

Engineering Life: Developing the Future A One-Day Cross-Faculty Research Symposium at UCL

Thursday, 27th June, 2024

Gavin de Beer Lecture Theatre, Anatomy Building, UCL main campus

09.00 – 09.30 Coffee and registration (Haldane Hub, Anatomy Building)

09.30 – 09.40 **Introduction:** Sandip Patel, UCL Faculty of Life Sciences

09.40 – 11.00 **Session I: Synthetic Developmental Biology**
Chair: Roberto Mayor, UCL Faculty of Life Sciences

1. Sebastian Brauchi, Universidad Austral de Chile. *Illuminating organellar synchronicity*
2. Silvia Santos, Francis Crick Institute. *Decoding cellular signals during embryonic transitions*
3. Anna Franz, UCL Cell and Developmental Biology. *Fat cells swim to heal*

11.00– 11.30 Tea and coffee (Haldane Hub, Anatomy Building)

11.30 – 12.55 **Session II: AI and Engineering**
Chair: Emad Moeendarbary, UCL Faculty of Engineering Sciences

1. Marco Fritzsche, Oxford. *Engineering the T-cell-mediated immune response across scales from tissue down to cells, and molecules*
2. Simon Konig, UCL Biochemical Engineering. *Engineering Life-on-a-Chip: A Blood-Brain Barrier Microfluidic Model to Understand Alzheimer's Disease and Improve Drug Delivery*
3. Claire Walsh, UCL Mechanical Engineering *The Metrics for Building the Human Organ Atlas*
4. Qasim Rafiq, UCL Biochemical Engineering. *Automated and Digital Biomanufacturing Strategies for Advanced Therapies*

13.00 – 14.00 Lunch break (Haldane Hub, Anatomy Building)

14.00 – 15.20 **Session III: Stem cells and Repair**
Chair: Paula Alexandre, UCL GOS Institute of Child Health

1. Philippos Mourikis, East-Paris University, France. *A self-made quiescent niche; lessons from muscle stem cells*
2. Francesco Saverio Tedesco, UCL Cell and Developmental Biology/Crick. *Engineering human skeletal muscle for advanced modelling of neuromuscular diseases and therapeutics*
3. Christy Hung, UCL Institute of Child Health. *Human stem cell models of Alzheimer's disease*

15.20 – 15.50 Tea and Coffee (Haldane Hub, Anatomy Building)

15.50 – 17.20 **Session IV: Bioethics and Policy**
Chair: Saheli Datta Burton, UCL Faculty of Mathematical and Physical Science

1. Saheli Datta Burton, UCL- Science & Technology Studies *Why Bioethics & Policy? A Responsible Innovation approach*
2. Sarah Edwards, UCL Science, Technology, Engineering and Public Policy (STeAPP) *CELS and Society: Bioethical considerations and challenges*
3. Michael Morrison, Oxford University *CELS and Society: Regulatory and Governance considerations and challenges*

10 min general Q and A

17.20 – 17.55 **Keynote Speaker**
Chair: Barbara Conradt, UCL Faculty of Life Sciences
Anne Grapin-Botton, Max Planck Institute of Molecular Cell Biology and Genetics, Germany. *Organoids to study development*

17.55 – 18.00 **Closing remarks**

18.00 – 19.00 **Drinks reception** (Haldane Hub, Anatomy Building)