

1. Title of research project:

“Isolation and Purification and Characterization of Restriction Enzyme From Actinomycetes Nocardioopsis SPB ”

2. Name of PI: Mr. Mohan Ramkrishna Chaudhari.

3. Funding Agency: UNIVERSITY GRANTS COMMISSION

4. Project Reference number/ File number: 47-005/12 (WRO)

5. Executive summary of the project along with output:

Samples were collected from costal sites of Alibag. Samples were collected from 1-2 Km inside from coast at the time of low tide in May 2013. The marine sediment was processed by giving heat treatment, SDS treatment. Microbial analysis and screening were carried out as per method described by Jensen. Screening of Actinomycetes for Endonuclease production.

Shake flask cultivation were done in standard conical flask of capacity 500ml by inoculating Actinomycetes culture in growth medium at thirty degree centigrade for fourteen days and at 150RPM. Cell mass was collected by centrifugation and it was suspended in buffer (Phosphate buffer pH 7.4) . Cell mass were homogenized by sonication. The homogenate were centrifuged and supernatant were collected.

We have developed method to isolate microbial strain from natural habitat and develop and optimized conditions to grow in laboratory. Assay of restriction Endonuclease was developed. We demonstrated activity RE on λ DNA.

We have isolated and purified Endonuclease from Actinomycetes species B₄ and successfully used in DNA Fragmentation