

Yungay, Mars on Earth

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The study of microbial communities in desert saline soils have revealed the presence of extremophile microorganisms, such as the genus *Nocardiopsis* Actinomycetes, which has proven to be an important source of new natural products of biotechnological industrial interest, which are antimicrobial and anticancer compounds. In these extreme ecosystems, such as the Salar and Yungay, there is a limitation in obtaining cultivable and non-cultivable microorganisms. In this study, the objective of identifying and analyzing the physiological activity against tolerance salt (NaCl) and production of amylase enzyme from a strain obtained by sporulating design culture medium from a soil sample was addressed "Salar de Yungay", by sequencing and molecular techniques. The results indicate the identification of *Nocardiopsis* species phylogenetically related to *N. dassonvillei* subsp. *dassonvillei*. This paper determines how molecular approaches can help supplement the identification of strains together with their morphological and physiological characteristics.