



Abstract

Lovastatin is an inhibitor of HMG-CoA reductase, an enzyme involved in the biosynthetic pathway of cholesterol in the liver. In the present study, 39 fungal strains were isolated from the soil samples including three strains taken from microbial bank and were tested for their capability to produce lovastatin, out of which eleven isolates were tested positive for the production of lovastatin. Submerged fermentation was used for the cultivation of fungal strains and production of lovastatin. Thin layer chromatography and high performance liquid chromatography were used for the qualitative and quantitative analysis of lovastatin. Among all the isolated fungal strains, *Aspergillus terreus* produced maximum amount of lovastatin (23.837 μ g/ml) through submerged fermentation in the flasks. After selecting *Aspergillus terreus* as the best lovastatin producing strain, different physical parameters including incubation period, temperature, pH, carbon and nitrogen sources were selected. Two folds increase in lovastatin production was obtained by providing optimized fermentation conditions. The optimized parameters included the incubation period of 7 days, incubation temperature of 30°C and medium pH of 7.0. Lactose as carbon source and yeast extract as nitrogen source in the fermentation media were found best for the maximum production of lovastatin by *Aspergillus terreus*