

## Special Issue

# Drug Discovery and Development Based on Native/Engineered Microorganisms

### Message from the Guest Editors

Most of the molecules utilized as drugs are obtained from microorganisms. These molecules can be natural compounds or their derivatives. In most cases, the useful compounds are obtained at low titers or are cryptic, so various metabolic engineering/genetic engineering approaches are utilized to enhance the production titer. Recent advances in the isolation/culture of previously uncultivable microorganisms and the availability of versatile genetic engineering approaches have taken microbial engineering to the next horizon. However, in cases where the molecules are not accessible from the native host under natural conditions, alternative/heterologous production platforms are utilized. Approaches such as “genome mining” have enabled the connection of secondary metabolites to their respective biosynthetic genetic codes, whereas the application of metabolic engineering, synthetic biology tools, and genome engineering has contributed remarkably to drug development based on engineered microorganisms. Hence, this Special Issue will cover all aspects of drug discovery and development utilizing native/engineered microorganisms.

---

### Guest Editors

Dr. Dipesh Dhakal

Dr. Michail Christodoulou

Dr. Marialuigia Fantacuzzi

Dr. Komal Kalani

Dr. Matej Sova

---

### Deadline for manuscript submissions

closed (31 August 2020)



## Molecules

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.6  
CiteScore 8.6  
Indexed in PubMed

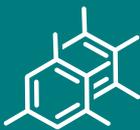


[mdpi.com/si/33431](https://mdpi.com/si/33431)

*Molecules*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[molecules@mdpi.com](mailto:molecules@mdpi.com)

[mdpi.com/journal/  
molecules](https://mdpi.com/journal/molecules)





# Molecules

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.6  
CiteScore 8.6  
Indexed in PubMed



[mdpi.com/journal/  
molecules](https://mdpi.com/journal/molecules)



## 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).