

Stem cell models of neurodegeneration

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The “Stem cell models of neurodegeneration” meeting in Edinburgh was organized for the first time and attracted around 300 researchers from all over the world to the beautiful campus of the University of Edinburgh. As a researcher developing stem-cell-based models of Alzheimer’s disease, I was very much looking forward to this conference as the program already promised a number of highly interesting and relevant talks and sessions by both early-career researchers as well as thought leaders of the respective fields.

This promise was indeed kept, and the general quality of all presentations was very high, making it scientifically one of the best conferences I have ever attended. My personal highlight was a keynote lecture by Sergiu Paşca who talked about the use of assembloids to model human neural circuits and study developmental diseases such as autism spectrum disorders and schizophrenia. It was a great presentation showcasing the enormous potential of stem-cell-based models to also study more complex human circuits by combining neural organoids of different brain regions. The talk also included one of the first, if not the first, examples to discover a therapeutic target and develop a promising drug targeting it in a purely stem-cell-based system, as the respective disease, Timothy syndrome, cannot be modeled and studied in commonly used animal models.

Another highlight were the talks, sessions and discussions about improving diversity in iPSC-based models. This featured for example a podium discussion as well as highly interesting talks about the generation of stem cell banks in Nigeria, South Africa, or India. The talks gave very important insights into the plentiful challenges faced in the process, from financial issues over the inconsistent supply with energy and liquid nitrogen in some cases to the skepticism of the local communities in donating cells and more, which are hard to grasp and makes one very grateful and humble about the privileged position we have and can do research in here in Germany. The podium discussion also featured ways to improve general diversity, for example regarding people presenting at conferences and papers published from researchers in developing countries, and how to increase awareness of this topic in the first place.

I further especially liked the concept of having early-career researcher talks in each session as well as a prominent focus on the two poster sessions, giving many young researchers the chance to present their work on all kinds of neurodegenerative diseases and related topics, and promoting fruitful discussions I had with a variety of people. I was also very happy to have been selected to give a talk myself in front of this impressive audience and enjoyed the following input and discussion to further improve my work a lot.

Taken together, the conference was a great experience with top-level science and interesting discussions with many different scientists from all over the world, and I am very grateful to the GSCN for being awarded the GSCN Travel grant which enabled me to attend this exciting meeting.

Sincerely,

Julien Klimmt