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An executive summary of the final report of work done on the Minor Research Project of Ms RENITA MARIA D'SOUZA entitled **"ISOLATION, PURIFICATION AND CHARACTERIZATION OF L-ASPARAGINASE"** sanctioned by UGC, vide sanction letter No. **MRP(S)-0128/12-13/KAMA002/UGC-SWRO** dated **29-3-2013**

The project work was carried out to screen and isolate the organisms producing L-asparginases, standardize the media components, purify and characterize them

Standardization of screening media was done which happened to be Czapekdox media for fungi and M-9media for bacteria

Screening for L-asparaginase producers was carried out. The media had various concentrations of phenol red incorporated into the media. The soil samples from Mangalore (Bunder and Nethravathi) and Kasargod area were screened for the organisms producing L-asparaginase. 1g of soil sample was added serially diluted and inoculated into the mediaThe organisms producing the enzyme gave a pink colour surrounding the colony. Good growth was observed at a dye concentration of 0.09%

Morpho Physiological and Biochemical studies were carried out to identify the organisms. Various tests like Gram's staining, spore staining, indole, methyl red, VP test, sugar fermentation tests, catalase test, oxidase test and nitrate reduction tests were perfomed to identify the bacteria. The bacteria was identified as belonging to the genus *Pseudomonas*
The fungus sample was identified as belonging to the genus *Scopularis*

Optimum Fungal and bacterial enzyme production by submerged fermentation using shaker culture and stationary culture was carried out. It was found that the bacteria produced maximum enzyme on the 2^{nd} day in shaker culture and 3^{rd} day on static culture. Whereas fungus produced maximum enzyme on 10^{th} day in static culture and 7^{th} day on shaker culture

Quantitative assay for L-asparaginase activity both for intracellular and extracellular enzymes

Of bacteria and fungus was carried out and found out that maximum enzyme activity was observed for extracellular enzymes of both bacteria and fungus

- Kinetic studies of the crude extracellular and intracellular enzymes of bacteria and fungus was carried out. Various factors included effect of temperature, effect of pH,