



GermanStemCellNetwork

12th GSCN Conference

25 – 27 September 2024

Friedrich Schiller University
Jena

www.gscn.org



Program & Abstracts

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GermanStemCellNetwork

12th GSCN Conference

25 – 27 September 2024

Friedrich Schiller University
Jena

Organizer:

German Stem Cell Network (GSCN)

c/o Charité Universitätsmedizin
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10117 Berlin

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e-mail: office@gscn.org

web: www.gscn.org

Welcome address



Dear colleagues and friends, partners and participants,

It is our greatest pleasure to welcome you to the 12th Conference of the German Stem Cell Network (GSCN) at the Friedrich Schiller University in Jena, one of the oldest universities in Germany. Life, light, and liberty, the three profile areas of our university highlight the importance of excellent science in Jena to understand how life is preserved and nurtured.

Jena is a lively and young city that receives every year a boost of energy from young people who come to the city by the river Saale to study. Thinking without boundaries spans from Friedrich Schiller, who taught in Jena, to the Zeiss-Planetarium, the oldest continuously operating

planetarium in the world that fascinates with digital full-dome projections. Embrace the rich history and knowledge this vibrant city offers during the conference. Maybe you will even discover the “Seven Wonders of Jena” during your stay?

The conference will cover the latest findings in stem cell biology and foster scientific exchange. There will be new and exciting findings and intense discussions in the oral sessions, during the poster sessions, and during the social get together events! Come and share our enthusiasm for stem cells in all flavors: pluripotent stem cells, adult stem cells, stem cells in development, cancer stem cells, or stem cells in the aging organism.

We feature many oral presentations that were selected from the large number of excellent abstracts that have been submitted, and we welcome our outstanding keynote speakers that are leaders in the field.

An interesting and broad industry exhibition will offer latest technologies and personal contact in combination with industry sessions of GSCN industry partners. There will also be the non-PI meeting, as well as the GSCN mentoring program workshop and the ELSA keynote lecture and symposium. Finally, we will enjoy two social events to continue networking after working hours. Check out the whole program on our online platform (Program & Speakers 2024 (gscn-conferences.org)).

The GSCN is a network of scientists enthusiastic about stem cells. Here, colleagues become friends, and we invite you to become part of this vibrant community, and to feel the joy of meeting other stem cell scientists. We welcome you to this conference and to the City of Light, Jena.

A handwritten signature in blue ink, likely belonging to Prof. Dr. Claudia Waskow.

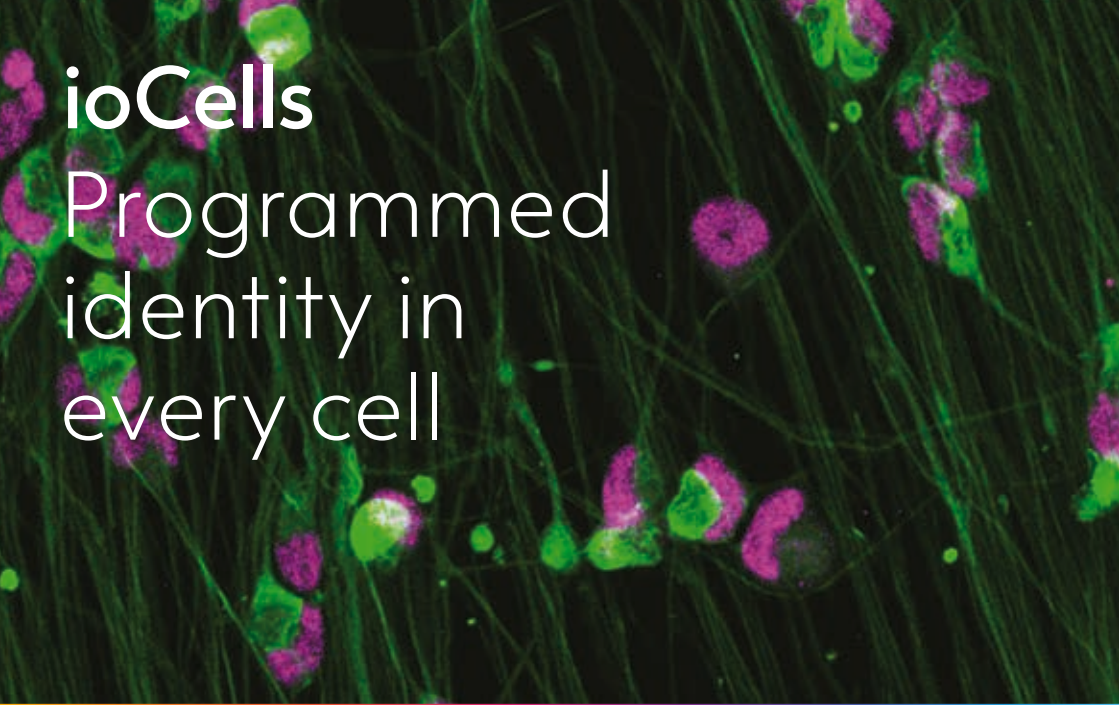
Prof. Dr. Claudia Waskow (*Jena*), *GSCN president*

For the program committee

Sina Bartfeld (Berlin) • Daniel Besser (Berlin) • Michael Cross (Leipzig) • Anne Grapin-Botton (Dresden) • Florian Heidel (Hannover) • Heiko Lickert (Munich) • Helen Morrison (Jena) • Hans Schöler (Münster) • Claudia Waskow (Jena)

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Conference Information

Venue

Friedrich Schiller University
Ernst-Abbe-Platz
Carl-Zeiss-Str. 3
07743 Jena

Date

Wednesday, 25 September to
Friday, 27 September 2024

Registration

Regular fee	€ 620,–	Student fee	€ 310,–
Regular member fee	€ 400,–	Student member fee	€ 200,–

The registration fee includes the admission to all scientific sessions, additional scientific events, poster and commercial exhibition, the get-together on 25 September and the networking evening on 26 September, lunch and coffee breaks, free internet access, conference documents including badge, final program (incl. abstracts) book.

