

University of Ottawa

Wednesday, May 11, 2022

KEYNOTE LECTURER



Katey Rayner PhD, Associate Dean, Research Office, University of Ottawa
"The Science of Cardiovascular Disease: In the Lab and Beyond"

Katey Rayner is an Associate Professor at the University of Ottawa Heart Institute in the Department of Biochemistry, where she directs the Cardiometabolic microRNA Laboratory. Dr. Rayner obtained her BSc from the University of Toronto, and her PhD from the University of Ottawa. Dr. Rayner's doctoral work focused on the role of hormones, heat shock proteins and macrophage foam cells in the development of atherosclerosis. After her PhD, she pursued a postdoctoral fellowship first at Massachusetts General Hospital then at New York University School of Medicine where Dr. Rayner helped to discover a role for microRNAs, specifically microRNA-33, in the regulation of HDL and its atheroprotective effects.

Since establishing her lab at the University of Ottawa, Dr. Rayner's research program focuses on novel mechanisms that underlie the inflammatory processes of plaque progression and vulnerability, with a specific focus the intersection between macrophage inflammation and microRNAs as drivers of disease. Her group has uncovered a novel role for microRNA control of mitochondrial respiration in macrophage cholesterol efflux. Dr. Rayner's research also examines how extracellular microRNAs are mediating the progression of atherosclerosis in both human and animal models. More recently, her group uncovered a role for programmed necrosis in the development of unstable plaques in mice and how this can be a therapeutic and diagnostic biomarker in humans.

Dr. Rayner is a member of the Royal Society of Canada's College of New Scholars and has been recognized with awards such as American Heart Association's Irvine H Page Young Investigator Award and the Canadian Society for Molecular Biosciences New Investigator Award. Dr. Rayner's research is currently funded by the Canadian Institutes for Health Research, the Heart and Stroke Foundation of Canada and the European Cardiovascular Disease Network.