

One Health Faculty candidate

Mohammad Soheilypour

Principal Investigator, Nexilico



SEMINAR

Monday, February 16, 2026

9:00 – 10:00 am – ABE 1164

Zoom: <https://tinyurl.com/76tmx5j8>

“AI-Driven Computational Frameworks for Precision Microbiome Engineering”

Mohammad Soheilypour is a microbiome scientist whose research focuses on developing AI-driven computational frameworks to model complex microbial systems and guide the design of precision microbiome interventions. He received his PhD in Computational Biology from the University of California, Berkeley, and is currently a Principal Investigator at Nexilico, where he leads a microbiome engineering research program supported by NIH, NSF, and industry partners. He has over a decade of experience in computational biology and microbiome science, with a sustained research focus on translating first-principles modeling and large-scale simulations into actionable microbiome engineering strategies.

Mohammad’s work is motivated by the need to move beyond observational microbiome studies toward predictive, mechanistic approaches that enable causal understanding and rational intervention design. By integrating artificial intelligence, computational modeling, and systems biology, his research uncovers underlying mechanisms governing microbial dynamics and identifies strategies for systematically reshaping microbiome function. This talk will highlight how these computational frameworks enable scalable exploration of microbiome perturbations and support precision design across intervention modalities. Together, this work establishes a generalizable computational foundation for engineering microbiomes across diverse biological contexts, with applications in health and disease.

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