Internet

Internet access via Wireless LAN is free of charge.

Poster exhibition

Posters will be displayed during the conference in two sessions. Authors are asked to be present at their poster during the poster session. Even numbers will be presented on Wednesday, 25 September from 17:30 – 18:30 h and odd numbers will be presented 18:30 – 19:30 h. On Thursday, 26 September even numbers will be presented from 16:30 – 17:30 h and odd numbers from 17:30 – 18:30 h.

You will find the number of your poster in this abstract volume. Please prepare the size DIN A 0 portrait for the poster. Otherwise, there are no further specifications. Posters in poster session I should be mounted on Wednesday 12:00 – 16:30 h and removed at latest on Thursday, 12:00 h. Poster in poster session II should be mounted on Thursday 12:00 – 16:30 h and removed latest on Friday at 14:00 h.

Poster session I (Poster number P001 – P064)

Wednesday, 25 September 2024, 17:30 – 19:30 h

Stem cells in disease modeling &

drug development: P001 – P038

Hematopoietic stem cells: P039 – P054

Pluripotency & reprogramming: P055 – P064

Poster session II (Poster number P065 – P126)

Thursday, 26 September 2024, 16:30 – 18:30 h

Stem cells in aging & disease: P65 – P077

Computational stem cell biology &

systems biology: P078 – P082

Stem cell organoids: P083 – P105

Stem cells in regenerative therapies: P106 – P121

Somatic stem cells & development: P122 – P126

The poster session I is supported by
PeptiGrowth



The poster session II is supported by
Bio-Techne



GSCN Awards

Travel awards

The following participants have been selected for the GSCN travel awards.

- *Eleonora Clemente* (CRTD, TU Dresden)
- *Júlia Csátári* (University Hospital Münster)
- *Bruno Ederer* (University of Leipzig)
- *Fatima Efendic* (University Medical Center Rostock)
- *Ian Ghezzi* (DKFZ Heidelberg)
- *Kimberly Hartl* (Charité Berlin)
- *Clara Hayn* (University of Bonn)

Poster awards

There will be two poster awards for each poster session. Members of the poster jury have a red dot on their badge – please present them your poster with due attention.

The awardees will receive € 500 each. Authors are asked to be present at the poster award ceremony on Friday, 27 September 2024 at 15:30 – 15:50 h in Hall 1.

The poster awards are supported by Thermo Fisher Scientific Germany

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Scientific awards 2024

A top-class commission supported the GSCN in choosing this year's awardees. The three awardees will give a presentation in the Presidential Symposium on Thursday, 26 September 2024 at 14:00 – 16:15 h.

GSCN 2024 Young Investigator Award: *Claudia Gerri*, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden

GSCN 2024 Hilde Mangold Award: *Mina Gouti*, Max Delbrück Center, Berlin

GSCN 2024 Publication of the Year Award: *Jorge Lázaro Farré*, EMBL Barcelona ... *Miki Ebisuya*, TU Dresden for the publication "A stem cell zoo uncovers intracellular scaling of developmental tempo across mammals" in the journal *Cell Stem Cell*, 30: 938-949, 2023.

ELSA Symposium

What makes it conscious?

The topic of consciousness holds significant relevance for ethical discussions surrounding neuro-organoids, advanced human embryo models, and, from a distinct perspective, the use of artificial intelligence in analyzing complex biomedical and clinical data. At this year's conference, we aim to foster a dialogue on these important issues, and we are pleased to welcome bioethicist Garðar Ágúst Árnason from Akureyri, Iceland, as the keynote speaker for Wednesday evening. During the ELSA Symposium on Thursday morning, he will join us at the ELSA Symposium when we explore the latest advancements in the rapidly growing fields of neuro-organoid research, embryo models, and AI algorithms. This will serve as a foundation for discussing potential biological correlates that could be used to assess the "consciousness" of these entities. While the scope of this symposium will not be extensive enough to provide comprehensive answers, we rather expect an enlightening start of such a debate.

Social Events

Get-together

On Wednesday, 25 September 2024, 20:30 – 22:00 h, all participants and exhibitors are invited to the get-together with dinner buffet in the Mensa Philosophenweg 20, which is a 10-minute walk from the Friedrich Schiller University.

