

Special Issue

Application of Gene Editing on Functional Characterization of Immunity-Associated Genes and Disease Resistance Breeding in Tomato

Message from the Guest Editors

The production of tomato, as one of the most important vegetable crops in the world, is threatened by many pathogens including bacteria, fungi, viruses, nematodes, oomycetes, and insects, which cause various infectious diseases leading to severe economic losses due to reduced yield and quality. To defend against pathogen infection, plants have evolved a sophisticated immune system that includes pattern-triggered immunity (PTI) and effector-triggered immunity (ETI). A large number of tomato candidate immunity-associated genes can be identified using RNA-seq data, but validation of the functional importance of these immunity-associated genes in tomato had been technically challenging before the emergence of genome editing technology, especially the CRISPR/Cas9 system. Genome editing has become a powerful tool for targeted gene editing in many organisms including tomato, revolutionizing basic research in functional genetics and applied research in plant breeding. Therefore, we are launching this Special Issue, the focus of which is captured in the title, **Application of Gene Editing on Functional Characterization of Immunity-Associated Genes and Disease Resistance Breeding in Tomato**.

Guest Editors

Dr. Ning Zhang

Dr. Qijun Chen

Dr. Zhiqi Jia

Dr. Cristina Crosatti

Deadline for manuscript submissions

closed (10 July 2024)



Plants

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 7.6
Indexed in PubMed



mdpi.com/si/168086

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

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





Plants

an Open Access Journal
by MDPI

Impact Factor 4.1
CiteScore 7.6
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

Plants is an open access journal which provides an advanced forum for research findings in areas related to plant function, its physiology, biology, taxonomy, stresses, and its interactions with other organisms. It publishes original research articles, reviews, reports, conference proceedings (peer reviewed full articles) and communications. In original research papers, it is important that full experimental details are provided. We also encourage timely reviews and commentaries on topics of interest to the plant research community.

Editor-in-Chief

Prof. Dr. Dilantha Fernando

Department of Plant Science, University of Manitoba, Winnipeg, MB
R3T 2N2, Canada

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, PubAg, AGRIS, CAPlus / SciFinder, and other databases.

Journal Rank:

JCR - Q1 (Plant Sciences) / CiteScore - Q1 (Ecology, Evolution, Behavior and Systematics)