Hem coagulase is an enzyme produced by some strains of Staphylococcus aureus, a type of bacteria that can cause a range of infections in humans. Hem coagulase is also known as coagulase-negative or free coagulase, to distinguish it from the more well-known bound coagulase, which is a surface protein produced by certain strains of S. aureus that can cause blood to clot.

Hem coagulase is thought to play a role in the virulence of S. aureus by promoting the formation of clots in the host's bloodstream, which can help to protect the bacteria from the immune system and facilitate their spread to other parts of the body. Some studies have suggested that infections caused by S. aureus strains that produce hem coagulase may be more likely to result in complications such as sepsis or endocarditis, although more research is needed to fully understand the mechanisms involved.

Laboratory tests can be used to detect the presence of hem coagulase in bacterial cultures, which can be useful in diagnosing S. aureus infections and determining the appropriate treatment. However, it is important to note that not all strains of S. aureus produce hem coagulase, and other factors such as the presence of bound coagulase or antibiotic resistance patterns may also be important considerations in the management of these infections.

Hem coagulase-induced thrombotic events