•••••

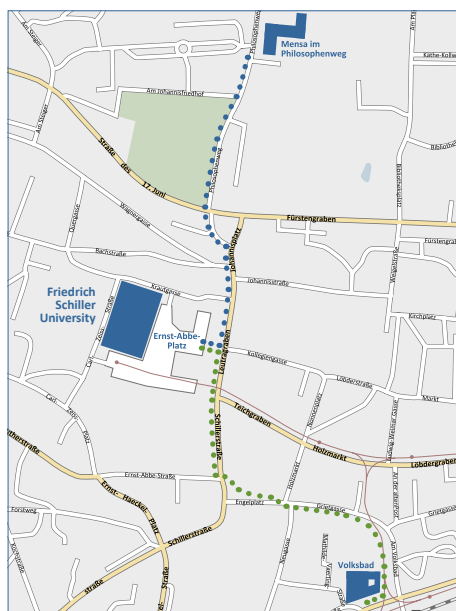
Address: Mensa Philosophenweg
Philosophenweg 20 · 07743 Jena

Networking Event

The GSCN Networking Event with dinner buffet and DJ is open for all participants and exhibitors and will take place on Thursday, 26 September, 19:30 – 01:00 h at the Volksbad Jena. It is a 10-minute walk from the Friedrich Schiller University.

•••••

Address: Volksbad Jena
Knebelstr. 10 · 07743 Jena





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Public outreach event (in German)

Aktuelle Forschung, neue Therapien und alte Medikamente: Stammzellen – die Alleskönner unter den Zellen

Wann: **Freitag, 27. September 2024, 18:30 – 20:00 Uhr**

Podiumsdiskussion mit Stammzellforscher*innen

Programm: 18:30 Uhr: Podiumsdiskussion & Kurzfilme
20:00 – 20:30 Uhr: Ausklang mit Gesprächen, Brezeln und Getränken

Ort: Volksbad Jena, Knebelstr. 10, 07743 Jena, Eintritt frei

Auf dem Podium sind:

- Prof. Dr. Claudia Waskow, Leibniz-Institut für Altersforschung & Uni Jena, Expertin für Blutstammzellen
 - Dr. Ole Pless, Fraunhofer ITMP Hamburg, Expertin für Wirkstofftestung und seltene Erkrankungen
 - Prof. Dr. Sina Bartfeld, TU Berlin, Expertin für Organoiden
 - Prof. Dr. Heiko Lickert, Helmholtz München, Expertin für Diabetes
- Moderation: *Stefanie Mahler*

Haare wachsen ein Leben lang. Wunden heilen wieder. Zellen im Blut erneuern sich alle drei Monate. Verantwortlich für diese Wunder sind Stammzellen, eine ganz besondere Zellart in unserem Körper: Ein Leben lang können sie sich teilen, vermehren und in alle verschiedenen Körperzellen entwickeln. Wenn bei diesen fundamentalen Vorgängen Fehler passieren, können Krankheiten entstehen. Daher liefert die Erforschung von Stammzellen wichtige Erkenntnisse für die Medizin.

Bei der Podiumsdiskussion berichten die eingeladenen Wissenschaftler*innen, welche Rolle Stammzellen bei der Erforschung von Krebs, Erkrankungen des Magen-Darm-Trakts, der Modellierung von Organoiden, bei Therapieansätzen für Diabetes oder bei neu verwendeten, „alten“ Medikamenten für seltene Erkrankungen spielen.

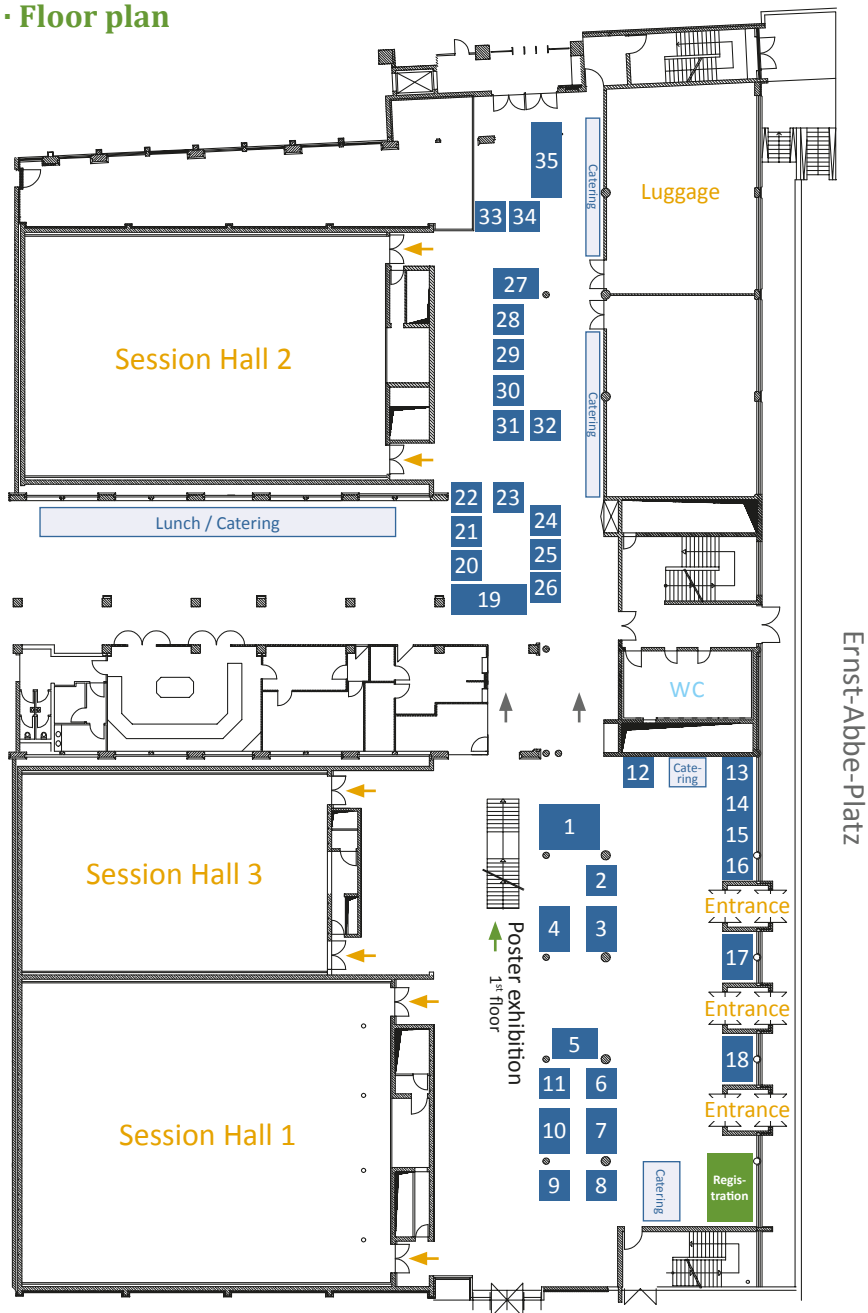
Mithilfe von Stammzellen lassen sich zukünftig neue Therapien entwickeln: Man kann aus ihnen kleine Gewebestückchen und Organoiden züchten und an diesen Medikamenten auf ihre Wirkung testen oder sie als Ersatz für verloren gegangenes Gewebe verwenden. Kurzfilme stellen die Forschung der Wissenschaftler*innen vor, in der Diskussion dreht es sich um Stand und Zukunft der Stammzellforschung sowie neue Behandlungsmöglichkeiten.

