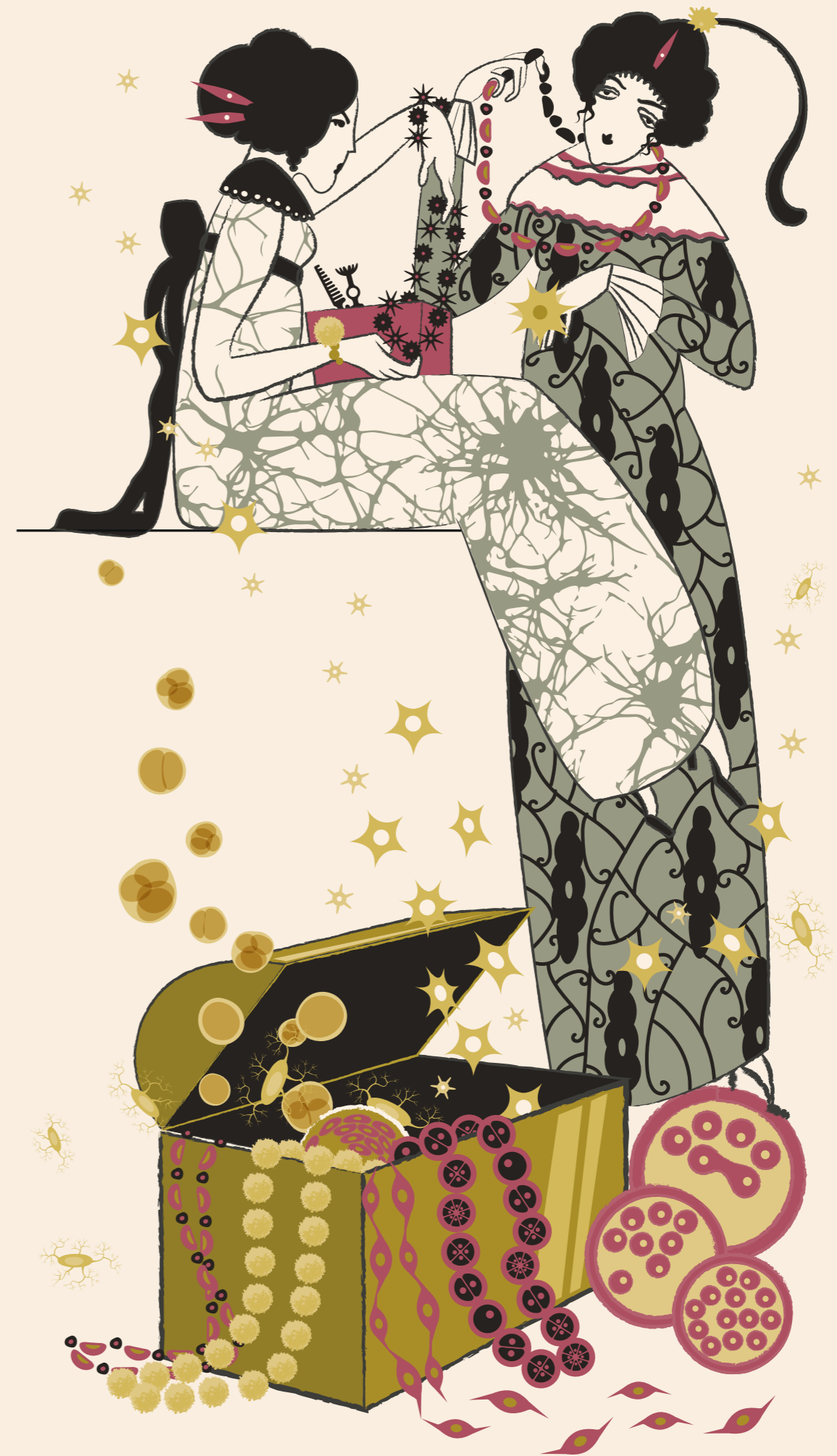


SY Stem

PROGRAMME

12 – 14 March 2025
Vienna, Austria

Symposium for the next generation of
stem cell researchers



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Venue



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Programme

DAY 1 - Wednesday, March 12

- 09:30 **Seminar: Funding opportunities at the European Research Council (ERC)**
 12:00 **Welcome and introduction**

