Special Issue

Glycomics-Driven Molecular Discovery: Diagnostics, Therapeutics and Vaccines for Global Health

Message from the Guest Editors

Glycan-related molecules and glycoscience play essential roles in numerous biological processes, including molecular recognition, cell signaling, immune regulation, and host–pathogen interactions. Recent advances in glycomics, analytical chemistry, and molecular biology have greatly improved our ability to characterize glycan structures and investigate their functions at the molecular level, opening new opportunities for molecular discovery. This Special Issue, "Glycomics-Driven Molecular Discovery: Diagnostics, Therapeutics and Vaccines for Global Health", aims to highlight recent progress in glycan-related molecular research and innovative glycomics methodologies. Topics of interest include glycan structure and biosynthesis, glycan–protein interactions, glycoengineering, synthetic glycochemistry, and advanced analytical tools for glycomics. Particular attention will also be given to glycan-related biomolecular strategies for vaccine development, such as carbohydrate antigens, glycoconjugate vaccines, and glycan-based immunomodulatory molecules.

Guest Editors

Prof. Dr. Mark von Itzstein
Dr. Arun Everest-Dass
Dr. Larissa Dirr

Deadline for manuscript submissions

31 December 2026

Molecules

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 10.3
Indexed in PubMed

mdpi.com/si/275692

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

mdpi.com/journal/molecules

Molecules

an Open Access Journal by MDPI

Impact Factor 4.6
CiteScore 10.3
Indexed in PubMed

mdpi.com/journal/molecules

MDPI

About the Journal

Message from the Editor-in-Chief

As the premier open access journal dedicated to molecular chemistry, now in its 30th year of publication, the papers published in *Molecules* span from classical synthetic methodology to natural product isolation and characterization, as well as physicochemical studies and the applications of these molecules as pharmaceuticals, catalysts, and novel materials. Pushing the boundaries of the discipline, we invite papers on all major fields of molecular chemistry and multidisciplinary topics bridging chemistry with biology, physics, and materials science, as well as timely reviews and topical issues on cutting-edge fields in all of these areas.

Editor-in-Chief

Prof. Dr. Thomas J. Schmidt
Institute of Pharmaceutical Biology and Phytochemistry, University of Münster, Corrensstrasse 48, D-48149 Münster, Germany

Author Benefits

High Visibility:

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, Reaxys, CaPlus / SciFinder, MarinLit, AGRIS, and other databases.

Journal Rank:

JCR - Q2 (Biochemistry and Molecular Biology) / CiteScore - Q1 (Organic Chemistry)

Rapid Publication:

manuscripts are peer-reviewed and a first decision is provided to authors approximately 15.1 days after submission; acceptance to publication is undertaken in 2.6 days (median values for papers published in this journal in the second half of 2025).