

ADP-Ribosylating Toxins and G Proteins

Insights into Signal Transduction

Edited by **Joel Moss** and **Martha Vaughan**, *National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, Maryland*

The contents of this important synthesis and the expert contributors span the disciplines of microbiology, biochemistry, molecular biology, and pharmacology to review current knowledge about ADP-ribosylating toxins, guanine nucleotide-binding proteins, receptors, and signal transduction. Recombinant DNA technology has been applied to elucidate the molecular basis of action of these bacterial toxins, which are responsible in part for the syndromes characteristic of a number of infectious diseases.

This book will very effectively update interested scientists and students on the current status of research into ADP-ribosylating toxins and related topics and will point the way for future advances.

CONDENSED CONTENTS

I. Bacterial ADP-Ribosyltransferases: Toxins and Related Proteins (9 chapters by Collier, Bodley and Veldman, Wick and Iglewski, U. Aktories and Just, Aktories et al., Mekalanos and DiRita, Fishman, and Murphy and Strom)

II. Guanine Nucleotide-Binding Proteins Coupled to Signal Transduction in Animal Cells (13 chapters by Raymond et al., Kaziro, Spiegel, Birnbaumer et al., De Vivo and Gershengorn, Snyderman et al., Serventi et al., Manning, Gautam and Simon, Gibbs et al., Price et al., Takai et al., and Boback et al.)

III. ADP Ribosylation in Bacteria and Animal Cells (6 chapters by Lowery and Ludden, Jacobson et al., Williamson and Moss, Iglewski and Fendrick, Ueda, and Miwa and Sugimura)

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This unique volume reviews current research at the forefront of investigation into the structure and function of the bacterial chromosome, summarizes the foundations of this research in previous work, and provides insights into future trends and directions. The need for such a compilation became apparent to many leading experts who assembled at a 1988 ASM conference. From there, the project soon expanded into an ambitious review encompassing perspectives ranging from bacterial genetics through molecular biology, biochemistry, and microbiology and including such useful features as detailed structural models and up-to-date genetic maps.

The 39 chapters represent the ongoing work in nearly as many leading laboratories and include an introductory chapter by the editors which recounts the historical developments leading to the present state of our knowledge and which serves to integrate the diverse approaches of the contributors. The result is an eminently useful book that will be appreciated by both scientists and graduate students.

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Prologue (2 chapters by Drlica and Riley and Berg)

Primary Structure: Genetic and Physical Maps (9 chapters by Kohara, Daniels, Condemine and Smith, Brewer, Riley and Sanderson, Holloway et al., Piggot, Hopwood and Kieser, and Pardee)

Configuration of DNA (9 chapters by Kellenberger, Wells et al., Drlica et al., Smith et al., Yang and Ames, Thompson et al., Pettijohn and Hodges-Garcia, Rouviere-Yaniv et al., and Imamoto and Kano)

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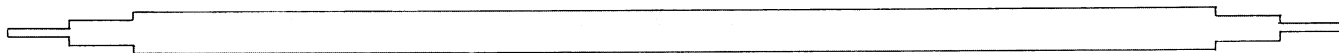
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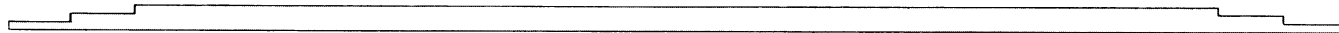
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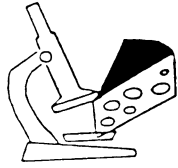
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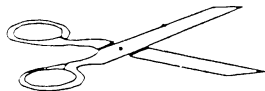


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Editors: **YEHUDA COHEN**, *Interuniversity Institute of Eilat, Eilat, and*
EUGENE ROSENBERG, *Tel Aviv University, Ramat Aviv, Israel*

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This book focuses on microbial processes in microbial mats and their interaction with the environment of deposition. It is based on an international conference held in Eilat, Israel, in September 1987.

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- I. Environments of Depositions** (8 chapters by Ward et al., Belkin and Jannasch, Cohen, Guerrero and Mas, Zohary, Oren, de Winder et al., and Lazar et al.)
- II. Structure and Function of Benthic Microbial Communities** (9 chapters by D'Amelio et al.,

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- III. Regulation of Adhesion and Hydrophobicity of Cell Surfaces in the Formation of Microbial Mats** (6 chapters by Shilo, Bar-Or et al., Rosenberg et al., Low and White, Marshall, and Rosenberg)

- IV. Physiology of Major Mat-Building Microorganisms** (10 chapters by Stal et al., Padan, Caumette, Post et al., van Gemerden and de Wit, de Wit and van Gemerden, Paerl et al., Truper and Galinski, Kuenen, and Wimpenny)

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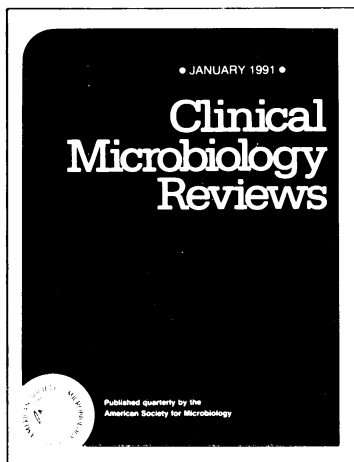
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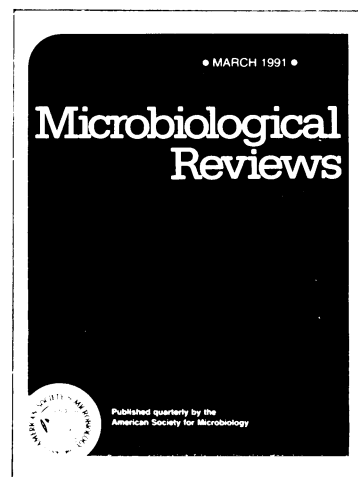
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THE BACTERIAL CHROMOSOME

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This unique volume reviews current research at the forefront of investigation into the structure and function of the bacterial chromosome, summarizes the foundations of this research in previous work, and provides insights into future trends and directions. The need for such a compilation became apparent to many leading experts who assembled at a 1988 ASM conference. From there, the project soon expanded into an ambitious review encompassing perspectives ranging from bacterial genetics through molecular biology, biochemistry, and microbiology and including such useful features as detailed structural models and up-to-date genetic maps.

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Edited by Christon J. Hurst

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