Keynote lecture I

Chair: Elly Tanaka

- 12:15 **Mitinori Saitou (Kyoto University)** Mechanism and in vitro reconstitution of human germ-cell development
 13:15 *Lunch break*

Session 1 - Gene regulation and stem cells

Chair: Nicolas Rivron

- 14:15 **Deborah Bourc'his (Institut Curie)** Novel actors in chromatin-based control of transposable elements
 14:45 **José González Martínez (MRC Laboratory of Molecular Biology)** The interaction between genetics and hormones in autism using brain organoids
 15:00 **Raquel Fueyo (Stanford University)** Human-specific innovations driven by retrotransposons impact preimplantation development
 15:30 *coffee break*
 16:00 **Stanley Strawbridge (University of Sheffield)** Pushy guests: interrogating cell-fate specification in the early embryo through chimeras and computation
 16:15 **Madeleine Linneberg-Agerholm (University of Copenhagen)** Regulative development in the preimplantation embryo: A role for OCT4 in plasticity maintenance in the mouse primitive endoderm.
 16:45 **Barbara Pernaute (Centro Andaluz de Biología del Desarrollo-CSIC)** A developmentally programmed splicing failure regulates DNA damage response in the early mammalian embryo
 17:00 *coffee break*

SESSION 2 – part I – Decoding cellular decisions in development

Chair: Martin Leeb

- 17:30 **Silvia Santos (The Francis Crick Institute)** Decoding signals during cellular transitions
 18:00 **Katharina Kohl (CeMM)** The transcription factor FOXA2 is a key regulator for gastric foveolar cell differentiation
 18:15 **POSTER SESSION I**
 20:00 *Symposium Dinner*

DAY 2 - Thursday, March 13

SESSION 2 – part II – Decoding cellular decisions in development

Chair: Martin Leeb

- 09:00 **Francis Corson (Centre national de la recherche scientifique - CNRS)** Geometric models for fate patterning
 09:30 **Hocine Rekaik (College de France)** Genetic ablation of Hox function in mouse pseudo-embryos reveals major rewiring in the early developmental program
 09:45 **Michael Dorrity (European Molecular Biology Laboratory - EMBL)** The role of cell type-specific timing in the robustness of development
 10:15 *coffee break*

SESSION 3: Cell biology of stem cells

Chair: Florian Raible

- 10:45 **Léo Guignard (Developmental Biology institute of Marseille (IBDM) - Turing Centre for living systems (CENTURI))** Comprehensive Quantification of Gastruloids Across Biological Scales: A Data-Driven Approach
 11:15 **Giada Rossignoli (University of Padua)** Feeder-free culture of naive human pluripotent stem cells retaining embryonic, extraembryonic and blastoid generation potential
 11:30 **Alba Diz-Muñoz (European Molecular Biology Laboratory - EMBL)** The Missing Mechanical Link: How Composite Interfaces Govern Cell Morphogenesis, Immune Migration, and Stem Cell Fate
 12:00 **coffee break**
 12:30 **Alex Kingston (Cambridge Stem Cell Institute)** Modelling Cortical Mechanics in vitro: The Mechanobiology of Neural Progenitors in Development
 12:45 **Sonja Weterings (Hubrecht Institute)** Frequency encoding regulates cell type composition in the small intestine
 13:15 *group picture & lunch*

SESSION 4: Stem cell niches

Chair: Sandra Siegert

- 14:15 **Ya-Chieh Hsu (Harvard University)** Skin Deep: Stem Cells at the Nexus of the Niche, Physiology, and the External Environment
 14:45 **Ji-Hyun Lee (Institution For Basic Science)** Epithelial WNT secretion drives niche escape of developing gastric cancer
 15:00 *coffee break*
 15:30 **Simon Schäfer (Technical University of Munich)** New approaches to decode human microglia phenotypes in health and disease
 16:00 **Ali Seleit (European Molecular Biology Laboratory - EMBL)** Modular control of time and space during vertebrate axis segmentation
 16:30 **POSTER SESSION II**
 18:30 **end of sessions - free evening for attendees**



