



COLLEGE of
BIOLOGICAL SCIENCE

DEPARTMENT OF MOLECULAR
AND CELLULAR BIOLOGY

Seminar

SPEAKER SERIES

2023-2024

NOV

WED

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PM

SSC 2315

DR. ALEX KOSTIC

Assistant Professor of Microbiology,

HARVARD MEDICAL SCHOOL

and

Assistant Investigator,

JOSLIN DIABETES CENTRE



TOPIC: The molecular underpinnings of human-microbe mutualism

Alex Kostic is an Assistant Professor of Microbiology at Harvard Medical School and Joslin Diabetes Center. The goal of his research program is to push our understanding of the metabolic dialog between gut symbionts and their mammalian hosts, and to translate this knowledge into novel therapeutic strategies for metabolic and autoimmune diseases. His lab reconstructed near-complete genomes from ancient human microbiomes, identifying microbial features/functions likely crucial to human adaptation, but that have unfortunately been lost to modern lifestyles. By studying the microbiomes of elite marathon runners, his group found that the gut microbiome metabolizes lactate into products that enhance mammalian exercise capacity, revealing microbial mediation of host physiology. Ongoing work in his laboratory is revealing that key gut microbes promote immune tolerance via extracellular vesicles and that their products can treat autoimmune disease, benefitting both themselves and the health of their long-term host. Alex received his Hon.B.Sc. at the University of Toronto, Mississauga, his PhD at Harvard University, and completed his postdoctoral studies at the Broad Institute of MIT and Harvard.

All welcome to attend
Refreshments will be served

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