

Tentative Outline

Special/Thematic Issue for the journal "Current Topics in Medicinal Chemistry"

Title of the Thematic Issue: **Phytochemicals for Human Health; The emerging trends and prospects**

Guest Editor: Vijay Rani Rajpal

- **Scope of the Thematic Issue:**

Plants have served mankind as important source of foods and medicines. Historically many potential drugs such as morphine discovered in the early nineteenth century, vincristine in 1970s and to the more recent discovery of artemisinin and paclitaxel used for the treatment of malaria and cancer, plants continue to serve mankind as an important source of food and medicine. Even though natural product chemistry was relegated to the backwaters of contemporary sciences till 1980s, the turn of century witnessed a renewed interest in the use of plant-based therapies and botanical healthcare products. Particularly, the past two decades witnessed a resurgence in use of natural products as the guiding principles of modern drug discovery. Natural products are considered as privileged and biologically validated structures used for new potential drug discovery either directly or through the synthesis of natural product like or natural product inspired new drugs libraries. With the growing popularity of natural product based food and phytomedicines worldwide, the interest in herbal medicine and plant based therapeutics has increased phenomenally with a greater scientific awareness in general public to explore and understand the pharmacologically active ingredients of medicinal plants. Pharmaceutical companies were demystified by the failure of diversity oriented synthesis and combinatorial chemistry to delivery good number of drug leads against their high expectations, now again rely on natural products due to their innate drug-like nature, natural products remain as mainstay in modern drug discovery programs. Clearly, development of natural products for the prevention and treatment of diseases continue to attract worldwide attention.

The aim of this Special Issue on "***Phytochemicals for Human Health; The emerging trends and prospects***" aims to present the scientific reports in a nutshell to demonstrate the potential of plant natural products as therapeutic entities, duly incorporating chemistry, preclinical and clinical pharmacology, structure-activity relationships, their pharmacokinetic properties and mechanisms of action. Given the fact that a vast majority of the world population rely on botanical products as remedies to meet their health needs, as traditional or complementary/alternative medicines, it is our earnest hope that this special Issue would serve as a timely reference for all those who are interested in the discovery of pharmacologically active secondary metabolites from plant sources for health-related applications.

Keywords: Phytochemicals, Therapeutics, Immunomodulation, Anti-cancerous, Anti-microbial, Traditional Medicine

Sub-topics:

- Immunomodulatory plant natural products
- Anti-microbial and anti-cancer plant natural products
- Mono- and Sesquiterpene plant natural products
- Traditional and Ethnomedicinal use of phytochemicals
- Bioactive and Medicinal uses of specific plant phytochemicals

Tentative titles of the articles:

- Immunomodulatory plant Natural Products as therapeutics against inflammatory skin diseases
- Immunomodulatory secondary metabolites from plants of Indian origin
- Immunomodulatory Effects of Photoactive Compounds on Human Health: An Integrated Bioinformatics Approach.
- Computational and experimental evidence to the anti-COVID-19 potential of honeybee propolis ingredients, caffeic acid phenethyl ester and artemisinin
- Tentrandarine for Targeting Therapy Resistance in Cancer

- Therapeutic potential of phytochemicals with antiangiogenic properties as alternative neo-angiogenesis blockers
- Cell-based evidence of anti-leishmanial potential of Chlorophyllin: a biological response modifier
- Biological activities, pharmacological effects and molecular mechanisms of Nootkatone: a molecule of therapeutic promise and pharmaceutical development.
- Parthenin: A Sesquiterpene Lactone with Versatile Chemistries and Biological Activities
- Comprehending the therapeutic properties and chemistry of biologically active compounds of *Picrorhiza kurroa* Royle ex Benth
- Ethnomedicinal use, Phytochemistry and pharmacology of the genus *Cocculus*
- Traditional uses, phytochemistry, pharmacology, and toxicology of the genus *Artemisia* L. (Asteraceae)
- Health relevance of narirutin a flavanone-7-O-glycoside present in citrus fruits
- A Review on Phytochemistry and Pharmacology of *Rosa* L. (Rosaceae)
- An update on pharmacological and phytochemical aspects of *Costus pictus* D. Don - A promising antidiabetic plant
- Chemical Engineering: a versatile tailoring tool for diversity generation of crude natural product extracts
- *Valeriana jatamansi*: Bioactive compounds and their medicinal uses
- Bioactive molecules from marine sources: Chemistry and biology of marine sponges belonging to the genus *Hyatella*

Schedule:

- ✧ Thematic issue submission deadline: 30th-Sep-23

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