



# BiophysTO Lunchtime Seminar Series

## Date

Thursday, September 21, 2017  
12:00 pm (noon)

## Location

McLennan Physical Laboratories,  
Room MP606, 60 St. George Street

## Streaming

Seminar live streamed to  
DV3129 @ UTM

**Pizza & refreshments  
provided**

## Dr. Trevor F. Moraes

University of Toronto  
Department of Biochemistry

# Bacterial Surface Lipoproteins and Membrane Proteins used to Overcome Nutritional Immunity

The battle for nutrients between invading bacteria and the host they colonize is extremely competitive and complex. To prevent unwanted bacterial proliferation, mammals utilize 'Nutritional Immunity' - a mechanism to sequester essential metals and nutrients (e.g. zinc and iron) thus limiting their availability to invading pathogens. In response, the evolving bacterial pathogen keeps pace with mammalian defences using specialized nutrient uptake systems to alleviate the nutritional immunity pressure. Herein I will discuss our structural and functional insights into several bacterial nutrient acquisition systems (including the Bacterial Transferrin Receptor -TbpA/TbpB and the Zn uptake receptor -ZnuD) and a new protein translocation system (SLAM) that places virulence factors on the surface of Gram negative pathogens and provides the pathogens with a mechanism to overcome nutritional and innate immunity.

**Host: Dr. Walid A. Houry**



**Seminar  
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