



SY Stem

**SYMPOSIUM FOR
THE NEXT GENERATION OF
STEM CELL RESEARCHERS**

**22. – 24. February 2018
Vienna, Austria**

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Welcome to the Vienna BioCenter!

We are so pleased that you are here at our **SY-Stem** symposium. The meeting is designed to be the first in a series of conferences where we would like to help create a strong and interactive community among young researchers in Europe and beyond. Our vision is to promote free exchange of ideas and results among the research groups working in this area.

Stem cell biology is one of the most exciting research fields of our times. The Vienna BioCenter has established a strong research focus in this area. With the IMP, IMBA, the GMI and the MFPL, the Vienna BioCenter comprises a strong cluster of excellent research institutions that are surrounded by a large number of biotech companies on campus. The goal of our **SY-Stem** symposium series will be to reach out to the international community and to stimulate interactions with other sites working in this area.

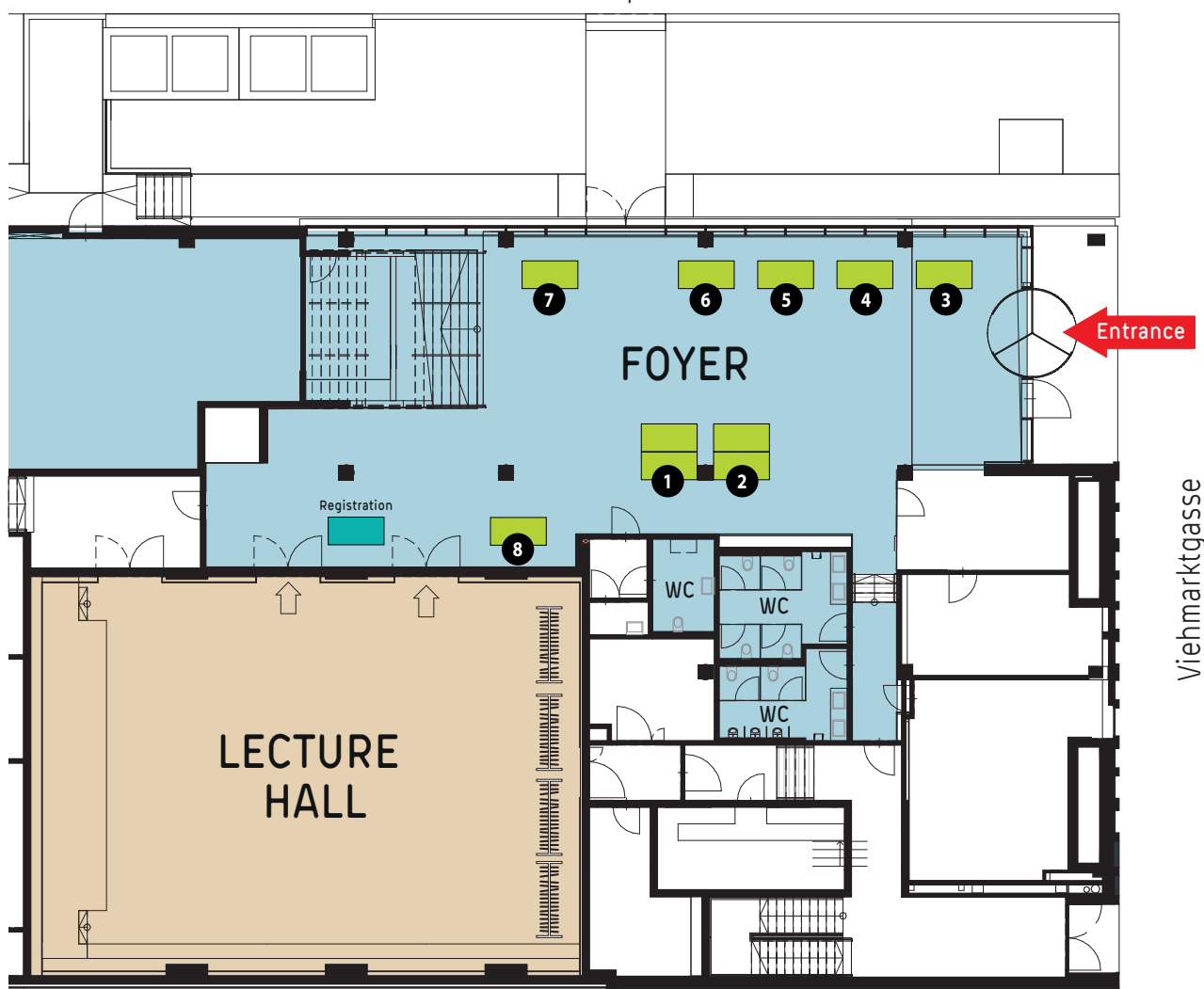
We want to extend a very warm welcome to our external guests, who come to us from 23 different countries. You are the ones who make this symposium a truly international event and will hopefully carry our message back to your home institutions. We would particularly like to thank our speakers who will contribute their knowledge and ideas to this symposium. We have selected a diverse area of stem cell-related research fields ranging from basic questions to clinical applications and hope to promote free and stimulating interactions between those areas. We would also like to extend a special thanks to the large number of industrial sponsors of this year's symposium. Their financial support made it possible to minimize the registration fee for our attendees. Finally, we want to welcome all colleagues from the Vienna BioCenter for attending the event and for helping us to connect our guests to the campus and showcase the exciting atmosphere of our research campus.

