### Monday 10 June 2024

**12:00**  
Registration, lunch and networking

**12:30**  
Briefing for Keynote 1 & Session 1 speakers, microphone runners, chair, moderator & committee - Auditorium

**12:45**  
Welcome

**12:50**  
Welcome Connecting Science:  
Nagehan Ramazanoglu Bahadir, Welcome Connecting Science, UK

**13:00**  
Scientific Programme Committee:  
Liora Koren, Weizmann Institute of Science, Israel  
Cole Trapnell, University of Washington, USA  
Roser Vento-Tormo, Wellcome Sanger Institute, UK  
Itai Yanai, New York University, USA

**13:00**  
Keynote 1  
Chair: Cole Trapnell, University of Washington, USA  
Moderator: Valentina Lorenzi, Wellcome Sanger Institute, UK

**13:00**  
Differential neural crest gene regulatory subcircuits along the body axis  
Marianne Bronner, California Institute of Technology, USA

**14:05**  
Session 1: How do cells cooperate and compete in tissues and organs?  
Chair: Samantha Morris, Washington University in St. Louis, USA  
Moderator: Philipp Weiler, Technical University of Munich, Germany

**14:05**  
Addressing noise and bias in spatial transcriptomics data  
Nir Yosef, Weizmann Institute of Science, Israel

**14:35**  
Multiscale approaches for understanding single cell spatial omics data  
Shira Shinar, The University of Sydney, Australia

**15:05**  
A cross-issue transcriptome atlas of human diseases  
Jong-Eun Park, KAIST, South Korea

**15:20**  
Dissecting the spatiotemporal diversity of adult neural stem cells  
Anika Neuschulz, Max-Delbrück-Center for Molecular Medicine, Germany

**15:35**  
Refreshment break and networking

**16:05**  
Briefing for Session 2 speakers, chair & moderator - Auditorium

**16:20**  
Session 2: How does a cell’s past predict its future?  
Chair: Roser Vento-Tormo, Wellcome Sanger Institute, UK  
Moderator: Jong-Eun Park, KAIST, South Korea

**16:20**  
New genomic technologies to deconstruct and control cell identity  
Samantha Morris, Washington University in St. Louis, USA

**16:50**  
Somatic epimutations enable single-cell lineage tracing in native hematopoiesis across the murine and human lifespan  
Alejandro Rodriguez-Franco, VIB, Belgium

**17:20**  
Deep learning-powered deciphering of gene regulatory dynamics in cortical development  
Darina Abaffyova, VIB-KU Leuven, Belgium

**17:35**  
Integrating deep learning with omics data to discover small-molecule modulators of complex phenotypes  
Doris Fu, Celarity, USA

