Monthly Neuro Seminar Series

Fall 2025

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Glia and the Gut: The Role of Gut Dysbiosis and Systemic Inflammation in High-Fat Diet-Induced Brain Changes

Consumption of a high fat, high sugar diet can cause excess weight gain which plays a role in many diseases including diabetes, cardiovascular disease, cancers, stroke, as well as dementia. Overconsumption of a high fat, high sugar diet can specifically lead to increased inflammation, neuroinflammation, and gut dysbiosis. Our goal is to determine peripheral factors that influence diet-induced changes to the brain. We hypothesize a role of gut dysbiosis and systemic inflammation to activate astrocytes and microglia following high fat, high sugar diet consumption. Furthermore, we hypothesize sex differences in the gut microbiome lead to sex differences in diet-induced changes to the brain. There are important differences in the response to a high fat diet between males and females that could impact diet-related interventions.

Tuesday, October 7
4:00 p.m.
Coverdell S175

UNIVERSITY OF GEORGIA
Neuroscience Ph.D. Program