

PIONEERS IN BIOMEDICAL RESEARCH SEMINAR

Presented by the Fralin Biomedical Research Institute at VTC and co-sponsored by the institute's Center for Neurobiology Research and the Center for Glial Biology in Health, Disease, and Cancer



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Senior Investigator at the Gladstone Institutes; and a Professor in the Department of Neurology at the University of California San Francisco

Neurovascular Interactions: Mechanisms, Imaging, Therapeutics

The communication between the brain, immune and vascular systems is a key contributor to the onset and progression of neurological diseases. Dr. Akassoglou's research has uncovered the blood clotting factor fibrinogen as a driver of neuroinflammation, as common thread in a wide range of neurologic diseases, such as multiple sclerosis, Alzheimer's disease and neurodegenerative diseases. Her lab developed cutting-edge imaging tools to study the neurovascular interface and discovered a role for fibrin in microglia-mediated oxidative stress-dependent spine elimination and novel fibrin-targeting immunotherapy to protect the brain from pathogenic neuroinflammation. Recent advances in functional single-cell transcriptional profiling of neurotoxic innate immunity (Tox-Seq) allowed the development of the oxidative stress cell atlas at the neurovascular interface. These findings could be a common thread for the understanding of the etiology, mechanisms of progression, and the development of new treatments for neurologic diseases with neuroimmune and cerebrovascular dysfunction.

FRIDAY, OCT. 30 at 11:00 a.m.

This seminar will be webcast live at fbri.vtc.vt.edu/events/live-webcast. In addition, students, faculty, and staff at Virginia Tech and Carilion Clinic who are invited to attend this lecture will receive Zoom access via email.



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