Program

Wednesday, September 7, 2022

12:00 - 14:00  Registration and welcome coffee

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

14:05 - 15:05  Opening session and round table - Past, Present, Future
   Andy Oates
   Patrick Aebischer
   Martin Vetterli - EPFL Life Sciences yesterday, today and tomorrow: A computer scientist's viewpoint
   Michael Hengartner

15:05 - 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 - 18:20  Closing session
   Andy Oates

18:20 - 20:30  Music & standing dinner

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

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 - 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 - 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  **Standing dinner and PhD comics**
- Jorge Cham - The power of procrastination
Program
Friday, September 9, 2022

08:30 - 09:00  Registration and welcome

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 - 12:30  **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

12:30 - 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
- 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)
- Ed Boyden - Optical tools for analyzing and controlling biological systems
- Cori Bargmann - Integrating behavior across timescales
- Michael Elowitz - Multicellular circuit design: natural and synthetic

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

18:00 - 22:00  **Steam boat trip**