



GermanStemCellNetwork

9th GSCN Conference of the German Stem Cell Network (GSCN)

6 – 8 October 2021

Center for Regenerative Therapies Dresden (CRTD)

Organizer:

German Stem Cell Network (GSCN)

c/o Max Delbrück Center (MDC)

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Welcome address



Dear colleagues and friends,

It is a great pleasure to welcome you to the 9th Conference of the German Stem Cell Network (GSCN) in Dresden. Originally, the city of Ulm was supposed to host the meeting. What is more, Ulm as the home of the then acting president Hartmut Geiger had already been selected as the meeting venue in 2020 – before it went virtual as a result of the pandemic. Despite the persistent Corona conditions, we are proud to announce that this year we can organize a physical conference once again, a feat for which we are especially grateful to the team in Dresden. Thanks to a special hygiene concept developed for this purpose, the GSCN will guarantee that the participants of the annual conference can enjoy face-to-face meetings again.

The focus of the conference should not only be on the latest findings in stem cell biology. It is equally important that it facilitates exchange among researchers working on different types of stem cells. We are all fascinated by stem cells, be it pluripotent stem cells, adult stem cells, stem cells in development, cancer stem cells, or stem cells in the aging organism. There will be exciting sessions as concurrent scientific working meetings can once again be staged. In the industry session we will learn about „Technologies from GSCN industry partners“. Just check out the program on our online platform (www.gscn-conferences.org). On Thursday night, our popular networking event will finally be resumed.

We will feature outstanding keynotes, perspectives and guidance from leading scientists. We hope that as many of you as possible will be able to attend, including Sara Wickström (Helsinki/Münster), Takanori Takebe (Cincinnati), Alfonso Arias Martinez (Barcelona), Cedric Blanpain (Brussels), Janet Rossant (Toronto) and Prisca Liberali (Basel) to present their exciting findings. As every year, most oral presentations were selected from the submitted abstracts, and outstanding scientific contributions to the meeting will be awarded. The non-PI meeting was very successful in recent years and therefore it will be held again, just as the new GSCN Mentoring Program with five mentees and mentors.

The GSCN is a network of like-minded people who are passionate about stem cells, and many of them are more than colleagues to me. They are good friends, and we are all looking forward to seeing each other again in person.

I hope you will enjoy this conference in Dresden.

Best wishes,

Hans Schöler (GSCN Acting President)

For the program committee

Daniel Besser (Berlin) • Nina Cabezas-Wallscheid (Freiburg) • Federico Calegari (Dresden) • Hartmut Geiger (Ulm) • Alexander Kleger (Ulm) • Heiko Lickert (München) • Stefan Liebau (Tübingen) • Ana Martin-Villalba (Heidelberg) • Hans Schöler (Münster) • Claudia Waskow (Jena)

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to discuss solutions to support your research project!

Conference Information

Venue

Center for Regenerative Therapies Dresden (CRTD) at TU Dresden
Fetscherstr. 105
01307 Dresden

Date

Wednesday, 6 October to Friday, 8 October 2021

Registration

Regular fee	€ 570,–	Day ticket are not available due to space limitations!
Regular member fee	€ 360,–	
Student fee	€ 285,–	
Student member fee	€ 180,–	

The registration fee includes the admission to all scientific sessions, additional scientific events, poster and commercial exhibition, the Get-together on 6 October and the Networking evening on 7 October, lunch and coffee breaks, free internet access, conference documents including badge, final program and abstract books.

Internet

Internet access via Wireless LAN is free of charge. You will receive your personal login when picking up your conference documents at the registration desk.

Poster exhibition

This year, all posters will be presented on ePoster terminals. The posters will be displayed throughout the conference. The ePoster terminals are located on the 2nd floor of the CRTD.

Authors are asked to present their poster during the poster session. 2 to 3 authors will share one ePoster terminals and present their multimedia posters in a mindful manner at the same terminal. It would be recommended to bring a laptop or a tablet so that the author could also present his online poster separately in case of high demand. Even though all posters can be viewed on one terminal, the poster session is divided as following:

Poster session I

Wednesday, 6 October 2021, 17:30 – 19:30 h
Even numbers will be presented 17:30 – 18:30 h
Odd numbers will be presented 18:30 – 19:30 h

Poster session II

Thursday, 7 October 2021, 16:30 – 18:30 h
Even numbers will be presented 16:30 – 17:30 h
Odd numbers will be presented 17:30 – 18:30 h

GSCN awards

Poster awards 2021

There will be two poster awards for each poster session.

The awardees will receive € 500. Authors are asked to be present at the poster award ceremony which will take place on Friday, 8 October 2021 at 15:30 – 15:50 h in the Auditorium (AUD).

Scientific awards 2021

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, 7 October 2021 at 14:00 – 16:15 h.

GSCN 2021 Young Investigator Awards: *Elvira Mass*, University Bonn

GSCN 2021 Hilde Mangold Award: *Katja Schenke-Layland*, University Tübingen

GSCN 2021 Publication of the Year Award: *Katharina Scheibner, Heiko Lickert, Silvia Schirge, Ingo Bartscher*, Institute of Diabetes and Regeneration Research at Helmholtz Zentrum München, for the publication „Epithelial cell plasticity drives endoderm formation during gastrulation“ released in 2021 in the journal *Nature Cell Biology*.

