

Nanomedicine and Parkinson's disease: A nanoparticle medical approach

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The challenge to obtain new formulations that can give us an effective medical tool to prepare active drugs with low bioavailability to combat Parkinson's disease, from commercial and natural sources, it has afforded investigations using nanomedicine as basic concept in the scientific research.

Supramolecular systems that include carbonnanotubes, natural polymers as chitosan, for instance, and a series of substances whose chemical structure can be modified to encapsulate all type of apolar compounds with low solubility in aqueous system and limited bioavailability in the living system, are exposed as drug delivery system. The success of the nanomedicine to the service of the patients in the early stages of the Parkinson's disease is due to the low cytotoxicity of the complex drug/carrier, little concentration of the active compound inside the nanocarrier, and finally an easier release of the compound in controlled release depending of the nanostructure of the carrier. Some examples about the formation of nanoparticles from organometallic compounds and its medical application in the treatment of Parkinson's disease are mentioned and discussed. ©

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Nanomedicine

Nanoparticles

Neurodegenerative diseases

Parkinson's disease

Protein amyloid aggregation