Special Issue

Molecular Mechanisms Responsible for Radiation-Induced Toxicity of Normal Tissue

Message from the Guest Editor

According to the American Cancer Society report, a little over 1.9 million new cancer cases are expected to be diagnosed in the United States in 2022. Approximately 50% to 60% of these cancer patients will either receive targeted fractionated radiation to eradicate a local tumor or total body irradiation as a conditioning process before bone marrow transplantation. Unfortunately, a strong positive correlation exists between tumor regression due to radiotherapy and healthy tissue toxicity. Radiation damage may also occur from nuclear accidents or warfare. Radiation damage, especially in highly radiosensitive tissues, such as those in the hematopoietic and gastrointestinal systems, may occur within hours to days (early), within weeks (acute), or after months or years (delayed). However, the pathogenesis of the postirradiation healthy tissue toxicity is highly complex in nature. Thus, it is important to define and better understand the genetic basis of and genes involved in healthy tissue radiation damage to allow the development of novel mitigating methods, which would not interfere with cancer therapy.

Guest Editor

Dr. Rupak Pathak
Division of Radiation Health, Department of Pharmaceutical Sciences, University of Arkansas for Medical Sciences, Little Rock, AR 72205, USA

Deadline for manuscript submissions

closed (25 December 2025)

GCAT
TACG
GCAT

Genes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5
Indexed in PubMed

mdpi.com/si/121424

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

mdpi.com/journal/genes

MDPI

GCAT
TACG
GCAT

Genes

an Open Access Journal by MDPI

Impact Factor 2.8
CiteScore 5.5
Indexed in PubMed

mdpi.com/journal/genes

MDPI

About the Journal

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

Prof. Dr. Selvarangan Ponnazhagan
Experimental Cancer Therapeutics, The University of Alabama at Birmingham, 1825 University Blvd., SHEL 814, Birmingham, AL 35294-2182, USA

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, MEDLINE, PMC, Embase, PubAg, and other databases.

Journal Rank:

JCR - Q2 (Genetics and Heredity) / CiteScore - Q2 (Genetics (clinical))