The GSCN is very happy to announce that the former GSCN Female Scientist Award has been renamed GSCN Hilde Mangold Award. **Hilde Mangold** (20 Oct. 1898 – 4 Sept. 1924) was a German embryologist who is best known for her 1923 dissertation. Her thesis was the foundation for her mentor Hans Spemann's 1935 Nobel Prize in Physiology or Medicine for the discovery of the **embryonic organizer**. It is one of the very few doctoral theses in biology that have directly resulted in the awarding of a Nobel Prize. The general effect she demonstrated is known as embryonic induction, the capacity of some cells to direct the developmental trajectory of other cells. Induction remains a fundamental concept and area of ongoing research in the field. Mangold died in 1924 due to severe burns after a gas heater explosion in her Berlin home. She never saw the publication of her results nor the awarding of the Nobel Prize.

Social events

Get-together

Wednesday, 6 October 2021

20:30 – 22:00 h

Center for Regenerative Therapies Dresden (CRTD) at TU Dresden
Foyer

All participants and exhibitors are invited to the **Get-together** with dinner buffet in the foyer of the CRTD.



Networking evening at the Carolaschlösschen, Dresden



The Carolaschlösschen is located in one of the most beautiful parks in Dresden, the Großer Garten.

Thursday, 7 October 2021

19:30 – 01:00 h

Carolaschlösschen

Querallée 7

01219 Dresden

Free shuttle buses to the networking event:
Buses will leave at 18:45 h from the CRTD.

The GSCN Networking evening with dinner buffet and DJ is included in the registration fee and is open to all participants and exhibitors.





Chromium Multiome solution for the analysis of gene regulation at single cell resolution

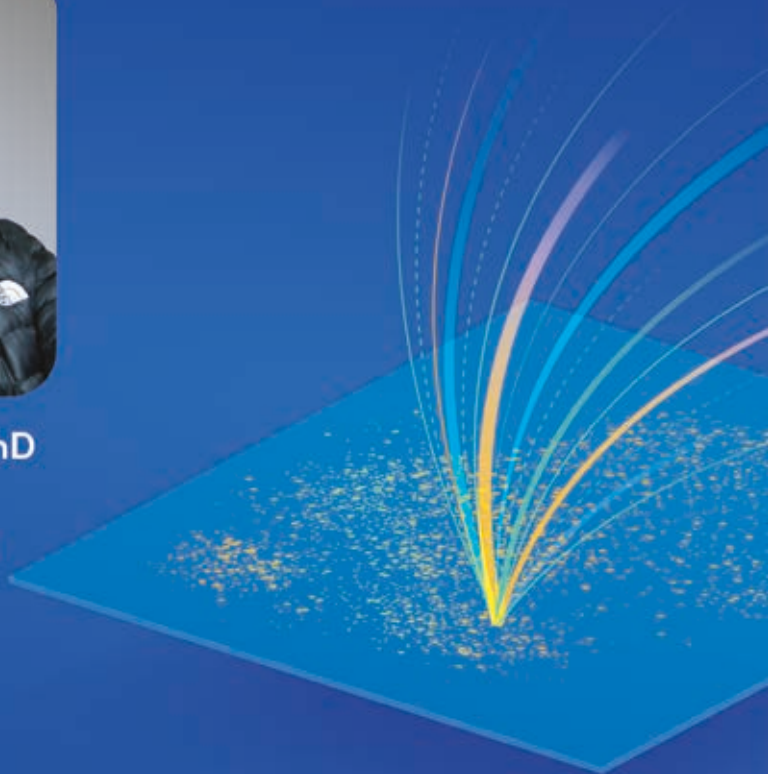
Join us for an insightful talk at the
9th GSCN Conference



Hannes Arnold, PhD
Senior Science &
Technology Advisor
10x Genomics

Join us

October 7, 2021 | 11:00 – 11:30 CEST



Public outreach event (in German)

Zelltherapien mit Stammzellen? Aktuelle Forschung und Zukunftsaussichten

Podiumsdiskussion zur aktuellen Forschung mit Wissenschaftler*innen

Wann: **Freitag, 8. Oktober 2021, 18:30 – 21:00 Uhr**

Programm: 18:30 Uhr: Einlass & Posterausstellung zu Stammzellen und Erkrankungen

19:00 Uhr: Kurzfilme & Podiumsdiskussion

20:30 Uhr: Ausklang mit Brezeln und Getränk

Ort: Deutsches Hygiene-Museum Dresden
Lingnerplatz 1, 01069 Dresden

Die Erforschung von Stammzellen liefert wichtige Erkenntnisse für die Medizin: Wissenschaftler*innen wollen langfristig Zelltherapien aus Stammzellen entwickeln, mit denen sie bislang unheilbare Krankheiten wie Diabetes, Parkinson und Retina-Degeneration behandeln wollen. Bei der Podiumsdiskussion sprechen international renommierte Wissenschaftler*innen darüber, wo die Stammzellforschung heute steht, bei welchen Krankheiten schon moderne Zelltherapien helfen können und welche Zukunftsaussichten sich für Klinik und Anwendung abzeichnen. Das Publikum ist eingeladen, ebenfalls Fragen zu stellen.

