Special Issue

Plant Biology and Biotechnology: Focus on Genomics, Bioinformatics and AI

Message from the Guest Editors

In the study of the molecular mechanisms of plant development and growth, response to environment is important for agrobiotechnology applications. The fast development of machine learning methods and AI (artificial intelligence) applications has revolutionized the methods of computer modeling in plant biotechnology. Sequencing and systems biology approaches offer a comprehensive view of plant growth from the molecular to cellular, organ, and population levels. Sequencing and microscopy technologies make it possible to model protein–protein and gene regulatory interactions in plant cells, providing a basis for better crop production and sustainability. Plant–pathogen interaction studies complement network modeling problems in plant bioinformatics. For this Special Issue, we aim to collate works focused on the following topics:

- computer model of gene expression regulation in plants;
- plant genomics and bioinformatics using AI methods;
- miRNA and molecular mechanisms of gene regulation in plants;
- digital phenotyping using machine learning tools;
- the sequencing of novel model organisms for biotechnology.

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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.

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