Tentative Outline
Special Issue for Current Medicinal Chemistry

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Parkinson’s and Alzheimer’s diseases and natural products: Pathologies and medication of the new times

Aims & Scope:
In our time, many compounds from natural sources are available either in nature or commercialized by the pharmaceutical industry that multiple therapeutic actions have developed in the treatment of diverse diseases and dysfunctions on the Central Nervous System (CNS). For Parkinson’s disease (PD), some alternative surgeries have required either of electrical implants to limit the involuntary muscular spasms or the controlled drug injection on the brain, which do not generate a reliable alternative to patients. Alzheimer’s disease (AD) is a progressive disease, wherein dementia symptoms gradually worsen over a number of years. Moreover, in its early stages, memory loss is mild, but with late-stage Alzheimer’s, individuals lose the ability to carry on a conversation and respond to their environment.

At present, synthetic methodologies have been developed for the preparation of chiral compounds as well as of complex heterocycles and hydrocarbon-cycles derived from marine and terrestrial natural products. In order to assure a high selectivity of the tested drug, molecular modeling simulation with well-known crystallized biological receptors has been extensively studied with an important acceptance, and obtaining designed drugs with high biological reactivity in certain mental disorders.

Therefore, the aim of this special issue, is to compile diverse reviews for future and novel therapeutic applications in treating Parkinson’s and Alzheimer’s disease by using designed heterocyclic and cyclic hydrocarbon compounds and inspired from natural sources. Thus, the inclusion of synthesis, isolation, theoretical studies of structure-activity relationship and pharmacological-clinical trials are welcome.

Keywords: CNS dysfunctions, Alzheimer’s disease, Parkinson’s disease, natural products, neurodegenerative disorders, motor dysfunctions.

Sub topics:
- Studies of isolation, chemical characterization of new anti-Parkinson drugs and against Alzheimer symptoms.
- Conventional synthesis of active heterocycles and hydrocarbon-cycles.
- Studies of structure-activity relationship and computational design to improve the current drugs and to propose novel drugs against neuro-degenerative diseases.
- Clinical trials and medical applications of the active compounds.

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