Special Issue

Inhibition of DNA Repair Enzymes as a Valuable Pharmaceutical Approach

Message from the Guest Editors

The cytotoxic effect of chemotherapy and radiotherapy of cancer is associated with their capacity to generate DNA damage. The ability of cancer cells to recognize DNA damage and initiate DNA repair is a key mechanism for therapeutic resistance to chemotherapy. Therefore, the targeting of DNA repair enzymes can be used as a strategy to potentiate the cytotoxicity of the currently available DNA damaging agents toward cancer cells. Inhibitors of PARP1 (poly ADP ribose polymerase 1, the enzyme involved in DNA repair) such as olaparib, rucaparib, and niraparib are in clinical use already. Thus, the search and study of therapeutic targets among DNA repair enzymes and factors, as well as development of new inhibitors of DNA repair enzymes, is an important and topical task. Medicinal chemists, bioorganic chemists, physical chemists, biologists, and pharmacologists contribute significantly to these multidisciplinary studies. A Special Issue of the International Journal of Molecular Sciences provides a great opportunity for a thorough discussion of the state of the art in this area.

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Deadline for manuscript submissions

closed (30 September 2020)

International Journal of Molecular Sciences

an Open Access Journal by MDPI

Impact Factor 4.9
CiteScore 9.0
Indexed in PubMed

mdpi.com/si/29963

International Journal of Molecular Sciences
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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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