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 Trio 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** (all participants at the conference venue)

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 archaea to eukaryotes
   - Julie Theriot - Mapping variation in the morphological landscape of human cells
   - Sophie Martin - Mechanisms 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 (all participants at the conference venue)

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** (all participants at the conference venue)
   - Jorge Cham - The power of procrastination

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**Thursday, September 8, 2022**
Program
Friday, September 9, 2022

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 (all participants at the conference venue)

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
  Lluís 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)