We hope that everyone will enjoy the conference and look forward to an exciting and fruitful symposium!

*Elly Tanaka, Juergen Knoblich, Ulrich Elling,
Sasha Mendjan & Chukwuma Agu*

Venue

Campus - Vienna - Biocenter



- EXHIBITORS:
- | | |
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| 1 Eppendorf | 5 Takara Bio |
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Programme

Note: The lectures will take place in the IMP lecture Hall while the poster sessions will be held in the IMBA Atrium.

THURSDAY, 22nd FEBRUARY

- 12.00 **Registration**
13.15 **Welcome & introduction (Elly Tanaka)**

Session 1 - Pluripotency, differentiation & reprogramming

- Chair: **Sasha Mendjan**
- 13.30 **Joerg Betschinger:** Lysosomal signalling is essential for embryonic stem cell differentiation and human development
- 14.00 **Yaqub Hanna:** Mechanisms for assembling and resolving naïve pluripotency
- 14.30 **Kikuë Tachibana:** Single-nucleus Hi-C reveals zygotic genome architecture is organized by cohesin-dependent loop extrusion
- 14.50 **Frank Edenhofer:** Exploring novel reprogramming pathways for biomedical applications – Induced neural stem cells ameliorate chronic neuroinflammation
- 15.10 *Coffee break (IMP Foyer)*
- 15.45 **Gabsang Lee:** Establishment of light-inducible control of stem cell fate
- 16.15 **Graziano Martello:** Transcriptional regulation of naive pluripotency
- 16.45 **Hannah Stuart:** Establishment of cellular identity via functionally distinct routes with a unifying transition logic
- 17.05 **Gratiela Dobîrta:** Funding possibilities of the European Research Council
- 17.20 *Coffee break (IMP Foyer)*

Keynote lecture

- Chair: **Kikuë Tachibana**
- 17.45 **Magdalena Zernicka-Goetz:** Building the mammalian embryo in vivo and in vitro
- 18.45 *Dinner (Cafeteria)*

FRIDAY, 23rd FEBRUARY

Session 2 - Adult stem cells & model organisms

- Chair: **Noelia Urbán**
- 09.00 **Nadia Mercader Huber:** Cardiomyocyte plasticity during heart regeneration in the zebrafish
- 09.30 **Enzo Porrello:** Metabolic and transcriptional control of mammalian heart regeneration
- 10.00 *Coffee break (IMP Foyer)*
- 10.30 **Tom Hiu Tung Cheung:** Differential mRNA processing during muscle stem cell activation
- 11.00 **Charles Chan:** Temporal/spatial transcriptomic analysis of normal and neoplastic stem cell niches
- 11.30 **Elif Eroglu:** Cardiac regeneration in the newt species *pleurodeles waltl*
- 11.50 *Coffee break (IMP Foyer)*

Session 3 - Organoids & bioengineering

- Chair: **Bon-Kyoung Koo**
- 12.20 **Meritxell Huch:** Liver organoids for the study of liver biology and disease
- 13.50 **Agnete Kirkeby:** Modelling human rostro-caudal neural patterning with microfluidic gradients
- 13.20 *Lunch (Cafeteria)*
- 14.30 **Anne Grapin-Botton:** Pancreas organoids to deconstruct developmental mechanisms
- 15.00 **Giorgia Quadrato:** Cell diversity and network dynamics in photosensitive human brain organoids
- 15.30 **Joep Beumer:** Enteroendocrine cells switch hormone expression along the crypt-to-villus BMP signaling gradient
- 15.50 **Judith Kraiczy:** DNA methylation defines regional identity of human intestinal epithelial organoids and undergoes dynamic changes during development
- 16.10 **Poster session 1 (IMBA Atrium)**



SATURDAY, 24th FEBRUARY

First author session

Chair: **Ulrich Elling**

09.00 **Jérôme Chal:** Developing the next generation of hiPSC-based assay platforms: biomedical relevance and applications for striated muscles

09.20 **Patricia Garcez:** Cerebral organoids and neurospheres as models to study microcephaly associated with zika virus in vitro

09.40 **Malkiel Cohen:** Stem cell derived neural crest chimeras for modeling human diseases in vivo

10.00 **Prayag Murawala:** Single-cell transcriptomics uncovers molecular funneling of cell identities during axolotl limb regeneration

10.20 *Coffee break (IMP Foyer)*

10.50 **Marisa Karow:** Probing the transcriptional programs underlying human neurogenesis by direct lineage reprogramming

11.10 **Sven Falk:** Molecular control of lineage diversification in the ventral telencephalon

Session 4 - Technologies & emerging methods

Chair: **Chukwuma Agu**

11.40 **Barbara Treutlein:** Reconstructing human organ development using single-cell transcriptomics

12.10 **Fatma Uzbas:** Massive single cell targeted transcriptomics reveals subpopulations of human pluripotent stem cells

12.30 **Lunch & Poster session 2 (IMBA Atrium)**

Session 5 - Clinical outlooks

Chair: **Juergen Knoblich**

14.30 **Barbara Ludwig:** Current status and future perspectives in diabetes therapy- from cells, pills, and chimera

15.00 **Markus Manz:** Inflamm-ageing of hematopoietic stem cells

15.30 **Fotis Sampaziotis:** Cholangiocyte organoids for clinical applications

16.00 *Coffee break (IMP Foyer)*

Keynote lecture

16.30 **Marius Wernig:** How to make a neuron

17.30 **Closing remarks (Juergen Knoblich)**

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