

How to Reach NIASM



Distance : Pune to Baramati - 120 km
Pune to NIASM - 110 km
Baramati to NIASM - 10 km



Mandate

To undertake basic and strategic research on management of abiotic stresses of crop plants, animals, fishes and microorganisms through genetic, biotechnological and nano technological tools and agronomic methods for enhanced sustainable productivity, food/feed quality and farm profitability adopting integrated interdisciplinary approaches.

To develop human resources of high quality as an academic institute.

To develop a Global Center of Excellence by establishing linkages and networking with national and international institutes/agencies.

To act as repository of information on abiotic stress and management.

PATRON

Dr. P. S. Minhas (Director)

National Institute of Abiotic Stress Management

COURSE COORDINATORS

Dr. K. K. Krishnani, Head, School of Edaphic Stress Management, kkrishnani@niam.res.in

Dr. B. Sarkar, Senior Scientist (Fish and Fisheries Sciences), bsarkar@niam.res.in

Dr. A. K. Singh, Senior Scientist (Agril. Biotechnology), aksingh@niam.res.in

Dr. M. P. Brahmane, Scientist (Animal Biotechnology), mpb@niam.res.in

Dr. G. C. Wakchaure, Scientist (AS & PE), gcv@niam.res.in

For details please contact to

Dr. Kamlesh Kumar Meena, Senior Scientist (Microbiology)
Course Director

School of Edaphic Stress Management
National Institute of Abiotic Stress Management

Malegaon, Baramati-413115, Pune (Maharashtra)

Phone: (02112) 254057; Mob: 09730289659, Fax: (02112) 254056

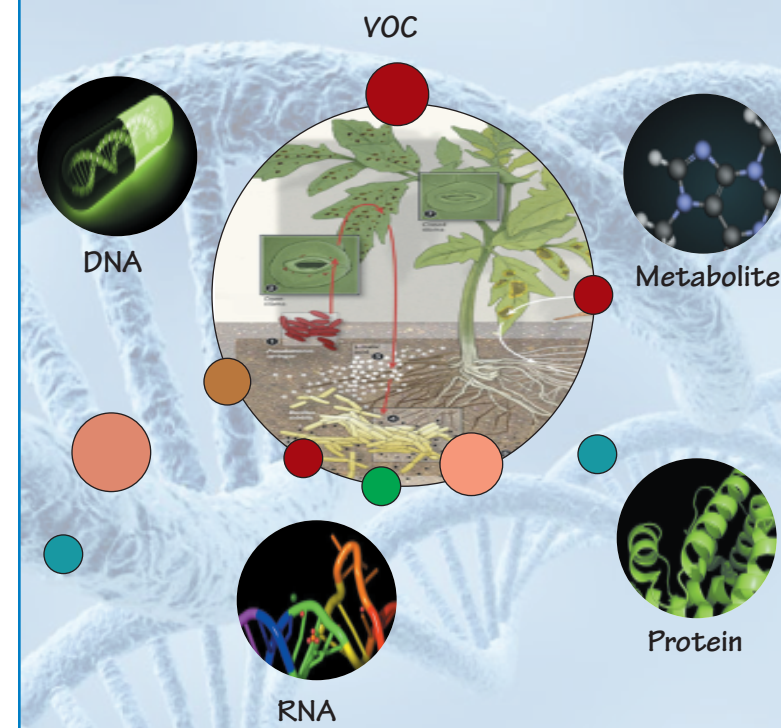
Email: kkmeenamicro@gmail.com, kkmeena@niam.res.in



Department of Biotechnology
Ministry of Science & Technology
Government of India

Short Term Training Course on

**Multi-omics Approaches to Alleviate Abiotic Stress in Post Genomic Era:
Methods and Application in Microbiological Research**
(September 11-24, 2013)



Organised by

School of Edaphic Stress Management
National Institute of Abiotic Stress Management

Malegaon, Baramati, Pune, Maharashtra – 413 115

Sponsored by

Department of Biotechnology (DBT)
Ministry of Science & Technology
Government of India



Short Term Training Course on

Multi-omics Approaches to Alleviate Abiotic Stress in Post Genomic Era: Methods and Application in Microbiological Research

This training programme is designed to deliver and sensitize young faculties and research scholars to basic knowledge in the sphere of “Omics” based technologies besides its potential applicability in the area of microbiological research to alleviate abiotic stresses in agriculture. The training schedule is enunciated in such a way that the trainees will secure hands on experience with multi “Omics” techniques and their application in microbiological research for microbial mediated abiotic stress management.

