Special Issue

DNA Damage and Repair in Microorganisms, Plants and Mammalian Systems

Message from the Guest Editors

Maintaining genome integrity is important for the perpetuation of all life forms. Cells that are constantly subject to endogenous and exogenous mutagens instigate robust DNA damage response (DDR), while persistent DNA damage triggers cell senescence or apoptosis. Mounting evidence suggests that the disruption and dysregulation of DNA damage repair play a key role in survival and adaptation of pathogens, cancer, neurodegeneration, and aging, to name but a few. DNA damage repair, in particular the p53 pathway, also contributes to the success and selection of CRISPR-based genome editing. In this Special Issue of Genes, we welcome reviews, research articles, brief communications, and perspectives that will employ biochemical and biophysical technologies to address the mechanisms of genotoxins, DDR pathways, telomere maintenance, DNA replication fidelity, repetitive sequences and chromosome fragility, and mitochondrial genome integrity in both microorganisms and mammalian systems. Therapeutic interventions, ranging from small molecules to biologics, that target DDR pathways in human diseases are also of special interest.

Guest Editors

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Deadline for manuscript submissions

closed (20 May 2024)

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Message from the Editor-in-Chief

Genes is central to our understanding of biology, and modern advances such as genomics and genome editing have maintained genetics as a vibrant, diverse and fast-moving 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

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