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German Stem Cell Network awards first scientific prizes

Excellent Stem Cell Researchers

New in the Stem Cell Field: The German Stem Cell Network (GSCN) has presented its first awards to stem cell researchers in Germany. With the prizes, the Network emphasizes a significant and very dynamic scientific field. „Next to publications, awards count as important milestones in a scientist’s career,“ says Dr. Daniel Besser, managing director of the GSCN. One award goes to a talented junior scientist; another aims to recognize an excellent female scientist, supporting the important role that women play in science, as a means of calling more attention to her work. The third award goes to the best publication from July 2014 to June 2015 and highlights the “pole position” of German stem cell research in the international arena.

A top-class commission supported the GSCN in choosing the first awardees:

- The „GSCN Young Investigator Award“ goes to [Dr. Julia Ladewig](#) of the Institute of Reconstructive Neurobiology of the University Hospital Bonn.
- The „GSCN Female Scientist Award“ goes to [Prof. Magdalena Götz](#) of the Institute of Stem Cell Research of the Helmholtz Zentrum München and chair of the Institute of Physiology - Department of Physiological Genomics of the Ludwig Maximilian University in Munich.
- The „GSCN Publication of the Year Award“ goes to Jichang Wang and Dr. Zsuzsanna Izsvák of the [Research Team „Mobile DNA“](#) at the Max-Delbrück-Centrum for Molecular Medicine (MDC) in Berlin-Buch. Their publication “Primate-specific endogenous retrovirus driven transcription defines naïve-like stem cells” appeared in the journal *Nature* (Wang, J. et al., 2014, *Nature*, [doi:10.1038/nature13804](https://doi.org/10.1038/nature13804)).

About the awardees:

Dr. Julia Ladewig’s research on human induced pluripotent stem cells (iPS cells) is motivated by her hope of improving our understanding of the development of the human brain, both in terms of its cognitive functions and processes that accompany disease. She uses iPS cells and induced neurons won by direct conversion as instruments to examine the genesis of the human cerebral cortex. Her lab has developed three-dimensional cell cultures of neurons as a model. This system can be used to check whether findings achieved through animal models also shed light on human biology. Ladewig has developed promising methods to acquire migrating young neurons and to directly transform human skin cells into neurons. She has discovered important mechanisms that govern communication between neurons and transplanted progenitor cells.

Julia Ladewig studied biology in Bielefeld and got a Master’s degree in medical ethics at the Imperial College in London. She completed her PhD at the Institute for Reconstructive Neurobiology at the University Hospital in Bonn, followed by her time as a postdoc, and has now advanced to build her own research group. Her lab focuses on the molecular mechanisms that control cell diversity and positioning in the developing human cerebral cortex in states of health and disease.

Link: <http://www.meb.uni-bonn.de/rnb/index.php?page=neuraldevelopment>

Prof. Magdalena Götz has received the „GSCN Female Scientist Award“ for excellent research on the molecular mechanisms that guide brain development. Götz discovered that radial glia cells are the stem cells of the developing embryonic brain and differentiate into neurons, a finding that ran counter to the consensus in the field. Even adult brains maintain areas where neurons can regenerate. These findings have led to a change of paradigm in the neurosciences with potential uses in the development of new therapies for brain injuries or diseases. By discovering basic molecular mechanisms responsible for the development of the neurons, Götz hopes to learn to reprogram glial cells in the brain into working neurons. Another focus of the lab is to understand the regenerative abilities of the tissues of the zebra fish.

Magdalena Götz studied philosophy in Heidelberg and biology in Tübingen. She completed her PhD in 1992 in the research group of Jürgen Bolz at the Friedrich-Miescher-Laboratory of the Max Planck Society. She worked from 1993 to 1996 at the National Institute for Medical Research, London, and as a Postdoctoral Scientist at Smith Kline Beecham in Harlow, UK. She returned to Germany to head a research group at the Max Planck Institute of Neurobiology in Martinsried. Since 2004 she has chaired the Institute of stem cell research of the Helmholtz Zentrum München in Neuherberg and the Department of Physiological Genomics of the Ludwig Maximilian University in Munich.

Link: <http://www.helmholtz-muenchen.de/isf>

Jijang Wang is completing his PhD in the research group “Mobile DNA” headed by Dr. **Dr. Zsuzsanna Izsvák** at the Max-Delbrück-Centrum for Molecular Medicine (MDC) in Berlin-Buch. With their publication “Primate-specific endogenous retrovirus driven transcription defines naïve-like stem cells” (Wang, J. et al., 2014, Nature, [doi:10.1038/nature13804](https://doi.org/10.1038/nature13804)), the lab was able to identify key new properties of naïve state human embryonic stem cells (hESCs). These cells constitute only five percent of hESC cultures. In the search for distinctive key properties of the naïve cells, the authors detected a sequence originally derived from primate-specific endogenous retrovirus. Such retroviral sequences were integrated into human DNA millions of years ago and lost their original function as viruses. These observations define HERVH expression as a hallmark of naïve-like hESCs and establish a novel, primate-specific transcriptional circuitry that regulates pluripotency. This is an important step for basic research into pluripotency and may one day lead to lead to applications in regenerative medicine.

Link: <https://www.mdc-berlin.de/44389769/de/highlights/archive/2015/Isvak>
https://www.mdc-berlin.de/1153542/de/research/research_teams/mobile_dna

“With our new awards we want to encourage young stem cell researchers, and especially female scientists, to work in this dynamic and exciting field,” says Prof. Thomas Braun, President of the German Stem cell Network and Head of the Max Planck Institute for heart and lung research, the choice of the awardees. Furthermore we want to support and foster excellent performance overall.”

The German Stem Cell Network (GSCN) was founded in 2013. Its central task is to pool expertise in stem cell research in Germany and develop synergies between basic research, regenerative medicine and pharmacology. The initiative will promote innovative research activities on a national and international level. In addition, targeted information and events will be developed to stimulate public discourse on stem cell research. The promotion of young emerging scientists as well as female scientists is a particular task of the GSCN.

The three GSCN awards are accompanied by a prize of 1500 €. Winners will deliver a presentation at the presidential symposium at the Third International Annual Meeting of the GSCN from 9 to 11 Sept., 2015, in Frankfurt/Main.

More information can be obtained at the website www.gscn.org. For questions, please contact:

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