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# Isolation and characterization of endophytic and rhizospheric bacteria of *Arthrocnemum* in the Odiel marshes and the heavy metals effects in their PGP properties

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*Arthrocnemum macrostachyum* is a halophyte plant Cd-hyper accumulator and hyper tolerant and it could be used as phytoremediation tool. This plant grows naturally in Odiel marshes, a polluted ecosystem with high levels of heavy metals. For this reason, the aim of this work was study the bacteria associated to this plant and see the effects of heavy metals over them. A total of 48 bacteria were isolated (18 from the rhizosphere and 30 endophytes) and all of them were able to grow in presence of heavy metals and salt. At least one of the PGP properties was present in the isolated bacteria and there were several strains that showed high values of these properties. The heavy metals presence affected to the PGP production by the bacteria both negatively and positively. On the other hand, a high number of isolated bacteria could be novas species. The results of this work suggest that the isolated bacteria could promote the plant growth even in presence of heavy metals and the set of plant and bacteria could be an interesting tool for the phytoremediation.

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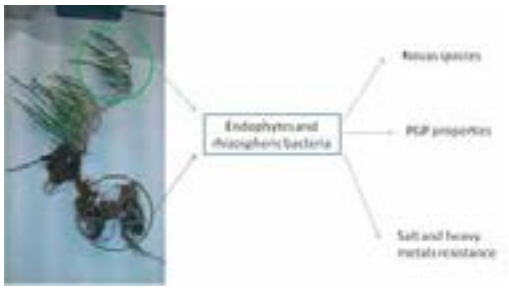


1. Navarro-Torre S, Mateos-Naranjo E, Caviedes MA, Pajuelo E, Rodríguez-Llorente ID (2016). Isolation of plant-growth promoting and metal resistant cultivable bacteria from Arthrocnemum macrostachyum in the Odiel marshes with potential use in phytoremediation. Marine Pollution Bulletin, 110:133-142. doi: 10.1016/j.marpolbul.2016.06.070

## Biography

Salvadora Navarro-Torre is currently pursuing her PhD in the Department of Microbiology and Parasitology in Faculty of Pharmacy, University of Seville, Spain. Her work is about phytoremediation of heavy metals from polluted soils like the Odiel marshes (Huelva).

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**Notes:**