

Synthesis of Metal Curcumin Complexes with Iron(III) and Manganese(II): The Effects on Alzheimer's Disease

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Abstract : Plants provide the wealth of bioactive compounds, which exert a substantial strategy for the treatment of neurological disorders such as Alzheimer's disease. Recently, a lot of studies have explored the medicinal properties of curcumin, including antitumoral, antimicrobial, anti-inflammatory, antioxidant, antiviral, and anti-Alzheimer's disease effects. Metal complexes of curcumin (1,7-bis(4-hydroxy-3-methoxyphenyl)-1,6-heptadiene-3,5-dione) were synthesized with Mn(II) and Fe(III). The structures of synthesized metal complexes have been characterized by using spectroscopic and analytic methods such as elemental analysis, magnetic susceptibility, FT-IR, AAS, TG and argentometric titration. It was determined that the complexes have octahedral geometry. The effects of the metal complexes on the disorder of memory, which is an important symptom of Alzheimer's Disease were studied on lab rats with Plus-Maze Tests at Behavioral Pharmacology Laboratory.

Keywords : curcumin, Mn(II), Fe(III), Alzheimer disease, beta amyloid 25-35

Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development

Conference Location : Chicago, United States

Conference Dates : December 12-13, 2020