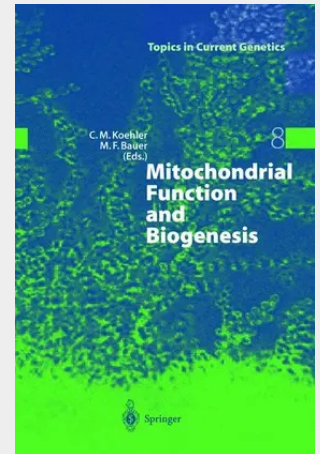


Mitochondrial Function and Biogenesis

Mitochondria are complex organelles, possessing a double-membrane and even their own genome, the mtDNA. They play a pivotal role in cellular metabolism, respiration, and production of ATP essential for the normal function of all human organ systems. It is not surprising, therefore, that genetic defects of mitochondrial functions cause a wide spectrum of human diseases. This book provides the first modern and truly comprehensive coverage of the biochemistry, genetics, and pathology of mitochondria in different organisms. It particularly focuses on the recent advances in our understanding of basic mitochondrial research to the consequences of dysfunction at the molecular level.

The 13 contributions written by leading researchers in the field include topics such as: mitochondrial genome evolution and mtDNA stability, mitochondrial biogenesis and protein quality control, mitochondrial morphology, assembly and function of the mitochondrial energy generation apparatus and mitochondrial metabolic pathways. These are particularly oriented to link in these various mitochondrial pathways to the clinical consequences of their dysfunctions.

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