DAY 3 - Friday, March 14

SESSION 5: Cellular dynamics in regeneration and aging

Chair: Elly Tanaka

- 09:00 **Elif Eroglu (Karolinska Institutet)** More than a barrier? The role of tight junctions in salamander heart regeneration
- 09:30 **Maximina Yun (Center for Regenerative Therapies Dresden - CRTD)** Probing the links between regeneration and ageing
- 10:00 *coffee break*
- 10:30 **Leonie Adelmann (University of Vienna)** A model system to decode the molecular mechanisms of age-dependent regenerative plasticity
- 10:45 **Sandra Scharaw (Max Planck Institute of Molecular Cell Biology and Genetics)** Endomembrane organelle organization in tissue renewal and with age
- 11:15 *coffee break*

SESSION 6: Transitioning stem cells into the clinic

Chair: Sasha Mendjan

- 11:45 **Alok Javali (dawn-bio)** A new dawn of IVF: First-principle approach to increase IVF success
- 12:15 **Magdalena Renner (Institute of Molecular and Clinical Ophthalmology Basel)** Scaling Up Organoid Handling and Analysis for High-Throughput Gene Therapy Screening in Retinal Organoids
- 12:30 **Volker Busskamp (Universitätsklinikum Bonn - UKB)** The Effect of Vascularization on Human Retinal Organoids
- 13:00 *lunch*
- 14:00 **Verena Schmied (Institute of Science and Technology Austria)** Microglia determine an immune-challenged environment and facilitate ibuprofen action in human retinal organoids
- 14:15 **Joep Beumer (Institute of Human Biology - IHB)** Modeling intestinal maturation and function in engineered human organoids
- 14:45 *short break*

Keynote lecture II

Chair: Juergen Knoblich

- 15:00 **Fiona Doetsch (University of Basel)** Regulation and Diversity of Adult Neural Stem Cells
- 16:00 **Closing remarks**
- 16:15 **Coffee & cake & farewell**





Poster Session 1 - Wednesday, March 12 2025

Please note that although all posters will be displayed at the same time, the presentations will take place on different days.
Please check the list below for the day of your presentation

