Therapeutic potentials of crocin in medication of neurological disorders

Salman Ahmed, Muhammad Mohtasheemul Hasan, Mojtaba Heydari, Abdur Rauf , Saud Bawazeer, Tareq Abu-Izneid, Maksim Rebezov, Mohammad Ali Shariati, Maria Daglia and Kannan RR. Rengasamy

Food and Chemical Toxicology, 145: 111739, 2020

Abstract

Neurological sicknesses are serious, multifactorial, debilitating disorders that may cause neurodegeneration. Neuroprotection is the protection of the structure and capacity of neurons from affronts emerging from cell injuries instigated by an assortment of specialists or neurodegenerative diseases. Various neurodegenerative diseases, including Alzheimer's, Parkinson's, and epilepsy, afflict many people worldwide, with increasing age representing the leading risk factor. Crocin is a natural carotenoid compound which was found to have therapeutic potentials in the management of the neurological disease. In this review, we focused on the restorative capabilities of Crocin as a neuroprotective agent. The general neuroprotective impact and the various conceivable basic components identified with Crocin have been examined. In light of the substantial proof indicating the neuro-pharmacological viability of Crocin to different exploratory standards, it is concluded that Crocin exerts direct antioxidant, antiapoptotic and anti-inflammatory activities by multiple signaling pathways. Besides, Crocin was found to elevate dopamine level in the brain during the experimental model of Parkinson's disease. Thus, this compound has been demonstrated to be a promising option for the treatment of neurodegenerative diseases, with few adverse effects. It ought to be further considered as a potential contender for neuro-therapeutics, concentrating on the mechanistic and clinical evidence for its effects.