

METHODS IN MOLECULAR BIOLOGY

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Alpha-1 Antitrypsin Deficiency

Methods and Protocols

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Preface

Why Did We Write This Book?

The book was triggered by the expansion in the field of alpha-1 antitrypsin (AAT) research. While by no means exhaustive, this book is meant to provide the essential protocols to laboratories ranging from new scientists in the field to more established alpha-one researchers. The aim of this book is to present a solid background by experts in their respective subfield of AAT research as well as state-of-the-art methods that are relevant to the audience, for both clinical and the bench researchers.

Who Is This Book For?

The intended audience of this book is researchers, students, and clinician-scientists interested in AAT deficiency, as well as clinicians in particular those in the fields of pulmonology and hepatology.

What Is in the Book?

This volume of the *Methods in Molecular Biology* series provides a collection of protocols. The book opens with reviews on the pathophysiology of the liver and lungs. Subsequently, protocols are organized in three parts: *Part I* is dedicated to patient-oriented research, *Part II* to animal models, and *Part III* to in vitro work. The book concludes with reviews from experts in the various fields relating to AAT translational research who share their vision of current and/or future therapeutics.

Worcester, MA, USA

*Florie Borel
Christian Mueller*

Acknowledgments

This book is the result of a long effort from many parties, and we would like to thank the publisher for entrusting us with this task, as well as to convey our appreciation to all our authors for their time and effort on this endeavor. We would like to acknowledge the wonderful alpha-1 patient community who remains a constant source of inspiration to many AAT labs around the world. We would like to dedicate this work to John and Fred Walsh who both have already accomplished so much for the field by increasing awareness and research for patients with alpha-1 antitrypsin deficiency and who are very dear to all the members of the Mueller Lab. Finally, we hope that this volume may find its place in many labs and contribute to the development of new therapeutics for alpha-1 patients.

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