

## Diversity of Halophilic Archaea from Ezzemoul sabkha in Algeria

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**Abstract :** Sabkhas and chotts are examples of hypersaline environments inhabited by halophilic microorganisms. In the present study, a culture-dependent methodology was used to determine the archaeal diversity present within Ezzemoul sabkha located in the north-eastern of Algeria. It was assessed using different media with different substrates in attempt to initiate the growth of wide spectrum of halophiles. Several strains were isolated and subjected to a polyphasic taxonomic characterization. The isolates tested placed within the family Halobacteriaceae, a group of extremely halophilic, aerobic archaea that have a salinity tolerance of 3 to 4M and associated with six genera Halorubrum, Halobacterium, Haloterrigena, Haloferax, Halomicrobium and Haloarcula. Halorubrum species were found to be the dominant archaea community as indicated by the presence of different strains recovered from this sabkha. In the other hand, two new species within Halobacteriaceae family; Halorubrum ezzemolulense sp. nov. and Halomicrobium katesii sp. nov. were described.

**Keywords :** sabkha, archaea, halophilic, hypersaline environments

**Conference Title :** ICBE 2016 : International Conference on Biodiversity and Ecosystems

**Conference Location :** Istanbul, Türkiye

**Conference Dates :** April 19-20, 2016