

Spatial dynamics of blood coagulation. A.A. Butylin, M.A. Pan-teleev, F.I. Ataullakhanov. *Russ. Khim. Zhurn.* (Zhurn. Ross. Khim. ob-va im. D.I.Mendeleeva), 2007, v. LI, № 1.

The A new conception regarding blood coagulation as an autowave process is proposed and substantiated: active coagulation factors can accelerate their own activation, and this process can autocatalytically propagate in space. Thrombus formation occurs in three stages controlled by different reactions and separated both temporally and spatially. The first stage, initiation, develops on the damaged surface of vessel wall and is determined by the reactions of the extrinsic pathway. The second stage, spatial propagation, depends on positive feedback loops of the intrinsic pathway of coagulation. The third stage, termination of clot growth, appears to be regulated by negative feedback loops of the protein C pathway.