**18:30**  
Poster pitch talks for odd number posters  
Chair: Roser Vento-Tormo, Wellcome Sanger Institute, UK

**19:45**  
Dinner
### Tuesday 11 June 2024

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>09:15</td>
<td>Briefing for Session 3 speakers, chair &amp; moderator - Auditorium</td>
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</table>
| 09:30  | **Session 3: What are the cell autonomous and non-cell autonomous mechanisms of disease?**  
Chair: Leeat Keren, Weizmann Institute of Science, Israel  
Moderator: Philipp Weiler, Technical University of Munich, Germany |
| 09:30  | 10:00  
An multi-omics epigenetic cell atlas of kidney  
Kun Zhang, Altos Labs, USA |
| 10:00  | 10:30  
Inter-organ communication during cancer metastasis  
Edsoni Lummertz da Rocha, Federal University of Santa Catarina, Brazil |
| 10:30  | 10:45  
Shared molecular vulnerabilities of human cortical neurons in C9ORF72 Amyotrophic lateral sclerosis  
Jimmy Lee, Wellcome Sanger Institute, UK |
| 10:45  | 11:00  
Spatial distribution of IL1B+ TAMs in human pancreatic cancer  
Federica La Terza, SR-Tiget, Italy |
| 11:00  | Refreshment break and networking                                       |
| 11:15  | Briefing for Session 4 speakers, chair & moderator - Auditorium       |
| 11:15  | **Session 4: What are the evolutionary principles of cellular ROBUSTNESS?**  
Chair: Itai Yanai, New York University, USA  
Moderator: Valentina Lorenzi, Wellcome Sanger Institute, UK |
| 11:45  | 12:15  
Build a foundation model for single-cell omics and imaging  
Bo Wang, University of Toronto, Canada |
| 12:15  | 12:45  
Cells within cells: establishment of photosynthetic endosymbiosis in flatworms and corals  
Elizabeth Hamilton, University of Vienna, Austria |
| 12:45  | 13:00  
Cell-type-specific control of developmental rate across species  
Jasmin Blum, European Molecular Biology Laboratory, Germany |
| 13:00  | 13:15  
CellRank 2: Unified late mapping in multiview single-cell data  
Philipp Weiler, Technical University of Munich, Germany |
| 13:15  | Lunch and networking                                                   |
| 14:00  | 14:15  
Briefing for Session 5 speakers, chair & moderator - Auditorium       |
| 14:15  | **Session 5: How are complex phenotypes regulated by the genome?**  
Chair: Shila Ghazanfar, The University of Sydney, Australia  
Moderator: Raul Benavoli, The Weizmann Institute of Science, Israel |
| 14:15  | 14:45  
Transfer learning to enable predictions in network biology  
Christina Theodore, Gladstone Institute, USA |
| 14:45  | 15:15  
How do cells integrate extrinsic signals and intrinsic state? A systems epigenetics approach  
Judith Zaugg, The European Molecular Biology Laboratory, Germany |
| 15:15  | 15:30  
Dissecting the spatiotemporal development of the human reproductive tract through the lens of single-cell and spatial  
Valentina Lorenzi, Wellcome Sanger Institute, UK |
| 15:30  | 15:45  
Joint profiling of cell morphology and gene expression during in vitro neurodevelopment  
Adith Sundararaj, University of Helsinki, Finland |
| 15:45  | 16:30  
Refreshment break and networking                                       |
| 16:15  | 16:30  
Briefing for Sponsored talk speaker & chair - Auditorium               |
| 17:10  | **Poster pitch talks for even number posters**                         
Chair: Leeat Keren, Weizmann Institute of Science, Israel               |
| 17:10  | 17:35  
Sponsored talk by Chan Zuckerberg Initiative Foundation                |
| 17:10  | 17:35  
CZ CELLxGENE: Increasing access to single-cell analyses with APIs and no-code interfaces  
Jonah Cool, Chan Zuckerberg Initiative, USA |
| 17:35  | 18:50  
Poster session 2 - even number posters with drinks reception          |
| 18:50  | 20:50  
Dinner                                                               |
| 18:50  | Bar open (card payments only)                                         |
**Wednesday 12 June 2024**

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<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Chair(s)</th>
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<tbody>
<tr>
<td>09:15-09:30</td>
<td>Briefing for Session 6 speakers, chair &amp; moderator - Auditorium</td>
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<td>09:30-11:00</td>
<td><strong>Session 6: How can we predict what cells will do next?</strong></td>
<td>Chair: Cole Trapnell, University of Washington, USA</td>
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<td>Moderator: Jong-Eun Park, KAIST, South Korea</td>
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<td>09:30-10:00</td>
<td>Genomic tools for probing the rules of tissue organization.</td>
<td>Fei Chen, Broad Institute of MIT and Harvard, USA</td>
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<td>10:00-10:30</td>
<td>Reconstructing cellular biographies</td>
<td>Alex Schier, Universität Basel, Switzerland</td>
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<td>10:30-10:45</td>
<td>Escalating High-dimensional Imaging Using Combinatorial Channel Multiplexing and Deep Learning</td>
<td>Raz Ben-avi, The Weizmann Institute of Science, Israel</td>
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<td>10:45-11:00</td>
<td>Exploring the role of gene expression noise in cell fate regulation</td>
<td>Reyna Edith Rosales Alvarez, Würzburg Institute of System Immunology, Germany</td>
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<td>11:00-11:45</td>
<td>Refreshment break and networking</td>
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<tr>
<td>11:30-11:45</td>
<td>Briefing for Keynote 2 speaker, chair, moderator &amp; committee - Auditorium</td>
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<td>11:45-12:45</td>
<td><strong>Keynote 2</strong></td>
<td>Chair: Roser Vento-Tormo, Wellcome Sanger Institute, UK</td>
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<td>Moderator: Raz Ben-avi, The Weizmann Institute of Science, Israel</td>
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<td>4D cell atlasping of human organs</td>
<td>Sarah Teichmann, University of Cambridge, UK</td>
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<td>12:45-13:00</td>
<td><strong>Closing remarks and prize presentation</strong></td>
<td>Scientific Programme Committee:</td>
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<td>Leeat Keren, Weizmann Institute of Science, Israel</td>
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<td>Itai Yanai, New York University, USA</td>
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<td>13:00-13:50</td>
<td>Lunch and departures</td>
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<td>13:50-14:00</td>
<td>Coach departures for Stansted and Heathrow airports</td>
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<td>14:00</td>
<td>Coach departures for Cambridge train station and city centre</td>
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