Special Issue

Immunological Control of Vascular Plasticity: Insights into Arteriogenesis, Angiogenesis, and Atherosclerosis

Message from the Guest Editors

Blood vessels possess an extraordinary capacity for adaptation, responding dynamically to physiological demands and pathological insults. Recent advances have revealed that this plasticity is not governed solely by hemodynamic forces or growth factor signaling, but is deeply intertwined with immune regulation. Innate and adaptive immune responses modulate vascular remodeling at every stage: from the initiation of arteriogenesis and the fine-tuning of angiogenic sprouting, to the progression and destabilization of atherosclerotic plaques.

This Special Issue will bring together ground-breaking research and distinguished perspectives at the intersection of vascular biology and immunology. We seek contributions that dissect the molecular and cellular mechanisms through which immune cells influence endothelial behavior, mural cell recruitment, extracellular matrix remodeling, and vascular integrity. Particularly welcome are studies integrating single-cell and spatial omics, advanced imaging, and in vivo modeling to illuminate immune-vascular interactions in both health and disease.

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Message from the Editor-in-Chief

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