

THE
BIOTECH
INVESTOR'S
BIBLE

GEORGE WOLFF

Like the industry itself, the fundamentals of biotech investing are unique. Because the financial characteristics of biotechnology investments are unlike those of any other sector on the market, few analysts and investors predicted the industry's recent, dramatic gains and even fewer profited from it.

The Biotech Investor's Bible is a practical guide to the essentials of biotechnology investment. Along with the most promising investing strategies, George Wolff provides an overview of an industry that many observers expect to emerge over the next century as the largest and most important business sector in the world.

Wolff first focuses on the unique financial forces that drive biotech markets. With this approach, you'll gain a better understanding of the structure of the industry and its many processes, setting the stage for an analysis of sensible investment criteria. He then simplifies complex scientific concepts and technical terminology so you can quickly cut through industry jargon and make informed investment decisions.

To help you get in as close as possible on biotech's ground floor, Wolff prepares you with:

- Guidelines and commonsense methods for picking companies
- Details on new technologies and innovations

(continued on back flap)

THE BIOTECH INVESTOR'S BIBLE

GEORGE WOLFF



JOHN WILEY & SONS, INC.

New York • Chichester • Weinheim • Brisbane • Singapore • Toronto

#9731

THE
BIOTECH
INVESTOR'S
BIBLE

GEORGE WOLFF

This book is printed on acid-free paper. ©

Copyright © 2001 by George Wolff. All rights reserved.

Published by John Wiley & Sons, Inc.

Published simultaneously in Canada.

No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 750-4744. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 605 Third Avenue, New York, NY 10158-0012, (212) 850-6011, fax (212) 850-6008, E-Mail: PERMREQ@WILEY.COM.

This publication is designed to provide accurate and authoritative information in regard to the subject matter covered. It is sold with the understanding that the publisher is not engaged in rendering professional services. If professional advice or other expert assistance is required, the services of a competent professional person should be sought.

ISBN 0-471-41279-1

Printed in the United States of America.

10 9 8 7 6 5 4 3 2 1

338.4
WOL

Contents

Preface	ix
Acknowledgments	xiii
Part I The Investment Perspective	
Introduction: Biotechnology's PC Paradigm	3
Chapter 1: At the Threshold	9
Chapter 2: Assessing the Biotech Market	26
Chapter 3: The Keys to Biotech Investing	50
Chapter 4: Going over Biotech Books	75
Chapter 5: Four Tiers of Biotech Companies	89
Chapter 6: Biotechnology and Portfolio Planning	113
Chapter 7: Decision Making	135
Chapter 8: The Sector in Perspective	155
Chapter 9: The Biotech Investor's Checklist	160
Part II The Scientific and Technological Perspective	
Chapter 10: The Science behind the Industry	169
Chapter 11: The Language of Genes	186
Chapter 12: The Realms of Biotechnology (or Who's Doing What)	193
Chapter 13: The Picks and Shovels of Biotechnology	204
Chapter 14: The New Biotech Therapies	216
Chapter 15: Special Sectors	238

Epilogue	257
Appendixes	
A: A Breakdown of 185 Major Biotech Companies: Alphabetically, by Market Cap, and by Tier	259
B: Resources	284
C: Glossary	289
Notes	303
Index	309