



**Ministry of Science and Technology  
Mandalay Technological University  
Department of Biotechnology**

**Myanmar**



# Research Effort based on Microbial Utilization under DBT, MTU

By

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# Background History of DBT

- ❖ Built up in 1998 under Department of Chemical Engineering at Yangon Technological University (YTU)  
( First wave of man power resources: chemical engineers, veterinary surgeons, agriculturists, microbiologists, chemists, zoologists and botanists.)
- ❖ Established in April, 2001 as DBT in Hlaing Campus, Yangon  
( Second wave of man power resources: young generation of qualified persons)
- ❖ In 2006, moved to Mandalay Technological University (MTU) in Mandalay  
( Graduate program : Master and Ph. D degrees )  
( Research development programs )

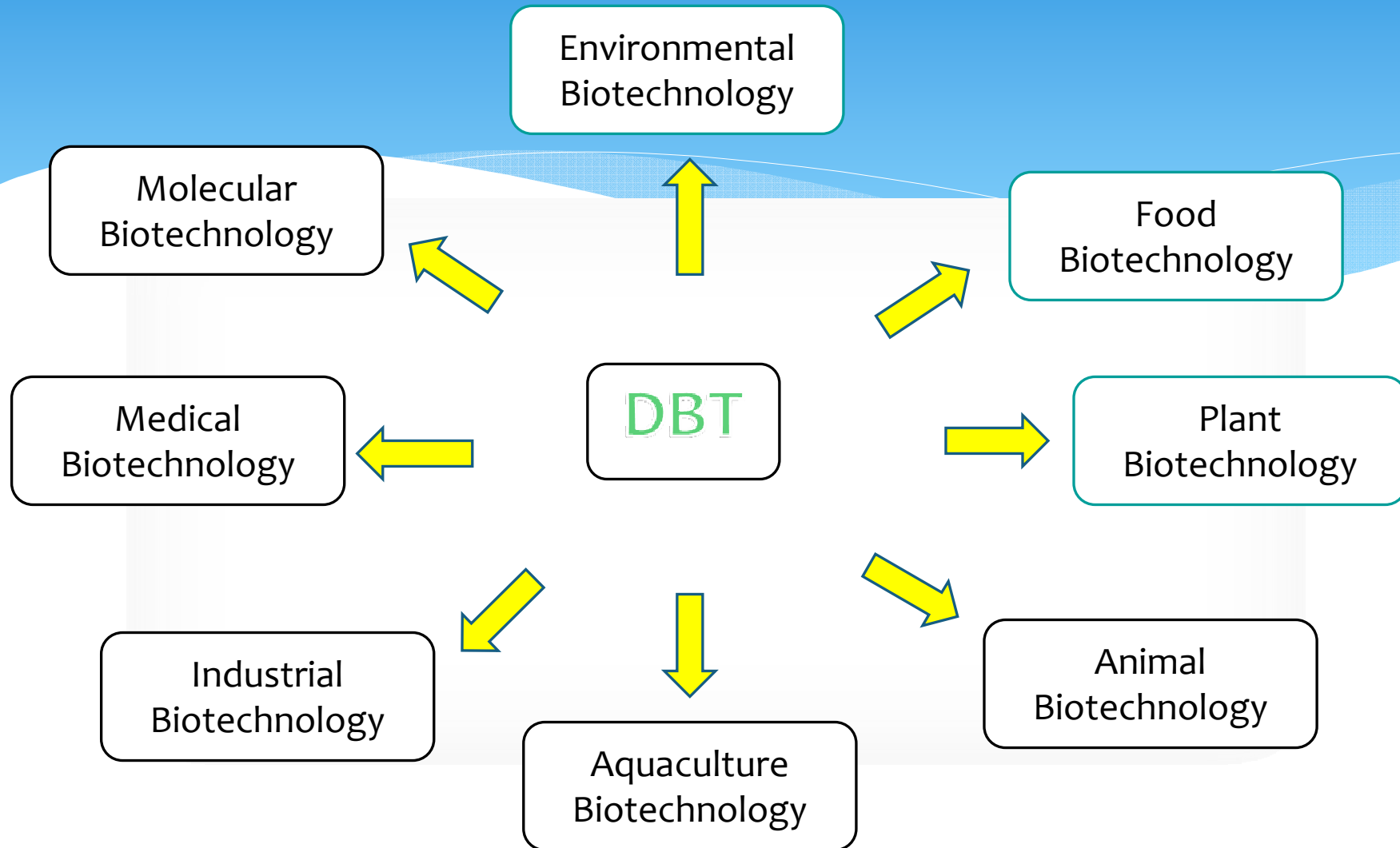
## Our Vision

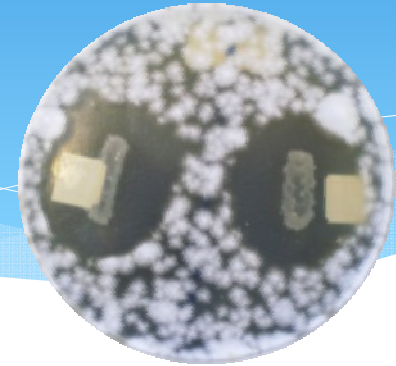
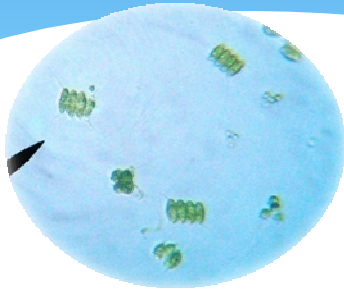
- To create a large pool of highly skilled personnel in different areas of biotechnology
- To develop biotechnological processes, designs, techniques, equipments and solutions which can provide applications in the field of Agriculture, Food, Medicines/Pharmaceuticals, Industry, Healthcare Services and Environmental Sciences

## Our Mission

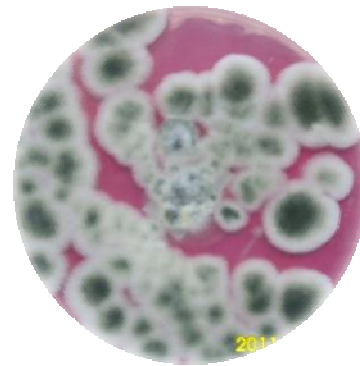
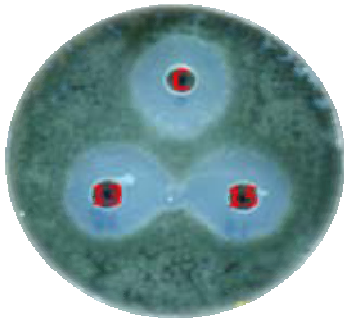
- To launch several important programs relevant to national needs and efforts with significant investment using biotechnological tools for generation of products, processes and technologies to enhance the efficiency and productivity of our country

