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Effect of Fibrinolytic Lipopeptides Isolated from *Bacillus* sp. on Platelet Rich Plasma Clot Lysis

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In present study, we have screened microorganisms for their ability to produce low molecular mass compound that can enhance the solubility of platelet rich plasma (PRP) and found that a strain of *Bacillus* sp. A9184 produced an active metabolite, which was identified as the lipopeptide surfactin. PRP clot lysis was enhanced in the presence of urokinase and the density of the PRP clots was decreased by surfactin in a dose-dependent manner. These findings indicated that although surfactin itself is not a potent thrombolytic agent, the agent enhanced the solubility of PRP clots and would enhance endogenous thrombolytic reactions when these are prompted to work, such as in thromboembolic states related to pulmonary, cerebral and myocardial disorders. Furthermore, the use of surfactins in combination with thrombolytic agents may benefit urgent thrombolytic therapy.

Keyword : Surfactin, fibrinolysis, lipopeptide, *Bacillus* sp.