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A Project Report on

"ISOLATION AND PURIFICATION OF ANTICANCER ENZYME AND ITS NANOPARTICLES"

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by

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ABSTRACT

Anticancer enzymes are substance that counteracts the effects and inhibits the development of cancer. L-Asparaginase is a therapeutic agent for acute leukemia and reported to be an efficient anti-lymphoma agent in humans.Soil microbial isolates were screened for potential producers of L-asparaginase using specific L-asparaginase growth media and the microbe producing the largest hydrolysis zone was selected. The isolate was characterised by biochemical tests and was found to belong to *Bacillus* cereus. Effect of UV radiation and TEMED on the production of L-asparaginase from selected strain was performed. Dialysis was carried out to remove the excess salt and complete purification was achieved by ion-exchange chromatography. The characterized enzyme exhibited maximal enzyme activity at pH 7 and temperature 35°C. An attempt was made on encapsulation of the enzyme on nanoparticles.