PIONEERS IN BIOMEDICAL RESEARCH SEMINAR

Presented by the Fralin Biomedical Research Institute and co-sponsored by the institute's Addiction Recovery Research Center and the Center for Health Behaviors Research

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In Person Seminar: Brain Dynamics and Flexible Behaviors

Executive control processes and flexible behaviors rely on the integrity of, and dynamic interactions between, large-scale functional brain networks. The right insular cortex is a critical component of a salience/midcingulo-insular network that is thought to mediate interactions between brain networks involved in externally oriented (central executive/lateral frontoparietal network) and internally oriented (default mode/medial frontoparietal network) processes. How these brain systems reconfigure with development is a critical question for cognitive neuroscience, with implications for neurodevelopmental pathologies affecting brain connectivity. Dr. Uddin will describe studies examining how brain network dynamics support flexible behaviors in typical and atypical development, presenting evidence suggesting a unique role for the dorsal anterior insular from studies of meta-analytic connectivity modeling, dynamic functional connectivity, and structural connectivity. These findings from adults, typically developing children, and children with autism suggest that structural and functional maturation of insular pathways is a critical component of the process by which human brain networks mature to support complex, flexible cognitive processes throughout the lifespan.

FRIDAY, APRIL 14, at 11 a.m.

Room R3012, 2 Riverside Circle, or watch via Zoom at https://fralinbiomed.info/PBR-Join, or via live webcast at https://fbri.vtc.vt.edu/events/live-webcast.html.

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