Prof. Dr. Michael Brand, Zentrum für Regenerative Therapien Dresden (CRTD) an der TU Dresden

Prof. Dr. Claudia Waskow, Leibniz-Institut für Alternsforschung, Jena

Prof. Dr. Hans Schöler, Max-Planck-Institut für molekulare Biomedizin, Münster

Prof. Dr. Heiko Lickert, Inst. für Diabetes- und Regenerationsforschung, Helmholtz Zentrum München

Bei der Podiumsveranstaltung über Ansätze von zukünftigen Zelltherapien erhalten Sie Antworten auf Ihre Fragen von den Wissenschaftler*innen:

- Wie weit ist die Entwicklung von modernen Zelltherapien?
- Sind Zelltherapien bei Diabetes und Parkinson in Sicht?
- Sind Stammzellen probat gegen altersbegleitende Erkrankungen?
- Welche Aussichten zeichnen sich für die Klinik und die Anwendung ab?
- Wieso ist Grundlagenforschung so wichtig für die Entwicklung von Therapien?
- Wie ist der Stand der Stammzellforschung?

Moderation: *Dr. Stefanie Seltmann* (BIH)

Floor plan

Sorted in alphabetical order

COMPANY

NUMBER

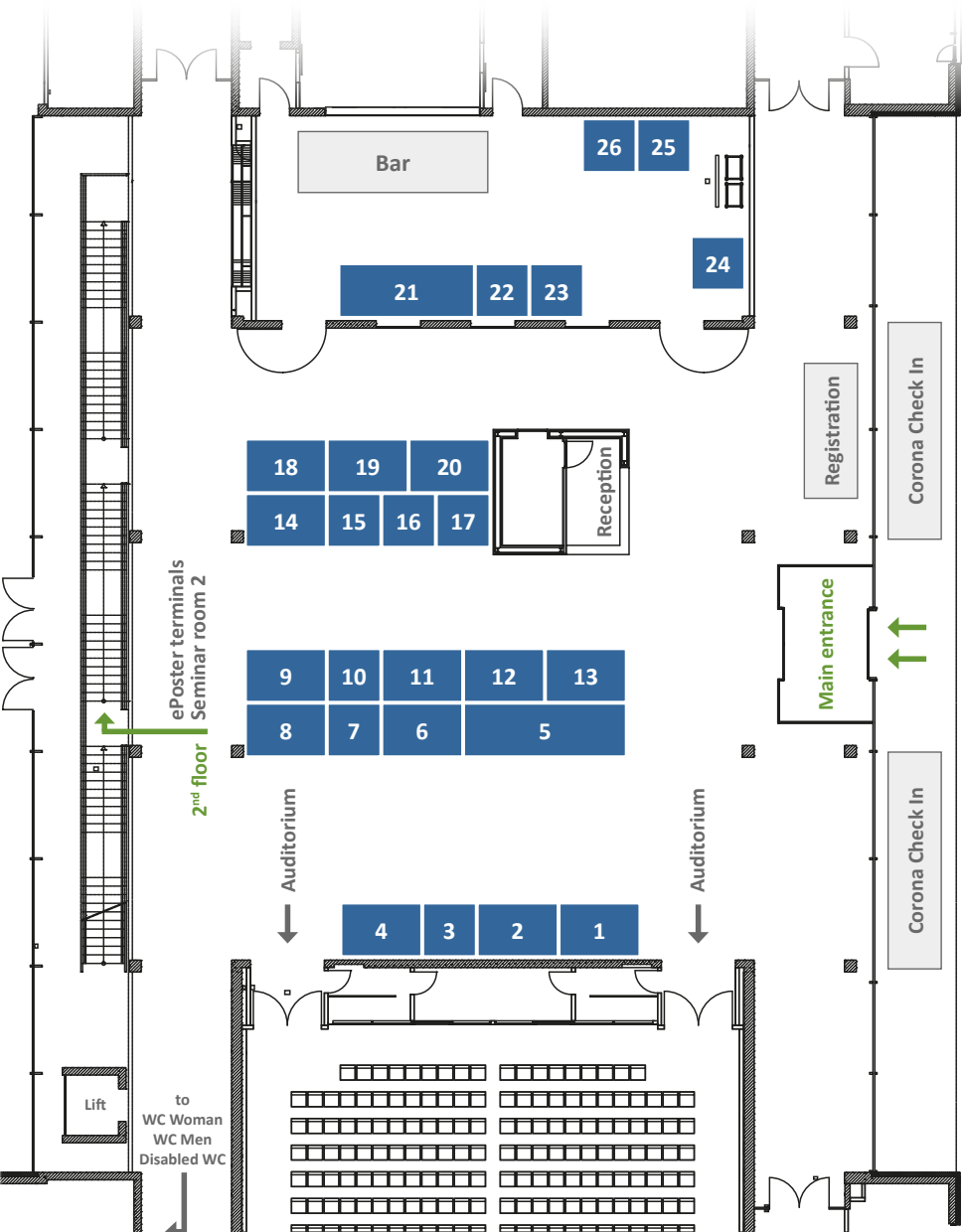
Sorted by booth number

COMPANY

* 10x Genomics	9	1	Takara Bio Europe, SAS *
* Active Bioscience GmbH	17	2	STEMCELL Technologies GmbH*
* AMSBIO	22	3	Labotect GmbH *
Aseptic Technologies	16	4	bit.bio *
Becton Dickinson (BD)	7	5	Eppendorf AG *
* Bio-Techne	19	6	Thermo Fisher Scientific *
* bit.bio	4	7	Becton Dickinson (BD)
Cellbox Solutions GmbH	26	8	Proteintech Group *
* CYTENA GmbH		9	10x Genomics *
* denovoMATRIX GmbH	18	10	Xceltis GmbH
* Eppendorf AG	5	11	Miltenyi Biotec B.V. & Co. KG *
* Greiner Bio-One GmbH	20	12	PL BioScience GmbH *
iotaSciences Ltd.	21	13	SARTORIUS *
* Labotect GmbH	3	14	OLS OMNI Life Science GmbH & Co. KG *
* Miltenyi Biotec B.V. & Co. KG	11	15	PELOBiotech GmbH *
New England BioLabs GmbH	25	16	Aseptic Technologies
* OLS OMNI Life Science GmbH & Co. KG	14	17	Active Bioscience GmbH *
* OriGene Technologies GmbH	24	18	denovoMATRIX GmbH *
* PELOBiotech GmbH	15	19	Bio-Techne *
* Peprotech GmbH	23	20	Greiner Bio-One GmbH *
* PL BioScience GmbH	12	21	iotaSciences Ltd.
* Proteintech Group	8	22	AMSBIO *
* SARTORIUS	13	23	Peprotech GmbH *
* STEMCELL Technologies GmbH	2	24	OriGene Technologies GmbH *
* Takara Bio Europe, SAS	1	25	New England BioLabs GmbH
* Thermo Fisher Scientific	6	26	Cellbox Solutions GmbH
Xceltis GmbH	10		

