

# PIONEERS IN BIOMEDICAL RESEARCH SEMINAR

Presented by the Fralin Biomedical Research Institute at VTC and co-sponsored by the institute's Center for Vascular and Heart Research



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## *In Person Lecture: Examining the Alveolar-Capillary Barrier in Lung Injury and Repair*

Lung injuries such as acute respiratory distress syndrome, acute lung injury, or ventilator-associated lung injury cause disruption in the alveolar-capillary barrier leading to edema and lack of gas exchange. The mechanical environment in the lung plays an important role in maintaining this barrier. The constantly moving lung subjects cells to mechanical strain and shear stress during normal breathing. Lung injury, aging extracellular matrix, and obstructive pulmonary diseases alter this mechanical environment, changing the strain, shear stress, and stiffness of the pulmonary extracellular matrix. Dr. Heise's talk will discuss how these mechanical changes alter cellular signaling and function focusing on aging alveolar epithelial cells and macrophages in murine ventilator-induced lung injury and the role of extracellular matrix in alveolar epithelial barrier formation.

FRIDAY, MARCH 10, at 11 a.m.

Room R3012, 2 Riverside Circle, or watch via Zoom at <https://FralinBioMed.info/PBR-Join>



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