

Endothelial Biomedicine

The endothelium, the cell layer that forms the inner lining of blood vessels, is a spatially distributed system that extends to all reaches of the human body. Today, clinical and basic research demonstrates that the endothelium plays a crucial role in mediating homeostasis and is involved in virtually every disease, either as a primary determinant of pathophysiology or as a victim of collateral damage. Indeed, the endothelium has remarkable, though largely untapped, diagnostic and therapeutic potential. This volume endeavors to bridge the bench-to-bedside gap in endothelial biomedicine, with the goal of advancing research and development and improving human health. The book is the first to systematically integrate knowledge about the endothelium from different organ-specific disciplines, including neurology, pulmonary, cardiology, gastroenterology, rheumatology, infectious disease, hematology-oncology, nephrology, and dermatology. Moreover, it is unique in its interdisciplinary approach, drawing on expertise from such diverse fields as evolutionary biology, comparative biology, molecular and cell biology, mathematical modeling and complexity theory, translational research, and clinical medicine.

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Endothelial Biomedicine

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To my wife Renee, and children Xan, Ali, and Jamie

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