

Characteristics of archaeobacterial ether-lipid biosynthesis compared with the similar metabolism of other livings

Noriaki Yamauchi[1], Tatsushi Murae[2]

[1] Earth and Planetary Sci., Kyushu Univ., [2] Earth and Planetary Sci, Kyushu Univ.

Archaea (archaeobacteria) live in a relatively hostile environment and many investigators consider that they are the living example being the nearest to the origin of life. However, they seems to adopt the life to the environment consequently from the features of a part of their body or metabolic system. Understanding of the correlation of their living environment, which have several resemblances to the primordial environment and the metabolic system from a point of bioorganic chemistry, we conducted the studies of the biosynthesis of their characteristic, acid-tolerable ether lipid. A part of our studies about the isoprenoidal component from amino acid along with other researchers results about them, and the biosynthetic proposal of the unique sugar part, carditol, are introduced.