Mitochondrial Dysfunction and Its Role in Neurological Disorders

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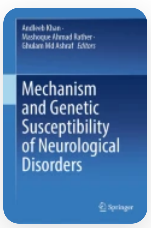

Mechanism and Genetic Susceptibility of Neurological Disorders

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Abstract

Mitochondria, pivotal cell organelles recognized for their paramount role in cellular energy production, play a crucial part in neurological disorders such as Parkinson's disease (PD), Alzheimer's disease (AD), and multiple sclerosis when their functionality falters. Among the repercussions of mitochondrial dysfunction, neuroinflammation emerges as a prominent concern, eliciting an upsurge in the generation of reactive oxygen species (ROS). The deleterious effects of these ROS on nerve cells induce a cascade toward neurodegeneration.

This chapter comprehensively delves into the adverse implications of mitochondrial dysfunction on the advancement of diverse neurological ailments, with particular emphasis on the pivotal role of neuroinflammation.

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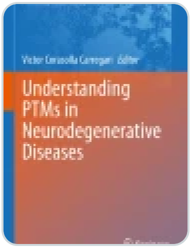

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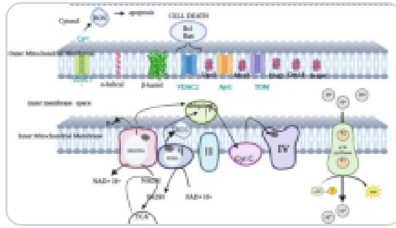

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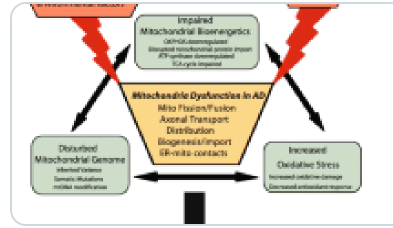

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