Systems Biology of Microbial Metabolism: from Genomes to Ecosystems

Pacific Northwest NATIONAL LABORATORY

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Frontiers in Biological Sciences
Seminar Series

Presented by…

Daniel Segrè, Ph.D.

- Associate Professor: Biomedical Engineering, Bioinformatics, and Biology
- Boston University

Abstract

Cellular metabolism consists of a complex network of chemical reactions, which provides the cell with a reliable supply of energy and building blocks. Learning how this network responds to environmental and genetic perturbations is a fundamental open question, relevant for understanding physiological and evolutionary adaptation, for fighting metabolic and infectious diseases, and for metabolic engineering of industrially important microbes. Optimization approaches based on steady state approximations of metabolic networks have become one of the main frameworks for addressing these questions, and one of the flagship methods in systems biology. Professor Segrè will discuss some ongoing applications and challenges in this field, including the integration of regulatory information in metabolic network models, and the extension from individual microbes to natural and engineered microbial communities.

More info?

http://www.bu.edu/experts/profiles/daniel-segre/

http://www.bu.edu/segrelab/

Date: Friday, April 18, 2014

Location: BSF/CSF Darwin (Room 1007)

Time: 9:00 a.m.