

Tentative Outline

Special Thematic Issue for Current Pharmaceutical Design

“An Approach to the Theoretical and Experimental Design of Fused Compounds in the Treatment of Mental and Motor Dysfunctions”

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Aims & Scope:

In our society 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). Such drugs have served for the partial or permanent treatment of behavior diseases such as depression or anxiety, and to improve motor dysfunctions like Parkinson or chronic neurodegenerative disease like Alzheimer's disease. Such substances have been assessed with wide effectiveness but varied selectivity. This fact can limit the medical application of a drug affording a low therapeutic answer from patient. Until now the medical treatments that involve either achiral substances or racemic mixture have introduced multiple effects, some of them undesirable, which affect the normal therapeutic effect and even can vary unnecessarily the drug doses.

Simple and complex fused heterocycle and cyclic hydrocarbon structures have been mentioned in the world sale of drugs, whose cost and questioned effectiveness alert us every day. At present, synthetic methodologies have been developed for the preparation of chiral compounds as well as of complex heterocycles and hydrocarbo-cycles derived from marine and terrestrial natural products. In order to assure a high selectivity from the tested drug, molecular modeling with well-known biological receptors has been extensively used with an important acceptance and obtaining designed drugs with high biological reactivity in certain mental dysfunctions.

The possibility that the above mentioned substances could generate therapeutic alternatives to favor less invasive treatments with permanent effect in the CNS, they have done that our proposal for including novel research and extensive reviews about new way to combat these behavior and motor diseases to be necessary to highlight it.

Therefore, the aim of this special issue, is to compile diverse reviews and research articles for future therapeutic applications by using designed heterocyclic and cyclic hydrocarbon compounds and inspired either from natural sources. Thus, the inclusion of synthesis, isolation, theoretical studies of structure-activity relationship and pharmacological assays for treating mood and motor dysfunctions are welcome. The critical and objective vision of these contributions will help us to understand and emphasize the advances in this field of the mental diseases and motor disorders.

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

Subtopics:

- Studies of isolation, chemical characterization of new anti-Parkinson, anti-Alzheimer drugs and treating motor dysfunctions.
- 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

Schedule:

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