



cells



an Open Access Journal by MDPI

Cell Biology of Drought and Heat Stress Responses in Plants

Guest Editor:

Dr. Andrei Smertenko

Institute of Biological Chemistry,
Plant Sciences Building, Room
281, Washington State University,
Washington, WA, USA

Deadline for manuscript
submissions:

closed (28 February 2024)

Message from the Guest Editor

Dear Colleagues,

Recent examples of extreme weather patterns demonstrated devastating effects of high temperatures on ecosystems at all levels with an especially damaging impact on plant health. Drought exacerbates the detrimental impact of the heat waves by compromising plant temperature control mechanisms. It has been shown that while drought alone results in 19-50% yield losses, depending on geographical location, a combination of heat and drought can cause complete yield losses or devalue the produce. Understanding changes in cellular dynamics under heat and drought is essential for our perception of stress factors, integration of this information with other environmental and developmental cues, and mounting short- and long-term responses on the cellular level. We anticipate this Special Issue will contribute to advancing our understanding of the molecular and cellular mechanism of drought and heat responses, serving as a useful resource for the scientific community, industry, and readers interested in the development of strategies and tools for improving plant resiliency.

Dr. Andrei Smertenko

Guest Editor



mdpi.com/si/166979

Special Issue



cells



an Open Access Journal by MDPI

Editors-in-Chief

Prof. Dr. Alexander E. Kalyuzhny

Neuroscience, UMN Twin Cities,
6-145 Jackson Hall, 321 Church St
SE, Minneapolis, MN 55455, USA

Prof. Dr. Cord Brakebusch

Biotech Research & Innovation
Centre, The University of
Copenhagen, Copenhagen,
Denmark

Message from the Editorial Board

Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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](#), [CAPus / SciFinder](#), and [other databases](#).

Journal Rank: JCR - Q2 (*Cell Biology*) / CiteScore - Q1 (*General Biochemistry, Genetics and Molecular Biology*)

Contact Us

Cells Editorial Office
MDPI, St. Alban-Anlage 66
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/cells
cells@mdpi.com
[X@Cells_MDPI](https://twitter.com/Cells_MDPI)