No.	Name	Affiliation (University / Institute / Company)	Abstract title
1	Janina Kaspar	TU München	Uncovering sexual dimorphism in human microglia using organoid-based platforms
3	Daniel Ming-Kang Lee	Max Planck Institute for Molecular Genetics	PRC2 safeguards ontogeny by restricting stochastic lineage commitment in post-implantation embryos
5	Jan-Daniël De Leede	Hubrecht Institute	Signalling dynamics in cell fate decision during intestinal regeneration
7	Nicole Amberg	Medical University of Vienna	Patient-derived iPSCs and cerebral organoids to model rare tumor predisposition syndromes in vitro
9	Nikita Vaulin	Medical University of Vienna	Plants vs. Zombies: systematic comparison of iPSC-derived and post-mortem neurons on the transcriptomic, epigenomic, and 3D-genomic levels
11	Alexander von Eyb	Institut für Biochemie FAU AGLie	Modulation of germ layer differentiation in early development by the SOXC transcription factor SOX11
13	Birgit Ritschka	Institute of Molecular Biotechnology (IMBA)	Modeling aging in hESC-derived Retinal Pigment Epithelial cells
15	Sameer Kumar Panda	University of Campania Luigi Vanvitelli	Mitochondrial transfer from MSC to cancer cells regulating breast cancer drug resistance and cancer stem cell phenotype
17	Soomin Kim	Institution For Basic Science	Epithelial WNT secretion drives niche escape of developing gastric cancer
19	Sanja Nikolić	University of Novi Sad	Growth and Early Characterization of neural organoids derived from patients with a neurodevelopmental and progeroid disease
21	Elizaveta Podoliak	University of Bonn	Functional characterization of a distinct anion channelrhodopsins (ACRs) family in mammalian cell lines and hiPSCs-derived neurons
23	Klaus Fortschegger	St. Anna Children's Cancer Research Institute	Alternative fates in CBFA2T3::GLIS2-driven acute megakaryoblastic leukemia initiation revealed by a stem cell differentiation model
25	Sumit Mallick	Yenepoya Research Centre	Hematopoietic stem cells derived conditioned media promotes colorectal cancer cell apoptosis through Drp-1-mediated mitochondrial fission
27	Nouf Alharbi	King Abdullah International Medical Research Center (KAIMRC)	The Role of Phospholipid Scramblase1 in Neural Cancer Stem Cells
29	Jamie Littleboy	Institute of Molecular Biotechnology (IMBA)	Functional Screening of Archaic Human Variants in Brain Organoids via scDNA/scRNA-Seq
31	Simon Kahlenberg	BOKU University/ Institute for Cell and Tissue Culture Technologies	A dynamic bioreactor platform for the cultivation of encapsulated MSCs
33	Johannes Rhode	Universitätsmedizin Greifswald Institut Genetik und Funkt. Genomforschung	Two CRISPR/Cas9 modified iPSC containing heterozygous mutation in the FLHS locus of the SRCAP-gene
35	Clemens Etl	Institute of Molecular Biotechnology (IMBA)	Targeting Senescence in aged hESC-derived Retinal Pigment Epithelial Cells to restore Wound Healing
37	Charlotte Janssens	Vrije Universiteit Brussel (VUB), Brussels Health Campus/ Faculty of Medicine and Pharmacy, Research Group Genetics, Reproduction and Development	XENO/FEEDER-FREE CULTURE USING LAMININ SUPPORTS RESETTING TOWARDS NAIVE PLURIPOTENCY IN HUMAN EMBRYONIC STEM CELLS
39	Sven Leisen	DKFZ Heidelberg	Investigating protein-glycan interactions in CRC with a paired organoid-bacteria biobank
41	Medina Korkut-Demirbas	Institute of Science and Technology Austria (ISTA)	Investigation of hiPSC-derived microglia migration dynamics using microfluidics
43	Eleni Chrysostomou	Necker Institute for Sick Children (INEM)	Fibrillin as a modulator of quiescence in skeletal muscle stem c
45	Rebecca Kresnik	Medical University of Vienna	Establishment of a high-throughput platform to study fibrosis and myocardial infarction using human Cardioids
47	Hye-Jin Jeong	Institute for Basic Science	Organoid-Based Human Stomach Micro-Physiological System Mimics the Dynamic Gastric Mucosal Barrier and Epithelial-Mesenchymal Interactions
49	Anna-Maria Prandstetter	Medical University of Vienna	Crosstalk between extravillous trophoblasts and decidual glands in early human pregnancy
51	Davide Benvegnù	University of Padua	Exploring the metabolic switch during blastocyst implantation through a 3D in vitro model
53	Natalia Malig	University of Cambridge	Mitochondrial Remodeling During Neural Induction in iPSCs
55	Clara Schimmer	University of Vienna / Max Perutz Labs	Mechanical determinants of cell growth and survival in embryonic skin formation
57	Deniz Conkar	MPI-CBG	Understanding the role of extracellular matrix during elongation of mouse and human gastruloids
59	Helena Bragulat Teixidor	Max Perutz Labs Vienna	The endoplasmic reticulum connects to the nucleus by constricted junctions that mature after mitosis
61	Michelle Huth	Max Perutz Labs	Gene cooperativity in the exit from naïve pluripotency



Poster Session 2 - Thursday, March 13 2025

Please note that although all posters will be displayed at the same time, the presentations will take place on different days.
Please check the list below for the day of your presentation

