

The GSCN Annual Conferences

Concept and Facts

The Annual Conference is the GSCN's key event. It is held in different locations in Germany. The intention at the GSCN annual conferences is to draw attention to the national networking of scientists, rather than solely focussing on inviting well-known international scientists. Contributions from lectures and poster presentations are sorted into topic areas to provide a platform for the broad field of basic and application-oriented stem cell research with its associated areas of regenerative medicine and drug research as well as to stimulate fruitful discussions, interactions and collaborations. Most of the lectures are selected from the submitted abstracts in order to offer a forum for young

scientists, from PhD students to junior team leaders. The GSCN's scientific working groups determine the content of the many individual sessions at the annual conferences. In addition, relevant general topics, such as outreach programs, career development and appropriate funding measures, are covered in sessions hosted by the strategic working groups. Selected international keynote speakers create the framework for the conference. The annual conference is also a forum for companies, who are given the opportunity to showcase themselves in an industry session and at an exhibition. Workshops for the further qualification of young scientists, for example, and events for interested members of the public are planned for future conferences.

1st Annual Conference of the GSCN

The first Annual Conference of the GSCN was held in the Max Delbrück Center for Molecular Medicine (MDC) in Berlin from November 11 – 13, 2013. With 400 participants from home and abroad, 21 exhibitors and 240 abstracts submitted, the conference was a resounding success. All the important stem cell research groups from Germany were represented. Without exception, extremely positive feedback on the event was received from the participants, GSCN members, speakers and chairs as well as the companies taking part.

Scientific Lectures

At the opening event, Walter Rosenthal, director of the MDC, welcomed the participants to the Max Delbrück Communications Center. Oliver Brüstle (Bonn), founding president of the GSCN, explained why a stem cell network in Germany had come at exactly the right time and described the GSCN's vision to the plenum. The conference's scientific program started with a lecture by renowned stem cell researcher Michele de Luca (Modena, Italy). He presented the huge successes of using epithelial stem cells in the clinical setting for skin transplants and for injuries to the cornea of the eye. He stressed that



Opening of the 1st GSCN Annual Conference

excellent basic research is the principal requirement for innovative stem cell therapies. In the following lecture, Vania Broccoli (Milan, Italy) went into results from his laboratory regarding the direct reprogramming of somatic cells to neuronal cells, in particular induced dopaminergic (iPA) neurons, and their functional properties. These cell types are crucially important to understanding Parkinson's disease and possible future cell therapies.



top: Michele de Luca

During the three days of the conference, the program included 27 presentations on a large number of topics:

- Pluripotency and embryonic stem cells
- Cancer stem cells in solid tumors
- Stem cells in tissues of meso- and endodermal origin
- Stem cells in regenerative therapies
- Programming und reprogramming
- Stem cells in tissues of neural and non-neuronal ectoderm
- Stem cells in disease modeling and drug development
- Stem cells in development
- HSCs and stem cells in hematopoietic malignancies

The conference proceedings, which are available on request from the GSCN office, contain condensed summaries of the presentations. In group discussions at the end of the sessions, the goals of the respective GSCN working group were debated and further measures planned.

These discussions gave the members of the individual working groups the opportunity to codetermine their future content.

The scientific program was brought to a close on November 13 with two high-caliber keynote lectures. Christine Mummery (Leiden, Netherlands) presented a large number of applications for heart muscle cells that can be created from pluripotent stem cells. These cells are now used in her laboratory and others for safety tests on drugs, for discovering novel compounds and for studies on diseases. In the EMBO Keynote Lecture, Austin Smith (Cambridge, UK) concluded the conference by examining the "Design principles of pluripotency", i.e.

top: Christine Mummery, below: Austin Smith

the central transcription factors and signaling molecules which maintain the pluripotent state in embryonic stem cells. He particularly detailed the relationship between the naïve and the primed state in pluripotent cells of the mouse and drew comparisons with cells of the germ line. Recently published data on the naïve state in the human system came under the spotlight in the discussion that followed.

