

## Isolation and identification of *Aspergillus* species using ITS regions and an attempt for biosynthesis of lovastatin

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Statins are well known potent inhibitors of 3-hydroxy-3-methylglutaryl-CoA reductase which plays a key role in Biosynthesis of cholesterol and are produced as secondary metabolites of the polyketide pathway by various fungi. Among them *Aspergillus terreus* was known to be the best producer of secondary metabolites having pharmaceutical importance. However little is known about the industrial production and the cost effective media giving maximum yield of statins in India. In view of increasing importance of statins in pharma industry, an attempt was made to produce lovastatin from local fungal isolates. The soil sample collected randomly from Seshachala forest range was serially diluted and cultivated on Potato Dextrose agar (PDA) medium strain identification was done by using Bergey's Manual, online pictures and employing Polymerase Chain Reaction (PCR). Internal transcribed spacers (ITS1 and ITS2) regions which are considered to be conserved regions for identification of fungal species universal pan-fungal primers were employed. The Scanning Electron Microscopy (SEM) also used to get a morphological picture of the spores which give vital information in identifying the organisms at species level. The accession number of submitted nucleotide sequence is JF495477. The cost effective Nitrogen and Carbon substrates which play a vital role in giving a maximum yield were used. The highest yield was observed by Green gram sprout powder (*Phaseolus aureus*) with Maltose (23.50 g/lit), followed by Bengal gram (*Cicer arietinum*) (20.0g/lit), Lentil (*Vigna unguiculata*) (16.0g/lit) and Bajra (*Pennisetum glaucum*) (12.00 g/lit).

### Biography

D. Ganesh Babu has completed his Bachelor Degree in Microbiology and Masters in Zoology from Sri Venkateswara University, Tirupati. Currently he is a doctoral student at Sri Venkateswara University. He has attended 2 National seminars and 1 International symposium conducted in India. He is an active researcher in the field of Microbiology and is involved in learning research strategies and participating in conducting National and International conferences in the university. He is getting ready to publish a paper in international repute shortly.

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