

SY Stem



PROGRAMME

13 – 15 March 2024
Vienna, Austria

Symposium for the next generation of
stem cell researchers



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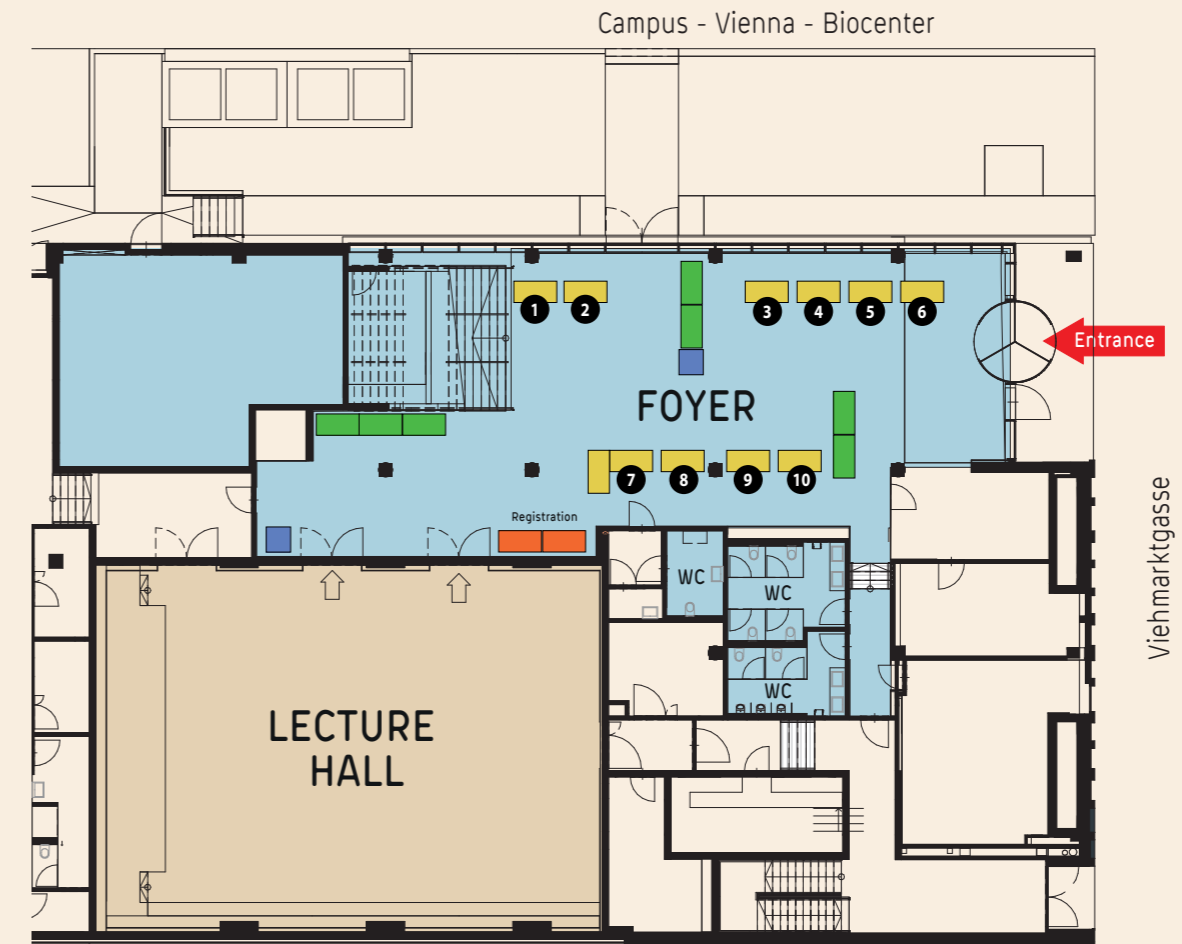
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BRONCE



Venue



- Reception/information desk
 - Buffet
 - Water for refill
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DAY 1 - Wednesday, March 13

09:30 **Mentoring session**
12:00 **Welcome and introduction**

Keynote lecture I

Chair: Elly Tanaka

12:10 **Hiro Nakauchi (Stanford Medicine)** The Stem Cell Niche and Beyond: xenocreated organs for rejection free transplantation
13:10 Equity, Diversity, and Inclusion (EDI) at the Vienna Biocenter
13:15 *Lunch break*

Session 1 - early embryogenesis

Chair: Theresa Sommer & Daria Filipczak

14:30 **Jan Żylicz (University of Copenhagen)** Epi-metabolic coupling coordinates early development
15:00 **Agnese Loda (European Molecular Biology Laboratory)** Escape from X inactivation is directly modulated by Xist RNA levels
15:15 **Claudia Gerri (Max Planck Institute of Molecular Cell Biology and Genetics)** The fetal-maternal interface across species
15:45 *Coffee break*
16:15 **Berna Sozen (Yale School of Medicine)** Stem Cell Modeling of Multicellular Organization and Patterning in Human Post-Implantation Embryonic Development
16:45 **Kristina Stapornwongkul (EMBL Barcelona)** Metabolic control of germ layer proportions through regulation of Nodal and Wnt signalling
17:00 *Break*

