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Nota di contenuto	1. Morphological and Functional Characteristics of Blood and Lymphatic Vessels -- 2. The Heart: The Engine in the Center of the Vascular System -- 3. Regulation of Tissue Perfusion and Exchange of Solutes, Macromolecules, and Water between Blood Vessels and the Interstitial Space -- 4. Endothelial Cells: Function and Dysfunction -- 5. Vascular Smooth muscle cells: Regulation of Vasoconstriction and Vasodilation -- 6. Embryonic Development of the Cardiovascular System -- 7. Cellular and Molecular Mechanisms of Vasculogenesis, Angiogenesis, and Lymphangiogenesis -- 8. Mechanisms of Hemostasis: Contribution of Platelets, Coagulation Factors, and the Vessel Wall -- 9. Biologically active lipids in Vascular Biology -- 10. Atherosclerosis -- 11. Venous Thromboembolism -- 12. Genetics of Vascular Diseases -- 13. Animal Models in Cardio-Vascular Biology -- 14. Endothelial Cell Isolation and

Manipulation -- 15. In vitro Assays Used to Analyse Vascular Cell Functions -- 16. The Porcine Coronary Artery Ring Myograph System -- 17. Proteomics in Vascular Biology.

Sommario/riassunto

This well-structured textbook offers essential knowledge on the vascular system. The reader will learn the properties, basic cellular mechanisms and development of the different parts of the vascular system (including the heart), gain knowledge on vascular and related diseases, and will be made familiar with common and most current methods and techniques applied to analyze the vascular system in patients, in animal models, and ex vivo. This book is based on a PhD Course for students from various bioscientific backgrounds given at the Medical University of Vienna, and it will be a valuable resource for Master´s Students in vascular biology and biomedicine in general and a helpful tool for young researchers world-wide wishing to gain or refresh their knowledge in this field.