

Special Issue

Molecular Advances in Radiation Oncology: Mechanisms, Immunotherapy and Innovation

Message from the Guest Editor

Radiation oncology is entering a new era shaped by molecular precision and therapeutic synergy. This Special Issue of the *International Journal of Molecular Sciences*, titled "Molecular Advances in Radiation Oncology: Mechanisms, Immunotherapy and Innovation," explores the dynamic interface of radiobiology, molecular oncology, and immunotherapy. We invite cutting-edge contributions that investigate innovative radiotherapy paradigms, including their integration with immune checkpoint inhibitors, targeted therapies, and novel radiosensitizers. Studies on DNA damage response mechanisms, biomarkers for treatment personalization, and modulation of the tumor microenvironment are especially welcomed. Emphasis will be placed on original research and translational studies that bridge molecular discoveries with clinical application, advancing the field toward more effective and individualized radiation treatments. By convening interdisciplinary insights, this Special Issue aims to accelerate scientific progress and clinical innovation in precision radiation oncology.

Guest Editor

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Message from the Editor-in-Chief

The International Journal of Molecular Sciences (*IJMS*, ISSN 1422-0067) is an open access journal, which was established in 2000. The journal aims to provide a forum for scholarly research on a range of topics, including biochemistry, molecular and cell biology, molecular biophysics, molecular medicine, and all aspects of molecular research in chemistry. *IJMS* publishes both original research and review articles, and regularly publishes special issues to highlight advances at the cutting edge of research. We invite you to read recent articles published in *IJMS* and consider publishing your next paper with us.

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