

Sample Abstract – Microbiology

Abstract Title: Identification, Cloning, and Characterization of *Staphylococcus pseudintermedius* Coagulase

Coagulase activation of prothrombin by staphylococcus induces the formation of fibrin deposition that facilitates the establishment of infection by *Staphylococcus* species. Coagulase activity is a key characteristic of *Staphylococcus pseudintermedius*; however, no coagulase gene or associated protein has been studied to characterize this activity. We report a recombinant protein sharing 40% similarity to *Staphylococcus aureus* coagulase produced from a putative *S. pseudintermedius* coagulase gene. Prothrombin activation by the protein was measured with a chromogenic assay using thrombin tripeptide substrate. Stronger interaction with bovine prothrombin than with human prothrombin was observed. The *S. pseudintermedius* coagulase protein also bound complement C3 and immunoglobulin. Recombinant coagulase facilitated the escape of *S. pseudintermedius* from phagocytosis, presumably by forming a bridge between opsonizing antibody, complement, and fibrinogen. Evidence from this work suggests that *S. pseudintermedius* coagulase has multifunctional properties that contribute to immune evasion that likely plays an important role in virulence.

KEY

Abstract contains sufficient background to understand the problem under investigation

Abstract must contain a hypothesis, objective or statement about the problem under investigation

Abstract must contain a brief statement of the experimental methods/methodology used

Essential results must be present in summary form (even if preliminary)

Abstract must contain a conclusion that explains how the work contributes to the hypothesis, objective or statement of problem

Abstract Source: Sewid A.H. et. al. (2018). *Infect. Immun.* 88(8): e00027-18. DOI: 10.1128/IAI.00027-18.

ABRCMS 2018

Abstract Submission Site: bit.ly/abrabstracts18