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Lanthanide-Dependent Methylotrophy and Methylotrophs

Guest Editor:

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Message from the Guest Editor

Dear Colleagues,

Methylobacterium (including Methylorubrum) species are Gram-negative, aerobic, and facultative methylotrophs 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 methylotroph, Methylorubrum extorquens strain AM1 has been intensively studied for its methylotrophy. Recent findings on the lanthanide dependency of its important methylotrophy, XoxF-type enzyme for methanol dehydrogenase, have indicated the unexpected role of lanthanides in biology. Besides, many isolates of the genera have also been reported as plant-growthpromoting bacteria, as well as pink biofilms in kitchen and bathrooms. The aim of this Special Issue is to contribute knowledge on the methylotrophy, physiology, and environment-adaptability of the genera Methylobacterium and Methylorubrum.

Dr. Akio Tani *Guest Editor*





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