INFORMATIONAL MACROMOLECULES

EDITED BY

Henry J. Vogel
Vernon Bryson
J. Oliver Lampen

INFORMATIONAL MACROMOLECULES

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Edited by

Henry J. Vogel
Vernon Bryson
J. Oliver Lampen

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Preface

In the area of molecular biology, efforts converging from various disciplines have recently led to breakthroughs in our understanding of the molecular basis for the storage, transmission, and expression of genetic information. These efforts largely concern the synthesis and functioning of what may be viewed as the two fundamental classes of biological polymers, the nucleic acids and proteins. The bodies of knowledge regarding these two kinds of macromolecules are now being unified through the genetic code, a concept of broad scope and high precision, which furnishes the key to the translation of the language of nucleotides into the language of amino acids. In such translation, particular interest attaches to the informational macromolecules which carry instructions for the amino acid sequence in proteins.

A Symposium on Informational Macromolecules was held at the Institute of Microbiology of Rutgers, The State University, September 5 to 7, 1962, with support from the National Science Foundation. The proceedings of the symposium are contained in this volume.

We are very much indebted to Dr. Severo Ochoa for his delivery of the Opening Address. The contributions of the session chairmen, Dr. D. M. Bonner, Dr. S. S. Cohen, Dr. W. F. Harrington, Dr. T. H. Jukes, Dr. F. Lipmann, Dr. D. M. Prescott, and Dr. E. L. Tatum, and of Dr. C. B. Anfinsen, who made his presentation as an Evening Lecture, are also gratefully acknowledged. We appreciate an address given by Dr. H. Fraenkel-Conrat for which, as arranged before the meeting, no manuscript was submitted. Some concluding thoughts were kindly expressed by Dr. R. D. Hotchkiss.

For their diligent help in connection with many details in the organization of the meeting and in the publication of this volume, we would like to thank Mr. E. R. Isaacs and the other staff members of the Institute of Microbiology who were involved.

April, 1963

HENRY J. VOGEL
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Introductory Remarks

J. Oliver Lampen

Director, Institute of Microbiology

I would like to welcome all of you to the Institute of Microbiology. This Symposium is part of a general series for which we select highly active research areas that warrant detailed consideration. We thought that the recent flood of experimental results and ideas concerning the nature of the genetic code and the molecular mechanisms of protein synthesis and of its regulation would provide sufficient interlocking and stimulating features for a valuable and timely discussion. Hence, our concentration on Informational Macromolecules.

I want to express our pleasure at having you here and our hope that you will enjoy the sessions. We will do our best to make them comfortable and, if possible, provocative for you.