Session 2 – part I - lineage specification

Chair: Diana Pinheiro

17:30 **Vicki Metzis (Imperial College London)** Motif substitution toggles Cdx2 silencer function during posterior body formation
18:00 **Alexandre Mayran (École polytechnique fédérale de Lausanne)** Cadherins modulate the self-organizing potential of gastruloids
18:15 **Xavier Trepas (Institute for Bioengineering of Catalonia)** Linking force, form and function in intestinal organoids and tumouroids
18:45 **Marek van Oostrom (Hubrecht Institute)** Linking molecular oscillators: coupling the segmentation clock and the cell cycle in mouse embryonic explants
19:00 *Symposium dinner*

DAY 2 - Thursday, March 14

Session 2 – part II - lineage specification

Chair: Nicolas Rivron

09:00 **Eyal Karzbrun (Weizmann Institute of Science)** Tubular morphogenesis in a dish
09:30 **Julia Batki (Max Planck Institute for Molecular Genetics)** Cell fate regulation of extraembryonic cells in the developing gut
09:45 **Stefan Jahnel (Institute of Molecular Biotechnology)** Role of hyaluronic acid in morphogenesis and physiology of human cardiac organoids
10:00 *Coffee break*

Session 3 – nervous systems development

Chair: Joanna Jachowicz

10:30 **Fides Zenk (École polytechnique fédérale de Lausanne)** Single-cell epigenomic reconstruction of developmental trajectories in human neural organoid systems
11:00 **Sakurako Nagumo Wong (Institute of Molecular Biotechnology)** Interneurons drive network pathology in tuberous sclerosis
11:15 **Johan Jakobsson (Lund University Moore)** Transposable elements and the evolution of the human brain
11:45 *Break*
12:15 **Marisa Karow (Friedrich-Alexander-Universität Erlangen-Nürnberg)** Dynamic X-chromosomal reactivation enhances female brain resilience in the context of neurodevelopment disorders
12:45 **Tomohisa Toda (German Center for Neurodegenerative Diseases/Friedrich-Alexander Universität Erlangen-Nürnberg)** Life-long persistence of nuclear RNA in the mammalian brain
13:00 *Group picture*
13:15 *Lunch break*

Session 4 – part I – brain disease and regeneration

Chair: Jürgen Knoblich

14:30 **In-Hyun Park (Yale Stem Cell Center)** Generation of human diencephalic organoids to investigate neurodevelopmental disorders
15:00 **Francesca Merighi (University of Pisa)** Stem cell and nanomedicine based regenerative approaches for treating spinal cord injuries
15:15 **Poster session I**
18:00 **Networking event: SY-Stem pub quiz**



DAY 3 - Friday, March 15

Session 4 – part II – brain disease and regeneration

Chair: Sofia Grade

- 09:00 **Mina Gouti (Max Delbrück Center for Molecular Medicine) [EMBO Young Investigator Lecture]**
Building advanced neuromuscular models to study human development and disease.
- 09:30 **Daniel Del Toro (University of Barcelona)** Expansion of the neocortex and protection from neurodegeneration by in vivo transient reprogramming
- 10:00 *Coffee break*

Session 5 – part I – novel technologies

Chair: Bon-Kyoung Koo

- 10:30 **Minhee Park (Korea Advanced Institute of Science and Technology)** To build and visualize chromatin: Understanding epigenetic memory
- 11:00 **Nike Walther (University of California, Berkeley)** Automated live-cell single-molecule imaging reveals the molecular dynamics of overexpressed Sox9 associated with a morphological change and proliferative cell state transition in intestinal organoids
- 11:15 **Joanna Jachowicz (Institute of Molecular Biotechnology)** Single-cell measurement of higher-order 3D genome organization with scSPRITE
- 11:45 **Kirstin Meyer (University of California San Francisco)** Unraveling a dynamic YAP communication code for stem cell fate and proliferation
- 12:15 *Lunch break*
- 13:00 **Poster session II**

Session 5 – part II – novel technologies

Chair: Christa Buecker

- 15:00 **Peter Zeller (Hubrecht Institute)** Understanding chromatin regulation during in vitro embryonic development using single-cell multi-omics
- 15:30 **Almut Eisele (École polytechnique fédérale de Lausanne)** Gene-expression memory based lineage inferences in scRNA-seq data
- 15:45 *break*

Keynote lecture II

Chair: Jürgen Knoblich

- 16:00 **Magdalena Götz (Helmholtz Munich)** Novel mechanisms of neurogenesis and neural repair
- 17:00 **Closing remarks**
- 17:15 **Light bites & farewell**