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Titolo Mitochondrial biology [[electronic resource]]: new perspectives //

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Nota di contenuto MITOCHONDRIAL BIOLOGY: NEW PERSPECTIVES; Contents; Chair's

introduction; Outer mitochondrial membrane protein degradation by the proteasome; DISCUSSION; PA-GFP: a window into the subcellular adventures of the individual mitochondrion; DISCUSSION; Multiple

functions of mitochondria-shaping proteins; DISCUSSION;

Transcriptional control of mitochondrial energy metabolism through the PGC1 coactivators; DISCUSSION; Novel uncoupling proteins; DISCUSSION; Mitochondria as generators and targets of nitric oxide;

DISCUSSION: Calcium signalling and mitochondrial motility:

DISCUSSION

Endoplasmic reticulum/mitochondria calcium cross-talkDISCUSSION:

Mitochondrial ion channels in cardiac function and dysfunction; DISCUSSION; The mitochondrial permeability transition pore; DISCUSSION; Mechanisms of mitochondrial outer membrane

permeabilization; DISCUSSION; Mitochondria and neurodegeneration;

DISCUSSION; Mitochondrial dysfunction in mammalian ageing; DISCUSSION; Mitochondrial mutations: genotype to phenotype:

DISCUSSION; Contributor Index; Subject Index

Sommario/riassunto

With the recent renaissance in mitochondrial biology and increasing recognition of their role in many diseases, this book provides a timely summary of the current state-of-the-art in mitochondrial research. The book opens with the regulation of mitochondrial replication and biogenesis and reviews the mechanisms and functional consequences of mitochondrial fission and fusion. Further chapters address mitochondria and oxidative stress and their roles in cell signalling and cell death. The book includes extensive, fascinating discussion of the biochemistry of mitochondrial cell signalling (especi