

Special Issue

Effects of Radiation on Plants

Message from the Guest Editors

With the discovery of ionizing radiations as physical mutagens, mutation research appeared as a new field in plant science. These mutagens may cause genetic variations such as DNA single- or double strand breakage and chromosomal aberrations in plants. These changes caused by radiation may be repaired by machinery such as a nucleotide excision repair (NER) and homologous recombination (HR). Despite this, some of the damaged nucleotides cannot be repaired or may be repaired incorrectly. Ionizing radiations are most commonly used to generate useful mutations in plants, owing to their ease of application and high mutation frequency. The effects on living organisms from a form of ionizing radiation, including mutation rate, cytogenetic effects and biological responses, have been reported in many plant species. An understanding of genetic variations, including physiological and morphological changes by radiation, is essential not only for the characterization of mutations, but also for the application of a mutational technique for plant breeding and molecular genetics. Through this Issue, we will deeply review the related topics and share novel plant effects caused by radiation.

Guest Editors

Dr. Jin-Baek Kim

Korea Atomic Energy Research Institute, Radiation Breeding Research Team, Jeongeup 56212, Korea

Dr. Sungbeom Lee

Korea Atomic Energy Research Institute, Research Division for Radiation, Jeongeup 56212, Korea

Deadline for manuscript submissions

closed (31 March 2021)



Plants

an Open Access Journal
by MDPI

Impact Factor 4.0
CiteScore 6.5
Indexed in PubMed



mdpi.com/si/56974

Plants

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 4.0
CiteScore 6.5
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, and 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)