Program

School of Life Sciences Symposium 2022

7-8-9 September 2022

Forum Rolex Learning Center
Lausanne, Switzerland
Program
Wednesday, September 7, 2022

12:00 - 14:00 Registration and welcome coffee

14:00 - 14:05 Official opening of the Symposium

14:05 - 15:10 Round table - Life Sciences at EPFL - Past, Present and Future
Andy Oates
Patrick Aebischer
Martin Vetterli - EPFL Life Sciences yesterday, today and tomorrow: A computer scientist’s viewpoint
Michael Hengartner
Martine Clozel

15:10 - 15:30 EPFL Life Sciences Early Independent Research Scholars
Ana Marija Jaksic
Gioele La Manno
Martin Weigert
Can Aztekin
Milena Schumacher

15:30 - 16:30 Music with SV PI’s band and coffee break

16:30 - 17:30 The making and telling of the scientific enterprise
Caroline Uhler - The biomedical sciences and machine learning: a 2-way street
Ron Vale - Open science education
Sean Carroll - The Thrill of Discovery: Science and Storytelling (remote)

17:30 - 18:00 Science, health, society
Soumya Swaminathan

18:00 - 18:10 Closing session
Andy Oates

18:10 - 21:00 Standing dinner

Moderator of the day: Mirko Bischofberger
08:00 - 09:00  Registration and welcome coffee

09:00 - 11:00  **Session 1 | Cell biology and mechanics** (Chair Alex Persat)
   - Buzz Baum - Evolution of cell division: from archea to eukaryotes
   - Julie Theriot - Mapping variation in the morphological landscape of human cells
   - Sophie Martin - Mechanics of cell-cell fusion
   - David van Valen - Everything as code (remote)

11:00 - 11:30  Coffee break and networking

11:30 - 13:00  **Session 2 | Stem cells and cancer genomics** (Chair Giovanni D’Angelo)
   - Fiona Doetsch - Stem cells in the adult brain: Regulation and diversity
   - Michelle Monje - Neuron-glial interactions in health and disease: From cognition to cancer
   - Mike Stratton - The EMBO Keynote Lecture: Mutational processes in normal human tissue

13:00 - 14:30  Lunch break and networking

14:30 - 16:30  **Session 3 | Organisms navigating a changing environment** (Chair Pavan Ramdya)
   - Moi Expósito-Alonso - The genomics of climate adaptation (and extinction)
   - Leslie Vosshall - Neurobiology of the world’s most dangerous animal
   - Manu Prakash
   - Ken Oye - Governing risks and benefits of biotechnology: Exemplary cases and cautionary tales

16:30 - 17:00  Coffee break and networking

17:00 - 18:30  **Session 4 | From the origin of animals to brain function** (Chair Brian McCabe)
   - Nicole King - A history of hypotheses on the origin of animals
   - Caroline Uhler - Causality, perturbations, gene regulation and drug repurposing
   - Rafael Yuste - Can you see a thought? Neuronal ensembles as emergent units of cortical function

18:30 - 22:00  PhD comics followed by standing dinner
   - Jorge Cham - The power of procrastination
08:00 - 09:00  Registration and welcome coffee

09:00 - 11:00  **Session 5 | Deciphering sub-cellular assemblies** (Chair Pierre Gönczy)
- **Tony Hyman** - Biomolecular condensates and their implications for cell physiology
- **Gaia Pigino** - Structural cell biology of cilia and eukaryotic flagella
- **Ron Vale** - Structure of the sperm axoneme
- **Melina Schuh** – Illuminating the beginning of life (remote)

11:00 - 11:30  Coffee break and networking

11:30 - 13:00  **Session 6 | Embryogenesis and animal evolution** (Chair Andy Oates)
- **Barbara Treutlein** - Human organoid development through the lens of single-cell technologies
- **Pavel Tomancak** - Evolution of morphogenesis
- **Adria LeBoeuf** - Development at the superorganismal scale

13:00 - 14:00  Lunch break and networking

14:00 - 15:30  **Session 7 | Immunity and microbiota** (Chair Melanie Blokesch)
- **Pascale Vonaesch** - The intestinal microbiota in childhood undernutrition
- **Eran Elinav** - Host microbiome interactions in health and disease
- **Lluis Quintana-Murci** - Darwin meets Pasteur: evolutionary genetics dissection of human immunity (remote)

15:30 - 16:00  Coffee break and networking

16:00 - 17:30  **Session 8 | Engineering biological systems** (Chair Anne-Florence Bitbol)
- **Michael Elowitz** - Multicellular circuit design: natural and synthetic (remote)
- **Ed Boyden** - Optical tools for analyzing and controlling biological systems
- **Cori Bargmann** - Integrating behavior across timescales

17:30 - 17:45  **Wrap up of Symposium**

18:30 - 23:00  **Steam boat trip** (upon invitation, places limited)