
Preface

The purpose of this book is to provide a definitive treatise on the conceptual principles and practical considerations regarding research initiatives in mitochondrial function. There has been a robust emergence of interest in mitochondrial bioenergetics of late, much of it driven by realization of the impact of drug and environmental chemical-induced disturbances of mitochondrial function as well as hereditary deficiencies and the progressive deterioration of bioenergetic performance with age. These initiatives have fostered the investment of enormous resources into the investigation of genetic and environmental influences on bioenergetics, demanding a certain degree of understanding of the fundamental principles and a level of proficiency in the practice of mitochondrial bioenergetic research.

This book is intended as a bench reference for a broad scope of readers, spanning students of mitochondrial bioenergetics to practitioners in the industries of pharmaceutical and environmental sciences as well as mitochondrial genetics. Each section is prefaced with a short treatise introducing the fundamental principles for that section followed by chapters describing the practical principles and assays designed to derive quantitative assessment of each set of parameters that reflect different aspects of mitochondrial bioenergetics. The hope is that this text will help elevate the quality and rate of investigative discoveries regarding disease states associated with environmental or genetic influences on mitochondrial bioenergetics.

Coimbra, Portugal
Coimbra, Portugal

Carlos M. Palmeira
António J. Moreno

Mitochondrial Bioenergetics

Methods and Protocols

Palmeira, C.M.; Moreno, A.J. (Eds.)

2012, XI, 333 p. 83 illus., 25 illus. in color., Hardcover

ISBN: 978-1-61779-381-3

A product of Humana Press