

Special Issue

Radiobiology—New Advances

Message from the Guest Editors

To date, radiobiology has played a pivotal role in understanding how ionizing radiation affects living systems, from molecular and cellular mechanisms to tissue and organism-level responses. In recent years, significant progress has been made in uncovering the complex biological processes triggered by radiation exposure, including DNA damage and repair pathways, cell cycle regulation, immune modulation, and the tumor microenvironment. This Special Issue aims to present the latest research and emerging trends in radiobiology, highlighting innovative approaches that are driving the field forward. Topics of interest include, but are not limited to, radiation-induced signaling pathways, radiosensitizers and radioprotectors, hypoxia-related mechanisms, normal tissue toxicity, and novel irradiation techniques such as FLASH and particle therapy. By bringing together contributions from both basic and translational research, this Special Issue seeks to foster a deeper understanding of radiation biology and its application to cancer treatment and beyond.

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