

GOODMAN & GILMAN's The
PHARMACOLOGICAL
BASIS OF
THERAPEUTICS

Ninth Edition

药物治疗学

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世界图书出版公司

GOODMAN & GILMAN's The PHARMACOLOGICAL BASIS OF THERAPEUTICS

Ninth Edition

INTERNATIONAL EDITION

McGraw-Hill

HEALTH PROFESSIONS DIVISION

New York St. Louis San Francisco Auckland Bogotá Caracas Lisbon London Madrid
Mexico City Milan Montreal New Delhi San Juan Singapore Sydney Tokyo Toronto

McGraw-Hill

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Goodman and Gilman's THE PHARMACOLOGICAL BASIS OF THERAPEUTICS, 9/e

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1234567890 DOWDOW 98765

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When ordering this title, use ISBN 0-07-113348-8.

This book was set in Times Roman by York Graphic Services, Inc. The editors were Martin J. Wonsiewicz and Peter McCurdy; the production supervisors were Robert Laffler and Clare Stanley; the cover designer was Marsha Cohen/Parallelogram, and the index was prepared by Irving Condé Tullar.

R.R. Donnelley and Sons Company was printer and binder.

This book is printed on acid-free paper.

Library of Congress Cataloging-in-Publication Data

Goodman & Gilman's *The Pharmacological Basis of Therapeutics*. —9th ed. / Joel G. Hardman, Alfred Goodman Gilman, Lee E. Limbird.

p. cm.

Includes bibliographical references and index.

ISBN 0-07-026266-7 (hardcover)

I. Pharmacology. 2. Chemotherapy. I. Goodman, Louis Sanford. II. Gilman, Alfred. III. Hardman, Joel G. IV. Gilman, Alfred Goodman. V. Limbird, Lee E.

[DNLM: 1. Pharmacology. 2. Drug Therapy. QV 4 G6532 1995]

RM300.G644 1995

615'.7—dc20

DNLM/DLC

for Library of Congress

95-36658

(陕)新登字 014 号

著作权合同登记 陕版出图字:25-1998-095 号

This edition is permitted by arrangement With McGraw-Hill Book Co. Singapore

The Pharmacological Basis Of Therapeutics

药物治疗学

by Joel G. Hardman & Lee E. Limbird

任卫军 重印责任编辑

世界图书出版西安公司重印发行

(西安市 南大街 93 号 邮编 710001)

世界图书出版西安公司印刷厂印刷

787×1092 毫米 开本 1/16 印张 120.5

1998 年 8 月第 1 次重印

ISBN 7-5062-3794-6/R·268

定价:723.00 元

ISBN 0-07-113348-8



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Preface

This ninth edition of *Goodman and Gilman's The Pharmacological Basis of Therapeutics* is the first edition of this book that has not been painstakingly edited, word for word, by a member of the Goodman or Gilman family. Nevertheless, the three objectives that guided the writing of the first edition, stated in its preface and reprinted herein, also have guided our efforts: correlation of pharmacology with related medical sciences, reinterpretation of the actions and uses of drugs from the viewpoint of important advances in medicine, and placing of emphasis on the application of pharmacodynamics to therapeutics.

Some changes have been made in this edition to facilitate achievement of these objectives. For example, each of the chapters has been reviewed by at least one physician, expert in the clinical areas treated by the agents discussed, and by a pharmacist. These physician and pharmacist reviewers, to whom the editors are grateful, are identified in the pages following the list of contributing authors. Each chapter begins with a *Synopsis* in an effort to link the contents of that chapter with other chapters in the book where complementary material is discussed. The pace at which new knowledge is being obtained is ever accelerating and has led to the addition of a *Prospectus* at the end of most chapters. It is largely in these sections that conceptual advances or therapeutic agents in early clinical trials are mentioned, with the intent of helping readers of this book search the biomedical literature for updated information during the period before the publication of the tenth edition.

