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DNA Damage Responses in Plants

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Message from the Guest Editors

Dear colleagues,

Maintenance of genome integrity is a priority for organisms exposed to genotoxic stress. Specialized plant DNA repair pathways ensure genetic information integrity. When damage is accumulated above a critical threshold and DNA repair cannot reverse lesions, plant cells undergo programmed cell death avoiding genetic defects that limit crop performance. DNA damage response (DDR) is a crucial regulator of cell cycle checkpoints, revealing that DNA damage sensing and signaling are strictly linked to growth. DNA lesions contribute to aging and there is renewed interest in plant telomere biology in the context of DNA repair. Plants can also withstand genotoxic injury by activating endoreduplication. Plant genomes host highly conserved DDR components, however, there are several plant-specific features of DDR that make this process unique compared to animals. This Special Issue aims at providing an update on basic and applied plant DDR research in model and crop plants in vitro and/or in the field, under abiotic/biotic stress conditions or exposed to genotoxins.

Dr. Al



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Special Issue



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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.

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