# Special Issue

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

## 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.

## Guest Editors


Dr. Hassan Ebrahim

Department of Biomedical Sciences, Edward Via College of Osteopathic Medicine, Louisiana Campus, Monroe, LA 71203, USA

Dr. Ángela Patricia Hernandez

1. Department of Pharmaceutical Sciences, Organic Chemistry Area, University of Salamanca, Salamanca, Spain
2. Department of Medicine and Cytometry General Service-Nucleus, CIBERONC, Cancer Research Centre (IBMCC/CSIC/USAL/IBSAL), Salamanca, Spain


## Deadline for manuscript submissions

closed (30 June 2025)


# Biomedicines

an Open Access Journal by MDPI

Impact Factor 3.9
CiteScore 6.8
Indexed in PubMed

mdpi.com/si/181406

*Biomedicines*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
biomedicines@mdpi.com

mdpi.com/journal/biomedicines

# Biomedicines

an Open Access Journal by MDPI

Impact Factor 3.9
CiteScore 6.8
Indexed in PubMed

mdpi.com/journal/biomedicines

## About the Journal

### 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.

### 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

### Author Benefits

**High Visibility:**

indexed within Scopus, SCIE (Web of Science), PubMed, PMC, CAPlus / SciFinder, and other databases.

**Journal Rank:**

JCR - Q1 (Pharmacology and Pharmacy) / CiteScore - Q1 (Medicine (miscellaneous))

**Rapid Publication:**

manuscripts are peer-reviewed and a first decision is provided to authors approximately 17 days after submission; acceptance to publication is undertaken in 2.9 days (median values for papers published in this journal in the first half of 2025).