

# THE BILE ACIDS

Chemistry, Physiology, and Metabolism

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VOLUME 4: METHODS AND APPLICATIONS

# THE BILE ACIDS

**Series Editors: Padmanabhan P. Nair and  
David Kritchevsky**

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*Volume 1: Chemistry*

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# THE BILE ACIDS

## Chemistry, Physiology, and Metabolism

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VOLUME 4: METHODS AND APPLICATIONS

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## **PREFACE**

Over a decade has elapsed since the last volume in this series was published. At that time we considered that we had comprehensively covered all aspects relating to bile acid chemistry and physiology. However, major strides have been made in our understanding of the physiology and pathophysiology of bile acids, due largely to the great advances which have taken place in analytical technology. As a result, the need to document these advances was felt acutely, and therefore this volume is devoted to methodologies in bile acid analysis and their applications.

This volume includes twelve chapters written by prominent scientists in the field of bile acid research. The initial chapter discusses techniques of extraction and isolation of bile acids from biological fluids. It is followed by descriptions of physical methods of analysis and discussions of the way these techniques have been applied in the field of bile acid research. Of practical value is the inclusion of a comprehensive list of spectra obtained for references by nuclear magnetic resonance spectroscopy and mass spectrometry. These chapters are followed by reviews of biological methods of immunoassay and bioluminescence. Specific applications of these techniques are then addressed in contributions relating to bile acid analysis of tissue, serum, urine, and feces.

With this integrated approach we have attempted to provide a volume which represents a comprehensive review of the analytical field of bile acids, while also serving as a useful reference book for those workers involved in bile acid analysis.

Inevitably there are several areas not covered in this volume and the description of applications has been largely restricted to the analysis of biological fluids from man. As editors we take responsibility for these omissions, our excuse being that the content is already at the limit of what can be reasonably accommodated in a single volume.

We wish to express our sincere thanks to Mary Jo McCarthy for typing

assistance, and we are indebted to Frances M. Murray and Shirley A. Tepper for their expert help in the preparation of the index.

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