

2. Abstract

Presence of antihemostasis molecule is essential for the successful reception of food organisms that feed on blood. They are vasodilators, anticoagulant molecules and apyrases that break into the host hemostasis, thus blocking the whole process. This work summarizes all available information about the anticoagulant factors of hematophagous parasites. The blood sucking groups of helminths, arthropods and leeches is particularly inhibitors of serine proteases, which have their inhibitory activity directed primarily against thrombin and factor Xa. These are two key factors in the coagulation cascade. Factor X is the first member, where it sets the intrinsic and extrinsic coagulation pathways. At the same time it arises due to the active form of the protein thrombin, which is responsible for the conversion of soluble fibrinogen to insoluble fibrin, which stops bleeding. In addition to these two factors are inhibited of other members of the cascade. For example the inhibition of complex factor VII and TF, which has been described in ticks and hookworms. Anticoagulation factors play a crucial role in the transmission of pathogens by blood from the vector into the host. The longer the blood is a liquid, the greater the chance of transmission of the pathogen.