Special Issue

Regulation and Functions of RNA Exonucleases in Bacteria

Message from the Guest Editor

RNA endo- and exonucleases (collectively referred to as ribonucleases, RNases) play fundamental roles in all kinds of cells. Indeed, they modulate the intracellular concentration of different RNA transcripts, thus contributing to gene expression regulation. Moreover, they provide the cells with mature and functional RNA molecules and contribute to recycling nucleotides.

The aim of this Special Issue is to advance the knowledge of hydrolytic and phosphorolytic exoribonucleases (exoRNases) of Gram-negative bacteria. Extensive studies performed in the last four decades have allowed us to understand the fundamental aspects of the function of these enzymes. Unclear are also the rules and mechanisms governing their specificity and activity so that they can extensively digest some RNAs and process others by accurately removing precise RNA portions. Moreover, RNA processing and degradation have mainly been studied in a few model species. It would be important to enlarge the analysis to other bacteria to get a more comprehensive understanding of the conservation and divergence of these processes in the branches of the bacterial phylogenetic tree.

Guest Editor

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"Microorganism" merges the idea of the very small with the idea of the evolving reproducing organism is a unifying principle for the discipline of microbiology. Our journal recognizes the broadly diverse yet connected nature of microorganisms and provides an advanced publishing forum for original articles from scientists involved in high-quality basic and applied research on any prokaryotic or eukaryotic microorganism, and for research on the ecology, genomics and evolution of microbial communities as well as that exploring cultured microorganisms in the laboratory.

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