Floor plan

Sorted in alphabetical order		Sorted by booth number	
COMPANY	NUMBER		COMPANY
*Active Bioscience	11	1	*STEMCELL Technologies
*AMSBIO	2	2	*AMSBIO
Aseptic Technologies	9	3	*Thermo Fisher Scientific
*Axion BioSystems	6	4	*Sartorius
Becton Dickinson GmbH	28	5	*LIFE & BRAIN GmbH
BioLamina AB	13	6	*Axion BioSystems
*Bio-Techne	27	7	*bit.bio
BioThrust GmbH	15	8	PL BioScience GmbH
*BIOTREND Chemikalien GmbH	14	9	Aseptic Technologies
*bit.bio	7	10	*PeptiGrowth Inc.
*Cenibra GmbH	16	11	*Active Bioscience
*Consarctic	26	12	*Miltenyi Biotec B.V. & Co. KG
*Eppendorf	18	13	BioLamina AB
GCT – Netze rk büro	32	14	*BIOTREND Chemikalien GmbH
Getinge Deutschland	17	15	BioThrust GmbH
*ibidi GmbH	24	16	*Cenibra GmbH
*IDT Germany GmbH	21	17	Getinge Deutschland
INTEGRA Biosciences	20	18	*Eppendorf
*iotaSciences	22	19	TAKARA BIO EUROPE
*LIFE & BRAIN GmbH	5	20	INTEGRA Biosciences
MedChemExpress	35	21	*IDT Germany GmbH
*Miltenyi Biotec B.V. & Co. KG	12	22	*iotaSciences
New England Biolabs	23	23	New England Biolabs
Novogene Europe	29	24	*ibidi GmbH
*PeptiGrowth Inc.	10	26	*Consarctic
PL BioScience GmbH	8	27	*Bio-Techne
Proteintech	30	28	Becton Dickinson GmbH
*Sartorius	4	29	Novogene Europe
Scale Biosciences	34	30	Proteintech
*STEMCELL Technologies	1	31	Telight
TAKARA BIO EUROPE	19	32	GCT – Netze rk büro
Telight	31	33	Xceltis GmbH
*Thermo Fisher Scientific	3	34	Scale Biosciences
Xceltis GmbH	33	35	MedChemExpress

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Foyer · Floor plan



Ernst-Abbe-Platz

Program overview

Wednesday, 25 September 2024

	Friedrich Schiller University			
09:00 – 19:00	Registration			
	Hall 1			
11:00 – 11:30	Opening			
11:30 – 12:15	Keynote lecture I <i>Amander Clark</i>			
12:15 – 13:00	Keynote lecture II <i>Cantas Alev</i>			
13:00 – 14:30	Lunch break / Industry exhibition			
	Hall 1	Hall 2	Hall 3	
	Concurrent scientific working group session I			
14:30 – 16:00	Stem cells organoids	Stem cells in aging & diseases	Computational stem cell biology	
16:00 – 16:30	Break time / Industry exhibition			
			Hall 3	
16:30 – 17:30			GSCN Members Meeting	
17:30 – 19:30				Poster session I (P001 – P064)
17:30 – 18:30				posters with even numbers
18:30 – 19:30				posters with odd numbers
	Hall 1			
19:45 – 20:30	Keynote lecture III (on ELSA topics) <i>Gardar Agust Arnason</i>			
20:30 – 22:00	Informal GSCN get-together with dinner buffet at the Mensa Philosophenweg			

