



Lanthanide-Dependent Methylootrophy and Methylootrophs

Guest Editor:

Dr. Akio Tani

Institute of Plant Science and
Resources, Okayama University,
Okayama, Japan

Deadline for manuscript
submissions:

closed (30 June 2021)

Message from the Guest Editor

Dear Colleagues,

Methylobacterium (including *Methylorubrum*) species are Gram-negative, aerobic, and facultative methylootrophs that belong to the *Methylobacteriaceae* family of the order Rhizobiales. So far, 61 species are known, and they have been isolated from many different environmental niches, which are represented by plants, soil, air, aquatic, and even human living environments. As a representative model methylootroph, *Methylorubrum extorquens* strain AM1 has been intensively studied for its methylootrophy. Recent findings on the lanthanide dependency of its important enzyme for methylootrophy, XoxF-type methanol dehydrogenase, have indicated the unexpected role of lanthanides in biology. Besides, many isolates of the genera have also been reported as plant-growth-promoting bacteria, as well as pink biofilms in kitchen and bathrooms. The aim of this Special Issue is to contribute knowledge on the methylootrophy, physiology, and environment-adaptability of the genera *Methylobacterium* and *Methylorubrum*.

Dr. Akio Tani
Guest Editor





an Open Access Journal by MDPI

Editor-in-Chief

Dr. Nico Jehmlich

Department of Molecular
Toxicology, UFZ-Helmholtz
Centre for Environmental
Research, 04318 Leipzig,
Germany

Message from the Editor-in-Chief

"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.

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), PubMed, PMC, PubAg, CAPlus / SciFinder, AGRIS, and other databases.

Journal Rank: JCR - Q2 (Microbiology) / CiteScore - Q1 (Microbiology (medical))

Contact Us

Microorganisms Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
www.mdpi.com

mdpi.com/journal/microorganisms
microorganisms@mdpi.com
X@Micro_MDPI