# Special Issue

# Impact of Radiation and Chemical Exposure on Genome Activity, Function, Structure and Evolution

## Message from the Guest Editor

Technological advances have brought forward new levels and areas of exposure to humans in form of synthetic chemicals and ionizing radiation. Ionizing radiation is defined as any electromagnetic wave or particle that will produce a subatomic ionization event. Ionizing radiation can inflict a wide spectrum of DNA damages resulting in mutations, translocations, deletions, and other genomic aberrations. The DNA lesions can lead to mutations in somatic cells, often resulting in cancer, making the ionizing radiation a well-known and described carcinogen. Ionizing radiation can also be used in a targeted manger on rapidly dividing cells in solid tumours, providing thus radiotherapy treatments. Chemicals, both natural and synthetic, can act on a variety of biological processes including DNA-methylation, histone activity, and genes expression. Moreover, the induced alterations can sometimes be associated with an increased risk of disease. The aim of this Special Issue is to provide an overview of the impact of radiation and chemical exposure at various levels on genome activity, function, structure and evolution.

## Guest Editor

Dr. Cristina Sisu

Department of Life Sciences, College of Health, Medicine and Life Sciences, Brunel University London, Uxbridge, UK

## Deadline for manuscript submissions

closed (1 October 2022)

**Cells**

**an Open Access Journal by MDPI**

**Impact Factor 5.2**
**CiteScore 10.5**
**Indexed in PubMed**

mdpi.com/si/81842

*Cells*
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
cells@mdpi.com

mdpi.com/journal/cells

# Cells

an Open Access Journal by MDPI

Impact Factor 5.2
CiteScore 10.5
Indexed in PubMed

mdpi.com/journal/cells

MDPI

# 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

Dr. Alexander E. Kalyuzhny
Dental Basic Sciences, University of Minnesota, 308 Harvard St. SE, Minneapolis, MN 55455, USA

Prof. Dr. Cord Brakebusch
Biotech Research & Innovation Centre, The University of Copenhagen, Copenhagen, Denmark

## Author Benefits

**High Visibility:**

indexed within Scopus, SCIE (Web of Science), PubMed, MEDLINE, PMC, CAPlus / SciFinder, and other databases.

**Journal Rank:**

JCR - Q2 (Cell Biology) / CiteScore - Q1 (General Biochemistry, Genetics and Molecular Biology)

**Rapid Publication:**

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).