

Isolation and Identification of Bacteria from the Rhizosphere Soil of *Prosopis juliflora* and the Efficacy of its Biochar on Cotton Plants †

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Abstract: Microbes are isolated from the rhizosphere region of *Prosopis juliflora*. In this study, the bacterial strain isolated from the rhizosphere is very helpful in the degradation of heavy metals in contaminated soil and water. The biochar produced from the tree acts as a natural fertilizer; it provides more growth rate and is useful in removing heavy metals. In this present study, one bacterial strain was isolated from the rhizosphere sample. This strain was identified from the biochemical characterization. Naturally, the identified organism having the ability of antimicrobial activity. The pyrolysed form of biochar having beneficial physical and chemical properties to improve plant growth.

Keywords: biochar; bioremediation; fertilizer; heavy metals.

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Conflicts of Interest

The authors declare no conflict of interest.