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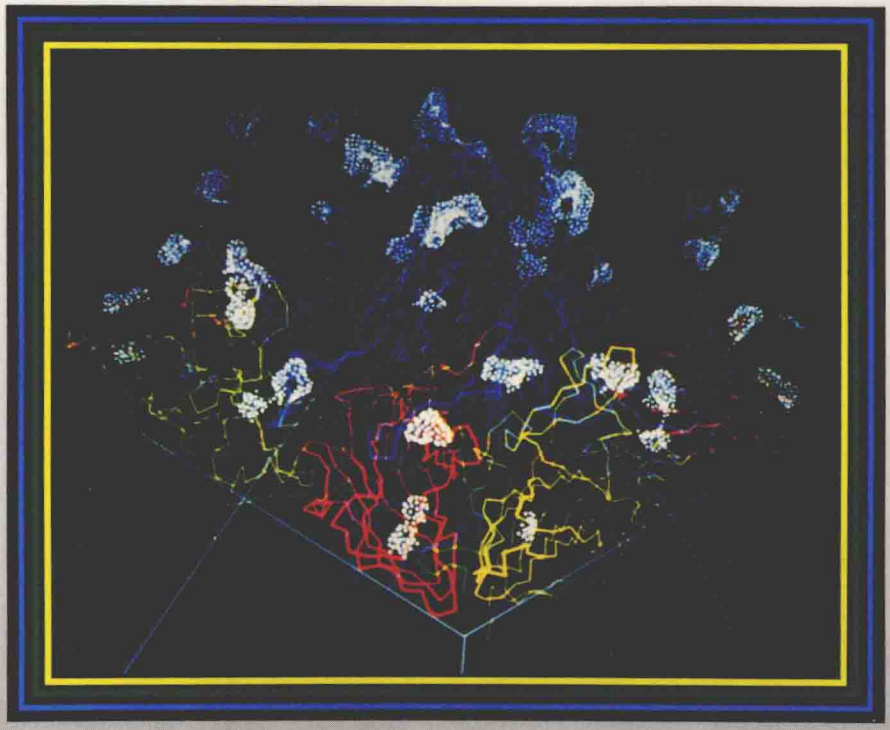

NEW APPROACHES TO IMMUNIZATION

DEVELOPING VACCINES AGAINST PARASITIC, BACTERIAL, AND VIRAL DISEASES

Vaccines86

NEW APPROACHES TO IMMUNIZATION

Developing Vaccines against Parasitic, Bacterial, and Viral Diseases

Edited by

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COLD SPRING HARBOR LABORATORY 1986

VACCINES 86
NEW APPROACHES TO IMMUNIZATION
Developing Vaccines against Parasitic, Bacterial, and Viral Diseases

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Front cover: White dots highlight the antigenic sites of poliovirus. A pentamer of the major coat proteins is shown. VP1 is blue, VP2 is yellow, and VP3 is red. (Adapted from J.M. Hogle and D.J. Filman, Research Institute of Scripps Clinic, La Jolla, California, and M. Chow, Massachusetts Institute of Technology, Cambridge.)

Back cover: Pasteur injecting the rabies virus vaccine into an early recipient. (Courtesy of the Department of Documentation, Institut Pasteur, Paris, France.)

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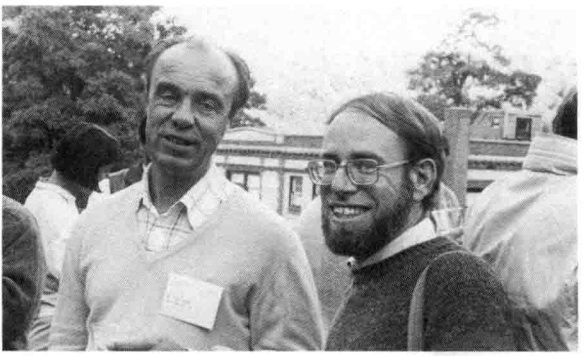
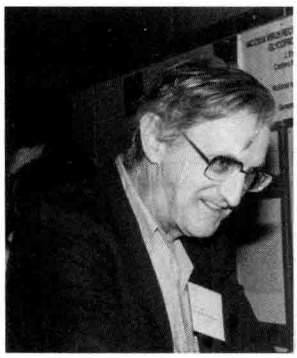
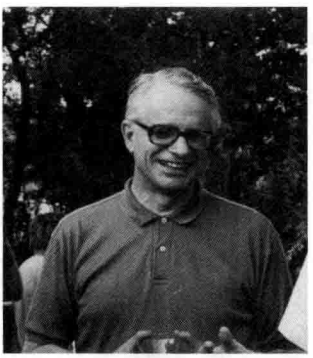