No.	Name	Affiliation (University / Institute / Company)	Abstract title
2	Iskra Sainova	Bulgarian Academy of Sciences (BAS)	Development of methods about gene-engineering manipulations of in vitro-incubated embryonic stem cells, predisposing to totipotency and pluripotency and further formation of embryoid and organoid structures
4	Birgit Tschatschek	Universität Graz / Institut für Biologie	Stem cell competition in adult intestinal tissue renewal under breakdown of neutrality
6	Mona Farhadipour	University of Leuven	FFAR4 activation in stem cells shapes lipid and iron dynamics in human intestinal organoids: impact of obesity
8	Karliën Van Nerum	University of Copenhagen / NNF Center for Stem Cell Medicine - reNEW	Metabolic rewiring underpins human trophoblast induction
10	Victoria Mader	Ludwig Boltzmann Institute for Traumatology	Comparative Imaging of Regenerative Processes in Axolotl and Mouse Limbs
12	Hong Thu PHAM	INSERM DR AuRA	First Efficient Generation of Germline Chimeras in a Non-Rodent Species Using Rabbit Induced Pluripotent Stem Cells
14	Anthi Faka Schulte	BioLamina - Stockholm	The Role of Full-Length Laminins in Enhancing In Vitro Cellular Microenvironments
16	Elisa Hahn	EMBL Barcelona	Novel insights into Bmp signaling during cell fate decisions in early mammalian development
18	Youssef El-Sherif	Misr University for Science and Technology (MUST)	Epigenetic Regulation of Early Embryogenesis: Using Human Embryo Models to Investigate Cellular Fate Decisions and Post-Implantation Development.
20	Miray Bozkurt	Institute of Molecular Biotechnology (IMBA)	Investigating fibroblast de-differentiation during axolotl limb regeneration
22	Katherina Tavernini	Institute of Molecular Biotechnology (IMBA)	BMP induces a quiescent-like state in radial glia-like human neural stem cells
24	Terezia Vcelkova	Medical University of Vienna	Role of MORC4 in placental development
26	Deborah Beckerová	Masaryk University	Duchenne Muscular Dystrophy cardiac organoid development: increased DNA damage, hastened maturation and elevated inflammation
28	JONATHAN ARIAS	VU EMBL partnership institute for gene editing	Generation of natural and synthetic hypo-immunogenic human iPSC cells.
30	Nora Papai	bit.bio discovery	Accelerating Functional Genomics in Human Neurons via a CRISPR-Ready iPSC-Derived System
32	Angelica Luna Leal	Friedrich Alexander Universität Erlangen -Nürnberg	Modeling SOX11-Related Coffin-Siris Syndrome in Human Embryonic Stem Cells
34	Maria Tryfonos	VUB	Assessing the impact of oxygen tension on the ability of peri-implantation blastocysts to attach on endometrial assembloids
36	Jasmin Wächter	Medical University of Vienna	The role of the STAT3 signaling in human placental extravillous trophoblast differentiation
38	Miguel Gaspar	Instituto de Investigação e Inovação em Saúde da Universidade do Porto (i3S)	Using Single Molecule Tracking to understand how Ascl1-genome interactions are regulated by post-translational modifications
40	Aranxa Torres Caballero	Institute of Molecular Biotechnology (IMBA)	Characterizing transposon dynamics at different potency stages
42	Theresa Maxian	Medical University of Vienna	Dynamic morphogenesis in early human placental development
44	Mie Meisner Jacobsen	University of Southern Denmark	iPSC propagation in a clinostat-based low shear stress environment
46	Chloe ROFFAY	Research Institute of Molecular Pathology (IMP)	UNCOVERING THE INTERPLAY BETWEEN MORPHOGENS, CELL FATES AND MECHANICAL FORCES IN HUMAN GASTRULOID DISCS
48	Lidija Milojkovic	Institute of Molecular Biotechnology (IMBA)	Dissecting the Role of MAPK Signalling in Adult Neural Stem Cells
50	Martina Cirigliano	Medical University of Vienna	Cardioids as a platform to model hypertrophic cardiomyopathies
52	Vittoria Mariano	Institute of Science and Technology Austria (ISTA)	Unravelling SLC13A5 and Citrate Metabolism in Developmental Epileptic Encephalopathies
54	Sanskriti Sharma	University of Vienna / Max Perutz Labs	Deciphering the cellular and molecular consequences of aneuploidy in the adult mammalian intestine
56	Kristina Mitrova	Medical University of Vienna	Cell-Fate Decision Balance and Pattern Emergence in Micropatterned Human 2D Neuruloids
58	Rachele Ghirardo	University of Padova	Modeling of Huntington's Disease to Uncover Therapeutic Gene Suppressors
60	Lena Bohaumilitzky	Research Institute of Molecular Pathology (IMP)	From dynamic morphogen gradients to complex tissue mechanics