* Partners of the GSCN Quiz. Win one of three Amazon 200€ Gift Vouchers!

Ground Floor



Program Overview

Wednesday, 6 October 2021

	CRTD			2 nd floor
	Auditorium (AUD)			
10:00 – 11:00	Registration			
11:00 – 11:30	Opening			
11:30 – 12:15	Keynote lecture I <i>Sara Wickström</i>			
12:15 – 13:00	Keynote lecture II <i>Takanori Takebe</i>			
13:00 – 14:30	Lunch break / Industry exhibition			
	Auditorium Left (AUD/L)	Auditorium Right (AUD/R)	Seminar room, 2 nd floor (SR)	
14:30 – 16:00	Concurrent scientific working group session I			
	Stem cells in disease modeling and drug development	Somatic stem cells and development	Computational stem cell biology	
16:00 – 16:30	Coffee break / Industry exhibition			
16:30 – 17:30	GSCN Members Meeting			
17:30 – 19:30				Postersession I (P001 – P051)
17:30 – 18:30				posters with even numbers
18:30 – 19:30				posters with odd numbers
19:45 – 20:30	Keynote lecture III <i>Alfonso Martinez Arias</i>			
20:30 – 22:00	Informal GSCN Get-together with dinner buffet at CRTD foyer			

Thursday, 7 October 2021

	CRTD			2 nd floor
	AUD/L	AUD/R	SR	
09:00 – 10:30	Concurrent scientific working group session II			
	Organoids: new models for diseases	Stem cells in regenerative therapies I	Stem cells in ageing and disease	
10:30 – 11:00	Coffee break / Industry exhibition			
11:00 – 12:30	Industrie session: „Technologies from GSCN industry partners“			
	Sartorius Eppendorf AG bit.bio OLS OMNI Life Science	10x Genomics Takara Bio Europe Miltenyi Biotec B.V. & Co. KG Proteintech Group	denovoMatrix Thermo Fisher Scientific STEMCELL Technologies GmbH PL Bioscience GmbH CYTENA GmbH Bio-Technie	
12:30 – 14:00	Lunch break / Industry exhibition			
13:00 – 14:00	Meet-the-expert tables (limited to 10 participants each table)			

	AUD		
14:00 – 16:15	Presidential Symposium		
14:00 – 14:45	Presidential Invite <i>Cédric Blanpain</i>		
14:45 – 15:15	Young Investigator Award <i>Elvira Mass</i>		
15:15 – 15:45	Hilde Mangold Award <i>Katja Schenke-Layland</i>		
15:45 – 16:15	Publication of the Year Award <i>Katharina Scheibner</i>		
16:15 – 16:30	Coffee break / Industry exhibition		
16:30 – 18:30			Postersession II (P052 – P101)
16:30 – 17:30			posters with even numbers
17:30 – 18:30			posters with odd numbers
19:00 – 01:00	GSCN Networking evening with dinner buffet & DJ at Carolaschlösschen		

