

ISSCR annual meeting 2024 in Hamburg, Germany

Participant: Alec Geßner

The travel grant from the German Stem Cell Society allowed me to attend the annual meeting of the International Society of Stem Cell Research (ISSCR) from 10th to 13th July 2024 in Hamburg, Germany. This prestigious conference is one of the largest meetings in the field of stem cell research, attracting over 3000 attendees year on year. It offered a diverse program, featuring outstanding scientific sessions on basic and translational research, poster presentations, industry exhibition and career development opportunities.

The meeting started with a highly expected talk by Magdalena Goetz (LMU, Germany) about organellar heterogeneity in stem cell differentiation and reprogramming. She showed that in a very distinct cellular context and organelle location some proteins, such as the splice factor PRPF6, can play a major role in disease development. In this case, PRPF6, which is expressed in all cells, can localize to the centrosome in neural stem cells, where its mutation can finally result in periventricular heterotopia. As my PhD project focuses on the inter-cellular heterogeneity between leukemic blasts, this talk gave me a new perspective on the importance of intra-cellular heterogeneity especially in a rapidly evolving context such as cancer. Throughout the conference, leading scientists like Sarah Teichmann (Cambridge Stem Cell Institute, UK), Fabian Theis (Helmholtz Center Munich, Germany), Elaine Fuchs (Rockefeller University, USA), and Sergiu Paşca (Stanford University, USA) shared their groundbreaking research. Another highlight was Cristina Lo Celso's (Imperial College London, UK) presentation, as she talked about the potential mechanisms behind relapse in AML after inflammation-inducing therapies such as chemo- or immunotherapy.

Recognizing the importance of early-career development, the ISSCR also featured inspiring talks by postdoctoral and PhD students, including Indranil Singh's work, who showed fascinating insights into transgene-free tracking of clonal dynamics in hematopoiesis using single-cell profiling of DNA methylation. The poster session provided a fantastic platform to connect with fellow researchers and discuss ongoing projects. I had the opportunity to present my own research on *"Tracking the progeny of leukemia-initiating stem cells in primary adult acute lymphoblastic leukemia and relapse by single-cell barcoding"*. I had very exciting discussions during the poster session, which was well-visited and received plenty of feedback and ideas for future projects or collaborations. Beyond the scientific excellence, the conference fostered connections through social events like the GSCN meet-up hub and the "WunderBar" event. These interactions with researchers from across the globe but also several Germany-based colleagues were truly inspiring and provided a huge advantage in my upcoming career. In summary, I enjoyed this exciting and stimulating meeting and I want to thank the GSCN for the travel grant to support my participation at the ISSCR 2024 meeting.

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