

Tentative Outline

Special Thematic Issue for Combinatorial Chemistry & High Throughput Screening

Natural enzyme inhibitors: Inhibition of clinically important enzymes with natural products for future drug discovery through biochemical analysis

Guest Editor: Dr. Shivraj Hariram Nile

Aims & Scope:

In recent years there is an increased prevalence of some chronic diseases worldwide including skin problems, hyperuricemia and gout, Alzheimer's disease, and diabetes mellitus. These diseases are identified as global health problems among many people; occurred due to the activity of various metabolic enzymes responsible for metabolism in human body. Enzyme inhibitors are the drugs which are important in treatment of various human diseases including metabolic, cardiovascular, neurological diseases and cancer. Thus, inhibition of the catalytic functions of clinically important enzymes is a key finding for management these diseases. In this context, the target enzymes which are mainly involved in metabolic pathways and alleviates the symptoms must be targeted including; tyrosinase responsible for skin disorders and browning of food products, xanthine oxidase involved in hyperuricemia or gouty arthritis, cholinesterase's develop Alzheimer's and Parkinson's disease, urease prevents pathogenicity of in hepatic coma, peptic ulceration, urinary stones, and gastric disorders caused by Helicobacter pylori, amylase and glucosidase markers in diabetes mellitus. Many synthetic drugs are available in market as inhibitors of these enzymes; however, these drugs exhibit several side effects and disorders including; nausea, diarrhea, headache, gastrointestinal problems, skin rashes, and allergies reactions. Thus, effective remedy using natural drugs from plants is an important research to control these diseases without any side effects. A number of reviews have been published on these enzymes and their inhibitors. This issue will focus on medicinal plants, natural products and their derivatives extraction and analysis as a multi-targeting compound.

Keywords: Natural products, drug discovery, enzyme inhibitors, extraction, disease control.

Subtopics:

The subtopics to be covered within this issue are listed below:

- The subtopics to be covered within this issue are listed below:
- Utilisation of various extraction and analytical methods for natural product analysis
- Evaluation of in vitro and in vivo related biological activities for enzyme inhibition
- Research on xanthine oxidase, urease and tyrosinase inhibitors from plants
- Studies on cholinesterase's, amylase and glucosidase inhibitors from plants
- Defining inhibition mechanism of enzymes through in in vitro and silico studies
- Providing concise reviews on xanthine oxidase, urease and tyrosinase inhibitors
- Providing compressive reviews on cholinesterase's, amylase and glucosidase inhibitors

Schedule:

- ✧ Manuscript submission deadline: October 30, 2019
- ✧ Peer Review Due: November 30, 2019
- ✧ Revision Due: December 30, 2019
- ✧ Announcement of acceptance by the Guest Editors: January 25, 2020
- ✧ Final manuscripts due: February 25, 2020

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