Thursday, 26 September 2024

	Friedrich Schiller University			
08:00 – 18:00	Registration			
	Hall 1	Hall 2	Hall 3	SR114
	Concurrent scientific working group session II			
09:00 – 10:30	Pluripotency, somatic stem cells & development	HEAL Symposium		ELSA Symposium
10:30 – 11:00	Break time / Industry exhibition			
	Hall 1	Hall 2	Hall 3	
11:00 – 12:30	Industry session: Technologies from GSCN industry partners			
	LIFE & BRAIN GmbH Sartorius Stedim Biotech STEMCELL Technologies UK bit.bio	Bio-Techne Getinge Thermo Fisher Scientific Eppendorf SE PeptiGrowth		
12:30 – 14:00	Lunch break / Industry exhibition			

	Hall 1		
14:00 – 16:15	Presidential Symposium		
14:00 – 14:45	Presidential Invite <i>Hans-Reimer Rodewald</i>		
14:45 – 15:15	Young Investigator Award <i>Claudia Gerri</i>		
15:15 – 15:45	Hilde Mangold Award <i>Mina Gouti</i>		
15:45 – 16:15	Publication of the Year Award <i>Jorge Lázaro Farré</i>		
16:15 – 16:30	Break time / Industry exhibition		
16:30 – 18:30			Poster session II (P065 – P126)
16:30 – 17:30			posters with even numbers
17:30 – 18:30			posters with odd numbers
19:00 – 01:00	GSCN Networking Event with dinner buffet & DJ at Volksbad Jena		

Friday, 27 September 2024

	Friedrich Schiller University		
08:00 – 16:00	Registration		
	Hall 1	Hall 2	Hall 3
	Concurrent scientific working group session III		
09:00 – 10:30	Stem cells in disease modeling & drug development	Hematopoietic stem cells	Stem cells in regenerative therapies
10:30 – 11:00	Break time / Industry exhibition		
11:00 – 12:30	Concurrent strategic working group session		
	Clinical trials & regulatory affairs	Career development	Technologies in stem cell research
12:30 – 14:00	Lunch break / Industry exhibition		
	Hall 1		
14:00 – 14:45	Keynote lecture IV <i>Camilla Forsberg</i>		
14:45 – 15:30	Keynote lecture V <i>Thomas Zwaka</i>		
15:30 – 16:00	Poster Award Ceremony and closing remarks		
	End of GSCN Conference 2024		
18:30 – 20:30	GSCN public outreach event with panelists Volksbad Jena (in German) Aktuelle Forschung, neue Therapien und alte Medikamente: Stammzellen – die Alleskönner unter den Zellen		



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Program

Wednesday, 25 September 2024

- 11:00 – 11:30 **Opening**
H1 **GSCN Conference 2024**
- 11:00 – 11:08 Welcome to Jena University
Lars-Oliver Klotz, Dean of the Faculty of Biological Sciences, Friedrich-Schiller University, Jena
- 11:08 – 11:16 Welcome by the Medical Faculty
Thomas Kamradt, Scientific Director and Dean of the Faculty of Medicine, University Hospital Jena
- 11:16 – 11:24 Welcome to Jena Science Campus
Dario Valenzano, Scientific Director, Leibniz Institute on Aging/FLI
- 11:24 – 11:30 Opening of GSCN Conference 2024
Claudia Waskow, President GSCN
- 11:30 – 12:15 **Keynote lecture I**
K1 – Building stem cell models for women's health research
Amander Clark, Broad Stem Cell Research Center, UCLA, Los Angeles, US
Chair: *Florian Heide*
- 12:15 – 13:00 **Keynote lecture II**
K2 – Towards reconstituting human & non-human primate axial development in vitro
Cantas Alev, ASHBI Kyoto University, JP
Chair: *Sina Bartfeld*
- 13:00 – 14:30 **Lunch break / Industry exhibition**
- 14:30 – 16:00 **Concurrent scientific working group session I**
- 14:30 – 16:00 **Stem cells organoids**
H1 (Chairs: *Sina Bartfeld* & *Mina Gouti*)
- 14:30 – 15:00 T01– Infection and host cell tropism in the gut – organoids as model
Sina Bartfeld, TU Berlin
- 15:00 – 15:15 T02 – Human liver ductal cell heterogeneity and cell-state transitions in an organoid system
Javier Bregante Boixg, MPI-CBG Dresden
- 15:15 – 15:30 T03 – P53 activation in epithelial cells terminates the fetal-like regenerative state after colitis-associated injury
Kimberly Hartl, Charité Berlin

