

## ISOLATION AND IDENTIFICATION OF BACTERIAL STRAINS RESISTANT TO FE, MN AND AL METAL IONS FROM RIVER NILE WATER IN EGYPT

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### ABSTRACT

The Nile River often thought of as the backbone of Egypt, has been source of great sustenance and mobility throughout the years. The heavy-metals are carried into streams, rivers, lakes and oceans and may be deposited in sediments at the bottom of the water body or they may evaporate and be carried elsewhere as rainwater. In our study hundred water samples were collected from River Nile in Rod El-farag region, Cairo, Egypt. To make isolation and identification of bacterial strains have the ability to bear and resist high concentrations of Al, Fe and Mn metals up to 5 mg/l. The isolated bacterial strains were *Pseudomonas putida* biotype A, *Citrobacter freundii* and *Aeromonas hydrophila* DNA Group I. The first and second strains had the ability to resist up to 5 mg/l Fe and Mn separately; while the last one had the ability to resist up to 5 mg/l Fe, Mn and Al, separately. The strains were identified by IMVIC test and confirmatory tests were done by Biolog GeneIII MICROPLATE technique.

**Keywords:** Nile River; *Pseudomonas putida*; *Citrobacter freundii*; *Aeromonas hydrophila*; Heavy metals.