Robert M. Berne CVRC Seminar

The Robert M. Berne Cardiovascular Research Center Presents

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Vascular inflammation in obesity and lung injury

Endothelial signaling microdomains precisely regulate vascular homeostasis. However, the mechanism by which the abnormalities at these microdomains increase vascular tone and permeability is poorly understood. My work has defined a novel paracrine signaling mechanism in which smooth muscle-derived TNF activates TNF receptors on neighboring endothelial cells, suppressing endothelial Ca^{2+} signals and elevating blood pressure. Additionally, we identify a Mineralocorticoid Receptor-dependent mechanism that drives hyperactivation of endothelial Ca^{2+} signals, leading to lung edema, immune cell infiltration, and lung injury. Together, these findings uncover new signaling abnormalities within endothelial microdomains that contribute to increased vascular tone and permeability in cardiovascular disorders.

Thursday January 15, 2026
11:00 AM-12:00 PM
MR5 3005

Refreshments served

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