- 15:30 – 15:45 T04 – Cell type-specific epigenome profiling identifies H3K27me3 dynamics in the human developing neocortex
Mareike Albert, CRTD, TU Dresden
- 15:45 – 16:00 T05 – Assessing the impact of prenatal paracetamol exposure on early human forebrain development using cerebral organoids
Clara Hayn, University of Bonn
- 14:30 – 16:00 **Stem cells in aging & diseases**
H2 (Chairs: *Hartmut Geiger & Michael Rieger*)
- 14:30 – 15:00 T06 – The role of leukemic stem cells in patients treated with the BCL-2 inhibitor venetoclax
Andreas Trumpp, Heidelberg Institute for Stem Cell Technology HI-STEM
- 15:00 – 15:15 T07 – High fat diet impacts intestinal stem cell niche and causes hyperproliferation in the pig intestinal epithelium
Falk Farkas, Helmholtz Center Munich
- 15:15 – 15:30 T08 – Relevance of dormant cancer stem cells in disease propagation and therapy resistance in JAK2V617F-driven myeloproliferative neoplasms
Ian Ghezzi, DKFZ Heidelberg
- 15:30 – 15:45 T09 – Targeting SRSF2 mutations in leukemia with RKI-1447: a method to disrupt HSC division and alter nuclear formation
Natalie Kaushansky, Weizman Institute, Rehovot, IL
- 15:45 – 16:00 T10 – The inflammatory connection: insights from spatial mapping of human hematopoiesis in aging and blood malignancies
Borhane Guezguez, University of Mainz
- 14:30 – 16:00 **Computational stem cell biology**
H3 (Chairs: *Ingmar Glauche & Carsten Marr*)
- 14:30 – 15:00 T11 – Hematopoiesis by the numbers: advances in cellular barcoding and counting cell division
Leila Perié, Curie Institute, Paris, FR
- 15:00 – 15:15 T12/P – A scalable computational framework for annotation-independent combinatorial target identification in scRNA-seq databases
Maximilian Buser, Helmholtz Center Munich
- 15:15 – 15:30 T13 – Tracking bone marrow regeneration after CAR-T cell therapy in myeloma at spatial single-cell resolution
Jennifer Wing Lam Cheung, University Würzburg
- 15:30 – 15:45 T14 – Inferring the clonal dynamics of development from holistic barcoding: theory and application to tissue macrophages
Maurice Langhinrichs, DKFZ Heidelberg

15:45 – 16:00 T15/P – Unveiling the mechanisms of macrophage-mediated cytokine release syndrome in CAR-T cell therapy with mathematical modeling
Artur César Fassoni, TU Dresden

16:00 – 16:30 Break time / Industry exhibition

16:30 – 17:30 **General Meeting**

H3 Executive Board & Managing Director
Claudia Waskow, Hans Schöler, Heiko Lickert, Michael Cross, Andreas Trumpp, Daniel Besser

17:30 – 19:30 **Poster session I** (Poster number P001 – P064)
Foyer + H 6 Stem cells in disease & drug development: P001 – P038
(1st floor) Hematopoietic stem cells: P039 – P054
Pluripotency & reprogramming: P055 – P064

Even numbers: 17:30 – 18:30

Odd numbers: 18:30 – 19:30

19:45 – 20:30 **Keynote lecture III (on ELSA topics)**

H1 K3 – Consciousness as an ethical issue in neural organoid research
Garðar Ágúst Árnason, University of Akureyri, IS
Chair: *Tobias Cantz*

20:30 – 22:00 GSCN Get-together for all participants

Mensa Dinner buffet at the Mensa Philosophenweg 20
Philosophenweg (10-minute walk from the Friedrich Schiller University)

Thursday, 26 September 2024

09:00 – 10:30 **Concurrent scientific working group session II**

09:00 – 10:30 **Pluripotency, somatic stem cells & development**

H1 (Chairs: *Thomas Braun & Hans Schöler*)

09:00 – 09:30 T16 – Capture of human axial stem cells
Micha Drukker, Stem Cell Technology for Microphysiological Modeling, Leiden University, NL

09:30 – 09:45 T17 – The homeobox transcription factor DUXBL controls toti- to pluripotent transition
Felipe Lüttmann, TRON Mainz

09:45 – 10:00 T18 – SOX and POU transcription factors are older than stem cells and animals
Ralf Jauch, University of Hong Kong, HK

10:00 – 10:15 T19/P – Lifelong persistence of nuclear RNAs in the rodent brain
Sara Zocher, DZNE Dresden

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- 10:15 – 10:30 T20 – Epithelial-stromal communication via BMP signaling is a critical regulator of site specificity in the mouse oral mucosa
Kai Kretzschmar, Uni Würzburg
- 09:00 – 10:30 **HEAL Symposium**
H2 (Chairs: *Ulrich Martin & Robert Zweigerdt*)
- 09:00 – 09:30 T21 – Advancing cardiac therapeutics from animals to patients
Eldad Tzahor, Weizmann Institute of Science, Rehovot, IL
- 09:30 – 09:45 T22 – Lineage-specific cancer-related mutations in human pluripotent and adult stem cells
Jonathan Jung, Hebrew University of Israel, Jerusalem, IL
- 09:45 – 10:00 T23 – HLA-homozygous GMP iPSCs show efficient cardiac induction on a new differentiation platform featuring scalability and enhanced robustness
Soraia Martins, Catalent, Langenfeld
- 10:00 – 10:15 T24 – hPSC-cardiomyocyte production: standardization and protein-free upscaling to 2000 mL
Niels Kriedemann, MH Hannover
- 10:15 – 10:30 T25/P – Optimization of cardiomyocyte cryopreservation and quality control aspects for potency and residual iPSC contaminations
Fabienne Becker, University Düsseldorf
- 09:00 – 10:30 **ELSA symposium:**
SR114 (Chairs: *Stefan Hoffmann & Tobias Cantz*)
Panelists: *Garðar Ágúst Árnason & others*
- 10:30 – 11:00 Break time / Industry exhibition
- 11:00 – 12:30 **Industry session: Technologies from GSCN industry partners**
- 11:00 – 12:30 **Supporter I**
H1 (Chair: *Nina Cabezas-Wallscheid / Harald Stachelscheid*)
- 11:00 – 11:15 C01 – Assay-ready human microglia for automated image-based phenotypic subgrouping and targeted compound screening
Michael Peitz, LIFE & BRAIN GmbH (Bronze Supporter)
- 11:15 – 11:30 C02 – Advancing stem cell research with automated detection and isolation of stem cells and colonies
Jurij Kintz, Sartorius Stedim Biotech GmbH (Bronze Supporter)
- 11:30 – 12:00 C03 – Improved genetic stability of human pluripotent stem cell cultures passaged as single cells using eTeSR™
Adam Hirst, STEMCELL Technologies UK Ltd. (Gold Supporter)

