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| Nota di contenuto       | High-Density Lipoproteins; Contents; Preface; List of Contributors; I HDL Structure; 1 Apolipoprotein A-I Structure; 1.1 Introduction and Perspective; 1.2 Lipid-Free ApoA-I; 1.3 The Role of Protein Structure in ApoA-I Function; 1.4 Full-Length ApoA-I X-Ray Structure; 1.5 Apolipoprotein A-I Structure - Lipid-Bound State; 1.6 Structural Studies of ApoA-I on Discoidal Nascent HDL; 1.7 Hinge Domain; 1.8 Computer Models; 1.9 Spherical HDL; 1.10 Future Directions; 1.11 Acknowledgments; 2 Apolipoprotein A-II; 2.1 Apolipoprotein A-II Structure and Plasma Level Regulation<br>2.1.1 Structural Organization and Transcriptional Regulation of the Gene<br>2.1.2 ApoA-II Mutations and Polymorphisms; 2.1.3 Protein Structure, Synthesis, Secretion, and Metabolism; 2.1.4 Other Determinants of ApoA-II Levels; 2.2 Pathophysiological Role of ApoA-II; 2.2.1 On HDL Metabolism; 2.2.1.1 HDL Remodeling; 2.2.1.2 Reverse Cholesterol Transport Function; 2.2.1.3 Antioxidant and Anti-inflammatory Effects; 2.2.2 Role of ApoA-II in Triglyceride and Glucose |

Metabolism; 2.2.2.1 Triglyceride and Free Fatty Acid (FFA) Metabolism; 2.2.2.2 Glucose Homeostasis 2.2.2.3 Role of ApoA-II in Dyslipidemia and Type 2 Diabetes Mellitus2. 2.3 ApoA-II in Atherogenesis; 2.3 Acknowledgments; 3 Apolipoprotein E and Reverse Cholesterol Transport: The Role of Recycling in Plasma and Intracellular Lipid Trafficking; 3.1 Introduction; 3.2 Role of ApoE in Triglyceride-Rich Lipoprotein Metabolism; 3.2.1 ApoE and Lipoprotein Assembly and Secretion; 3.2.2 ApoE and Lipoprotein Processing and Catabolism; 3.2.3 ApoE and Lipoprotein Uptake; 3.3 Role of ApoE in HDL Metabolism; 3.3.1 HDL Formation and Maturation; 3.3.2 Cholesterol Efflux and RCT 3.3.3 Roles of apoE in RCT and HDL Metabolism3.3.4 Critical Roles for ApoE and SR-BI in RCT; 3.4 ApoE and Recycling; 3.4.1 Evidence for apoE Recycling; 3.4.2 Regulation of ApoE recycling; 3.4.3 ApoE Recycling and Cholesterol Efflux; 3.4.4 Form of Recycled ApoE; 3.4.5 ApoE Recycling: Relevance to Atherosclerosis; 3.5 Summary; 4 ApoM - A Novel Apolipoprotein with Antiatherogenic Properties; 4.1 Introduction; 4.2 Cloning and Characterization of Human ApoM; 4.3 Gene Location and Amino Acid Sequence of ApoM; 4.4 Protein Structure of ApoM; 4.5 Distribution of ApoM in Plasma Lipoproteins 4.6 Tissue Distribution and Cellular Expression of ApoM4.7 Putative Functions of ApoM; 4.8 Regulation of ApoM; 4.9 Hormonal Regulation of ApoM; 4.10 Clinical Observations; 4.11 Conclusions and Perspectives; II HDL Plasma Metabolic Factors; 5 ATP Binding Cassette Transporters; 5.1 The Family of ABC Transporters - General Features; 5.2 ABC Transporters and Lipid Transport; 5.3 The ABCA Subfamily and the Handling of Excess Lipids; 5.3.1 ABCA1; 5.3.1.1 ABCA1 Expression and its Control; 5.3.1.2 Structural Considerations 5.3.1.3 ABCA1 and Cellular Effluxes of Phospholipid and Cholesterol - Facts and Speculation

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### Sommario/riassunto

This book meets the long-awaited need for a comprehensive overview of the biological role of HDLs. Edited by one of the pioneers in HDL and cholesterol research, this monograph summarizes current knowledge on HDL turnover, regulation and physiology. Clearly structured, the various sections cover HDL structure, formation, secretion and removal, as well as plasma metabolic factors. The biological activities and clinical aspects are equally discussed, as is the impact of HDL on common diseases and their prevention.

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