissue Dissociation (PP, FA, DC, LL, DM)	SmartSeq2 (ALS, LC, FA, DC)		Bioanalyser Demonstration & Practice (PP, PS, DM, LL, FA)		
10:00				Beads Clean Up (LC)			
10:30			Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
11:00		Coffee Break	SmartSeq2 - Converting RNA to cDNA with Reverse Transcription (ALS, LC, FA, DC)		Single-Cell RNA-Seq Experimental Methods (PS, PP, LC, ALS, DM, LL, FA, DC)	10X - Post-GEM Collection Processing & "From Sample Prep to Library Construction: Troubleshooting" (PS, DM & LL)	Project Development (MB, YCA, VMC, BC, JB, GR, LS, AR) (Room 221 - COAGE)
11:30		Cell Counting & Sorting (PP)		SmartSeq2 - cDNA Clean Up with Magnetic Beads (LC, ALS, FA, DC)			
12:00	Registration & Lunch (Vila Galé Hotel)	Cell Counting & Sorting (PP, FA, DC, LL, DM)					
12:30					Multiomics (ALS)		
13:00	Welcome & Introductions: WCS Training team Participants	Nice walk to lunch	Nice walk to lunch	Nice walk to lunch	Nice walk to lunch	Nice walk to lunch	Nice walk to lunch
13:30		Lunch	Lunch	Lunch	Lunch	Lunch	Lunch
14:00		Nice walk back from lunch	Nice walk back from lunch	Nice walk back from lunch	Nice walk back from lunch	Nice walk back from lunch	Nice walk back from lunch
14:30	Single Cell Genomics - A Brief Introduction (MB & PP)	Designing Unbiased Single Cell Experiments (VMC)	Bridging the Gap Between Molecules & Reads (MB)	Data Quality Control (YCA, VMC, AR, GR) (Room 221 - COAGE)	Differential Expression, Cell Type Annotation (BC, JB, GR, LS) (Room 221 - COAGE)	scRNA-seq Dataset Integration (VMC, BC, AR, GR) (Room 221 - COAGE)	Project Development (MB, YCA, VMC, BC, JB, GR, LS, AR) (Room 221 - COAGE)
15:00		Single Cell Resources (VMC, YCA, AR, LS) (Room 221 - COAGE)	Data Processing (YCA, JB, GR, LS) (Room 221 - COAGE)				
15:30	Coffee Break						
16:00	Course Overview (MB & PP)						
16:30	Advanced Learning Skills (LBA & IM)	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break	Coffee Break
17:00	Networking Drinks	Hands-on Databases (VMC, MB, AR, GR) (Room 221 - COAGE)	Single Cell RNASeq Data Structure (JB, YCA, AR, LS) (Room 221 - COAGE)	Data Normalisation & Clustering (BC, MB, GR, LS) (Room 221 - COAGE)	Functional Analysis (JB, VMC, AR, LS) (Room 221 - COAGE)	Integration Benchmarks (MB, BC, GR, LS) (Room 221 - COAGE)	Project Presentations (All) (Auditorium - COAGE)
17:30						Using SC Genomics to Decipher Local & Systemic Immune Responses to SARS-CoV-2 (JB)	
18:00							
18:30						Q&A	Wrap-up
19:00	Welcome Dinner						
19:30							

Team Initials

Initials	Name
PP	Patricia Possik
MB	Mariana Boroni
DA	David Adams
VMC	Vinicius Maracaja-Coutinho
PS	Patricia Severino
LC	Lia Chappell
ALS	Anita Louise Scoones
YCA	Yesid Cuesta Astroz
BC	Benilton de Sá Carvalho
ACS	Annie Christine Squiavinato
NT	Nayara Tessarollo
DC	Danielle Carvalho
FA	Flavia Aguiar
JB	Jacqueline Boccacino
DM	Domenica Marchese
LL	Laura Leaden
LS	Leandro Santos
GR	Gabriela Rapozo
AR	Adolfo Rojas
IM	Isabela Malta
LBA	Liã Bárbara Arruda

Key

- Lectures
- Wet-lab briefings
- Wet-lab practicals
- Computational practicals
- Workshop
- Breaks
- Group project
- Intro/wrap-up sessions
- Nice walks