- 12:00 – 12:20 C04 – Harnessing CRISPR-ready human iPSC derived cells for disease modelling and drug discovery in neurodegenerative diseases
Rebecca Northeast, bit.bio (Silver Supporter)
- 11:00 – 12:30 **Supporter II**
H2 (Chair: *Hartmut Geiger / Anne Grapin-Botton*)
- 11:00 – 11:15 C05 – Take your research translational the easy way: streamline your cell culture with our ready-to-use products and automated solutions
Volker Arps, Bio-Techne (Bronze Supporter)
- 11:15 – 11:35 C06 – Bioreactor systems | cell & gene therapy applications | state-of-the-art
Sascha Gandert, Getinge (Silver Supporter)
- 11:35 – 11:55 C07 – NK cell generation from iPSC suspension cultures
Sara Pérez Muñoz, Thermo Fisher Scientific (Silver Supporter)
- 11:55 – 12:15 C08 – From R&D to manufacturing: the cell as a product
Philipp Nold, Eppendorf SE (Silver Supporter)
- 12:15 – 12:30 C09 – Innovative synthetic peptide-based growth factor: overcoming challenges in stem cell medicine production
Robert Brownlee, PeptiGrowth (Bronze Supporter)
- 12:30 – 14:00 **Lunch break / Industry exhibition**
- 14:00 – 16:15 **Presidential Symposium**
H1 Chair: *Claudia Waskow*
- 14:00 – 14:45 **Presidential Invite**
PS1 – Deconvolution of stem and progenitor cell fates and immune lineages by polylox barcoding
Hans-Reimer Rodewald, German Cancer Research Center (DKFZ), Heidelberg
- 14:45 – 15:15 **GSCN 2024 Young Investigator Award**
PS2 – Fetal-maternal interface across species
Claudia Gerri, MPI-CBG Dresden
- 15:15 – 15:45 **GSCN 2024 Hilde Mangold Award**
PS3 – Building the next generation of neuromuscular models to study disease
Mina Gouti, MDC Berlin
- 15:45 – 16:15 **GSCN Publication of the Year 2023 – 2024 Award**
PS4 – A stem cell zoo uncovers intracellular scaling of developmental tempo across mammals
Jorge Lázaro Farré, TU Dresden & EMBL Barcelona, ES
- 16:15 – 16:30 **Break time / Industry exhibition**

- 16:30 – 18:30 **Poster session II** (Poster number P065 – P126)
Foyer + H 6 (with beverages)
(1st floor) Stem cells in aging & disease: P065 – P077
Computational stem cell biology & systems biology: P078 – P082
Stem cell organoids: P083 – P105
Stem cells in regenerative therapies: P106 – P121
Somatic stem cells & development: P122 – P126
- Even numbers: 16:30 – 17:30
Odd number: 17:30 – 18:30
- 19:00 – 01:00 **GSCN networking event for all participants**
The entrance fee is collected on site.
Event location: Volksbad Jena · Knebelstraße 10 · 07743 Jena

Friday, 27 September 2024

- 09:00 – 10:30 **Concurrent scientific working group session III**
- 09:00 – 10:30 **Stem cell in disease modeling & drug development**
H1 (Chairs: *Oliver Brüstle & Karl-Ludwig Laugwitz*)
- 09:00 – 09:30 T26 – iPSCs in drug discovery – from a user's and a personal perspective
Bert Klebl, Lead Discovery Center (LDC), Dortmund
- 09:30 – 09:45 T27 – Patient-specific iPSC-derived hepatic organoids as model for drug dosing and mRNA-based gene therapy
Malte Sgodda, Hannover Medical School (MHH)
- 09:45 – 10:00 T28 – Human multi-tissue organoids as an advanced teratogenicity model
Liam Wilson, Hannover Medical School (MHH)
- 10:00 – 10:15 T29 – Cellular metabolism senses exogenous fatty acids to reprogram dormant tumour cells into aggressive oncogenic cell states
Patricia Inacio, Max Planck Institute of Molecular Cell Biology and Genetics, Dresden
- 10:15 – 10:30 T30 – iPSC modeling of bipolar disorder 1 based on polygenic risk scores
Tamara Krutenko, University of Bonn
- 09:00 – 10:30 **Hematopoietic stem cells**
H2 (Chairs: *Michaela Frye & Mick Milsom*)
- 09:00 – 09:30 T31 – The bonemarrow niche under stress
Marieke Essers, DKFZ & HI-Stem, Heidelberg

