Special Issue

The Molecular Mechanisms for Infection and Phenotypic Changes of the Host in Procaryote–Eukaryote and Eukaryote-Eukaryote Endosymbioses

Message from the Guest Editor

Endosymbiosis is a primary process in eukaryote evolution and can be observed in protists, insects and vertebrates. To provide an explanation for this phenomenon, experiments for the recreation of endosymbiosis between symbionts isolated from symbiont-bearing host cells (or free-living cells with symbiotic capacity) and symbiont host cells are indispensable. Thus, the aim of this Special Issue is twofold: to elucidate the molecular mechanisms underlying the initiation of endosymbiosis and to contribute to the development of technologies to create useful organisms by artificially inducing endosymbiosis. We invite articles and reviews that provide insights into the molecular mechanisms underlying the following phenomena.

- How does the symbiont invade the host cell and avoid digestion by the host's lysosomal enzymes?
- How can the symbiont grow in synchrony with the host cell?
- Is horizontal gene transfer from the symbiont to the host still taking place today? If so, when and how?
- How does the host maintain endosymbionts and acquire new phenotypes to adapt to its environment?

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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