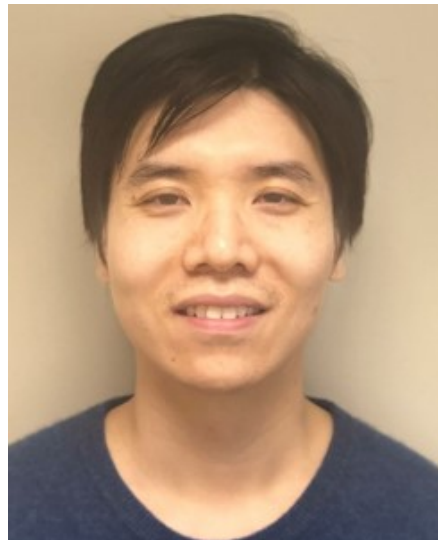


RMB CVRC Seminar

The Robert M. Berne Cardiovascular Research Center Presents

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Divergent Roles of Integrated Stress Responses in Vascular Smooth Muscle Cells: Therapeutic Implications in Peripheral Vascular Diseases

The diseased phenotypic switching of vascular smooth muscle cells (VSMC) critically contributes to the pathogenesis of peripheral vascular diseases. Integrated stress response (ISR) represents a highly conserved homeostatic program in eukaryotes, yet its exact role in VSMC remains largely unknown. Our studies discovered that the endoplasmic reticulum (ER) stress PERK branch and the amino acid starvation response (AASR) GCN2 branch of ISR differentially regulate VSMC phenotypic changes, thereby leading to distinct outcomes in the development of peripheral vascular diseases. Moreover, utilizing pharmacological and dietary approaches, we established the early efficacy of PERK-inhibiting and GCN2-activating therapies in experimental models of restenosis and abdominal aortic aneurysm.

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11:00 AM-12:00 PM

MR5 Room 3005