The role of antioxidants and natural compounds in treatment of Parkinson's disease

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Parkinson's disease (PD) is the second common neurodegenerative disease. Many biological processes are involved in the development and progression of PD, including oxidative stress, neuro-inflammation, and apoptosis. Accordingly, researchers have performed vast studies to prevent or treat PD via targeting these processes. In this study, we tried to summarize a series of these attempts by reviewing the studies focused on PD and antioxidants. We explained how certain compounds target various biological processes and cell signaling pathways, to prevent or treat PD. The mechanisms of the compounds are related to fighting oxidative stress, inhibiting inflammation, preventing apoptosis, boosting mitochondrial performance, and regulating autophagy. Collectively, the studies strongly stated that these compounds have an enormous potential for developing novel therapeutic medications.

Biography

Arman Rahimmi is PhD of Molecular Medicine from Kurdistan University of Medical Sciences, Sanandaj, Iran. Arman does his researches exclusively in the field of neurodegenerative diseases, especially Parkinson's disease since 2012. He has performed several research projects about pathophysiology of PD, novel therapies, optimizing animal models of PD, etc. He is well-experienced in several cellular and molecular techniques, designing projects, and scientific writing. He is going to continue his scientific career as a postdoctoral researcher abroad.

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