

Special Issue

Evolutionary Genomics of Bacterial Endosymbionts: From Mutualism to Parasitism

Message from the Guest Editor

Bacterial endosymbionts are ubiquitous across the tree of life, forming intimate associations with a wide range of hosts, including insects, marine invertebrates, and even vertebrates. These relationships span a dynamic spectrum—from mutualism to parasitism—and play pivotal roles in shaping host biology, ecology, and evolution. Despite their significance, the study of endosymbionts presents unique challenges. Many are obligate intracellular organisms, often unculturable outside their hosts. However, advances in genomic technologies—such as whole-genome sequencing, comparative and population genomics, phylogenomics, and co-phylogenetic analyses—have opened new avenues for exploring the complexity of these associations. This Special Issue invites original research articles and comprehensive reviews that delve into the evolutionary genomics of bacterial endosymbionts, with a focus on understanding the molecular and evolutionary mechanisms underlying transitions along the mutualism–parasitism continuum.

Guest Editor

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Biomolecules is a multidisciplinary open-access journal that reports on all aspects of research related to biogenic substances, from small molecules to complex polymers. We invite manuscripts of high scientific quality that pertain to the diverse aspects relevant to organic molecules, irrespective of the biological question or methodology. We aim for a competent, fair peer review and rapid publication. Please look at some of the exciting work that has been published in *Biomolecules* so far. We would be delighted to welcome you as one of our authors.

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