- 09:30 – 09:45 T32 – Apelin signaling restricts the formation of the blood stem cell-forming hemogenic endothelium
Jean Eberlein, University of Marburg
- 09:45 – 10:00 T33/P – Intrinsic reconstitution potential of developmentally restricted hematopoietic stem cells in non-conditioned immunocompromised mice
Marcel G.E. Rommel, UC Santa Cruz
- 10:00 – 10:15 T34 – Metabolic atlas of human bone marrow hematopoietic stem cells upon differentiation, aging and leukemia
Maria Eleni Lalioti, MPI-IE, Freiburg
- 10:15 – 10:30 T35 – The function of PD-L2 expression on human hematopoietic stem cells in allogeneic immune regulation at single cell resolution
Tessa Schmachtel, University Hospital Frankfurt
- 09:00 – 10:30 **Stem cells in regenerative therapies**
H3
(Chairs: *Michael Cross & Ulrich Martin*)
- 09:00 – 09:30 T36 – Tracking of early cell fate decisions of iPSCs based on DNA methylation
Wolfgang Wagner, RWTH Aachen
- 09:30 – 09:45 T37 – Pooled mesenchymal stromal cells fail to represent average donor cell characteristics
Janina Burk, vetmeduni, Vienna, AT
- 09:45 – 10:00 T38/P – Humanized osteoclasts: an interspecies chimeric immune cell
Gülce Percin, Leibniz Institute on Aging/FLL, Jena
- 10:00 – 10:15 T39 – Resolving human alpha versus beta cell fate allocation for the generation of stem cell-derived islets
Corinna Cozzitorto, Helmholtz Center Munich
- 10:15 – 10:30 T40 – Generation of designer stem cell-derived islets (SC-islets) to improve safety and efficacy of SC-based islet replacement therapy
Eunike Setyono, Helmholtz Center Munich
- 10:30 – 11:00 **Break time / Industry exhibition**
- 11:00 – 12:30 **Concurrent strategic working group session**
- 11:00 – 12:30 **Clinical trials & regulatory affairs**
H1
(Chairs: *Zoltán Ivics & Andreas Kurtz*)
- 11:00 – 11:30 S1 – Exploring public and government funding opportunities
Bettina Otto, Berlin Institute of Health (BIH)
- 11:30 – 12:00 S2 – High-Tech Gründerfonds – early stage seed investments
Christian Kannemeier, High-Tech Gründerfonds, Berlin

12:00 – 12:30 S3 – The National Office for Gene- and Cell Therapies (GCT): updates on activities and future impact
Elke Luger, GCT National Network Office, Berlin

11:00 – 12:30 **Career development**
H2 (Chairs: *Marieke Essers & Insa Schroeder*)
S4 – Publish or perish – feed back from a journal editor
Achim Breiling, EMBO Reports, Heidelberg

11:00 – 12:30 **Technologies in stem cell research**
H3 (Chairs: *Andreas Bosio & Sebastian Diecke*)

11:00 – 11:30 S5 – Cellular microenvironments fabricated with fluid walls for disease modeling
Edmond Walsh, University of Oxford, UK

11:30 – 12:00 S6 – Combining stem cell and device engineering for in vitro models of human physiology
Anna Herland, KTH Royal Institute of Technology, Solna, SE

12:00 – 12:30 S7 – Stem cell-derived vessels-on-chip for cardiovascular disease modeling
Matthias Meier, Helmholtz Center Munich

12:30 – 14:00 **Lunch break / Industry exhibition**

14:00 – 14:45 **Keynote lecture IV**
H1 K4 – Colorful aging? An aging-specific platelet differentiation path from hematopoietic stem cells
Camilla Forsberg, UC Santa Cruz, US
Chair: *Meritxell Huch*

14:45 – 15:30 **Keynote lecture V**
H1 K5 – Bat induced pluripotent stem cells as a model for viral tolerance and immunity
Thomas Zwaka, Icahn School of Medicine at Mount Sinai, New York, US
Chair: *Helen Morrison*

15:30 – 15:50 **Poster award ceremony**
H1 *Daniel Besser*
Poster awards
Travel awards

15:50 – 16:00 **Closing remarks by the GSCN president**
H1 *Heiko Lickert*

End of GSCN Conference 2024

National Office Gene & Cell-Based Therapies GCT Germany

Who we are

The National Office Gene & Cell-Based Therapies | GCT Germany was established as part of the National Strategy for Gene and Cell Therapies. We see ourselves as a nationwide contact point and platform for national and international actors, stakeholders from the fields of science, industry, politics, society, authorities, foundations and patient organizations.

Our vision

We are unveiling the vast potential that gene and cell therapies offer for patient care, the healthcare economy and Germany's pharmaceutical landscape. By uniting local expertise and excellence in this highly innovative and forward-thinking field we are facilitating a new era of collaboration. Ensuring that patients can seamlessly and swiftly access gene and cell therapies in the future. Together we are creating a pioneering and patient-centered healthcare.

What we do & what we offer

- 1 Platform & Contact Point
- 2 National GCT Atlas
- 3 Patient & Stakeholder Engagement
- 4 Networking & Cooperation
- 5 Education & Training, e.g. GeneNovate
- 6 Science Communication
- 7 Regulatory Support Unit

What is GeneNovate about?

- 1 national entrepreneurship program GCT
- 2 For early career scientists & physicians
- 3 Collaboration across Germany
- 4 Coaching by mentors
- 5 6 modules focusing on a.o.:

Business Models | IP-Protection
 Regulation | Go to Market | Legal Founda-
 tions Team & Project Management | Finance
 & Funding | Exit Options & Strategic Value

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