

Special Issue

Abiotic Stress in Plants: Molecular Genetics and Genomics—2nd Edition

Message from the Guest Editor

Environmental stresses such as drought and low temperatures can have serious adverse effects on plant growth and development, and crop yield. Global warming and climate change will further exacerbate the negative impact of adverse environments on plants, highlighting the necessity and importance of molecular mechanisms for plant abiotic stress response and tolerance. With the increasing maturity of high-throughput DNA sequencing technology and the development of various genetic modification methods, including CRISPR-Cas9, molecular genetics and genomics technologies are increasingly being applied to the field of plant abiotic stress research, improving our understanding of the response mechanisms of various non-model plants to environmental stress. The purpose of this Special Issue is to analyze the response and adaptation mechanisms of plants to environmental stress by applying multiple types of omics methods, including genomics, transcriptomics, proteomics and metabolomics, individually or in combination. The combination of bioinformatics and experimental validation is encouraged to analyze the abiotic stress response of plants.

Guest Editor

Prof. Dr. Fei Gao

College of Life and Environmental Sciences, Minzu University of China,
Beijing 100081, China

Deadline for manuscript submissions

20 May 2025

G C A T
T A C G
G C A T

Genes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.2
Indexed in PubMed



mdpi.com/si/213235

Genes

MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
genes@mdpi.com

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



G C A T
T A C G
G C A T

Genes

an Open Access Journal
by MDPI

Impact Factor 2.8
CiteScore 5.2
Indexed in PubMed



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



About the Journal

Message from the Editor-in-Chief

Genes are central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fastmoving field. There is a need for good quality, open access journals in this area, and the *Genes* team aims to provide expert manuscript handling, serious peer review, and rapid publication across the whole discipline of genetics. Starting in 2010, the journal is now well established and recognised.

Why not consider *Genes* for your next genetics paper?

Editor-in-Chief

Prof. Dr. Selvarangan Ponnazhagan

Department of Pathology, The University of Alabama at Birmingham,
1825 University Blvd, SHEL 814, Birmingham, AL 35294-2182, USA

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, MEDLINE, PMC, Embase, PubAg, and other databases.

Journal Rank:

JCR - Q2 (Genetics and Heredity) / CiteScore - Q2 (Genetics (clinical))