

Isolation and antibiotic activity of actinomycetes recovered from Iranian deserts

Saeed Zaker Bostanabad^{1*}, Abdolrazagh Hahsemi Shahraki², Parvin Heidareih³, Misagh Hoseinaei⁴

1. Microbiology Department, Islamic Azad University Parand Branch, Tehran, Iran

2. Department of Epidemiology, Pasteur Institute of Iran, Tehran, Iran

3. Department of Microbiology and Virology, Alborz University of Medical Science, Karaj, Iran

4. Shahid Beheshti University of Medical Science

Abstract

Background: Screening of actinomycetes for the production of novel antibiotics has been intensively evaluated for many years by scientists.

Methods: From Lout desert, Sistan and Balouchestan and Khuzestan deserts, 30 soil samples were collected. The actinomycetes from each sample were isolated and their antibiotic activities against pathogenic bacteria were investigated.

Results: A total of 300 actinomycetes isolates from soil samples were isolated. Out of 300 isolates, 24 isolates shown antimicrobial activity against *S. aureus*, *E. faecium*, *K. pneumonia* and *A. baumannii*.

Conclusion: The study indicated that desert soil had diverse group of actinomycetes which some of the isolates had broader spectrum antibacterial activity which showed potential as a source of antibiotics for pharmaceutical interest.

Key Words: Desert soil, actinomycetes, antibacterial activity

* Corresponding author:

Address: biology Department, Islamic Azad University Parand Branch, Tehran, Iran

Email: Saeedzaker20@yahoo.com