Friday, 8 October 2021

	CRTD		
	AUD/L	AUD/R	SR
09:00 – 10:30	Concurrent scientific working group session III		
	Pluripotency and reprogramming	Stem cells in regenerative therapies II	Hematopoietic stem cells
10:30 – 11:00	Coffee break / Industry exhibition		
11:00 – 12:30	Concurrent strategic working group session		
	Clinical trials and regulatory affairs	Career development	Technologies in stem cell research
12:30 – 14:00	Lunch break / Industry exhibition		
13:00 – 14:00			Meet-the-expert tables (limited to 10 participants each table)
	AUD		
14:00 – 14:45	EMBO Keynote lecture IV <i>Janet Rossant</i>		
14:45 – 15:30	Keynote lecture V <i>Prisca Liberali</i>		
15:30 – 16:00	Poster Award Ceremony and closing remarks		
	End of conference		
18:30 – 21:00	GSCN public outreach event with panelists in the Deutsche Hygiene Museum (in German) Zelltherapien mit Stammzellen? Aktuelle Forschung und Zukunftsaussichten		

Legend:

AUD – Auditorium

AUD/L – Auditorium left side

AUD/R – Auditorium right side

SR – Seminar room, 2nd floor



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Programm

Wednesday, 6 October 2021

11:00 – 11:30 **Opening**

AUD **GSCN Conference 2021**

11:00 – 11:10 Welcome to the Center for Regenerative Therapies (CRTD) at the TU Dresden
Federico Calegari, Director CRTD

11:10 – 11:20 Greeting address of the Berlin Institute of Health (BIH)
Christopher Baum, Chairman of the Board of Directors of the BIH at Charité

11:20 – 11:30 Welcome to GSCN Conference 2021
Hans Schöler, President GSCN

11:30 – 12:15 **Keynote lecture I**

AUD K1 – Regulation of stem cell fate by niche-derived factors and forces
Sara Wickström, University of Helsinki, Finland
Chair: *Hans Schöler*

12:15 – 13:00 **Keynote lecture II**

AUD K2 – Hepato-biliary-pancreatic organogenesis in a dish
Takanori Takebe, Cincinnati Children's Hospital Medical Center, OH, USA
Chair: *Hartmut Geiger*

supported by Sartorius

13:00 – 14:30 **Break time / Industry exhibition**

14:30 – 16:00 **Concurrent scientific working group session I**

AUD/L **Stem cells in disease modeling and drug development**

Chairs: *Oliver Brüstle* / *Karl-Ludwig Laugwitz*

supported by bit.bio

14:30 – 14:55 T01 – Human iPSCs and 3D model systems for translational cardiovascular medicine
Alessandra Moretti, TU Munich

14:55 – 15:08 T02 – Characterization of a novel in vitro cardiomyocyte developmental disease model with hPSCs by chromatin remodelling
Emiliano Bolesani, Hannover Medical School (MHH)

15:08 – 15:21 T03 – Inceptor is a novel regulator of insulin signaling, synthesis and degradation in human iPSC-derived beta cells
Johanna Siehler, Helmholtz Zentrum München

15:21 – 15:34 T04 – Rapid generation of human sensory neurons from iPSC by overexpression of NGN1, BRN3A and ISLET1
Pascal Röderer, University of Bonn, Institute of Reconstructive Neurobiology, Bonn

- 15:34 – 15:47 T05 – Failure to repress non-neuronal genes in neurons can cause autistic-like phenotypes
Moritz Mall, German Cancer Research Center (DKFZ), Heidelberg
- 15:47 – 16:00 T06 – SARS-CoV-2 infects the brain vasculature in COVID-19 patients which can be mimicked with an hiPSC-derived model of the blood-brain barrier
Undine Haferkamp, Fraunhofer ITMP, ScreeningPort, Hamburg
- 14:30 – 16:00 **Somatic stem cells and development** supported by Greiner Bio-One GmbH
AUD/R Chairs: *Federico Calegari / Ana Martin-Villalba*
- 14:30 – 15:00 T07 – Regeneration of the adult vertebrate brain: learning from the fish
Michael Brand, CRTD Dresden
- 15:00 – 15:15 T08 – ZNRF3 and RNF43 cooperate to safeguard metabolic liver zonation and hepatocyte proliferation
Tianliang Sun, Novartis Institutes for BioMedical Research, Basel, CH
- 15:15 – 15:30 T09 – Troy/Tnfrsf19 marks epidermal cells that govern interfollicular epidermal renewal and cornification
Kai Kretzschmar, University Hospital Würzburg
- 15:30 – 15:45 T10 – Generation of rat spermatozoa in sterile mice utilizing blastocyst complementation with pluripotent stem cells
Joel Zwick, ETH Zürich, CH
- 15:45 – 16:00 T11 – Basal neural stem cells drive postnatal neurogenesis whereas apical stem cells act as proliferation gatekeepers by regulating notch activation in the postnatal ventricular-subventricular zone
Katja Baur, University of Heidelberg
- 14:30 – 16:00 **Computational stem cell biology**
SR Chairs: *Carsten Marr / Ingmar Glauche*
- 14:30 – 15:00 T12 – RNA velocity, fate mapping, modeling: tools to quantify haematopoiesis
Melania Barile, MRC Cambridge Stem Cell Institute, UK
- 15:00 – 15:15 T13 – Clonal reconstruction from co-occurrence of vector integration sites allows accurate quantification of expanding clones in vivo
Ingmar Glauche, TU Dresden
- 15:15 – 15:30 T14 – Predicting nuclei displacement and transcription factor expression from highthroughput 3D brightfield organoids
Dominik Waibel, HelmholtzZentrum München, Munich
- 15:30 – 15:45 T15 – Population dynamics, the role of interferons and molecular underpinnings of neural stem cell maintenance
Jooa Hooli, DKFZ Heidelberg

