# **Special Issue**

# Molecular Interactions between Plants and Pests

## Message from the Guest Editor

Plants have always been exposed to attacks to their aboveground parts by insects and to their roots by soilborne parasites (mostly by parasitic nematodes). Plantpest interactions are primarily characterized by the feeding habits of pests, which can be categorized as necrotrophs, biotrophs and hemibiotrophs. Biotrophic interactions are the most intriguing as pests do not kill host cells and establish an intimate relationship with the host by secreting digestive fluids that are able to induce considerable changes in host gene expression, metabolism, biochemistry, and tissue histology. The interactions induce an elaborate array of reactions involving the release of volatile compounds, effector and signaling molecules, trans-membrane proteins, and a variety of enzymes and hormones.

This Special Issue welcomes multifaceted research on the pathogenesis and molecular mechanisms activated in plant-pest interactions, including the complex network of molecules, signals, and pathways that overcome mutually established defense systems.

## **Guest Editor**

Dr. Sergio Molinari

Institute for Sustainable Plant Protection, IPSP-Bari Unit, Department of Biology, Agricultural and Food Sciences, DISBA, National Council of Research, CNR, 70126 Bari, Italy

# Deadline for manuscript submissions

closed (20 April 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/188892

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

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





# 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)

