

Abstract

In vitro root induction and its antibacterial activity of *Costus igneus* was conducted. The plant *C. igneus* was well known for its anti-diabetic property. Traditionally the plant was used to treat fever, rash, asthma and intestinal worms. Two growth regulator IAA (Indole 3-acetic acid) and IBA (Indole butyric acid) in combinations were applied to MS medium for direct root induction. MS medium supplemented with 0.5 mg/ml IBA, induced maximum amount of root culture (fresh weight was 1.566 g and dry weight 0.102 g) after 30 days. In vitro raised roots were subjected to its antimicrobial activity. Acetone, chloroform and methanol were used as solvents to extract plant materials from IBA and IAA derived roots and the extracts were subjected to antimicrobial activity against four gram negative bacteria namely *Pseudomonas aeruginosa*, *Klebsiella pneumonia*, *Salmonella* sp, *Proteus vulgaris*. In which *Klebsiella pneumonia* was found to be most susceptible to both IBA and IAA derived roots. Whose zone of clearance was found to be 25 mm, which was almost equal to that of commercially available antibiotic Gentamycin.

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Help



Indexing Terms

Descriptors

antibacterial properties | antibiotics | antimicrobial properties | asthma | diabetes | extracts | gentamicin | Gram negative bacteria | growth regulators | human diseases | hypoglycaemic properties | IAA | IBA | pathogens | plant extracts | plant growth regulators | plant tissues | pneumonia | roots | aminoglycoside antibiotics | parasites | respiratory diseases | antiinfective agents

Organism Descriptors

Bacteria | Chamaecostus cuspidatus | Costus | Klebsiella | Proteus vulgaris | Pseudomonas | Pseudomonas aeruginosa | Salmonella | humans

Identifiers

man | bacterium | Costus igneus | indolebutyric acid | bactericidal properties | anti-microbial properties | gram-negative bacteria | growth substances | anti-diabetic properties | anti-hyperglycaemic properties | antidiabetic properties | antihyperglycaemic properties | hypoglycemic properties | indoleacetic acid | indolylacetic acid | indolylbutyric acid | plant growth substances | plant hormones | lung diseases | antimicrobials

Broader Terms

Help

Spermatophyta | plants | eukaryotes | Enterobacteriaceae | Enterobacteriales | Gammaproteobacteria | Proteobacteria | Bacteria | Proteus (Bacteria) | Pseudomonadaceae | Pseudomonadales | Pseudomonas | Homo | Hominidae | Primates | mammals | vertebrates | Chordata | animals