

“Anti-inflammatory, Antioxidant and Antithrombotic Properties of Natural Compounds”

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Natural compounds have attracted increasing attention as bioactive agents with pleiotropic effects on human health, particularly in the context of cardiovascular disease. Among their most relevant properties are anti-inflammatory, antioxidant, and antithrombotic activities, which may act in concert to modulate oxidative stress, vascular inflammation, platelet activation, and thrombus formation. These mechanisms make natural products promising adjuncts in the prevention and management of thrombotic and inflammatory cardiovascular disorders.

Oxidative stress and chronic low-grade inflammation are central contributors to endothelial dysfunction and atherothrombosis. Natural compounds can counteract these processes by scavenging reactive oxygen species, reducing the activation of inflammatory signaling pathways, and attenuating platelet aggregation and coagulation cascades. In this context, the therapeutic potential of bioactive natural products lies not in targeting a single pathway, but in modulating the broader atherothrombotic milieu through complementary mechanisms.

Overall, natural bioactive compounds represent a promising and evolving field in cardiovascular research. Further mechanistic studies and well-designed clinical investigations are needed to clarify their efficacy, safety, and translational potential in thrombotic and inflammatory settings.