

*Sidney P. Colowick and Nathan O. Kaplan*

# Methods in ENZYMOLOGY

Volume 129

Plasma Lipoproteins

Part B

Characterization, Cell Biology,  
and Metabolism

*Edited by*

John J. Albers

Jere P. Segrest

*Methods in Enzymology*

*Volume 129*

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## Preface

Methodology development has played a central role in understanding the structure, biosynthesis, and physiological functions of the plasma lipoproteins. The ultracentrifuge played a major role in the discovery and characterization of the plasma lipoproteins, and the instrument continues to be a methodologic mainstay. One result has been a progressively better appreciation of the metabolic interrelationships of the different plasma lipoprotein species.

The discovery of the LDL receptor less than 15 years ago ushered in the molecular era in plasma lipoprotein physiology. Simultaneously, the identification, isolation, and amino acid sequence analyses of the different plasma apolipoproteins laid the foundation for a molecular revolution in our understanding of plasma lipoprotein structure and metabolism. This revolution has been accelerated in the past five years by explosive advances in recombinant DNA technology. The structures of the genes encoding for apolipoproteins, lipoprotein receptors, and enzymes involved in the regulation of lipoprotein metabolism are emerging. With the added availability of new techniques for the isolation and analysis of plasma lipoprotein subspecies, an exciting new era in lipoprotein research beckons. This era promises a detailed understanding of the molecular basis for genetic and metabolic regulation of the plasma lipoproteins.

The exciting state of growth in lipoprotein research, the complete lack of a recent comprehensive treatise on the central methodology presently being used in the field, and the relatively limited treatment of lipoproteins in earlier volumes of *Methods in Enzymology* warranted the assembly of this two-volume work. Volume 128, Part A, deals with the preparation, structure, and molecular biology of the plasma lipoproteins; Volume 129, Part B, deals with the characterization, cell biology, and metabolism of the plasma lipoproteins. These volumes should serve as convenient handbooks for all investigators involved in lipoprotein research.

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# METHODS IN ENZYMOLOGY

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