# Special Issue

# Advances in DNA Repair Disorders Research: Molecular Mechanisms, Novel Therapies and Implications for Understanding Aging, Neurological Dysfunction and Cancer Progression

## Message from the Guest Editor

DNA repair defective diseases, encompassing a spectrum of disorders such as xeroderma pigmentosum, Trichotioystrophy, Cockayne syndrome, Ataxia-telangiectasia, Boom syndrome, Werener syndrome, Fanconi Anemia, and Hutchinson–Gilford progeria syndrome, underline the critical importance of DNA repair mechanisms in maintaining genomic stability. These conditions manifest as heightened susceptibility to cancer, accelerated aging, neurological dysfunction, and a plethora of other health challenges. A deep understanding of the molecular basis of these disorders is pivotal for the development of effective therapies.

This Special Issue of *Cells* aims to bring together the latest research and discoveries in the field in a collection of original research articles and reviews. Topics include exploration of the intricate molecular mechanisms and signaling pathways at the basis of DNA repair-defective disorders, novel therapies and interventions designed to correct DNA repair deficiencies and the use of patients' cells as a model to decipher the critical connection between DNA repair, aging, neurological dysfunction and tumorigenesis.

## Guest Editor

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## Deadline for manuscript submissions

closed (20 February 2025)

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# About the Journal

## 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.

## Editors-in-Chief

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manuscripts are peer-reviewed and a first decision is provided to authors approximately 16 days after submission; acceptance to publication is undertaken in 2.7 days (median values for papers published in this journal in the first half of 2025).