

IRA Retreat 2024 Cologne:

We met at the Ameron Hotel in Cologne where our program began in the "Roma" conference room, over delicious coffee, with our keynote speaker, Priv.-Doz. Dr. rer. nat. Markus Aswendt, head of the "Neuroimaging and Neuroengineering of Experimental Stroke" working group at the University of Cologne Clinic.



Figure 1: Introduction of KeyNote Speaker Priv.-Doz. Dr. rer. nat. Markus Aswendt

His lecture on "The role of astrogliosis in recovery after stroke - a functional connectivity study in mice" took the students from the translational roadblock and what can be done about it, e.g. following STAIR, ARRIVE, IMPROVE Guidelines, to how to implement these rules in practice in the laboratory. The importance of electronic lab notebooks, group-specific data storage, automated data processing (for MRI, histology, etc.) and "standard operating procedures" (SOPs) was highlighted. This way, even after students leave the working group after successful graduation, the raw data can be found again, and the documentation of the experiments can be used for e.g. publication. As a practical example from his working group, an experimental study with KO mice lacking two astrocyte proteins after photothrombosis was presented. These mice did not recover as well after the stroke as their littermates, which could be proven e.g. with MRI, histology and behavioral tests. Astrocytes are therefore important for recovery from a stroke. After the exciting and very informative lecture, many questions were asked and discussed.



Figure 2: *The correlation between untreated atrial fibrillation and ischemic events*

Following a short coffee break and snacks, we continued with the student presentations. In these group presentations, the systemic effects of kidney ischemia, atrial fibrillation, pregnancy, or a stroke were explained and subsequently also discussed lively.

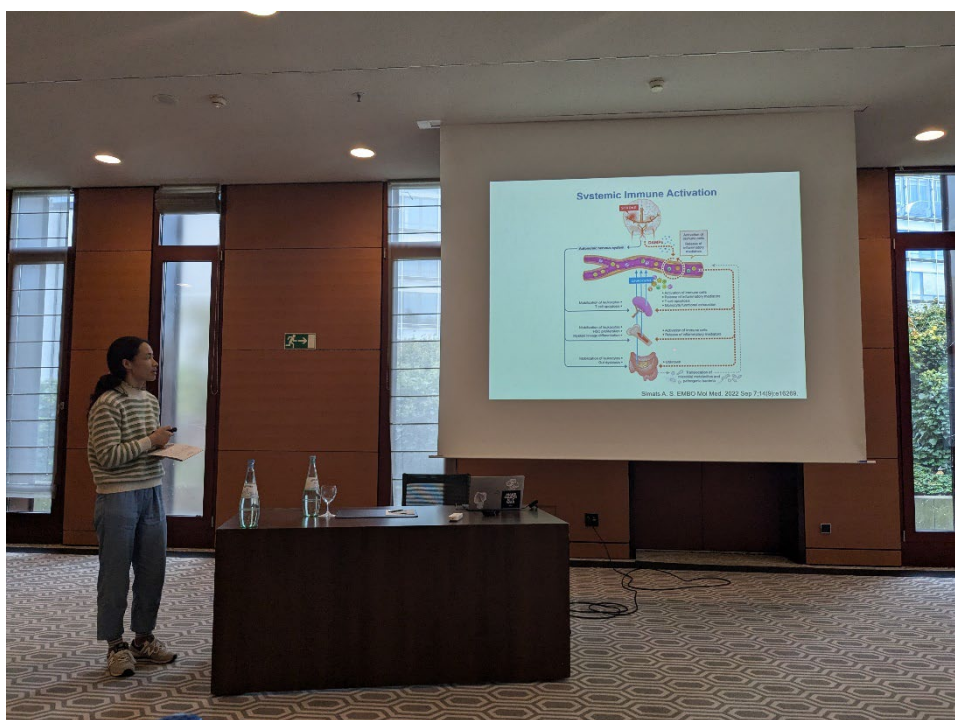


Figure 3: *Systemic inflammation after Stroke*



Figure 4: Pregnancy associated stroke



Figure 5: Systemic Effects after kidney ischemia

After the presentations, we went to the Body Worlds exhibition, where we viewed the exhibits with great interest and sometimes disbelief. Despite medical prior knowledge (to varying degrees), there is much to discover and learn here.



Figure 6: Systemic immune response after ischemic stroke



Figure 7: Group Picture of all participants

We thank our students and the keynote speaker for the beautiful and exciting presentations and hope everyone enjoyed it as much as we did.

The IRA Team Ana, Dirk, Egor, Janine, Stine