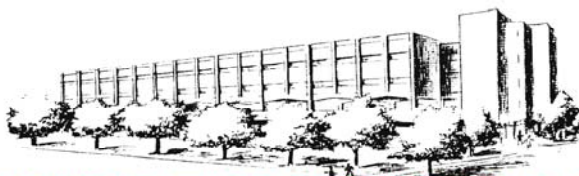


UNIVERSITY OF CONNECTICUT



**INSTITUTE OF MATERIALS SCIENCE**

POLYMER PROGRAM SEMINAR

**“Leveraging Genome-Scale Metabolic Modeling for Hypothesis Generation: A Case-Study with *Rickettsia prowazekii*”**

**Prof. Ranjan Srivastava  
University of Connecticut**

**Friday, November 6, 2009  
11 AM, IMS Room 20**

**Abstract**

Metabolic engineering of microorganisms opens an exciting new avenue for polymer synthesis. To fully exploit this potential, a deep understanding of bacterial metabolism is required. To rationally manipulate microorganisms for this purpose, strategies for creating and implementing quantitative metabolic models based on the theory of reaction kinetics and experimental genome-scale analysis have been developed. However, even these models suffer significant shortcomings due to lack of knowledge regarding all aspects of metabolic activity within the cell. In this talk, I will provide a detailed overview of how genome-scale metabolic analysis is carried out. Then using the pathogenic bacteria *Rickettsia prowazekii* as a case study, I will illustrate a strategy our lab has developed allowing us to hypothesize about which metabolites may be participating in hitherto unknown reactions within the cell.

\*Coffee will be served at 10:45AM outside the seminar room.

\*For further information, please contact YH Chudy at 860.486.3582 or [yhchudy@ims.uconn.edu](mailto:yhchudy@ims.uconn.edu)

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