

Activation of platelets by *Staphylococcus aureus* and exotoxins

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Platelets play an important role in the pathogenesis of vascular inflammatory diseases, particularly in infective endocarditis by providing an adhesive surface for bacteria binding to vessel walls.

It is known that *S. aureus* can bind to platelets directly as well as indirectly via soluble plasma proteins. The direct association is mediated by *S. aureus*- and platelet surface proteins through receptor ligand binding. The indirect binding of *S. aureus* to platelets is mediated by soluble proteins such as fibrinogen, which function as bridging agent. *S. aureus* also recognizes other proteins of the extracellular matrix such as fibronectin, collagen, vitronectin, laminin or thrombospondin.

Experiments about the activating properties of different bacteria or their secreted proteins are being performed. For this we use apathogen bacteria comparing them with isolates from septic patients and examine the influence of plasmatic factors as well as platelet receptors. The involved bacterial proteins will be characterized using *S. aureus* mutants.