

## Special Issue

# Molecular Biology of Plant Disease Resistance

### Message from the Guest Editor

Defense Mechanisms of Amino Acid from Antifungal Bacteria (*Bacillus subtilis*) The chemical elicitor beta-Aminobutyric acid (BABA) induces a systemic defense response against various plant pathogens. It has been demonstrated in previous studies that during plant pathogen infection, BABA enhances the activation of defense genes related to the salicylic signaling pathway in plants. Until now, research on the various strains of the antimicrobial bacteria *Bacillus subtilis* has focused on the biological control and identification of antimicrobial substances. In a recent study, it was found that amino acids and lysine are produced in large quantities in *B. subtilis* and play an important role in the expression of resistance genes in a cucumber plant against powdery mildew. Therefore, it is necessary to pay attention not only to the direct antimicrobial effect of antimicrobial substances on plant pathogens but also to the fact that resistance-inducing substances such as amino acids enhance the resistance of plants.

### Guest Editor

Prof. Dr. Heewan Kang

Division of Horticultural Biotechnology, School of Biotechnology,  
Hankyong National University, Anseong 17579, Republic of Korea

### Deadline for manuscript submissions

28 August 2025



## International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



[mdpi.com/si/233170](https://mdpi.com/si/233170)

*International Journal of  
Molecular Sciences*  
Editorial Office  
MDPI, Grosspeteranlage 5  
4052 Basel, Switzerland  
Tel: +41 61 683 77 34  
[ijms@mdpi.com](mailto:ijms@mdpi.com)

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





# International Journal of Molecular Sciences

---

an Open Access Journal  
by MDPI

---

Impact Factor 4.9  
CiteScore 9.0  
Indexed in PubMed



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



## About the Journal

### Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

---

### Editor-in-Chief

Prof. Dr. Maurizio Battino

Department of Odontostomatologic and Specialized Clinical Sciences,  
Sez-Biochimica, Faculty of Medicine, Università Politecnica delle  
Marche, Via Ranieri 65, 60100 Ancona, Italy

---

### 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, MEDLINE, Embase, CAPlus / SciFinder, and other databases.

#### Journal Rank:

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