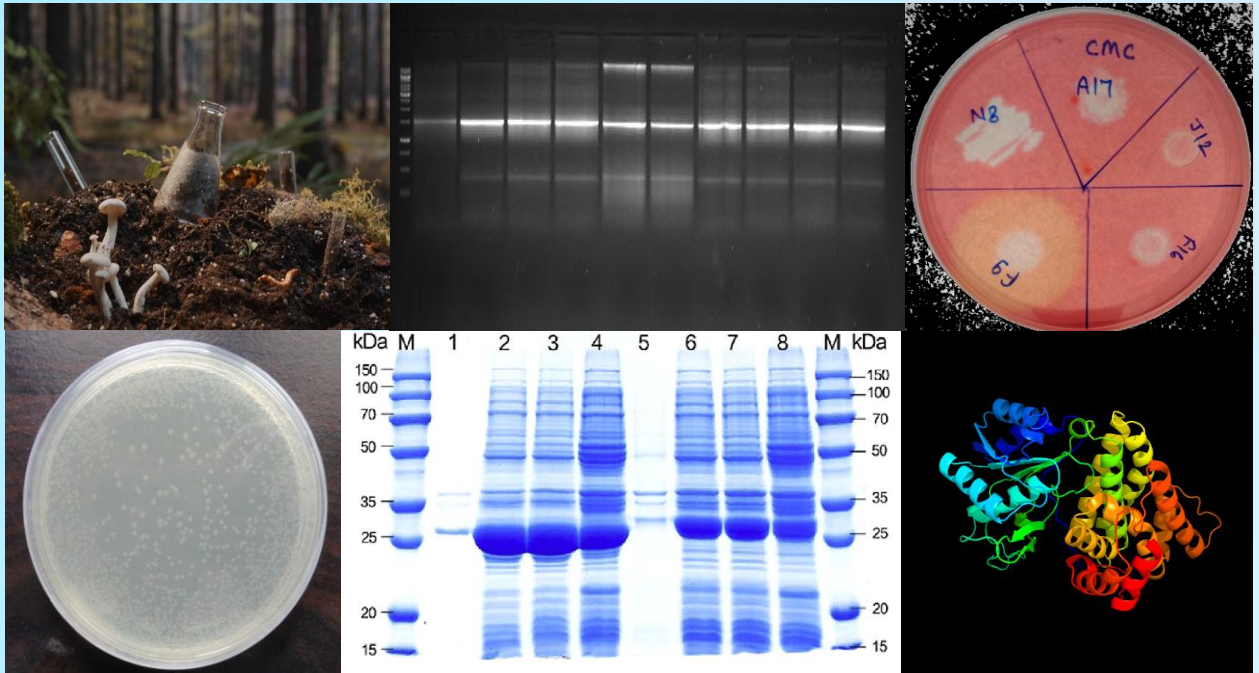


**National Training
on
Mining of Metagenome for Genes: Cloning &
Expression
12th – 21st February 2019**



Course Director
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ABOUT ICAR-NBAIM



ICAR-National Bureau of Agriculturally Important Microorganisms (NBAIM) is among the premier institutions of Indian Council of Agricultural Research (ICAR) for microbiological research in India. The Bureau is aimed to work for the collection, conservation and preservation of agriculturally important microbial cultures and their genomic resources for future needs. The Bureau is engaged in the cutting-edge research themes in microbial biotechnology and bioinformatics for the development of technologies, processes, protocols and products which will ultimately benefit Indian academics, research institutions and farmers. As part of our Human Resource Development (HRD) Programs, NBAIM successfully organized several National and international training programs on different areas of molecular characterization, molecular biotechnology, bio-control, plant-microbe interactions and applications of bioinformatics since the inception of the Bureau.

BACKGROUND

It is well known that the reported microbial diversity represents less than 1% of diversity that exists in the nature. More than 99% of them cannot be cultivated easily and very little is known about their genomes, genes and encoded enzymes. In the recent past, the development of metagenomics revealed the potential of unculturable microbes as sources of novel enzymes, antibiotics, biosurfactants and bioactive molecules for industrial applications such as medicine, food, paper & pulp industry and agriculture. Metagenome promises to provide new molecules and novel enzymes with diverse functions and enhanced features as compared to enzymes from culturable microbes. Identification of novel genes from metagenomes has many advantages such as much higher probability of finding a target gene and higher proportion of genome coverage. Designing primers for amplification of full length functional gene, cloning in a suitable vector and its expression in a heterologous host is desirable to mine genes from metagenomes. Looking at the immense potential of metagenome for identification of novel genes, this training has been designed to provide insights into the various tools and pipelines for mining of genes of industrial importance and their characterization.

TOPICS TO BE COVERED

This training is aimed to provide hands-on training in the field of metagenomics, molecular cloning and protein modeling. It includes both lectures and hands-on practical sessions by the experts. Major areas to be covered in this training are as follow:

- Metagenome isolation and its purification
- Mining of ORF or genes from metagenome
- Designing of primer, its validation and amplification of genes
- Molecular cloning of gene and its expression in heterologous host
- Protein Modeling and its validation

WHO CAN PARTICIPATE?

| | | |
|--|---|--------------------|
| Students or Research scholars | - | Rs. 2500/- |
| Technical officers, Scientists / Assistant Professors / Lecturers - or above from any University / Institute / Govt. Organization | - | Rs. 5000/- |
| Researchers from Industry / Non – Govt. Organizations | - | Rs. 10000/- |

HOW TO APPLY?

Interested candidates may send their application forwarded through Project Investigator / Head of the Department / Institute to The Director, ICAR-NBAIM, Mau along with their CV (not more than one page). Also send the scanned copy of application to director.nbaim@icar.gov.in (with a copy to Pandiyam.K@icar.gov.in). The last date to apply for the training is **7th January 2019**.

SELECTION PROCESS

The number of participants is limited to 20. Selected candidates will be informed by **10th January 2019** and shall be required to deposit the registration fees. In case of non-receipt of fees by **25th January 2019**, seats will be offered to other candidates.

ACCOMMODATION

Food and Accommodation will be made available to the candidates by the Institute without any extra fees.

CONTACT US

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