Monday 22 July 2019

8.50 -9.05 Conference Welcome

Session 1: Computational Biology 1

9.05 - 9.40 Assistant Professor Rahul Satija - Keynote
Integration of single-cell data across technologies and modalities.

9.40 - 10.10 Associate Professor Alicia Oshlack - Invited
Navigating the single cell RNA-seq analysis landscape with application to kidney organoids.

10.10 - 10.25 Yingxin Lin
scClassify: Multiscale classification of single cells via cell-type hierarchies based on ensemble learning and sample size estimation.

10.30 - 11.00 Morning Tea

Session 2: Development

11.00 - 11.35 Dr Leïla Perié - Keynote
Family matters: the role of single cell families in hematopoiesis.

11.35 - 11.50 Dr Tom Weber
Loxcodes: In situ cellular barcoding using Cre Lox.

11.50 - 12.05 Enakshi Sinniah
Conserved epigenetic regulatory logic infers genes governing cell identity.

12.05 - 12.20 Dr Christine Biben
Investigating early hematopoiesis using single cell technologies.

12.20 - 12.35 Dr Malathi S.I. Dona
Single-Cell Transcriptional Profiling Reveals New Cellular and Molecular Drivers of Heart Failure.

12.35 - 13.35 Lunch

Session 3: Immunology 1

13.35 - 14.10 Assistant Professor Alexandra-Chloe Villani - Keynote

14.10 - 14.40 Associate Professor Joseph Powell - Invited
Single cell expression quantitative trait mapping identifies cell type specific genetic control for complex diseases.

14.40 - 14.55 Dr Manu Singh
Profiling rogue lymphocytes in autoimmune disease using single-cell multi-omics.

14.55 - 15.30 Afternoon Tea

Session 4: Cancer

15.30 - 16.00 Professor Jane Visvader - Invited
Getting abreast of mammary development and cancer at the single cell level.

16.00 - 16.30 Dr Siok Tey - Invited
Analysing the peripheral blood maturation of natural killer (NK) cells following allogeneic bone marrow transplantation.

16.30 - 16.45 Sunny Wu
Landscape of the Breast Tumour Microenvironment at Single Cell Resolution.

16.45 - 17.00 Associate Professor Hanlee Ji
Single cell characterization of tumor and immune cellular diversity and dynamics for cancer target discovery.

17.00 - 17.45 Pitch Prize & Lightning Talks

17.45 - 19.15 Poster Session

19.15 - 22.30 Conference Dinner
### Tuesday 23 July 2019

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<td>10X Genomics / Millennium Science - Sponsor Talk</td>
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<td>9.35 - 10.10</td>
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<tr>
<td>9.35 - 10.10</td>
<td><em>Single cell spatial genomics by RNA seqFISH</em>+</td>
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<td>10.10 - 10.25</td>
<td>Dr Traude Beilharz</td>
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<td>10.10 - 10.25</td>
<td><em>The repertoire of alternative polyadenylation in the brain and how 3’-regulatory control contributes to gene expression.</em></td>
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<td>10.25 - 10.40</td>
<td>Dr Josh Lee</td>
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<td><em>Transcriptome Dynamics and Single-cell Epigenomics Map Effector to Memory Transitions in T cells in vivo.</em></td>
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<td>11.00 - 11.35</td>
<td><em>Applying single cell technology to the oldest immune cell known to man.</em></td>
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<td><em>A framework for lymphocyte signal integration utilising a probabilistic cell.</em></td>
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<td><em>Distinct microbial and immune niches of the human colon.</em></td>
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<td><strong>Session 7: Computational Biology 2</strong></td>
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<td>Professor Joakim Lundeberg - Florey Institute Seminar</td>
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<td><em>Sequencing based Spatial Transcriptomics - data driven annotation of tissues and pathologies.</em></td>
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<td>Assistant Professor Smita Krishnaswamy - Keynote</td>
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<td><em>Manifold learning yields insight into cellular state space under complex experimental conditions.</em></td>
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<td><em>Machine learning approaches to integrating multiomics sequencing and spatial tissue imaging data.</em></td>
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<td>Xiaomei Li</td>
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<td><em>Identifying cell locations from subsets of marker genes - A winning method for the DREAM 2019 Single Cell Transcriptomics Challenge.</em></td>
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<td><em>Dissecting plant development at single cell resolution.</em></td>
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<td><em>Highly multiplexed imaging cytometry to investigate the early Interactions of HIV with mucosal target cells in situ.</em></td>
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