- 15:45 – 16:00 T16 – Single-cell proteo-genomic reference maps of the hematopoietic system enable the purification and massive profiling of precisely defined cell states
Lea Jopp-Saile, DKFZ and HI-STEM Heidelberg
- 16:00 – 16:30 **Break time / Industry exhibition**
- 16:30 – 17:30 **GSCN General Membership Meeting**
AUD/L GSCN Executive Board
- 17:30 – 19:30 **Poster session I** (Poster numbers P001 – P051)
Poster area, **Pluripotency & Reprograming: P001 – P015**
2nd floor **Stem cells in disease modeling and drug development: P016 – P051**
Even numbers: 17:30 – 18:30
Odd numbers: 18:30 – 19:30
- 19:45 – 20:30 **Keynote lecture III**
AUD/L K3 – Gastruloids: an ESC based model for mammalian gastrulation and body plan engineering
Alfonso Martinez Arias, ICREA and Universidad Pompeu Fabra, Barcelona, Spain
Chair: *Tobias Cantz*
- 20:30 – 22:00 Informal GSCN Get-together for all participants with dinner buffet in the Foyer of the CRTD

Thursday, 7 October 2021

- 09:00 – 10:30 **Concurrent scientific working group session II**
- 09:00 – 10:30 **Organoids: new models for diseases** supported by OLS – OMNI Life Science GmbH & Co. KG
AUD/L Chairs: *Mina Gouti / Heiko Lickert*
- 09:00 – 09:30 T17 – Building advanced human neuromuscular organoids to study development and disease
Mina Gouti, MDC Berlin
- 09:30 – 09:45 T18 – Patient-specific iPSC for characterization of unclear intrahepatic cholestasis in hepatobiliary organoids
Lennart Dignas, Hannover Medical School (MHH)
- 09:45 – 10:00 T19 – USP42 forms a tug-of-war with R-spondin to control Wnt activity in intestinal stem cells
Sergio Perez Acebron, Heidelberg University
- 10:00 – 10:15 T20 – A neural organoid based drug screen for targets of Huntington's disease
Jakob Metzger, MDC Berlin

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- 10:15 – 10:30 T21 – Developing a new generation of human brain disease models using CRISPR editing and iPS cells
Dominik Paquet, Ludwig Maximilian University of Munich
- 09:00 – 10:30 **Stem cells in regenerative therapies I** supported by PL BioScience GmbH
AUD/R Chairs: *Michael Cross / Hannes Klump*
- 09:00 – 09:30 T22 – Stem cells meet cell-based immunotherapies, the hope behind regenerative medicine
Nico Lachmann, Hannover Medical School (MHH)
- 09:30 – 09:45 T23 – Inflammation-responding mesenchymal stromal cells modulate the bone marrow microenvironment response to stress over time
Shubhankar Sood, German Cancer Research Center, Heidelberg
- 09:45 – 10:00 T24 – Mesenchymal stromal cells for treatment of tendon injuries: first insights from a controlled, randomized, blinded veterinary patient study
Janina Burk, Justus-Liebig-University Giessen
- 10:00 – 10:15 T25 – Transgene-free direct reprogramming of mouse fibroblasts into myogenic progenitors utilizing modified mRNA and small molecules
Xhem Qabrati, ETH Zürich
- 10:15 – 10:30 T26 – Allele-specific targeting of mutant ataxin-3 by antisense oligonucleotides in SCA3-iPSC-derived neurons
Stefan Hauser, German Center for Neurodegenerative Diseases (DZNE), Tübingen
- 09:00 - 10:30 **Stem cells in ageing and disease** supported by Bio-Technie
SR Chairs: *Michael Rieger / Andreas Trumpp*
- 09:00 – 09:30 T27 – Stem cells in ageing and disease
Hartmut Geiger, Ulm University
- 09:30 – 09:45 T28 – Mathematical modelling of immune response in CML patients suggests potential for TKI reduction prior to cessation
Thomas Zerjatke, TU Dresden
- 09:45 – 10:00 T29 – Mathematical modeling of chronic lymphocytic leukemia cell kinetics under therapy with Ibrutinib
Melanie Schulz, HelmholtzZentrum München, Munich
- 10:00 – 10:15 T30 – Aging stem cell biology – convergence of murine and human hematopoietic systems
Nina Henning, Leibniz Institute on Aging, Jena
- 10:15 – 10:30 T31 – A Taz/PU.1 loop protects aged hematopoietic stem cells from functional decline
Bjoern von Eyss, Leibniz Institute on Aging, Jena

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**AUD/L Chairs: *Marieke Essers / Stefan Liebau*

11:00 – 11:30 C01 – A look into the full solution: Sartorius' efforts and offers to ATMPs
Vinay Murtadak, Sartorius