# Eight Major Branches of Biotechnology





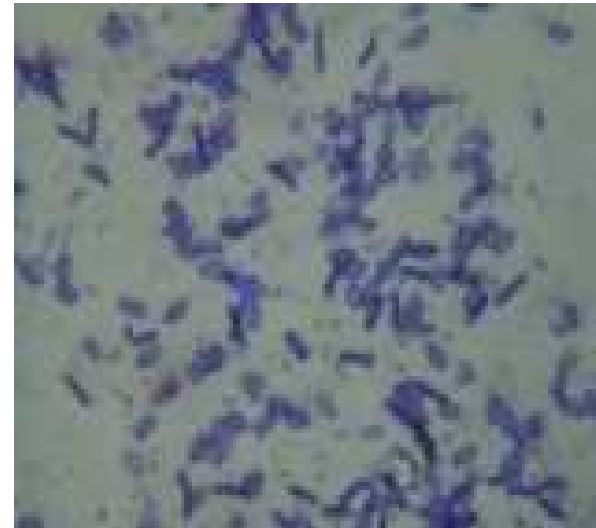
## On-going research



# 1. Study on the Biofungicidal Activity of *Paenibacillus polymyxa*



*Paenibacillus polymyxa*

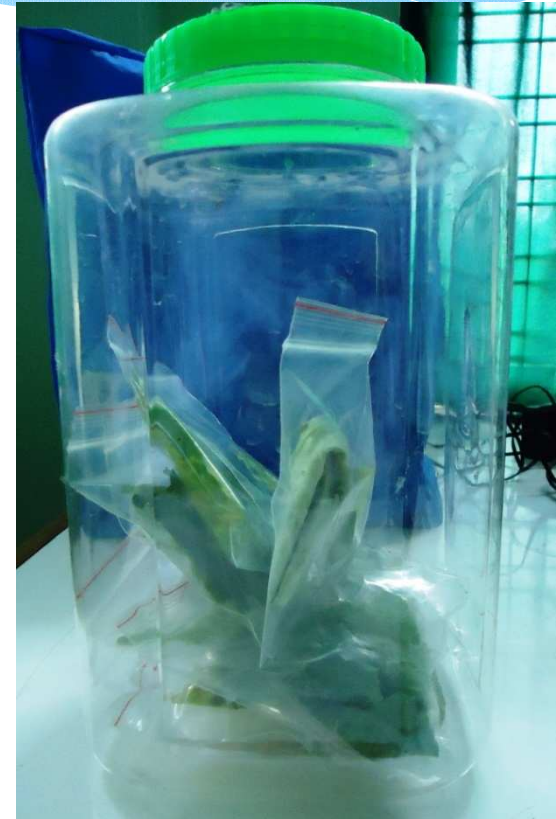


