



Molecular Mechanisms in Rhizobium–Legume Symbiosis

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Message from the Guest Editors

Dear Colleagues,

Biological nitrogen fixation (BNF) is a very important process enriching natural and agricultural ecosystems with nitrogen compounds available for plants. Symbiotic systems composed of legume plants and soil rhizobia are the most efficient in BNF.

The development of functional *Rhizobium*–legume symbiosis is a multi-step and very complicated process, finally leading to the formation of special plant organs called root nodules, the colonization of plant tissues by bacteria, and the transformation of rhizobia into nitrogen-fixing bacteroids. At each step of this process, specific molecular signals and mechanisms facilitate its precise regulation.

The diversity of rhizobia, legumes, and their mutual interactions are huge; therefore, despite the decades of research, we are still surprised by new discoveries concerning the mechanisms acting in such symbiotic systems. We welcome all novel research and reviews covering topics related to molecular mechanisms in *Rhizobium*–legume symbiosis.





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