current issues in molecular biology

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Molecular Insights into Radiation Oncology

Guest Editor:

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Message from the Guest Editor

Radiation therapy is a treatment using ionizing radiation that is generally provided as part of cancer therapy to either kill or control the growth of malignant cells. Radiation therapy works by damaging the DNA of cancer cells and can cause them to undergo mitotic catastrophe. However, radiation affects normal cells as well as cancerous cells, causing side effects in the treatment area.

We aim to dissect the molecular mechanisms by which radiation therapy influences the initiation and progression of tumors. In addition, we would like to advance the development of cancer treatments that target the mechanisms of radiation therapy and reduce the side effects of radiation. We invite submissions of original research articles and comprehensive reviews that can help to advance our molecular understanding of radiation oncology. Subtopics may include, but are not limited to, the following:

- Molecular mechanisms in radiation oncology;
- Developing new drugs that target the mechanisms by which radiation affects tumor initiation and progression;
- Reducing side effects from radiation and the mechanisms behind them;
- Exploring personalized treatment options related to radiation oncology.