



Archaea

Special Issue on
**Structure, Function, and Evolution of Archaeal
Proteins**

CALL FOR PAPERS

Since the discovery by Carl Woese in 1977, the Archaea have attracted a great deal of scientific attention. Particularly interesting is the fact that studies of archaeal proteins in the structure, function, and other parts have provided valuable insights into the biological mechanisms. In evolution, the Archaea were more closely related to the eukaryotic nuclear lineage. Structure of thousands of archaeal proteins was determined and gave clues to the function of eukaryotic homologues. The Archaea harbor many unique metabolic pathways that differ from classical pathways from those in Bacteria and Eukarya. These novel pathways are always accompanied by novel enzymes. The study of these novel enzymes can further elucidate the evolutionary relationship in the different domains of life and adaption mechanism to diverse environments.

Archaeal proteins can also be adapted to thermophilic, psychrophilic, and halophilic conditions, and then they also have great potential in biotechnical applications. Because of the promiscuous property of archaeal enzymes, they have advantages in protein design and the production of chiral compounds.

In this special issue, we invite authors to submit original research and review articles addressing topics in structure, function, evolution, and application of archaeal proteins.

Potential topics include but are not limited to the following:

- ▶ Structural and functional characterization of archaeal proteins
- ▶ Identification and characterization of novel proteins in Archaea
- ▶ Bioinformatics analysis and classification of archaeal proteins
- ▶ Evolutionary relationship between proteins related to Archaea
- ▶ Commercial applications and design of archaeal proteins

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

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Manuscript Due

Friday, 7 October 2016

First Round of Reviews

Friday, 30 December 2016

Publication Date

Friday, 24 February 2017