The first annual conference closed on Wednesday afternoon with the change at the helm from the founding president Oliver Brüstle to the new acting president Andreas Trumpp. Trumpp ended the conference in Berlin with an overview of the GSCN's plans for 2014 as well as an invitation to the second annual conference in Heidelberg.

Poster Exhibition

With a total of 193 poster presentations, the poster sessions on the first and second day of the conference offered extensive insights into the current status of stem cell research. They were very well-attended by the participants. The scientists had enough time on both evenings to discuss the data from the various laboratories and the latest developments in the field with their colleagues. Many participants on site stated that they were very pleased to be present at the first annual conference and had already made new contacts. Prizes for the best posters were provided by GSCN member company Peprotech GmbH and – for a contribution from applied stem cell research – by GSCN member institute Fraunhofer IZI in Leipzig.





The poster prizes went to:

- Mehdi Pirouz (Göttingen): *Mad2l2-deficient mouse embryonic stem cells are unstable and deviate into primitive endoderm*
- Miha Modic (Cambridge/Munich): *Regulation of alternative polyadenylation by hnRNPs in human embryonic stem cells*
- Liang Fang (Berlin): *Novel small-molecule antagonists of β -catenin/TCF4 interaction: interference with the self-renewal of cancer stem cells*
- Robert Fordham (Cambridge): *Transplantation of expanded foetal intestinal progenitors contributes to colon regeneration after injury*

Poster prize for applied stem cell research:

- Bella Rossbach (Berlin): *Human induced pluripotent stem cells for cell-replacement therapy: Exploring their immunogenicity and immunomodulatory properties*

The GSCN would also like to congratulate the recipients of the GSCN Travel Awards: Bianca Buechner (Hannover), André Görgens (Essen), Leonid Schneider (Darmstadt) and Edda Schulz (Paris, France).

Strategic Working Groups

In the session of the strategic working group “Career Development”, Thorsten Abs (Hamburg) from *academics.de*, an online job market for science, research and development, spoke about various professional opportunities for life scientists. He also talked about the requirements and demands for young scientists to work in alternative scientific fields. In the session of the working group “Funding Programs and Policies”, Jürgen Sautter (Brussels, Belgium) from the European Commission explained strategies of research funding at EU level within the new research framework program Horizon 2020. He summarized the current political relationships, the financial framework from

2014 to 2020 and the priorities of Horizon 2020. Within the course of this program, there will be good financial funding for biomedical questions including regenerative medicine and stem cell research. The huge importance of communication in stem cell research was emphasized in the session “Outreach activities and public perception of stem cell therapies” by Emma Kemp (Edinburgh, Scotland). She presented materials for providing information about stem cell research that had been created by the EuroStemCell consortium for the wider public and as teaching materials for schools. Gisela Badura-Lotter (Ulm) took a look at ethical questions of stem cell research, such as the moral status of the embryo. She called



for less ambiguity in the arguments and said that all positions and opinion leaders should be taken into account. Andreas Bosio (Bergisch Gladbach) and Frank Emmerich (Leipzig) presented new "Stem cell technologies" in the session with the same heading. In the session of the working group "Clinical trials and regulatory affairs", Christine Günther, CEO of Munich-based company Apceth, spoke about the challenges and regulatory requirements involved in implementing cell therapies in clinical practice based on the example of a clinical study recently launched by her company.

Companies Present

In the industry session, GSCN member companies AMS Biotechnology, Eppendorf, Essen BioScience, Life Technologies and Peprotech with the addition of Apceth, BD Biosciences, Fluidigm and Nanostring introduced the latest technologies and methods for stem cell research. There was a very positive response to the industry session and the industry exhibition. In an online evaluation after the conference, the participants rated the organization of the conference as excellent (4.64 points out of 5) and the number and length of the breaks as well as the opportunities to interact with other participants as outstanding (3.82 points out of 5). Roland Leathers



from the GSCN member company Life Technologies stressed, "It is very important that German scientists come together here to discuss all the aspects that are relevant for stem cell research." Nicolas Danzenbächer from Peprotech, also a GSCN member company, referring to the motivation of their companies within the framework of the GSCN, said, "We are always happy to take part in any efforts to unite the German stem

cell field."

