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Indigenous hydrocarbon-degrading salt-tolerant bacterial strain *Pseudomonas mendocina* isolated from seawater and marine sediments of Oran harbor, Northwestern Algeria

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Petroleum hydrocarbons are xenobiotiques pollutants of great concern for their persistent toxicity, carcinogenicity and difficult elimination. Microorganisms play a significant role in the bioremediation of petroleum contaminants. In our study, crude oil-degrading bacterial strain SP57N was isolated using Bushnell-Hass salt medium, from the contaminated marine sediments and seawater at the harbor of Oran, northwestern Algeria. Identified as *Pseudomonas mendocina* by sequencing and analyzing partial 16S rDNA, using the BLAST program on the NCBI website, This strain could support high concentrations of crude oil (up to 10%, v/v). The effects of salt concentration, pH and temperature

on rate growth rate of strain SP57N, in BHSM medium supplemented with 2% (v/v) of crude oil as sole carbon and energy source, were studied. The results show that maximum growth rate was obtained at 3% (w/v) of NaCl, pH 7and temperature 25°C, at 140 rpm. Furthermore, *Pseudomonas mendocina* could effectively utilize crude oil as its sole carbon and energy source. Thus, *Pseudomonas mendocina* SP57N could be useful for the bioremediation of harbor of Oran, as an excellent degrader to develop one eco-friendly and cost-effective method, as a native bacteria, and marine environments polluted by oil and petroleum hydrocarbons, and for biotechnological applications.

Biography

Faiza Bendadeche is currently working as a professor in University of Oran, Algeria. She attended many national and international conferences and seminar. Her work has been published in many reputed international and national journals

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