

Special Issue

Molecular Mechanisms of Archaea

Message from the Guest Editors

Genomic integrity is a fundamental requirement for the proper functioning of all cellular processes and for the transmission of genetic information to offspring.

DNA damage can be caused by exogenous sources, but also by endogenous errors during replication, recombination, and chromosome segregation as the incorporation of mismatch errors, torsional stress of the DNA helix, and spontaneous deamination or hydrolysis. Compared to Eukarya and Bacteria, Archaea must have more robust DNA replication and repair complexes. Since archaeal enzyme structures provide critical data about the architecture and mechanisms of key DNA repair proteins, the study of archaeal structural biology is fundamental for both medical and industrial impacts. With this Special Issue of IJMS we aim to enlarge current knowledge on molecular mechanisms of DNA replication and recombinational repair, particularly in Archaea which have been considered the most efficient model of DNA repair pathways for decades now. We hope to contribute to the knowledge in DNA repair mechanisms and consequently to identify new strategies for the most accurate treatments in human diseases.

Guest Editors

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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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