

**Department of Molecular and Cellular Biology
DISTINGUISHED SPEAKER SEMINAR SERIES****Dr. Thomas J. Silhavy**

Warner-Lambert Parke-Davis Professor of Molecular
Biology, Princeton University

**“Outer Membrane Biogenesis
in Gram-Negative Bacteria”**

**Wednesday, February 29, 2012
at 12:30 p.m. in ANNU 156**

The outer membrane (OM) of Gram-negative bacteria functions as a protective barrier. It is unusual because the OM bilayer is asymmetric; the inner leaflet is composed of phospholipids, but the outer leaflet is made of lipopolysaccharide (LPS). Two kinds of proteins are found in the OM. Lipoproteins are inserted into the inner leaflet of the OM by posttranslationally attached lipid moieties. Integral OM proteins are β -barrel proteins (OMPs). We have used genetic, bioinformatic and biochemical strategies to identify and characterize the cellular components required for LPS and OMP biogenesis. After describing what is known about these essential cellular processes, I will focus on the genetic approaches we are taking to probe the mechanism by which β -barrel assembly machine folds and inserts OMPs into the OM. This machine is composed of a large β -barrel protein, BamA, and four lipoproteins, Bam BCDE. My talk will focus on the role of BamE and how the two essential proteins, BamA and BamD communicate with each other.

Faculty Host: Dr. Chris Whitfield

Coffee, Tea & Timbits

EVERYONE IS WELCOME TO ATTEND!

“A great opportunity to hear leading researchers in the scientific community discuss their work”