

BIO-COMPRESIÓN

A collection of Biological Research Papers



DEPARTMENT OF BIOTECHNOLOGY
EMEA College of Arts and Science
Kondotti, Kerala, India, Pin. 6763638
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Chief Editor
Mashoor K

Editors

Ruba Badarudheen
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S. No.	CHAPTER	Page No.
1.	Anti-Inflammatory Potential of Methanol Extract of Teak (<i>Tectona grandis</i> Linn.) Leaves-An <i>In vitro</i> And <i>In silico</i> Approach <i>Anoop K, Sayeed Ali MP, Jayadevi Variyar E</i>	1
2.	Optimisation of Extracellular Invertase Enzyme Production by <i>Bacillus Sp.</i> Isolated from Bagasse <i>Asha B, Shainy NK</i>	14
3.	The Relation Between Efflux Pumps, Biofilm Formation and Antibiotic Resistance-A Mini Review <i>Abdul Bari K. K., Neethu George, Aswathy P.P.</i>	24
4.	Mitochondrial Gene Sequence Analysis of <i>Blattella Germanica</i> of India for Barcoding and Phylogeny Analysis <i>Mashhoor K, Ponnu P</i>	44
5.	Isolation and Antimicrobial Activity of Endophytic Fungi from the Leaves of <i>Ficus auriculata</i> <i>Farha Baramy, Binciya Sherin and Shainy NK</i>	55
6.	Comparison of the Antimicrobial Activity of Amylase Producing and Non Amylase Producing <i>Bacillus Spp.</i> Isolated from Soil. <i>Jisha P J, Binsha Mariyam M, Nihmath M</i>	62
7.	Isolation And Characterization Of Lectin From <i>Euphorbia nerifolia</i> Stem Exudate <i>Krishnakumar T</i>	69
8.	Molecular Barcoding and Phylogenetic Analysis of <i>Octopus cyanea</i> of Kavarati Island, Lakshadweep <i>Mashhoor, K., Akhilesh, V.P., Idrees Babu, K., Leya, T., Kottickal, L.V.</i>	80
9.	Isolation And Identification Of Potent Dye Degrading Bacteria From Waste Water Effluent <i>Muhsina K, Rasiya KT</i>	86
10.	Isolation and Identification of Amylase Producers from the Gut of Cockroach and Estimation of Their Enzyme Activity <i>Shabeera K, Fathimathu Zuhara K</i>	91
11.	Antifungal activities of <i>Bacillus cereus</i> extracts obtained from soil <i>Shainy N.K. Asha B, Nafeesathul Prinseena K.K.</i>	108
12.	Preliminary Antimicrobial and Phytochemical Screening of <i>Camellia Sinensis</i> L and <i>Piper Nigrum</i> Leaf Extracts <i>Shiji Thomas</i>	125
13.	Anticancerous effect of Resveratrol, on Human Colon Tumor (Hct) Cell Lines <i>Umadevi D., Smitha M. Xavier</i>	134

Comparison of the Antimicrobial Activity of Amylase Producing and Non Amylase Producing *Bacillus* Spp. Isolated from Soil.

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Abstract

This work was intended to confirm whether the amylase producing isolate is responsible for showing higher antibacterial activity as compared to the non amylase producing isolate. In this test of the crude enzyme extract of both, the *Bacillus* spp. against *E.coli*, maximum optical density was recorded at lower concentration of the enzyme extract whereas the minimum value was recorded at higher concentration of enzyme extract. This means the *Bacillus* spp. with amylase enzyme production has the highest antibacterial potential when compared to the other isolate without amylase enzyme activity. So there is a correlation between enzyme production and antibacterial activity. Further studies need to be conducted in order to confirm this hypothesis.

Key words: *Bacillus*, Extracellular enzymes, Antimicrobial, Amylases

Introduction

Microorganisms are the most important source for enzyme production. Selection of the right organism plays a key role in high yield of desirable enzymes. For production of enzymes for industrial use, isolation and characterization of new promising strains using cheap carbon and nitrogen source is a continuous process. Microorganisms have become increasingly important as producer of industrial enzymes. (Alexander M,1977) Due to their biochemical diversity and the ease with which enzyme concentrations may be increased by environmental and genetic manipulation, attempts are now being made to replace enzymes, which traditionally have been isolated from complex eukaryotes, starch degrading amylolytic enzymes are most important in the biotechnology industries with huge application in food ,fermentation, textile and paper (Gupta et al, 2003). α -amylase is a key enzyme in metabolism of species diversity of living organisms which utilize starch as carbon and energy sources. It can hydrolyze starch, glycogen and related polysaccharides by randomly cleaving enzymes which