

Special Issue

Molecular Mechanisms in Rhizobium–Legume Symbiosis

Message from the Guest Editors

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.

Guest Editors

Prof. Dr. Jerzy Wielbo

Department of Genetics and Microbiology, Maria Curie-Skłodowska University, Pl. M. Curie-Skłodowskiej 5, 20-031 Lublin, Poland

Dr. Sylwia Wdowiak-Wróbel

Department of Genetics and Microbiology, Maria Curie-Skłodowska University, Pl. M. Curie-Skłodowskiej 5, 20-031 Lublin, Poland

Deadline for manuscript submissions

closed (15 June 2023)



Agronomy

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 6.7



mdpi.com/si/135632

Agronomy
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
agronomy@mdpi.com

[mdpi.com/journal/
agronomy](https://mdpi.com/journal/agronomy)





Agronomy

an Open Access Journal
by MDPI

Impact Factor 3.4
CiteScore 6.7



[mdpi.com/journal/
agronomy](https://mdpi.com/journal/agronomy)



About the Journal

Message from the Editor-in-Chief

Agronomy draws together researchers from diverse areas of agricultural research with a common aim of enhancing agricultural productivity globally. The journal provides unlimited free access to all those interested in advancing agricultural science from both the research and general community. Papers are released immediately after acceptance through the internet.

Agronomy is supported by our authors and their institutes through low article processing charges (APC) for accepted papers. We hope you will support the journal by becoming one of our authors.

Editor-in-Chief

Prof. Dr. Leslie A. Weston

Gulbali Centre for Agriculture, Water and Environment Research,
Charles Sturt University, Wagga Wagga, NSW 2678, Australia

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), GEOBASE, PubAg, AGRIS, and other databases.

Journal Rank:

JCR - Q1 (Agronomy) / CiteScore - Q1 (Agronomy and Crop Science)