Several new chapters have been added. In the section "General Principles" (Section I), a chapter has been added on the principles of gene therapy. Whether or not gene therapy ultimately achieves all that is hoped for it, its clinical strategies nonetheless may reveal insights into the molecular bases of disease in a setting that otherwise could not be achieved by studies in animal models or in healthy human volunteers. The identification of diverse serotonin receptor subtypes and clarification of the roles of different subtypes in the central nervous system and gastrointestinal tract encouraged us to include a new chapter on sero-

tonin receptor agonists and antagonists. We also have added new chapters on the treatment of migraine and on ocular pharmacology. As in previous editions, each chapter in the book emphasizes therapeutic advances permitted by newly marketed drugs and some investigational agents. The compilation of pharmacokinetic data (Appendix II) includes 335 agents, of which 91 are new entries.

We are grateful to Dr. Perry B. Molinoff and Dr. Raymond W. Ruddon, our editorial colleagues, whose insightful advice and dedicated efforts in editing this volume were essential to its completion. We, of course, are greatly indebted to all of the contributors to this edition, in particular to those who delivered their chapters by or before the requested deadline. In addition to the editors and contributors, three other individuals played a vital role in the production of this edition. Edna M. Kunkel worked as both graphic artist and editorial assistant and was assisted in the latter role by Jane C. Almon. Lauralea Edwards, D.Ph., was exhaustive in her efforts to document the references and to assure accuracy of pharmaceutical information included in this edition, particularly agents released for clinical use in the United States during the course of the book's preparation and agents in use in other countries. Without the tireless and highly skillful work of these three individuals, the timely completion of this book would not have been possible. We also appreciate the encouragement, efforts, and "final push" provided by Martin Wonsiewicz and Peter McCurdy of McGraw-Hill.

Finally, we are extremely grateful for the enthusiasm, wisdom, encouragement, and friendship of our consulting editor, Dr. Alfred Goodman Gilman. We were and remain, even at its conclusion, intimidated by the daunting task of editing this book. Now fully aware of the effort required, we are even more in awe of Dr. Gilman's editing of previous editions of this book and flattered by his willingness to entrust the editing of this edition to us. The ninth edition is dedicated to Dr. Alfred Goodman Gilman in recognition of his contributions to this and previous editions of this book, to the field of pharmacology, and to science in general.

JOEL G. HARDMAN
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October 18, 1995

Preface to the First Edition

Three objectives have guided the writing of this book—the correlation of pharmacology with related medical sciences, the reinterpretation of the actions and uses of drugs from the viewpoint of important advances in medicine, and the placing of emphasis on the applications of pharmacodynamics to therapeutics.

Although pharmacology is a basic medical science in its own right, it borrows freely from and contributes generously to the subject matter and technics of many medical disciplines, clinical as well as preclinical. Therefore, the correlation of strictly pharmacological information with medicine as a whole is essential for a proper presentation of pharmacology to students and physicians. Furthermore, the reinterpretation of the actions and uses of well-established therapeutic agents in the light of recent advances in the medical sciences is as important a function of a modern textbook of pharmacology as is the description of new drugs. In many instances these new interpretations necessitate radical departures from accepted but outworn concepts of the actions of drugs. Lastly, the emphasis throughout the book, as indicated in its title, has been clinical. This is mandatory because medical students must be taught pharmacology from the standpoint of the

actions and uses of drugs in the prevention and treatment of disease. To the student, pharmacological data per se are valueless unless he is able to apply his information in the practice of medicine. This book has also been written for the practicing physician, to whom it offers an opportunity to keep abreast of recent advances in therapeutics and to acquire the basic principles necessary for the rational use of drugs in his daily practice.

The criteria for the selection of bibliographic references require comment. It is obviously unwise, if not impossible, to document every fact included in the text. Preference has therefore been given to articles of a review nature, to the literature on new drugs, and to original contributions in controversial fields. In most instances, only the more recent investigations have been cited. In order to encourage free use of the bibliography, references are chiefly to the available literature in the English language.

The authors are greatly indebted to their many colleagues at the Yale University School of Medicine for their generous help and criticism. In particular they are deeply grateful to Professor Henry Gray Barbour, whose constant encouragement and advice have been invaluable.

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ALFRED GILMAN

New Haven, Connecticut
November 20, 1940

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