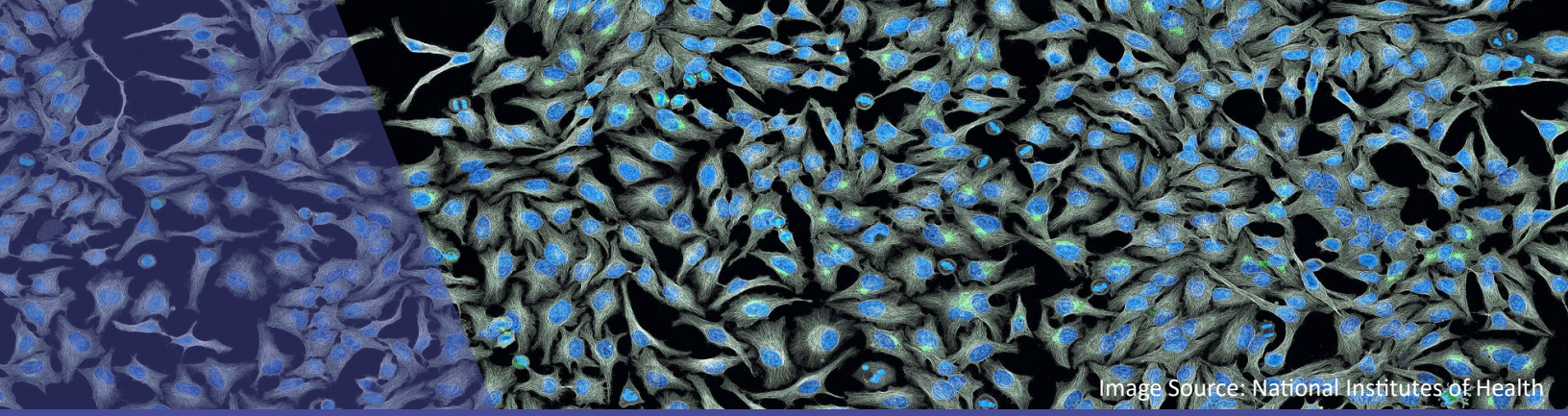

Robert H. Lurie Comprehensive Cancer Center of Northwestern University

Lurie Cancer Center's Basic Research Seminar Series

Pathogenic Role of Epithelial Plasticity Programs in Lung Cancer Tumorigenesis and Treatment Resistance

Tuesday, January 21, 2025

11:00 a.m.- 12:00 p.m. CT

Baldwin Auditorium, 1st Floor

Robert H. Lurie Medical Research Center
303 E. Superior St., Chicago, IL

Lung cancer is a major cause of cancer mortality. One area of the Tran laboratory focuses on tumor cell epithelial plasticity - the transitions between epithelial and mesenchymal cellular states and the implications of these transitions for lung cancer tumorigenesis and treatment resistance. One of these transitions, known as epithelial-mesenchymal transition (EMT), is a conserved developmental program that when inappropriately activated in post-natal life has been associated with organ fibrosis, tumorigenesis, treatment resistance and metastasis. High expression of epithelial-to-mesenchymal transition transcription factors (EMT-TFs) are strongly associated with metastatic cancers and with treatment resistance. However, EMT-TFs can also upregulate pathways such as O-GlcNAcylation and MYC to suppress fail-safe programs such as oncogene-induced senescence (OIS) that accelerates early tumorigenesis. Our work in this area has revealed critical structure-function relationships of the EMT-TF Twist1 for acceleration of lung tumorigenesis and downstream pathways that may serve as therapeutic targets. More recently have uncovered novel targeting strategies to limit pro-tumorigenic programs and serve as a therapeutic for TWIST1-overexpressing lung cancer.

Phuoc Tran, MD, PhD
Professor and Senior Vice Chair for
Research of Radiation Oncology
University of Maryland School of Medicine

Hosted by: Mohamed Abazeed, MD, PhD

Northwestern Medicine | Robert H. Lurie Comprehensive Cancer Center of Northwestern University

Basic Sciences Research Division of the Robert H. Lurie Comprehensive Cancer Center of Northwestern University
cancer.northwestern.edu