Robert M. Berne CVRC Seminar

The Robert M. Berne Cardiovascular Research Center Presents

Baptiste Lacoste, Ph.D.

Affiliation:

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Beyond Neurons: Vascular Pathways in Autism

Dr. Lacoste and his team have established a unique research niche bridging basic and translational neurovascular biology. The Lacoste Lab, established in 2016, has discovered novel mechanisms regulating cerebrovascular maturation[1], and the vascular contributions to autism spectrum disorders (ASD), a fundamental breakthrough[2-5]. During his lecture, Dr. Lacoste will present recent and unpublished evidence linking cerebrovascular deficits to ASD. Brain development and function are highly reliant on adequate development and maintenance of vascular networks[6,7]. Early cerebrovascular dysfunction can affect brain maturation by impacting trophic support and/or energy supply. Recent findings from the Lacoste Lab revealed cerebrovascular abnormalities in a 16p11.2 deletion ASD mouse model, causally linking postnatal brain endothelial dysfunction to shifts in adult brain metabolism[8] and animal behavior[2]. Yet, the endothelial alterations eliciting these changes remained unknown. The Lacoste lab just found that 16p11.2 deletion-induced brain endothelial dysfunction results from an endothelial-specific bioenergetic failure, which can be rescued by purinergic receptor engagement[9]. Finally, to test whether such vascular abnormalities are generalizable, Dr. Lacoste's leads new projects investigating endothelial alterations in other laboratory models of ASD, including of Syngap1-related intellectual disability.

Thursday February 5, 2026
11:00 AM-12:00 PM
MR5 3005

Refreshments served
Hosted By: Tre Mills, PhD, Ukpong Eyo, PhD

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