The National Institute of Abiotic Stress Management (NIASM) is a deemed to be University of its kind, focusing on cutting edge multidisciplinary research in area of abiotic stresses and provides policy support for its management in agriculture through mitigation and adaptation technologies.

Course Content

About the Abiotic Stress : Introduction to major abiotic stressors and its impact on agriculture, edaphic, atmospheric, drought driven stresses and its management practices and advanced technologies for mitigating the major abiotic stressors. Current status of microbial mediated abiotic stress alleviation, need based “Multi-omics” approaches for microbiological research.

Techniques for Isolation and Characterization of Stress Tolerant Microbial Resources : Isolation, identification, biochemical and molecular characterization of microorganisms from stressed plant, soil and water samples, extraction of metagenomic DNA from salt and drought affected soil samples, biochemical and functional characterization of salt and drought tolerant microbial resources, molecular identification of functional genes, calculation of diversity indices for diverse ecological niches.

Genomics : Identification of functional genes from cultivable and environmental samples, isolation of RNA and construction of cDNA library, gene expression and functional characterization, gene transfer and tissue culture technologies for gene expression studies, PCR, RT-PCR based gene amplification and quantification, DNA sequencing technologies and sequence annotation, bioinformatics based prediction and detection of new genes for new functions.

Metabolomics : Metabolic profiling of salt tolerant microorganisms, isolation and characterization of metabolom of salt tolerant bacteria, HPLC-GC-MS-MS based fingerprinting and profiling of microbial secondary metabolites, hands on training for harvesting of secondary metabolites.

Proteomics : Methods for identification and characterization of differential proteins, hands on demonstration of software used for proteomic studies of salt tolerant bacteria, animals, fish and plant.

Bioinformatics : Insight into most widely used high end bioinformatics software for DNA sequence annotation and biological data analysis, hands on demonstration of bioinformatics software.

Bacterial bioremediation : Application of molecular techniques.

Nano (bio-) technology : Synthesis, characterization and application of nanoparticles for amelioration of abiotic stresses in crop plants. Development of microbes based nanoparticles and their application.

Location and Weather Conditions

Baramati has a pleasant climate and is well connected by road, rail and air (Pune). Baramati is located at 120 km from Pune. The weather during the training period will be ambient and pleasant. The temperature during the training period will be around 26-28°C (day) and 20-22°C (night).

Eligibility

Permanent faculty member of Universities/SAUs/ICAR/CSIR/DBT/DST/research institutes not below the rank of assistant professor/scientist or equivalent having a minimum of two years of research or teaching experience in the field of microbiology, biotechnology, biochemistry, botany and related disciplines of agriculture and allied sciences. A total of 20 candidates will be selected for this course. A screening committee as per the stipulated guidelines of the DBT will make the final selection of the participants for aforesaid training course.

How to Apply?

The participants should send the application in the given format through proper channel duly recommended by the competent authority to the Director, National Institute of Abiotic Stress Management, Malegaon Khurd, Baramati-413115; Pune (MH). The applicant may also send an advance copy of their filled application by email at director@niam.res.in and kkmeenamicro@gmail.com, latest by 16th August 2013. The last date for receipt of applications complete in all respects is 25th August 2013. Application form can be downloaded from NIASM website www.niam.res.in.

Selection procedure

Final selection will be made only after the receipt of hard copy of application forwarded by the competent authority. The selected candidates will be informed by post or email within a week from last date of receiving application.

Accommodation and Travel

Expenses towards lodging and boarding will be borne by the host/employing institute of the participant. NIASM will facilitate accommodation arrangement to the participants on payment basis. No TA and DA will be paid to the participant by the NIASM. However, the TA and DA may be provided to few eligible participants by DBT as per the guidelines.

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APPLICATION FORM

Name :		
Designation :		
Present employer with full address :		
Address for communication :		
Telephone : (R)	(O)	Fax :
Email :		
Date of birth :		Sex : Male [] Female []
Teaching, research, professional experience : Yes [] No []		

Academic Record

Degree with Specialization	Year of Passing	Institute / University	OGPA
UG			
PG			
Ph.D.			

Details of the training attended during the last two years

- 1.
- 2.

Signature of applicant with date and place

Recommendation of the forwarding authority

Certificate

Certified that the information furnished by the applicant is found to be correct

Signature and designation of
the sponsoring authority