



## Project B11 - A role for meningeal lymphatic vessels in the regulation of CNS inflammation

Subcluster: Immune cell trafficking

**Project Summary:** Antigens in the central nervous system (CNS) are drained via the meningeal lymphatic vessels to the deep cervical lymph nodes (dcLNs). There, dendritic cells (DC) play an essential role in keeping CNS immune-privilege status. Aim of this project is to identify the function and physiology of DC associated with the meningeal lymphatics. We want to elucidate how they influence the status of the immune system within the CNS under healthy and neuroinflammatory conditions. By using different reporter mice and single-cell transcriptome profiling, we aim to:

- a) Evaluate DC/T cells crosstalk within the meningeal lymphatics and the deep cervical LNs, its consequence on immune tolerance vs. pathogenicity
- b) Initially and in-depth characterize the human meningeal lymphatic vessels and their role in maintaining CNS immune-privilege status

### Principal Investigators:

**Prof. Dr. rer. nat. Jonathan Kipnis**

Klinik und Poliklinik für Neurologie /

Gutenberg-Forschungskolleg

Universitätsmedizin Mainz

Langenbeckstraße 1

55131 Mainz

Tel.: +49 6131 17 2224

E-Mail: [jokipnis@uni-mainz.de](mailto:jokipnis@uni-mainz.de)