

PREFACE

This volume contains the proceedings of the International Symposium on "Thirty Years of Progress in Mitochondrial Bioenergetics and Molecular Biology" which was held at Selva di Fasano near Bari from the 7th to the 10th of October 1994. The Symposium was organized in honour of the 70th birthday of Ernesto Quagliariello, professor of Biochemistry at the University of Bari since 1962, by all his pupils who made up the Organizing Committee: M.N. Gadaleta, R. Gallerani, G. Genchi, V. Gnoni, F. Guerrieri, A. Guerriore, C. Landriscina, M. Libonati, N.E. Lofrumento, M. Lorusso, E. Marra, F. Palmieri (chairman), S. Papa, S. Passarella, C. Saccone, F. Salvatore and I. Stipani. The Symposium was one of the traditional "Bari meetings" which have regularly taken place in the Bari area since 1965, conceived and realised mainly thanks to the efforts made by prof. Quagliariello. Nearly all the lectures given at the Symposium are included in the volume.

The topics of this meeting represent timely and currently exciting areas of the research focused on mitochondria. The first section deals with bioenergetics, especially with the recent progress made in elucidating the structure and function of the respiratory chain as well as of the ATP synthase. In a number of contributions several mitochondrial transport systems have been described showing that the field of transport has advanced to a better understanding of its mechanisms by the molecular approach. In another section aspects have been reported regarding the biogenesis of mitochondria with special emphasis on the structure, replication, expression and evolution of mitochondrial DNA as well as on the nucleo-cytoplasmic-mitochondrial interactions. The last topic of the Symposium deals with the molecular bases of mitochondrial diseases, a field that

has exploded in the last few years and has achieved significant advances.

It is felt that these proceedings form a comprehensive and up-to-date record of present knowledge at the molecular level of many important mitochondrial processes. Major achievements as well as new openings in the field have been stressed in many of the contributions to this book. Thus, it represents a valuable source and reference book, comprising the most recent results in this area. The topics treated should attract the attention of scientists from various fields, who are interested in bioenergetics, molecular biology and pathology of mitochondria.

The volume has been published as quickly as possible thanks to the efforts of the publishers whose co-operation is gratefully acknowledged.

The Editors