

EDITORIAL

“Natural Products Chemistry and Drug Design - 2020”

The proposed thematic issue is intended to discuss the pharmacological and medicobiological applications of potential active chemicals derived from natural products. The proposed thematic issue of “Natural Products Chemistry and Drug Design - 2020” to Bentham science under the journal of Cardiovascular and Hematological Agents in Medicinal chemistry is comprised of 16 research and review articles. The side effects associated with conventional treatment regimen prompted the researchers to explore alternative strategies, among which natural products assume a greater role. The key findings to be published under this theme will be more prompt and the chemical entities of the natural products identified will be helpful for the treatment of diseases and also enable future researches to design the drugs. Substantially, the publications under this thematic issue would identify natural products which will be useful in the treatment of debilitating diseases like cardiovascular diseases, diabetes, arthritis, cancer, liver diseases, *etc.*, Advancements in the technology involved in the production of natural products and their efficacies in drug designing would be given priority thus identifying and highlighting their pharmaceutical applications. From the above information, the proposal concludes that this thematic issue will be a milestone for the future endeavors and prospective research.

The issue is comprised of 16 articles in three parts and each part of the issue comprises 5 articles presenting current research and review models for various interactions related to plant materials, ayurvedic and allopathic drugs. The following is a brief description of selected articles:

The opening of the first article is a review article Kalaiseziyen *et al.*, that deals with the updated information of scientific research and reports available in different aspects of the plant involving pharmacological activities and therapeutical applications against various syndromes [1]. In a research article, the authors Rathinasamy *et al.*, deal with the Biochanin-A that may alleviate the derangement of HFD-induced trace element metabolism by modulating hyperglycemic and insulin resistance status and altering hepcidin and HO-1 [2]. In another research article, the authors Govindasami *et al.*, deal with the therapeutic potential of Biochanin-A with significantly increased levels of antioxidant enzymes, confirming that pretreatment provides useful information for developing a new safe drug against cardiotoxicity in rats [3]. The research article by authors Kalidhindi *et al.*, discuss Asiatic acid, derived from *Centella Asiatica* in the renal retrieve and derangements of Streptozotocin - Nicotinamide treated Diabetic rats and analyzed the protection against renal dysfunction by attenuating carbohydrate metabolic disorder [4]. The research article by Anand *et al.*, focus on the fabrication and characterization of Lomustine-doped polymer chitosan nanoparticles to treat brain targeting diseases through experiments of Box-Behnken design and analytical schemes [5].

We are grateful to all the authors and reviewers for contributing to this current thematic special issue: “Natural Products Chemistry and Drug Design - 2020”. Moreover, we, the guest editors, (Dr. Rajesh Pandiyan, Dr. Saravanan Ganapathy, Dr. M. Sridhar Muthusami and Dr. Hariprasath Lakshmanan) would like to pay gratitude to the journal “Cardiovascular and Hematological Agents in Medicinal Chemistry” for providing us the great opportunity to complete this thematic issue.

Keywords: Chemical entities, drug design and pharmaceutical approaches, natural products, metabolism, biochanin A.

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EDITORIAL

“Natural Products Chemistry and Drug Design - 2020” (Part - II)

The proposed thematic issue is intended to deal with the pharmacological and medicobiological applications of potential active chemicals derived from natural products. The proposed thematic issue titled, “Natural Products Chemistry and Drug Design - 2020” to Bentham Science under the journal of *Cardiovascular and Hematological Agents in Medicinal Chemistry* is comprised of 16 research and review articles. The side effects associated with conventional treatment regimen prompted the researchers to explore alternative strategies, among which natural products assume a greater role. The key findings to be published under this theme will be more prompt and the chemical entities of the natural products identified will be helpful for the treatment of diseases and also enable future researches to design the drugs. Substantially, the publications under this theme would identify natural products which will be useful in the treatment of debilitating diseases like cardiovascular diseases, diabetes, arthritis, cancer, liver diseases, *etc.*, Advancements in the technology involved in the production of natural products and their efficacies in the drug designing would be given priority; thus identifying and highlighting their pharmaceutical applications. From the above details, the proposal concludes that this thematic issue will be a milestone for future endeavors and prospective research.

Following are the research and review articles of the thematic issue with 15 papers presenting current review and research articles for various interactions related to plant materials, ayurvedic and allopathic drugs. The CHAMC 18(1): 2020 issue deals with 5 articles, and the current issue 18(2): 2020 deals with 5 articles and the following is a brief description of selected articles:

The focus of the current review article by Arumugam *et al.*, is on the impact of medicinal plants in the treatment of oral and dental diseases with the updated information and novel approaches towards preventive oral care using the herbs and plants [1]. The review article by Arumugam *et al.*, focused on natural sweeteners from the *Stevia rebaudiana* plant source [2]. The current review by Alagaraj *et al.*, is an attempt to document the potential of *Toddalia asiatica* (Linn.) phytoconstituents, which contribute to pharmacological actions [3]. The research article by V.V.S. Uddandarao *et al.*, deals with the anti-oxide trend and anti-diabetic activity on polyherbal formulation [4]. The research article by Jagadeesh *et al.*, is a milestone. It focusses on the bioactive sterol that exhibits potential cytotoxic activity against MDA-MD-231 (human breast cancer) and EL4 (mouse T cell lymphoma) cells. The study findings and data might provide new insights into the possible therapeutic and pharmaceutical uses in the design of anti-cancer drugs from this edible mushroom [5].

We are grateful to all the authors and reviewers for contributing to this current thematic special issue: “Natural Products Chemistry and Drug Design - 2020”. As guest editors (Dr. Rajesh Pandiyan, Dr. Saravanan Ganapathy, Dr. M. Sridhar Muthusami and Dr. Hariprasath Lakshmanan), we would like to pay gratitude to the journal “Cardiovascular and Hematological Agents in Medicinal Chemistry” for providing us the great opportunity to complete the special thematic issue.

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