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Antimicrobial peptides produced by actinomycetes from ecosystems of Algeria. Molecular identification of microorganisms and preliminary characterization of their biological activity

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Abstract :

The constant development of bacterial resistance to antibiotics and the emergence of new infectious diseases justify the urgent need for new antimicrobial molecules. For this, fourty-five strains of actinomycetes were isolated starting from soil samples from Algeria collected within different ecosystems (forest, wadis, oasis, dams etc.). Antimicrobial activities of 40 strains were tested on Candida albicans, Staphylococcus aureus, Micrococcus luteus, Escherichia coli and Pseudomonas aeruginosa and the activity profiles were used as selection criteria for further screening of antimicrobial peptides. In particular, we are interested in discovering novel lasso peptides through genomic-based approaches.

The identification of the most active strains by polymerase chain reaction has ranked among the genus Streptomyces

Key words : Soil, actinomycetes, antimicrobial activity, lasso peptides, PCR.

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