

Special Issue

Molecular Aspects of Tumor Radiotherapy

Message from the Guest Editor

The molecular aspects of tumor radiotherapy represent a critical frontier in modern cancer research, where understanding the intricate molecular mechanisms underlying radiation response has become paramount for advancing personalized therapeutic strategies. Despite the role of radiotherapy in curing approximately 40% of cancers, treatment resistance remains a formidable clinical challenge, demanding deeper molecular insights to optimize therapeutic outcomes.

We especially encourage submissions examining novel combination strategies that enhance radiotherapy efficacy through metabolic modulators, DNA repair inhibitors, and immunotherapeutic agents. Studies utilizing diverse experimental models, from in vitro cellular systems to patient-derived xenografts and clinical specimens, are particularly valued. Furthermore, research investigating predictive biomarkers for treatment response and innovative approaches to overcome resistance mechanisms, including targeting the tumor microenvironment and hypoxia-mediated resistance, will significantly contribute to this collection.

Guest Editor

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