11:30 – 12:00 C02 – Process intensification through automated feedback process control for high-yield stem cell culture
Philipp Nold, Eppendorf AG

12:00 – 12:15 C03 – OPTi-OX™: a next generation cellular reprogramming technology - highly defined and functional human iPSC-derived cell models for research and drug discovery
Roisin Nicoll, bit.bio

12:15 – 12:30 C04 – A novel benchtop approach for high-yield, improved viability and long-term cultivation of 3D cell models
Markus Uhrig, OLS – OMNI Life Science GmbH & Co. KG

11:00 – 12:30 Supporter IIAUD/R Chairs: *Heiko Lickert / Claudia Waskow*

11:00 – 11:30 C05– 10x Genomics Chromium Multiome solution for the analysis of gene regulation at single cell resolution
Hannes Arnold, 10x Genomics

11:30 – 12:00 C06 – Simplifying the development of hiPSC-based disease models
Florian Paasch, Takara Bio Europe

12:00 – 12:15 C07 – New generation of hPSC cell culture media is ready for challenging applications
Sebastian Knöbel, Miltenyi Biotec B.V. & Co. KG

12:15 – 12:30 C08 – How to evaluate recombinant proteins, cytokines, and growth factors
Fiona Bellot, Proteintech Group

11:00 – 12:30 Supporter IIISR Chairs: *Thomas Braun / Nina Cabezas-Wallscheid*

11:00 – 11:15 C09 – Modular biomimetic matrices enable highly defined culture of functional stem cells
Dejan Husman, denovoMATRIX

11:15 – 11:30 C10 – CTS™ NK-Xpander™: a feeder-free NK cell expansion medium for cell therapy
Roland Leathers, Thermo Fisher Scientific

- 11:30 – 11:45 C11 – Next generation brain-region-specific organoid models
Katharina Debowski, STEMCELL Technologies GmbH
- 11:45 – 12:00 C12 – Moving towards animal-free cell culture media: human platelet lysate as surrogate solution for FBS
Roman Goetzke, PL BioScience GmbH
- 12:00 – 12:15 C13 – Harnessing the power of live cell imaging: performing high-throughput and high-content experiments using the CELLCYTE X and Liveocyte imaging systems
Jim Engström, CYTENA GmbH
- 12:15 – 12:30 C14 – Optimizing tools required for the discovery and development of stem cell-based models
Volker Arps, Bio-Techne
- 12:30 – 14:00 **Break time / Industry exhibition**
- 13:00 – 14:00 **Meet-the-expert tables**
(limited to 10 participants each, registration is possible at the registration desk)
Nico Lachmann, Hannover Medical School (MHH); Heiko Lickert, Helmholtz Zentrum München; Sara Wickström, University of Helsinki, FIN
- 14:00 – 16:15 **Presidential Symposium**
AUD Chair: *Hans Schöler*
- 14:00 – 14:45 **Presidential Invite** supported by Takara Bio Europe
PS1 – Mechanisms regulating tumor transition states
Cédric Blanpain, Université Libre de Bruxelles, Brussels, Belgium
- 14:45 – 15:15 **GSCN 2021 Young Investigator Award**
PS2 – The role of resident macrophages in health and disease
Elvira Mass, Limes Institute, University Bonn
- 15:15 – 15:45 **GSCN 2021 Hilde Mangold Award**
PS3 – Developmental biology-inspired approaches for regenerative medicine
Katja Schenke-Layland, Eberhard Karls University Tübingen
- 15:45 – 16:15 **GSCN Publication of the Year 2020/21 Award**
PS4 – Epithelial cell plasticity drives endoderm formation during gastrulation
Katharina Scheibner, Helmholtz Zentrum München
- 16:15 – 16:30 **Break Time / Industry exhibition**

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16:30 – 18:30 **Poster session II** (Poster numbers P052 – P101)
 Poster area, 2nd floor Hematopoietic stem cells: P052 – P057
 Organoids: new models for diseases: P058 – P064
 Computational stem cell biology and systems biology: P065 – P068
 Somatic stem cells and development: P069 – P079
 Stem cells in ageing and disease: P080 – P083
 Stem cells in regenerative therapies: P084 – P095
 Stem cells in regenerative therapies: mesenchymal stromal cells: P096 – P101
 Even numbers: 16:30 – 17:30
 Odd numbers: 17:30 – 18:30

19:30 – 01:00 **GSCN Networking evening for all participants**

supported by eppendorf

Friday, 8 October 2021

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

09:00 – 10:30 **Pluripotency and reprogramming**

supported by STEMCELL Technologies GmbH

AUD/L Chairs: *Micha Drukker / Frank Edenhofer*

09:00 – 09:30 T32 – XEN state reprogramming into self-organizing trophectoderm-like cells
 enables the assembly of synthetic embryoids
Ivan Bedzhov, MPI Münster

09:30 – 09:45 T33 – Functional genomic screening during somatic cell reprogramming identifies
 DKK3 as a roadblock of organ regeneration
Frank Arnold, University Hospital Ulm

09:45 – 10:00 T34 – Integrative molecular roadmap for reprogramming fibroblasts into induced
 myogenic stem and progenitor cells
Inseon Kim, ETH Zürich, CH

