Special Issue

Plant-Derived Bioactive Molecules and Their Use in Sports Practice

Message from the Guest Editors

The utilization of plant-derived bioactive molecules in sports practice has gained significant attention due to their potential to optimize athletic performance, enhance recovery, and support overall well-being. This Special Issue explores the growing body of research surrounding the application of these natural compounds in sports and exercise, highlighting their benefits and mechanisms of action. Plant-derived bioactive molecules, such as phytochemicals, polyphenols, alkaloids, and flavonoids, possess a wide array of physiological properties that can positively impact sports performance. These compounds exhibit antioxidant, anti-inflammatory, and vasodilatory effects, which may aid in reducing exercise-induced oxidative stress, inflammation, and muscle damage. Additionally, they have been found to enhance endurance, improve cardiovascular function, and enhance the body's ability to adapt to physical stressors.

Guest Editors

Dr. Guglielmo Duranti

Unit of Biochemistry and Molecular Biology, Department of Movement, Human and Health Sciences, University of Rome FORO ITALICO, Piazza Lauro de Bosis 6, 00135 Rome, Italy

Dr. Piergiorgio La Rosa

Department of Neuroscience, Section of Human Anatomy, Catholic University of the Sacred Heart, Largo Francesco Vito 1, 00168 Rome, Italy

Deadline for manuscript submissions

30 September 2025



an Open Access Journal by MDPI

Indexed in Scopus



mdpi.com/si/186096

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

mdpi.com/journal/biochem





an Open Access Journal by MDPI

Indexed in Scopus



About the Journal

Message from the Editor-in-Chief

BioChem is an international and interdisciplinary open access journal encompassing the fields of molecular biology, cell biology, structural biology, nucleic acid biology, chemical biology, synthetic biology, disease biology, biophysics, and theoretical biochemistry. It publishes reviews, research articles, communications, and letters. Our aim is to encourage scientists to publish their experimental and theoretical research in as much detail as possible.

Editor-in-Chief

Prof. Dr. Buyong Ma

School of Pharmacy, Shanghai Jiaotong University, Shanghai, China

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, EBSCO and other databases.

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 33.9 days after submission; acceptance to publication is undertaken in 3.5 days (median values for papers published in this journal in the first half of 2025).

