

# TIMOTHY A. JOHNSON MEDICAL SCHOLAR LECTURE SERIES

Presented by the Fralin Biomedical Research Institute at VTC and the Virginia Tech Carilion School of Medicine



## ZOLTAN ARANY, M.D., Ph.D.

Samuel Bellet Professor of Cardiology  
Co-Director, Cardiovascular Division  
Institute for Diabetes, Obesity & Metabolism  
Perelman School of Medicine  
University of Pennsylvania

## *In Person Lecture: Human Cardiac Metabolism*

Heart failure is understood to be in part a metabolic disorder, but most of our understanding of cardiac metabolism stems from pre-clinical models. Dr. Arany and his lab therefore leveraged modern mass spectrometry and metabolomics to probe cardiac metabolism in human health and disease in two contexts: (1) arteriovenous differences in plasma metabolite concentrations across the cardiac microvasculature in 120 patients undergoing elective procedures requiring placement of a coronary sinus catheter, and (2) tissue samples from excised hearts from patients undergoing transplantation for non-ischemic dilated cardiomyopathy or from organ donors with normal cardiac function. From the former, the lab calculated flux of hundreds metabolites in and out of the heart in health and disease, while from the latter researchers gathered mechanistic insight into metabolic alterations in heart failure.

FRIDAY, OCT. 28 at 1 p.m.

Room M203, 2 Riverside Circle.

Watch live via Zoom at <https://fralinbiomed.info/MedScholar-Join> or at <https://fbri.vtc.vt.edu/events/live-webcast.html>.

