## **Guest Speaker:**

## Dr. Cynthia B. Whitchurch The ithree institute, University of Technology Sidney



Understanding and exploiting bacterial lifestyles to control infection

## Monday, August 29, 2016 SSC 2315 at 10:30 a.m.

A major contributor to the ability of pathogenic bacteria to resist the actions of antibiotics and host immune defenses is their ability to transition between different lifestyles. These are survival strategies that occur in response to a range of environmental stresses such as nutrient deprivation, oxidative stress, predation, immune attack, antibiotic exposure and inter- and intra-species competition. Examples of these alternate lifestyles include matrix-encased biofilms that can be up to 1000 times more resistant to antibiotics than their planktonic counterparts; self-organised collective behaviours such as twitching and swarming motilities that lead to rapid biofilm expansion; and cell-wall deficient L-forms that survive and proliferate in the presence of high concentrations of beta-lactam antibiotics. Our research into biofilm development, twitching motility and beta lactam tolerance by *Pseudomonas aeruginosa* has identified several biological phenomena that may be exploited to develop innovative approaches to control infection.

For more information please contact: Professor Joe Lam (jlam@uoguelph.ca) Department of Molecular and Cellular Biology



## ALL WELCOME TO ATTEND