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温泉環境に生息する微生物のメタゲノム解析
Metagenomic Analyses of Microbes in Hot Springs

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研究成果概要

This study focused on the microorganisms inhabiting five hot springs in Akita and Aomori prefectures and Jinata hot spring. As each hot spring site has unique geochemical conditions, it is expected that environmental adaptation of microorganisms is observed from the comparative genomics. The metagenome-assembled genomes (MAG) were reconstructed using the bioinformatics tools in the supercomputer system, and we performed the metabolic potential analysis.

In the next fiscal year, we will focus on the physiology and metabolism of specific clades to reveal their uniqueness in the targeted hot springs. To overcome the limited number of available genomes, we will also analyze MAGs from the curated genomic catalogs (e.g. Genomes from Earth's Microbiomes catalog, OceanDNA MAG catalog).