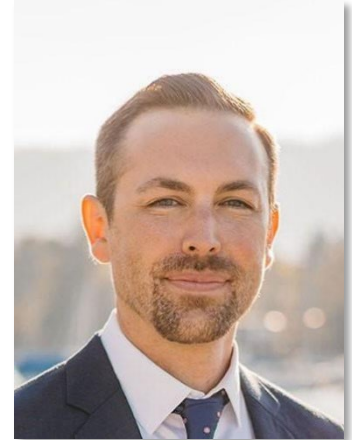# RUTGERS

The Department of Nutritional Sciences
Spring 2024 Seminar Series

"Integrating metabolic signatures of aging across mammalian species"

Michael R. MacArthur Ph.D.

Lewis-Sigler Scholar
Lewis-Sigler Institute for Integrative Genomics
Princeton University

Host: Tracy Anthony, Ph.D.
Professor of Nutritional Sciences, Rutgers

Wednesday, April 10, 2024 @ 2:15 PM
FSNS Building, 65 Dudley Road, New Brunswick, Room 120

Zoom option: https://go.rutgers.edu/MacArthur-Seminar

Metabolic dysfunction is a key feature of aging with hallmarks including dysregulated nutrient sensing and perturbed insulin sensitivity. The most effective geroprotective interventions are those which broadly affect metabolism including caloric restriction and pharmacologic inhibition of the master nutrient sensor mTOR. However, the specific events at the levels of tissues and cell types that drive age-related metabolic dysfunction remain unclear. This seminar will cover our recent efforts to understand mechanisms of age-related metabolic dysfunction by integrating tissue-specific metabolomic and fluxomic profiles across mice, bats, non-human primates and humans. Using this approach, we aim to identify conserved tissue-specific metabolic perturbations in aging, build models for inferring tissue dysfunction from serum profiles and ultimately propose testable dietary or pharmacological interventions to correct identified age-associated metabolic perturbations.