## 2. Isolation, Identification and Study on the Insecticidal Activities of Entomopathogenic Fungi and Bacteria

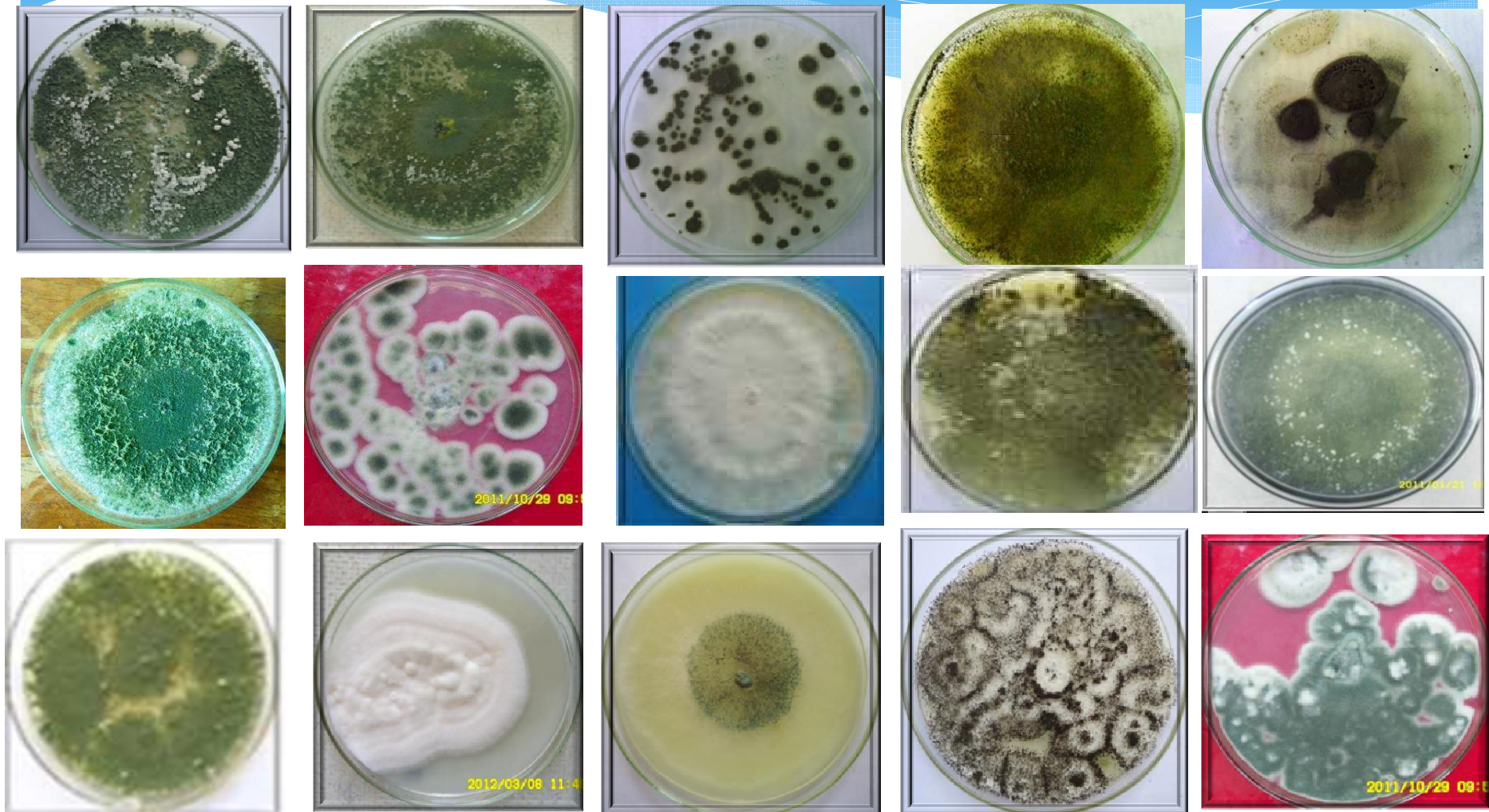




# Collection of Infected Insects

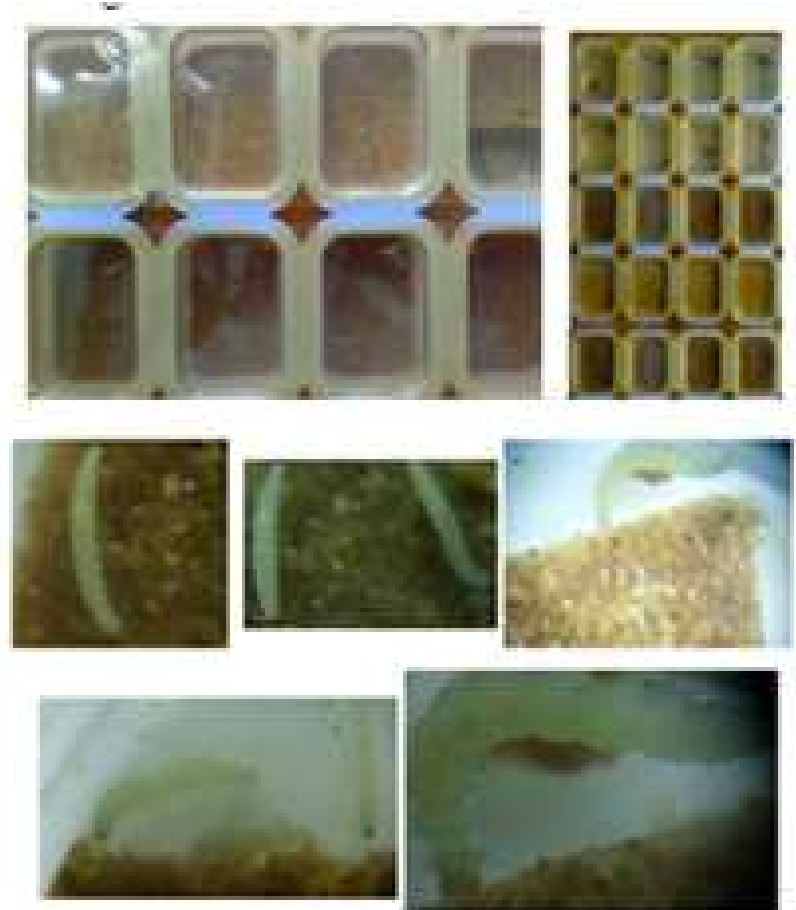
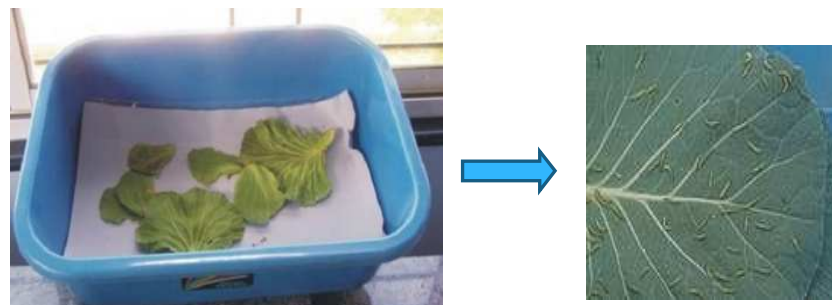


