

IFSH Seminar Series

Wednesday, September 6, 2017

1:00 – 2:00 PM

Building 91, Room 108

Behzad Imanian, Ph.D.

Project Leader, IFSH Whole Genome Sequencing Initiative
Institute for Food Safety and Health
Illinois Institute of Technology

“Next Generation Sequencing – From Unveiling the secrets of the Dinotom, to Unravelling the Mysteries of Foodborne Microorganisms”

Biosketch

Behzad Imanian has a BSc in Cell Biology, a MSc in Genetics and a PhD in Botany from University of British Columbia, Canada. Prior to acquiring his doctorate degree, Behzad worked as a computational biologist and research fellow in the Genome Sciences Center, BC Cancer Agency, Canada, where he helped with the quality control of the Bovine and Spruce genome and transcriptome sequencing projects as well as the design and production of artificial DNA constructs for the Pleiades Promoter Project. His previous research has been mainly focused on the evolution of eukaryotic organelles namely mitochondria and plastids through long-term and established endosymbiosis. His research interests also include the reductive evolution of commensal or parasitic symbionts, the metabolism of mitochondria and plastids, the evolutionary history of eukaryotes, gene, genome and protein structure and evolution. Since March 2016 he is leading the IFSH WGS Initiative at Illinois Institute of Technology.

Abstract

Dinotoms are a small group of single cell dinoflagellates that harbor a diatom endosymbiont. The obligate and long-term symbiosis of the host and endosymbiont in dinotoms seems to be at its earlier stages of development. This ‘union’ has generated an extraordinarily complex cell with an even more complicated genome. In this seminar, the effects of symbiosis on the morphology and especially the genome of dinotoms and the sequencing strategy to tackle this system will be discussed. I will also provide an introduction to the IFSH WGS Initiative, its brief history, its goals and a few examples of the collaborative projects we are involved in.