

Annual Conference on

MICROBIAL PATHOGENESIS, INFECTIOUS DISEASE, ANTIMICROBIALS AND DRUG RESISTANCE

August 23-24, 2017 | Toronto, Canada

The role of *Staphylococcus aureus*, related bacteria and their virulence factors in pathogenesis of multi organ infections: Future molecular targets in prevention and treatment, in addition to already available antibacterial drugs

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Staphylococcus aureus and related bacteria such as *Streptococci* cause Millions of fatal human infections annually around the globe with sequelae of complications and of which some are very difficult to treat with cheap and widely available antibacterial drugs especially in Uganda, East Africa. There is also an increasing incidence of bacterial resistance against various categories of antibacterial drugs causing chronicity of some infections. The following are the examples of virulence factors; lipases, collagenases, super antigens, exfoliatin A and B, haemolytic toxins e.g. beta

toxin which is a sphingomyelinase and protein A. The major will be in; Osteomyelitis, toxic shock syndrome, sepsis and necrotizing fasciitis. The purpose of this study is to analyze these virulence factors in detail which will subsequently lead to the discovery (innovation) of polyvalent antitoxins (e.g. in vaccine form or a gamma globulins) that will be used to prevent such fatal infections in groups at high risk. The study will also reduce future antibiotic abuse and eventually also reduce antibiotic resistance.

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