



Centre of Excellence

on



“Bioprospecting of Ethno-pharmaceuticals of Southern Odisha to explore their potential against cancer, infectious and autoimmune diseases”

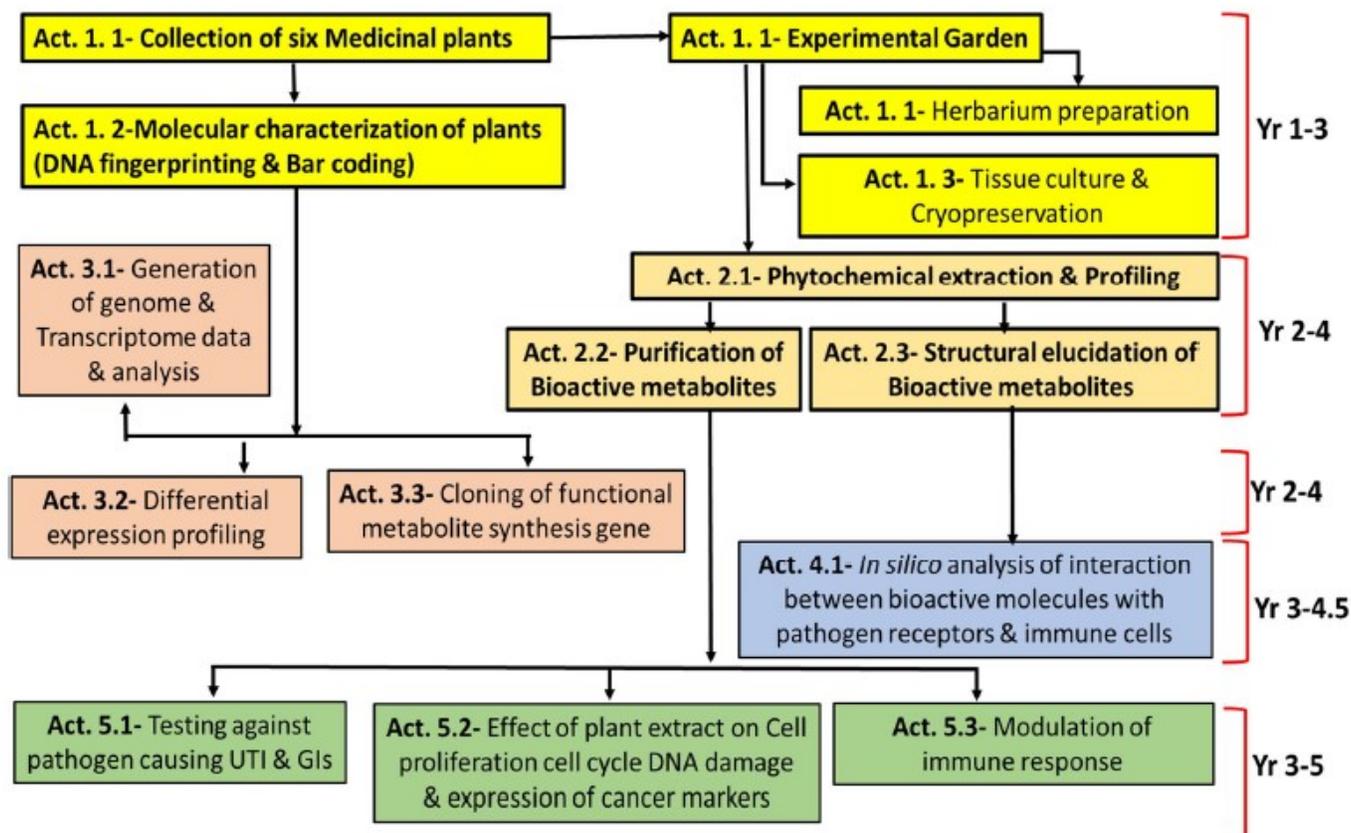
- Sponsored by** : OHEPEE, Department of Higher Education
Government of Odisha, Bhubaneswar
(Under The World Bank Project)
- Carried out by** : P. G. Department of Bioscience and Bioinformatics
Khallikote University, Berhampur
- Vice Chancellor-cum-Advisor** : Prof. Amarendra Narayan Mishra
- Mentor** : Prof. M. Mishra, Former Professor, Department of Botany
Berhampur University, Odisha
- CoE Coordinator** : Prof. Jogeswar Panigrahi
- Principal Investigators** : Prof. Jogeswar Panigrahi
Dr. Sushil Kumar Pathak
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Dr. Saswat Sourav Mohapatra
Dr. Sunil Kumar Behera
Mr. Tapan Kumar Singh Nayak
Dr. Biswa Ranjan Meher
- Manpower** : Post Doctoral Fellow (02 Nos.)
Research/ Technical Assistant (02 Nos.)
Office Assistant (01 No.)

Objectives:

1. *Ex situ* conservation of the six identified medicinal plants: through micropropagation, cryopreservation and field gene bank/ Medicinal plant garden
2. Phytochemical screening and profiling of the plant parts of the proposed six medicinal plants.
3. Exploration of metabolic pathways for differential accumulation of the target metabolites of herapeutics value and its genetic improvement.

- In silico* analysis of the identified metabolites to characterize their interaction with pathogens as well as immune cells (bioinformatics & cheminformatics approaches).
- Validation and efficacy analysis of the active metabolites from the plant extracts against cancer, infectious pathogens and auto-immune disorders.

Timeline and Workplan:



Expected Outcomes and Future Directions:

- The proposal will explore these six medicinal plants from Odisha and will identify the active ingredients having therapeutics properties.
- This proposal will decipher role of plant extracts on positive modulation of immune system *in vitro*, if any. Furthermore, result of the present proposed investigation can be translated into *in vivo* studies.
- Medicinal compounds identified in the present study can either be used directly or further chemical modifications can be performed to improve its pharmacokinetic and pharmacodynamics properties.
- The proposed work will formulate different strategies towards the sustainable utilization of these plants along with their conservation.
- Public awareness created through the project will enhance cultural importance of the selected medicinal plants leading to promotion of their cultivation and preservation.
- The CoE at KUB could organize regular skill development programs to participants (Students, Researchers, Teachers and local stakeholders).