

Special Issue on
Genome Stability in Archaea

CALL FOR PAPERS

The delicate balance between processes governing genetic variations and mechanisms of genome stability is the driving principle of evolution, to whose laws all organisms are subjected. All organisms are equipped with cellular machineries that secure accurate replication, as well as with a variety of DNA repair and protection systems, which correct or prevent genome lesions, thus ensuring the genetic information transfer from parents to offspring. Elucidation of the molecular basis of these mechanisms is a topic of a great and wide interest for scientific community, culminating in the award of the Nobel Prize in 2015.

Since the discovery of Archaea in 70s, these organisms have been objects of deep interest because of their ability to colonize all habitats, including environmental extremes: under such conditions, the structure of biological macromolecules and, in particular, genome maintenance is greatly affected. Considering that some molecular features of DNA repair systems are uniquely archaeal but others are shared with eukaryotes, these organisms represent useful models for the advancement of knowledge on genome stability, but also potential sources of new information concerning early cellular evolution and the origin of life.

In this special issue, we invite authors to submit original research and review articles addressing topics in archaeal genome stability and maintenance.

Potential topics include but are not limited to the following:

- ▶ Archaeal proteins and complexes involved in DNA topology and chromatin organization
- ▶ *In vivo* and *in vitro* studies on archaeal DNA damage and repair under extreme conditions
- ▶ DNA replication in Archaea and its impact on genome integrity
- ▶ Proteins and mechanisms related to DNA recombination in Archaea

Authors can submit their manuscripts through the Manuscript Tracking System at <http://mts.hindawi.com/submit/journals/archaea/gsa/>.

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