

ABSTRACT

Candidate: Dáša Straková

Title of diploma thesis: Phylogenetic diversity of culturable prokaryotes from hypersaline environments.

Charles University, Faculty of Pharmacy

Department of Biological and Medical Sciences

University of Sevilla, Faculty of Pharmacy

Department of Microbiology and Parasitology

Study program: Pharmacy

Hypersaline environments are widely distributed habitats characterized by elevated concentrations of salts, mainly represented by aquatic systems and hypersaline soils. Their study has enabled the isolation and characterization of a large number of halophilic microorganisms during the last decades, which are microorganisms that require a high concentration of salts in order to be capable of life and growth.

The aim of this work was to continue the initial characterization of halophilic Archaea and Bacteria, previously isolated by Ana Durán-Viseras in 2016 from several water samples from Isla Cristina and Isla Bacuta solar salterns (Huelva, Spain) and from a hypersaline soil located in Odiel Saltmarshes (Huelva, Spain), and to carry out a biodiversity study of these samples. Ana Durán-Viseras started this project and I continued with it during my stay in Sevilla.

As a part of the characterization, we sequenced the partial 16S rRNA gene of the isolated strains. For those that were potentially interesting, we carried out a phylogenetic study of the complete 16S rRNA gene and of the *rpoB*' gene. Based on these results, we assumed that they could represent new halophilic taxa.