“Understanding the underlying mechanisms of persistence in Mycobacterial infections”

Mycobacterial infections, such as *Mycobacterium avium subspecies paratuberculosis* (MAP) which causes Johne’s disease in cattle and other ruminants and *Mycobacterium tuberculosis* (MTB), which is the etiological agent of tuberculosis in humans, are characterized by a persistent and slow infection progression, which can be rapid under certain conditions. Mycobacterial pathogens have the ability to adapt to the changing intracellular environment in response to a dynamic immune response. The underlying mechanisms on how the bacilli can persist irrespective of the host mounting a robust immune response are poorly understood. This talk will: (i) provide insights in understanding some of the MTB bacilli mechanisms associated with its persistence using a mathematical framework that integrates gene expression data and systems biology biochemical systems theory; and (ii) present a mathematical immunological model that helps to understand the cattle immune response mechanisms that are associated with MAP infection progression.

**Join us for refreshments at 3 p.m.**

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