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CHEMICAL AND BIOLOGICAL ASPECTS OF VITAMIN B_6 CATALYSIS

PART A

Metabolism, Structure, and Function of Phosphorylases, Decarboxylases, and Other Enzymes

Proceedings of a Symposium Held in Athens, Greece, May 29–June 3, 1983

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See pages following the index for previous titles in this series.

CHEMICAL AND BIOLOGICAL ASPECTS OF VITAMIN B_6 CATALYSIS

PART A

Metabolism, Structure, and Function of Phosphorylases, Decarboxylases, and Other Enzymes

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Contents of Part B: Metabolism, Structure, and Function of Transaminases

Preface

Enzymatic catalysis and biology of vitamin B_6 has made great progress in the last five years, covering some of the most important biological reactions in the fields of amino acid, protein, and glycogen metabolism as well as in other areas of biological research. These two volumes contain papers presented at Symposium 121 of the International Union of Biochemistry on "Chemical and Biological Aspects of Vitamin B_6 Catalysis" held in Athens between May 29 and June 3, 1983.

Published records of scientific symposia lose much of their value if publication is unduly delayed. In the present instance, we have decided to proceed with publication at the expense of omitting the interesting discussions which occurred during the course of the meeting.

The symposium was sponsored and supported by the Ministries of Culture and Sciences, and Research and Technology of Greece, the International Union of Biochemistry, the Hellenic Biochemical and Biophysical Society, and Hoffmann-LaRoche, Inc. The editor wishes to thank these organizations for their sponsorship and generous support. Thanks are also due to the Organizing Committee for their invaluable help in putting together the program of the symposium and contributing so fully to an efficient and enjoyable meeting.

Finally, the editor would like to take this occasion to thank each of the authors and other participants whose contributions made this meeting such an intellectually stimulating and profitable event.

A.E. Evangelopoulos

Introduction

The first international symposium devoted to chemical and biological aspects of pyridoxal catalysis was held in Rome in 1962. Thereafter, advances in the study of this problem have been surveyed in several international symposia: in Moscow (1966), Nagoya (1967), Leningrad (1974), Toronto (1979), and in a number of meetings on the national level, summarizing the progress achieved in this important field of research. The symposium held in Athens on May 29–June 3, 1983 was the most recent landmark in the area. It was attended by more than a hundred participants from many countries. The lecturers, posters, and lively discussions will long be remembered by those who attended the sessions, and will act as a stimulus for future investigations.

One should point out, as a breakthrough in recent years, the elucidation, at high resolution, of the three-dimensional structures of glycogen phosphorylase, of the cytosolic and mitochondrial isoenzymes of aspartate transaminase. In the near future we shall undoubtedly witness clarification of the spatial structure of a broader range of vitamin B_6-dependent enzymes, and this will lay the ground for new, deeper insight into various aspects of the evolution, catalytic specificity, and mechanism of action of this group of enzymes.

The high professional level and smooth course of the meeting was due to its excellent organization by the National Hellenic Organizing Committee, chaired by Professor A.E. Evangelopoulos. On behalf of all the participants, I would like to express our sincere thanks to the organizers of this very proficient and eminently enjoyable meeting.

Alexander E. Braunstein

Contents