

Special Thematic Issue for Anti-Cancer Agents in Medicinal Chemistry:

“Natural bioactive compounds , vegetal extracts and modern pharmaceutical formulations: new insights into the anti-cancer mechanism of action”

Guest Editor: Associate professor Corina Danciu

Aim and scope:

The fact that cancer is the greatest challenge of the medicine of the twenty-first century is undebatable. Moreover it represent a hot topic not only in the medico-pharmaceutical research but scientist belonging to other different connected fields like chemistry, physics, informatics work together in order to find a good strategy to defeat this hard-to-beat enemy. The latest statistic of WHO published in September 2018 details the fact that cancer is the second leading cause of death globally. Up to date the most common approaches include: surgery, chemotherapy, radiation therapy, immunotherapy. It is well known the fact that Plant Kingdom have played a vital role in the design of active chemotherapeutic agents. In the history of natural compounds used in clinical trials for the cytotoxic activity they are some well known ‘protagonists’ including: vinca alkaloids, paclitaxel, homoharringtonine and their derivatives. Also an increased number of semisynthetic derivatives of plant secondary metabolites are in clinical trials for different types of cancer. FDA data show that approximately 40% of the approved molecules in the pharmaceutical market are natural compounds or their chemical derivatives from which, 74% are employed in well-established protocols of anticancer therapy. Moreover recent studies show that a significant number of natural compounds are ‘cancer-selective’ presenting antiproliferative, pro-apoptotic, cytotoxic potential against cancerous cells without any effect against normal, healthy cells. Because the biodiversity of our planet has not been fully exploited, Plant Kingdom represent a big pool for the discovery of anti-cancer agents.

Having this alive proofs about the role of natural compounds in the management of this highly aggressive pathology this special thematic issue of Anti-Cancer Agents in Medicinal Chemistry aims to cover the recent trends and advancements in the field of natural bioactive compounds , vegetal extracts and modern pharmaceutical formulations with anti-cancer potential.

Subtopics:

Natural bioactive compounds/vegetal extracts: new insights into the anti-cancer mechanism of action (*in vitro*, *in vivo studies*, *clinical trials*)

Tumour microenvironment: recent advances in the study of immunomodulatory, anti-inflammatory, antioxidant, antiangiogenic natural bioactive compounds/vegetal extracts (*in vitro*, *in vivo studies*, *clinical trials*)

In depth phytochemical characterization of active anti-cancer vegetal extracts

Methods of isolation of natural molecules with anti-cancer potential

Physico-chemical modulations and new pharmaceutical formulations of natural bioactive compounds/vegetal extracts as therapeutic strategies for an increased anti-cancer potential

Nutraceuticals, functional foods and cancer

Metabolomics and natural products – a gateway for cancer treatment/prevention

Schedule:

Manuscript submission deadline: 1.10.2019

Peer Review Due: 1.11.2019

Revision Due: 1.12.2019

Announcement of acceptance by the Guest Editors: 1.01.2020

Final manuscripts due: 1.02.2020

Contact:

Guest Editor: Associate professor Corina Danciu

Affiliation: Department of Pharmacognosy, University of Medicine and Pharmacy “Victor Babeș”, Eftimie Murgu Square, No. 2, 300041 Timișoara, România

Email: corina.danciu@umft.ro