Networking in the Evenings

The networking evening to which all conference participants were invited took place on Monday at the "Alte Pumpe" in Berlin's Tiergarten district. Berlin's historic monument from the year 1883 with its





meticulously restored industrial side provided a unique ambience for getting to know people and exchanging ideas and opinions on scientific work. As one of the participants said, "This is how science works – we can't just do it on our own." And another scientist said, "Once you've had a beer with them (collaborating scientists), it makes things much easier." The networking evening was also given a very positive rating (4.21 points out of 5) by conference participants in an online evaluation. On Tuesday evening, the get-together after the Annual General Meeting of the GSCN offered even more opportunities to exchange views and opinions.

3/4 of those participating in the survey said that they would like to attend the next conference of the GSCN. The GSCN and its working groups are greatly looking forward to the next GSCN annual conference which will take place in Heidelberg from November 3 – 5, 2014 (see page 17).

Results of the online evaluation

The online evaluation showed a good overall response to the conference. The participating in the survey gave the variety of topics, opportunities for interaction and the conference in general a excellent average rating of 3.88 points out of 5. The conference concept itself, with a large number of presentations that were selected based on the submitted abstracts as well as several international keynote speakers, achieved an impressive 4.09 points out of 5. The organization of the group discussions in the working groups was deemed to require optimization at the next annual conference (3.41 points out of 5). Almost





GermanStemCellNetwork

2nd International Annual Conference of the German Stem Cell Network (GSCN)

www.gscn.org



November 3-5, 2014

German Cancer Research Center (DKFZ)
Heidelberg

Abstract submission deadline: July 31, 2014

The 2nd international Annual Conference of the GSCN will be held from November 3 - 5, 2014 at the Communications Center of the German Cancer Research Center (DKFZ) in Heidelberg. The conference will cover the latest findings in stem cell biology in Germany and beside selected international keynote lectures many scientists will get the chance to present their work to a wide forum.

International keynote speakers

Scientific sessions

- Pluripotency and embryonic stem cells
- Programing and reprograming
- Stem cells in development
- Stem cells in tissues of neural and non-neuronal ectoderm
- Stem cells in tissues of mesodermal and endodermal origin
- HSCs and stem cells in hematopoietic malignancies
- Cancer stem cells in solid tumors
- Stem cells in regenerative therapies
- Stem cells in disease modeling and drug development

Strategic topics

- Funding programs
- Clinical trials and regulatory affairs
- Career development
- Public outreach
- Public discourse on therapies
- Emerging technologies

Session chairs

Gisela Badura-Lotter · Andreas Bosio · Thomas Brabletz · Thomas Braun · Oliver Brüstle · Tobias Cantz · Michael Cross · Micha Drukker · Frank Emmrich · Georg Fuellen · Hartmut Geiger · Ira Herrmann · Andreas Kurtz · Karl-Ludwig Laugwitz · Ulrich Martin · Albrecht Müller · Ingo Roeder · Hans Schöler · Insa Schröder · Elly Tanaka · Mathias Treier · Torsten Tonn · Andreas Trumpp · Hans-Dieter Volk · and others

Program committee

Daniel Besser (Berlin) · Thomas Braun (Bad Nauheim) · Oliver Brüstle (Bonn) · Micha Drukker (München) · Ulrich Martin (Hannover) · Ana Martin-Villalba (Heidelberg) · Elly Tanaka (Dresden) · Andreas Trumpp (Heidelberg)



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A Life Without Cancer



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