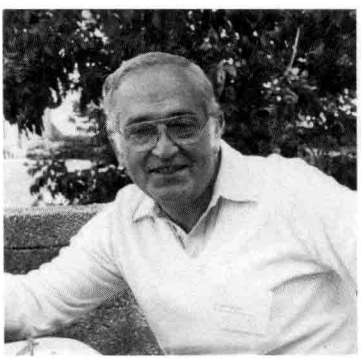
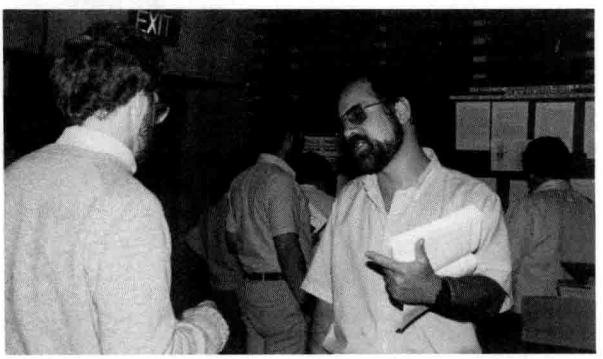



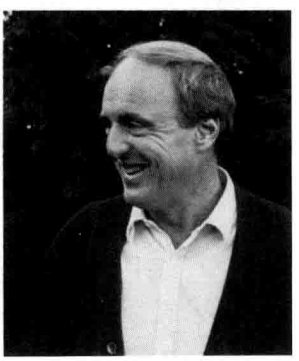

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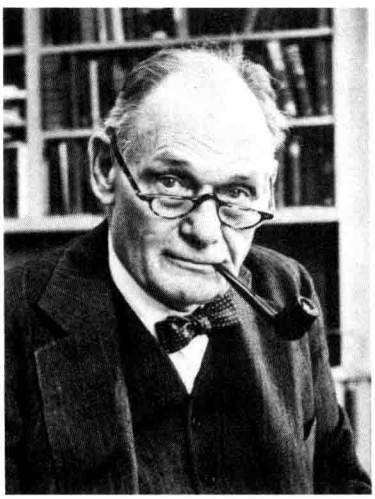
F. MacFarlane Burnet
(1899-1985)



John F. Enders
(1897-1985)

Rodney R. Porter
(1917-1985)

Preface

The highly successful meetings held at Cold Spring Harbor Laboratory in 1983 and 1984 on Modern Approaches to Vaccines underscored the interest in this topic, and judging from the increase in the number of participants at the meeting in 1985, there appears to be no waning of this interest. As in the previous volumes, Vaccines 86 includes papers on viruses, pathogenic bacteria, and parasites that cause important diseases. There are, however, two important additions to this volume. A complete section is devoted to a single disease, AIDS. With one of the greatest microbiological problems confronting us at this time, it was considered opportune to discuss fully the prospects for a vaccine against this disease. A section on immunology is also included because we recognize that in order to achieve optimal effectiveness of the new vaccines, we must reach a better understanding of the immunological responses that provide maximal resistance to infection and disease.

The meeting was held within 2 weeks of the deaths of three Nobel laureates, F. MacFarlane Burnet, John F. Enders, and Rodney R. Porter, whose contributions to the fields of virology and immunology laid the foundations of much of the work described here. We dedicate this volume to their memory.

The organizers wish to thank the NIH-NIAID Intramural Research Program and Wellcome Biotechnology, Ltd., for their generous financial support. We also acknowledge the contributions from the following Corporate Sponsors, who provided core support for this meeting: Agrigenetics Corporation, American Cyanamid Company, Amersham International plc, Becton Dickinson and Company, Biogen S.A., Cetus Corporation, Ciba-Geigy Corporation, CPC International Inc., E.I. du Pont de Nemours & Company, Genentech, Inc., Genetics Institute, Hoffmann-La Roche Inc., Johnson & Johnson, Eli Lilly and Company, Mitsui Toatsu Chemicals, Inc., Monsanto Company, Pall Corporation, Pfizer Inc., Schering-Plough Corporation, Smith Kline & French Laboratories, and the Upjohn Company.

Once again, we thank Dr. James Watson for his continuing support and for making available the conference and publications facilities of Cold Spring Harbor Laboratory. The meetings office staff, headed by Gladys Kist, provided invaluable assistance and we thank them for their help in organizing the meeting. We also appreciate the efforts of the publications office, in particular Nancy Ford, Dorothy Brown, and Marty McMaster, for helping to prepare this book for publication. Not least, the efficiency of Herb Parsons in helping all the speakers at the meeting to communicate their data to the participants is greatly appreciated.

F.B.
R.M.C.
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