

Special Issue

The Role of Heparin in Blood

Message from the Guest Editors

In this Special Issue, “The Role of Heparin in Blood,” we explore how unfractionated and low-molecular-weight heparins extend their biological reach far beyond thrombin and factor Xa inhibition.

- Anti-inflammatory properties. By competing for cationic proteins, heparin may attenuate glycocalyx shedding, preserving vascular integrity during inflammation, sepsis, or extracorporeal circulation.
- Modulating innate immunity. Heparin and its derivatives bind extracellular histones, neutrophil extracellular traps (NETs), host defence peptides, and complement components, mitigating their cytotoxic or pro-thrombotic effects.
- Interfering with pathogen entry. Electrostatic interaction with viral and bacterial surface proteins can block attachment to host cells.
- Hemocompatibility: heparin-coated surfaces limit protein adsorption and platelet activation.
- Risks: heparin-induced thrombocytopenia exemplifies potential adverse sequelae.

This Special Issue will highlight original research and critical reviews that elucidate how and why heparin exerts these multifaceted effects—whether protective or harmful. We welcome studies on molecular mechanisms, translational models, and clinical implications.

Guest Editors

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Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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