



## Natural and Synthetic Molecules with Anticancer Activity: Pharmacological Basis and Mechanistic Insight

Guest Editors:

**Dr. Hassan Ebrahim**

Edward Via College of  
Osteopathic Medicine, University  
of Louisiana Monroe, Monroe, LA,  
USA

**Dr. Angela Patricia Hernandez**

Department of Pharmaceutical  
Sciences: Pharmaceutical  
Chemistry, Faculty of Pharmacy,  
University of Salamanca, CIETUS,  
IBSAL, 37007 Salamanca, Spain

Deadline for manuscript  
submissions:

**30 June 2024**

### Message from the Guest Editors

Cancer is one of the most challenging health problems encountered humanity. The deleterious side-effects and development of resistance to the current clinically used chemotherapeutics necessitate continuing research to better understand the pathology of the disease and design more effective therapeutics. Natural products with defined molecular compounds or their semisynthetic derivatives have been well-documented for their potent antitumor activity, such as paclitaxel, vincristine, doxorubicin, and bleomycin. Furthermore, another approach is ligand-based anticancer drug discovery, which relies on the screening of mega libraries of chemically diverse synthetic molecules against relevant targets, while the structure-based approach involves the rational design and synthesis of biomolecules to optimize their binding to a validated macromolecular target of a known 3D molecular architecture. In this context, this Special Issue is aimed at encouraging scientists in the field of anticancer drug development to publish their recent finding on the mechanistic mode of action of defined natural, semisynthetic, and synthetic biomolecules with emphasis on their anticancer molecular pharmacology.





an Open Access Journal by MDPI

## Editor-in-Chief

### Prof. Dr. Felipe Fregni

1. Neuromodulation Center and  
Center for Clinical Research  
Learning, Spaulding  
Rehabilitation Hospital and  
Massachusetts General Hospital,  
Harvard Medical School, Boston,  
MA 02114, USA  
2. Department of Epidemiology,  
Harvard T.H. Chan School of  
Public Health, Boston, MA 02115,  
USA

## Message from the Editor-in-Chief

*Biomedicines* (ISSN 2227-9059) is an open access journal devoted to all aspects of research on human health and disease, the discovery and characterization of new therapeutic targets, therapeutic strategies, and research of naturally driven biomedicines, pharmaceuticals, and biopharmaceutical products. Topics include pathogenesis mechanisms of diseases, translational medical research, biomaterial in biomedical research, natural bioactive molecules, biologics, vaccines, gene therapies, cell-based therapies, targeted specific antibodies, recombinant therapeutic proteins, nanobiotechnology driven products, targeted therapy, bioimaging, biosensors, biomarkers, and biosimilars. The journal is open for publication of studies conducted at the basic science and preclinical research levels. We invite you to consider submitting your work to *Biomedicines*, be it original research, review articles, or developing Special Issues of current key topics.

## Author Benefits

**Open Access:** free for readers, with [article processing charges \(APC\)](#) paid by authors or their institutions.

**High Visibility:** indexed within [Scopus](#), [SCIE \(Web of Science\)](#), [PubMed](#), [PMC](#), [CAPus / SciFinder](#), and [other databases](#).

**Journal Rank:** JCR - Q1 (*Pharmacology & Pharmacy*) / CiteScore - Q2 (*Medicine (miscellaneous)*)

## Contact Us

*Biomedicines* Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/biomedicines](http://mdpi.com/journal/biomedicines)  
[biomedicines@mdpi.com](mailto:biomedicines@mdpi.com)  
[X@Biomed\\_MDPI](#)