

عنوان مقاله:

DETECTION OF THE POLYKETIDE SYNTHASE (PKSS) GENES WITH ANTIMICROBIAL ACTIVITY IN SOIL
CYANOBACTERIA OF THE LAVASAN

محل انتشار:

نوزدهمین کنگره بین المللی میکروب شناسی ایران (سال: 1397)

تعداد صفحات اصل مقاله: 1

نویسندگان:

Roghaye Sadat Hosseini - *Department of Biology, School of Basic Science, Science and Research Branch, Islamic Azad University, Tehran, Iran*

Bahareh Nowruzi - *Department of Biology, School of Basic Science, Science and Research Branch, Islamic Azad University, Tehran, Iran*

Abbas Akhavan Sepahi - *Department of Microbiology, Islamic Azad University, Tehran North Branch, Tehran, Iran*

خلاصه مقاله:

Background and Aim: Cyanobacteria produce a tremendous variety of secondary bioactive metabolites. Many of these compounds have biological activity. **Methods:** In the current study, we focused on the detection of polyketide synthase (PKSs) genes in seven soil cyanobacteria strains of the Lavasan. Total genomic DNA was extracted from exponential phase cultures. The sequences of the 16s rRNA region were determined. Moreover amplification of polyketide synthase was achieved. Results showed amplification of the appropriate ~700 bp for peptide synthetase. Also, analyses of antibiogram bioassay were screened. In vitro antibacterial activities of organic extracts of studied strains were evaluated against Gram-positive bacteria (*Staphylococcus aureus*) and Gram-negative bacteria (*Escherichia coli*). Dried extracts and supernatants were dissolved in methanol and antimicrobial activity was determined by the disc method. **Results:** The extract of *Nostoc* sp. Ft11 showed more potent activity against *Staphylococcus aureus* and no inhibitory effect was found against *Escherichia coli*. **Conclusion:** According to these results, it is concluded that the antibiogram bioassay and molecular detection of polyketide synthase (PKSs) genes in the soil cyanobacterial strains of Iran may be useful techniques for the assessment of natural product -producing species.

کلمات کلیدی:

Polyketide synthase (PKSs), Soil cyanobacteria, Antimicrobial activity

لینک ثابت مقاله در پایگاه سیویلیکا:

<https://civilica.com/doc/782454>