# Isolated entamopathogenic Fungi



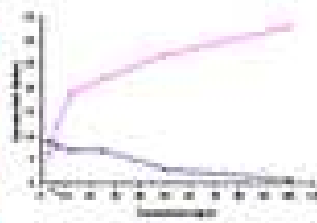
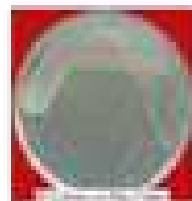


# Insect Rearing

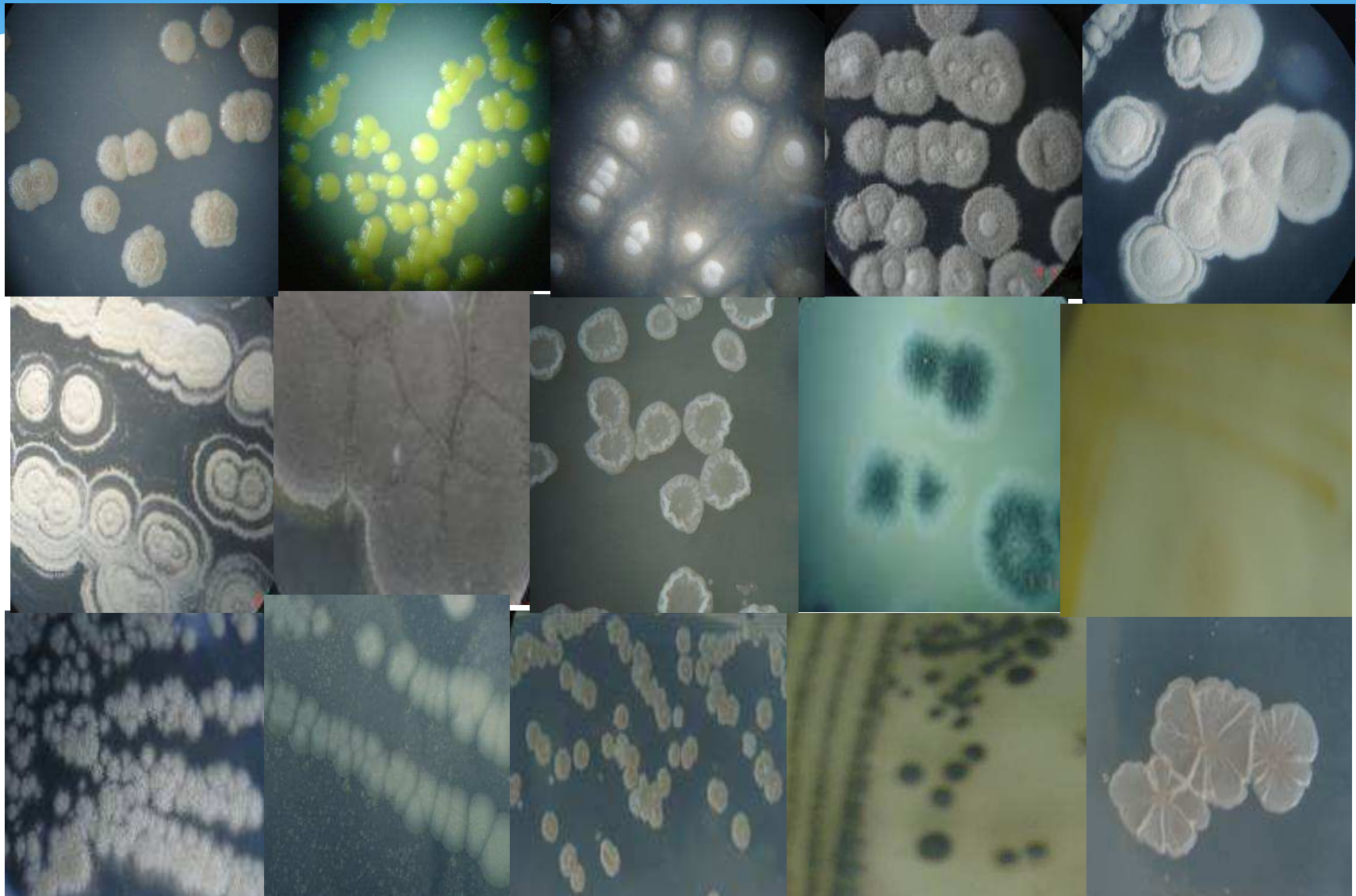


# Bioassay Experiment

*Bacillus thuringiensis* Vs DBM



### 3. Study on Secondary Metabolites from *Streptomyces*



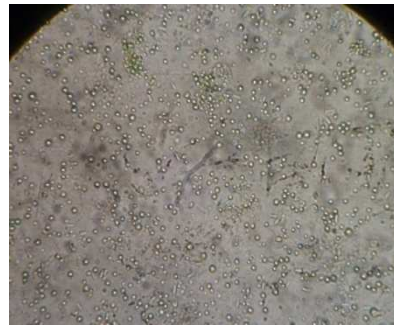
Isolated *Sreptomycetes* spp. Strains



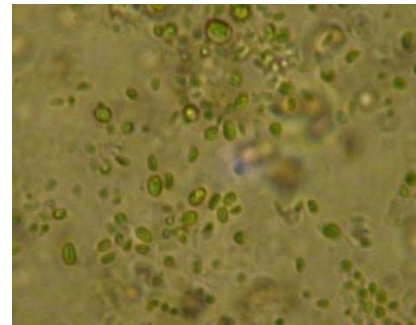
