Special Issue

Responses of Extreme Environment Plants to Abiotic Stress

Message from the Guest Editors

Extremophytes are plants capable of inhabiting environments characterized by harsh abiotic conditions that limit the fundamental metabolic and physiological processes. Thus, one of the most interesting aspects to study extremophile plants is the possibility to identify key traits and genes for plant adaptation to unfavorable climatic conditions, which may result in a potential tool for developing novel stress-resistant genotypes. Additionally, most extremophile environments have been identified as areas strongly affected by climate change (Antarctica, Arctic, high mountains), which further increases the interest in studying these singular species and further complicates their responses against abiotic stress. Therefore, the aim of this Special Issue is to consolidate a set of articles which examine the physiological, molecular, and biochemical mechanisms behind the singularity of extremophile plant species in terms of adaptation/acclimation to harsh environments as reservoirs of stress resistance mechanisms and the challenges they face in dealing with the current scenario of climate change.

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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.

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