PCR-RFLP of 16s rRNA Amplification Techniques and Utilization of Different Carbon Sources Used for Identification of Frankia Spp. Isolated from Different Egyptian Governorates

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Abstract: Symbiotic Frankia form specialized structures (nodules) along the root system of the host plants. The occurrence of Frankia inside root nodules providing the host plant with fixed nitrogen. The Molecular biology technique (PCR-RFLP) was used to detect the polymorphism of 16s rRNA in addition to the traditional physiological tests for the detection and distinction between the isolated Frankia strains. In this study, Frankia strains were isolated from ecologically different Egyptian governorates. According to their physiological properties i.e., use efficiency of different carbon sources e.g., sodium propionate, sodium pyruvate, sodium acetate, sucrose, glucose and mannitol in addition to the molecular biology technique, the Frankia isolates were identified.

Key words: Frankia, carbon sources, 16S rRNA, polymerase chain reaction PCR, Restriction Fragment Length Polymorphism RFLP.