

## Potential application of cyanobacteria estimated by gene analysis of terrestrial cyanobacterium, *Nostoc* sp. HK-01, in closed-environment

\*Hiroshi Katoh<sup>1</sup>, Shunta Kimura<sup>2,3</sup>, Kaori Tomita-Yokotani<sup>2</sup>

1. Mie University, 2. University of Tsukuba, 3. The University of Tokyo

Cyanobacteria are photoautotrophic organisms and living various environments on the earth. We have been studying space environment tolerance on drought-tolerant cyanobacterium, *Nostoc* sp. HK-01 (NIES-2109, hereafter HK-01). To live under extreme environments for a long time, HK-01 may change gene expression. Here, we closely check genes for extreme environments tolerance in HK-01 whole genome and will show a part of our new results and discussion. We will also discuss potential application of the cyanobacterium in closed ecosystem.

Keywords: cyanobacteria, gene, closed ecosystem