

ABSTRACT

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Title of diploma thesis: Phylogenetic and taxonomic characterization of new haloarchaea related to *Natronomonas*.

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Study program: Pharmacy

This work continues with the characterization of new Archaea related to the genus *Natronomonas* isolated from hypersaline waters of solar salterns located near the city of Huelva in the southwest of Spain. These microorganisms need a high concentration of salts in the environment for their survival and growth. Ana Durán-Viseras started with their characterization and I was participating on the continuation of the project during my stay in Sevilla.

To complete the phylogenetic studies, we amplified the *rpoB*' gene of the potentially new species of *Archaea* as a part of MLSA and we created a phylogenetic tree. Based on these results we came to the conclusion that they represent new genus, which was later confirmed by the analysis of polar lipids profile by the HPTLC method. We have determined the guanine and cytosine content, which is part of the taxonomic characterization of new prokaryotic species. We have started the phenotypic characterization.