Molecular Pathogenesis of Staphylococcal Infections

Message from the Guest Editor

Dear Colleagues,

Staphylococcus aureus persistently colonizes the nares of about 20% of the population and is a transient resident of the remainder. The bacterium can cause both superficial skin infections and more serious and potentially life-threatening invasive diseases. Treatment has been compromised by the development of resistance to multiple antibiotics. S. aureus expresses a plethora of secreted and surface proteins that promote infection by facilitating adhesion to host cells and tissues, invasion of host cells, and evasion of innate immune responses by interfering with complement and neutrophils. The bacterium can also interfere with adaptive immune responses. Molecular analysis of virulence factors has involved construction of mutants that are defective in a factor and comparing virulence with the wild type in appropriate animal models.

Prof. Dr. Tim Foster
Guest Editor