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Titolo	Mitochondrial Function in Lung Health and Disease [[electronic resource] /] / edited by Viswanathan Natarajan, Narasimham L. Parinandi
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Descrizione fisica	1 online resource (230 p.)
Collana	Respiratory Medicine, , 2197-7372
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Soggetti	Respiratory organs—Diseases Internal medicine Medicine Pneumology/Respiratory System Internal Medicine Biomedicine, general
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Role of Mitochondrial Reactive Oxygen and Nitrogen Species in Respiratory Diseases -- Regulation of Mitochondrial Functions by Transcription Factor NRF2 -- Mitochondrion: A Missing Link in Asthma Pathogenesis -- ROS Signaling in Cardiovascular Dysfunction Associated with Obstructive Sleep Apnea -- Mitochondrial Excitation-Energy Coupling in Airway Smooth Muscle -- Mitochondrial Lipid Peroxidation in Lung Damage and Disease -- The Impact of DNA Damage on Epithelial Cell Maintenance of the Lung -- Mitochondrial Function in Lung Health and Disease -- Age-Specific Difference in Pulmonary Cellular Injury and Mitochondrial Damage.
Sommario/riassunto	Mitochondria, often referred to as the “powerhouses” of the cell, generate adenosine triphosphate (ATP) by oxidative phosphorylation or OXPHOS, and maintain cellular homeostasis. In addition to generating ATP, mitochondria are involved in regulation of cell cycle, proliferation, free radical production, innate immune responses and apoptosis. Mitochondrial Function in Lung Health and Disease fills the

current gap in the literature and outlines the growing clinical relevance of mitochondrial dysfunction. Currently, there is no overview on the role of mitochondria in pulmonary diseases and this volume focuses on the mitochondrial metabolism, redox signaling, and mechanisms of mitochondrial pathways in lung injury, inflammation, repair and remodeling. Furthermore, in addition to their well-recognized role in cellular energy production and apoptosis, mitochondria appear to play a role in many respiratory diseases and lung cancer. Chapters are written by top notch researchers and clinicians and outline the evidence for mitochondrial biogenesis in inhalational lung injury, COPD and asthma. .
