

Abstract

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Title of diploma thesis: Mitochondrial dysfunction and neurodegenerative diseases

The diploma thesis deals with mitochondrial dysfunction and neurodegenerative diseases and it is divided into two main parts. The first part summarized the classification of neurodegenerative diseases and general characteristic of mitochondria. Then a describe of the processes of oxidative stress, excitotoxicity, apoptosis and briefly describe the nervous system. The second part deals with description of mitochondrial dysfunction in selected neurodegenerative diseases. The recent studies refer to connection between mitochondrial dysfunctions and formation of neurodegenerative diseases.

Keywords: excitotoxicity, mitochondrial dysfunction, neurodegenerative disorders, neuronal cell death, oxidative damage