2016-17
MCB Seminar Speaker Series

Dr. Joe Lam

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"Coming up to many forks on the road and taking them – studies of LPS biosynthesis in *Pseudomonas aeruginosa*"

Wed. Feb. 8th, 2017
SSC 2315 @ 10:30 am

The microbiology department in CBS recruited me to form part of the critical mass of bacterial cell surface research focus that also includes the labs of my esteem colleagues Chris Whitfield, the late Terry Beveridge, and Anthony Clarke (who joined later). This combination forms a formidable group. While setting up my lab, the first scientific question that I asked was why it would be so difficult to serotype Pseudomonas aeruginosa, particularly those strains that were isolated from cystic fibrosis (CF) patients. This problem has hampered epidemiological and infection control studies. Albeit my PhD research results had showed the tenacity of P. aeruginosa to form biofilms, making this species resilient to killing by host defences or antibiotics, no one at that point in time understood the dynamics of lipopolysaccharide (LPS) biosynthesis or changes that occur on the bacterial cell surface when the pathogen was under various conditions of stress. This scientific curiosity was relevant to chronic P. aeruginosa lung infections, the main cause of death to CF patients. As such, I have no trouble securing funding support from various sources. In this talk, I will summarize the various paths that my group has taken towards learning new knowledge and developing novel approaches along the way to fulfilling our goals of investigating the biology, chemistry, and biochemistry of LPS biosynthesis in P. aeruginosa; more importantly, fruitful collaborations were established both with colleagues on this campus and outside to address the question of why LPS is important to virulence of this important opportunistic pathogen. It has been a tremendous journey for me because of the opportunity to learn and to work with so many highly talented trainees, many of whom have become world-class leaders by their own rights.

"A GREAT OPPORTUNITY TO HEAR LEADING RESEARCHERS IN THE SCIENTIFIC COMMUNITY DISCUSS THEIR WORK"

*** ALL WELCOME TO ATTEND *** *** COFFEE, TEA AND TIMBITS ***

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