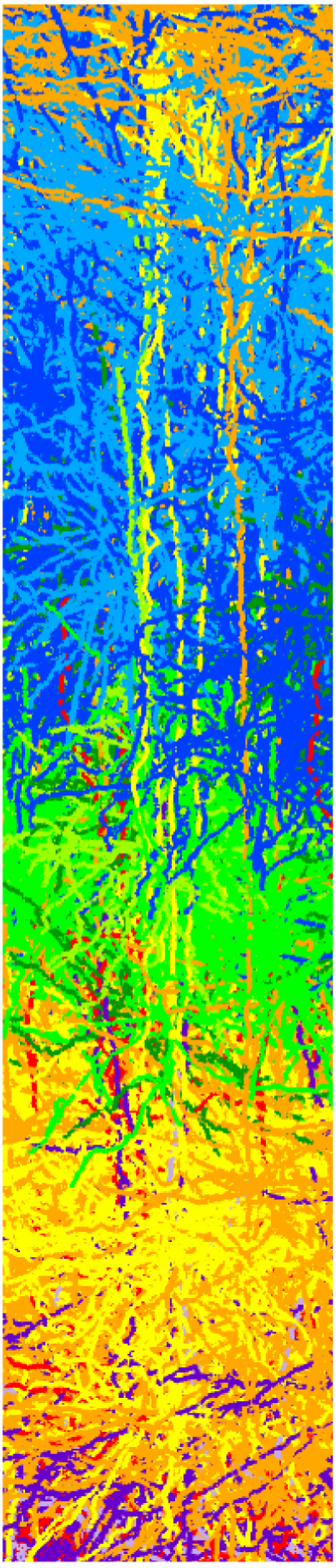
UNIVERSITÄT BONN

Neuroscience Lecture

Bonn Center of Neuroscience



Single-cell and spatial transcriptomics analyses reveal CD8 T cells as the driver of brain aging.

Ozgun Gokce, Dr.

LMU University Hospital, Institute for Stroke and Dementia Research (ISD)

A hallmark of nervous system aging is a decline of white matter volume and function, but the underlying mechanisms leading to white matter pathology are unknown. Using spatial transcriptomics and scRNA-seq, we found that microglia and oligodendrocyte identities show age-related alterations in white matter. To further characterised these cell responses, we developed Spatial Transcriptomics-correlated Electron Microscopy (STcEM) which correlates large-area scanning EM and multiplexed error-robust fluorescence in situ hybridization (MERFISH) and links transcriptional identities of single cells with ultrastructural data. In summary, we provide evidence that CD8+ T cell-induced interferon-responsive oligodendrocytes and microglia are important modifiers of white matter aging and likely be involved in neurodegenerative disorders.

November 08, 2022, 11:00 a.m.

Epileptology, Seminar Room, Ground Floor (266)

Find more talks

If you would like to meet with the speaker, please contact:

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