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Lecture | הרצאה

DISSECTING THE VIRULENCE STRATEGIES OF ACINETOBACTER BAUMANNII

Abstract
Healthcare-associated infections (HAI) are the most common adverse event in healthcare settings that affect patient safety. They contribute to significant morbidity, mortality, and financial burden on patients and healthcare systems. Acinetobacter baumannii (Ab) has been a leading cause of HAI, and it is the Gram-negative bacterium displaying the highest rate of multidrug resistance (MDR). Reflecting its growing impact on global health, the World Health Organization has listed carbapenem-resistant Acinetobacter as a critical threat to human health, prioritizing research into the development of new therapeutics. Although hospital-acquired pneumonia and bloodstream infections are the most common infections associated with Acinetobacter, soft-tissue infections, and urinary tract infections (UTIs) are also prevalent. Notably, ~20% of A. baumannii clinical strains are isolated from urinary sources, 60% of which correspond to catheter-associated UTI (CAUTI). In this seminar, I will first discuss our recent advances in understanding how A. baumannii cause infections, and in particular, UTIs. Traditional efforts to understand and track hospital outbreaks have focused on direct contact transmission, where infected patients act as sources for bacterial transmission to uncolonized patients. Hospitals often institute active patient surveillance, strict contact precautions, and sterilization interventions. Although these measures mitigate the spread of bacteria, the means by which new strains initiate hospital outbreaks are rarely understood. I will present our work supporting the hypothesis that patients previously colonized by A. baumannii act as reservoirs for potential outbreaks in hospital settings. Understanding the reservoirs and virulence mechanisms of nosocomial pathogens like Ab will aid in the development of effective strategies for infection prevention and control in hospital settings.

The lecture will be held on Monday
21 March 2022, at 12:15
Hall 100, Faculty of Medicine Building
Tel-Aviv University, Ramat-Aviv

Light refreshments will be served before the lecture | כיבוד קל יוגש לפני ההרצאה