## 4. Study on Microalgae Culture aimed to use in Biofuel and Animal Feed



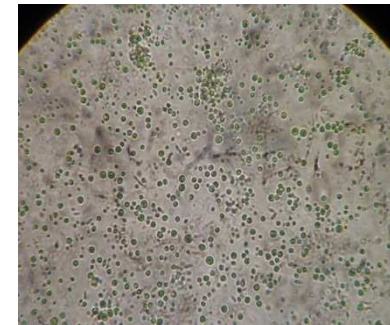
*Scenedesmus* sp.



*Nannochloropsis*  
sp.



*Tetraselmis* sp.



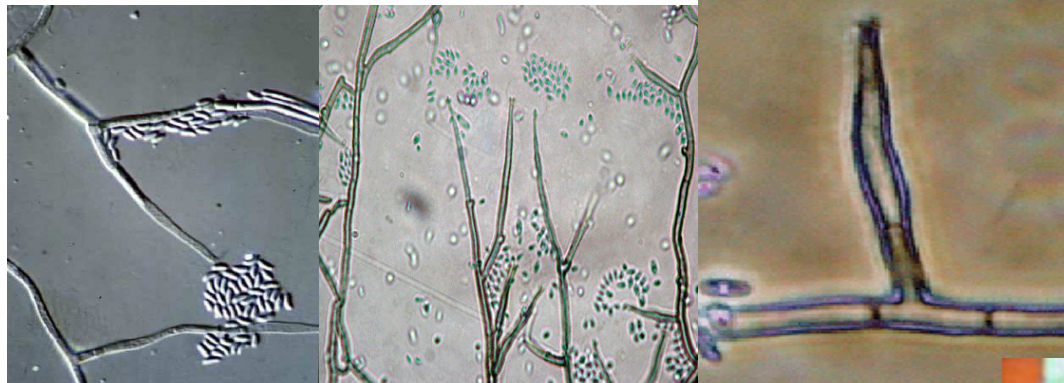
*Chlorella* sp.

## Microalgae Cultures



## 5. Isolation and Characterization of Indigenous Fungi and Study on Oil Formation in Agarwood Plant

*P. parasiticum*



Agarwood







**Thank you<sup>19</sup> very much!**