

Single cell genomic analysis for the marine ammonia-oxidizing archaea

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Ammonia-oxidizing Archaea (AOA) is one of the most dominant lineages in aquatic microbial ecosystem in the dark oceans. Potential niche separation of AOA has been observed along with the concentration/flux of electron donors such as ammonia and urea. However, isolates and enrichments of AOA belong to the lineages that adapt relatively high concentration/flux of electron donors. In this study, single cell genomic analysis was applied to the AOA population that inhabit sea surface to hadal water in the Izu Ogasawara Trench in order to know the machinery of niche separation of the AOA lineages in the dark ocean.

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