10:00 – 10:15 T35 – Harnessing the regenerative potential of cortical glia through Ascl1-mediated
 lineage reprogramming
Sophie Péron, Johannes Gutenberg University Mainz

10:15 – 10:30 T36 – Activation of HERV-K(HML-2) disrupts cortical patterning and neuronal
 differentiation by increasing NTRK3
Michelle Vincendeau, Helmholtz Zentrum München

09:00 – 10:30 **Stem cells in regenerative therapies II**

supported by Miltenyi Biotec B.V. & Co. KG

AUD/R Chairs: *Ulrich Martin / Wolfgang Wagner*

09:00 – 09:30 T37 – Translating tissue engineered heart repair
Wolfram-Hubertus Zimmermann, University Hospital Göttingen

09:30 – 09:45 T38 – Cardiac optogenetic technologies for investigation of the electrophysiological properties in 2D and 3D stem cell-derived cardiac derivatives
Maria Ricci Signorini, Hannover Medical School (MHH)

09:45 – 10:00 T39 – Dynamic gene expression controls muscle stem cell fate
Ines Lahmann, Max Delbrück Center (MDC), Berlin

10:00 – 10:15 T40 – Pancreatic differentiation guided by tissue-specific extracellular matrix
Constatin Berger, University Hospital Würzburg

10:15 – 10:30 T41 – Universal upscaling strategy for high-density bioprocessing of human pluripotent stem cells in stirred bioreactors
Felix Manstein, Hannover Medical School (MHH)

09:00 – 10:30 **Hematopoietic stem cells**

supported by Proteintech Group

SR Chairs: *Nina Cabezas-Wallscheid / Timm Schroeder*

09:00 – 09:30 T42 – Repetitive elements as signals for developmental and regenerative hematopoiesis
Eirini Trompouki, MPI Freiburg

09:30 – 09:45 T43 – Glucose internalization of hematopoietic stem cells defines their function and potential
Mona Vogel, Ulm University

09:45 – 10:00 T44 – Mitochondrial active hematopoietic stem cells can long-term reconstitute lymphomyeloid blood cells
Malak Fawaz, Goethe University Hospital Frankfurt

10:00 – 10:15 T45 – Embryo-derived bone macrophages regulate the pool size of HSCs
Gülce Percin, Leibniz Institute on Aging, Jena

10:15 – 10:30 T46 – Emergency megakaryopoiesis is independent of MPL/THPO axis during influenza infection
Marcel Rommel, Paul Ehrlich Institute, Langen

10:30 – 11:00 **Break Time / Industry exhibition**

11:00 – 12:30 **Concurrent scientific working group session**

11:00 – 12:30 **Clinical trials and regulatory affairs**

supported by denovoMATRIX

AUD/L Chairs: *Zoltan Ivics / Andreas Kurtz*

11:00 – 11:30 S01 – Inflammation-responding mesenchymal stromal cells modulate the bone marrow microenvironment response to stress over time
Marieke Essers, HI-STEM and DKFZ, Heidelberg

11:30 – 12:00 S02 – Metabolism guides definitive lineage specification during endothelial to hematopoietic transition
Niels-Bjarne Woods, Lund University, SWE

12:00 – 12:30 S03 – Advanced curative options for hemoglobinopathies in the era of gene editing
Selim Corbacioglu, University Hospital Regensburg

11:00 – 12:30 **Career development**

AUD/R Chairs: *German Camargo Ortega / Insa Schröder*

11:00 – 12:30 S04 – Erfolgreiche Gesprächsführung mit Advisors: Strategien und Zielsetzung (DE)
Nele Haasen, konteam

11:00 – 12:30 **Technologies in stem cell research**

SR Chairs: *Andreas Bosio / Sebastian Diecke*

11:00 – 11:30 S05 – A resource of clinical-grade human iPS cells with immune compatibility to the caucasian population
Boris Greber, RheinCell Therapeutics, Langenfeld (Rheinland)

11:30 – 12:00 S06 – Universal donor iPSC lines for regenerative medicine – tailored to escape the immune system?
Malte Tiburcy, University Hospital Göttingen

12:00 – 12:30 S07 – iPSC-based therapies: manufacturing of clinical-grade cell products and considerations concerning autologous vs allogeneic concepts
Ulrich Martin, Hannover Medical School

12:30 – 14:00 **Break Time / Industry exhibition**

13:00 – 14:00 **Meet-the-expert-table**

(limited to 10 registered participants each, registration is possible at the registration desk)

Tobias Cantz, Hannover Medical School (MHH); *Mina Gouti*, MDC Berlin;
Elvira Mass, LIMES Institute Bonn

14:00 – 14:45 **EMBO Keynote lecture IV**

AUD K4 – Stem cells, embryos and embryo models
Janet Rossant, SickKids Research Institute, Toronto, CAN
Chair: *Claudia Waskow*

14:45 – 15:30 **Keynote lecture V**

supported by 10x Genomics

K5 – Symmetry breaking and self-organization in intestinal organoids
Prisca Liberali, Friedrich Miescher Institute, Basel, CH
Chair: *Stefan Liebau*

15:30 – 15:50 **Poster award ceremony**

Daniel Besser

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

Hans Schöler

End of GSCN Conference 2021