



Scopus



[Back](#)

Neuroprotective Agents: Implications for Parkinson's Disease Treatment

[Current Alzheimer Research](#) • Review • 2025 •

DOI: 10.2174/0115672050368080250529075006

[Algantri, Khaled Ramadan](#)^{a,b} ; [Mohamed, Wael](#)^{b,c}; [Nasir, Mohd Hamzah Mohd](#)^d; [Nahas, Abdul Rahman Mahmoud Fata](#)^e

^a Department of Anatomy, Kulliyyah of Medicine, Widad University College, BIM Point, Bandar Indera Mahkota, Pahang, Kuantan, 25200, Malaysia

[Show all information](#)

1 73th percentile

Citation

0.85

FWCI

[Full text](#) [Export](#) [Save to list](#)

Document

Impact

Cited by (1)

References (174)

Similar documents

Abstract

Parkinson's disease (PD) is a multifaceted neurodegenerative condition marked by the progressive loss of dopaminergic neurons, leading to impairments in movement and cognition. This research offers an in-depth examination of the pathophysiological pathways associated with PD, emphasising the roles of oxidative stress, mitochondrial dysfunction, and neuroinflammation. The study examines the interaction between genetic and environmental factors in the development of PD, highlighting the significance of oxidative stress, mitochondrial dysfunction, and excitotoxicity in the degeneration of dopaminergic neurons. It also looks into the impact of neuroinflammation and microglial activation on the causes of PD. Despite considerable progress in research, there remains a

lack of effective treatments that can modify the course of the disease, highlighting the pressing need for new therapeutic approaches that address mitochondrial malfunction, oxidative stress, and neuroinflammation. This study assesses the neuroprotective efficacy of various substances, notably natural agents like resveratrol, curcumin, ginsenoside, and melatonin, for managing PD. Although these natural chemicals show promise, further robust clinical trials are needed to confirm their effectiveness and safety, as well as to investigate their potential incorporation into conventional PD treatment. Bentham Science Publishers

Author keywords

bradykinesia; mitochondrial dysfunction; Neuroprotective agents; Parkinson's disease (PD); reactive oxygen species (ROS); substantia nigra pars compacta (SNpc)

Indexed keywords

EMTREE drug terms

curcumin; ginsenoside; melatonin; neuroprotective agent; reactive oxygen metabolite; resveratrol

EMTREE medical terms

animal model; bradykinesia; controlled study; dopaminergic nerve cell; drug therapy; environmental factor; excitotoxicity; human; nervous system inflammation; neuroprotection; nonhuman; oxidative stress; Parkinson disease; pharmacology; review; substantia nigra pars compacta

Reaxys Chemistry database information

Reaxys is designed to support chemistry researchers at every stage with the ability to investigate chemistry related research topics in peer-reviewed literature, patents and substance databases. Reaxys retrieves substances, substance properties, reaction and synthesis data.

Substances

[View all substances \(3\)](#)

Chemicals and CAS Registry Numbers

Unique identifiers assigned by the Chemical Abstracts Service (CAS) to ensure accurate identification and tracking of chemicals across scientific literature.

curcumin	458-37-7
ginsenoside	74749-74-9
melatonin	73-31-4
resveratrol	501-36-0

Corresponding authors

Corresponding author	K.R. Algantri
----------------------	---------------

Affiliation	Department of Anatomy, Faculty of Medicine, Widad University College, BIM Point, Bandar Indera Mahkota, Pahang, Kuantan, 25200, Malaysia
-------------	--

Email address	khaledrg22@gmail.com
---------------	----------------------

Corresponding author	A.R.M.F. Nahas
----------------------	----------------

Affiliation	Department of Pharmacy Practice, Kulliyyah of Pharmacy, International Islamic University Malaysia, Bandar Indera Mahkota, Pahang, Kuantan, 25200, Malaysia
-------------	--

Email address	abd_mfn@hotmail.com
---------------	---------------------

Abstract

Author keywords

Indexed keywords

Reaxys Chemistry database information

Chemicals and CAS Registry Numbers

Corresponding authors

About Scopus

[What is Scopus](#)

[Content coverage](#)

[Scopus blog](#)

[Scopus API](#)

[Privacy matters](#)

Language

[日本語版を表示する](#)

[查看简体中文版本](#)

[查看繁體中文版本](#)

[Просмотр версии на русском языке](#)

Customer Service

[Help](#)

[Tutorials](#)

[Contact us](#)

ELSEVIER

[Terms and conditions](#) ↗ [Privacy policy](#) ↗ [Cookies settings](#)

All content on this site: Copyright © 2025 Elsevier B.V. [↗](#), its licensors, and contributors. All rights are reserved, including those for text and data mining, AI training, and similar technologies. For all open access content, the relevant licensing terms apply.

