GSCN Travel Award: Participation Report

Participant: Alexandra Pötzsch, DZNE (German Center for Neurodegenerative Diseases), Dresden, Germany

Conference: 4th Eurogenesis meeting, 11th – 13th of June 2019 in Bordeaux

Background:
Adult neurogenesis is a unique form of lifelong brain plasticity occurring in ectopic niches (hippocampus and subventricular zone), which harbor a population of adult neural stem cells that have the ability to give rise to functional neurons important for spatial learning and memory formation. The process of adult neurogenesis is highly regulated and can be influenced by lifestyle factors, such as physical activity, learning, environmental enrichment and nutrition and much research focuses on gaining a comprehensive understanding regarding the functional link between these lifestyle factors and plasticity in the adult brain.

Conference:
Every three years, the Eurogenesis meeting in Bordeaux brings together experts of the field of adult neurogenesis and draws an ever-growing number of participants to present and discuss their newest research. Contributions ranged from basic research to understand the fundamental principles behind this phenomenon of the lifelong plasticity to elucidating its relevance for behavior, cognition and possible implications in the prevalence of neurodegeneration. The highlight of this years meeting, however, was the discussion concerning the controversially debated existence of adult hippocampal neurogenesis in humans. Recently, three major papers were published providing evidence for (Boldrini et al. 2018, Moreno-Jiménez et al. 2019) human adult neurogenesis and one report questioning (Sorrells et al. 2018) its existence after early childhood. Having the authors of these publications present (Maura Boldrini, María Llorens-Martin and Arturo Alvarez-Buyalla) their data and engaging in an open and fair discussion about methodology and reproducibility of their respective results was a highpoint of the conference. Ultimately, a consensus was formed to exchange tissue samples and protocols among the involved laboratories aiming at revealing the validity and quality of the employed methods in order to explain the diverging findings and to settle this, for the field of adult neurogenesis, vital debate. Other emerging topics discussed the heterogeneity of the
stem cell pool, the regulation of neural precursor cells, the network properties and integration of new neurons into the existing circuitry, the function of neurogenesis for behavior and its role for disease. Highlights for me were the talks by Anne Brunet, Nicolas Toni, Victor Luna, Sandrine Thuret and René Hen. The program was diverse and dense with poster sessions taking place during coffee breaks and evening events that continued scientific discussions well into the night. For my own poster presentation, I received positive feedback and much support. The meeting gave ample opportunities to interact with group leaders and junior scientists alike and to engage in constructive discussions and talks about prospective collaborations.

I would like to thank the GSCN for supporting my participation at Eurogenesis and the organizers (Nora Abrous, Alejandro Schinder, Paul J. Lucassen, Sebation Jessberger, Georg Kuhn, Chichung Lie, Nicolas Toni and Gerd Kempermann) of this very enriching conference!

Best regards,
Alexandra Pötzsch