

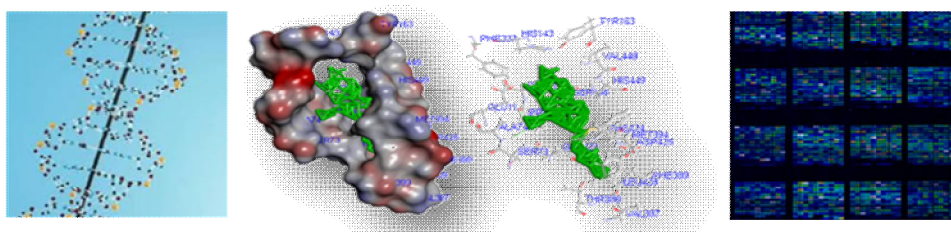


From
Dec., 04-
15. 2012

Bioinformatics: Methods, Tasks and Applications in Microbial Research

under

National Agricultural Bioinformatics Grid
National Agricultural Innovation Project (NAIP)
Indian Council of Agricultural Research (ICAR)



Objectives

- ✓ To provide insights among researchers to analyze & organize data related to biological complexity
- ✓ To make an understanding of bioinformatics tools and software employed for the data analysis
- ✓ To update the strategies for integrating bioinformatics tools for data mining and computational biology

Themes of the training

1. Fundamentals of Bioinformatics	Bioinformatics <ul style="list-style-type: none"> • Introductory & need-base applications • Tasks, challenges & preparedness for future Biological Databases <ul style="list-style-type: none"> • Primary, secondary & structural databases • Sequence submission and retrieval system Database management <ul style="list-style-type: none"> • DBMS strategies
2. Functional Genomics	<ul style="list-style-type: none"> • Gene identification/prediction • Genome assembly & annotation • Genome comparison • Primer designing & restriction site analysis • Gene ontology
3. Proteomics	<ul style="list-style-type: none"> • Protein structure prediction (Homology, Threading & Abinitio) • Active site detection • Prediction of ADME/Tox of drug molecule. • Docking studies, Virtual screening
4. Metabolomics	<ul style="list-style-type: none"> • Introductory metabolomics • Databases for biosynthetic pathways
5. Sequence Analysis	<ul style="list-style-type: none"> • Sequence analysis & applications • Sequence alignment • Heuristic algorithm (BLAST and FASTA) • Multiple sequence alignment
6. Phylogenetic Analysis	<ul style="list-style-type: none"> • Elements of phylogeny for evolution • Methods of phylogenetic analysis • Phylogenetic tree of life
7. Expression Profiling	<ul style="list-style-type: none"> • Data analysis • Database of expression profiling

Benefits

- Enhanced understanding of different bioinformatics tools
- Applications of databases and web-resources
- Increased usage of bioinformatics in day-to-day research
- Intensification of knowledge-based approaches among the scientists for molecular biological research

About NBAIM

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, we have successfully organized 24 National training programs on different areas of molecular microbial identification, characterization, molecular taxonomy, biocontrol, plant-microbe interactions and the applications of bioinformatics in gene mining since the inception of the Bureau. Microbial research at NBAIM basically focuses in the areas of microbial diversity analysis from extreme habitats, biological control of plant diseases, plant growth promotion, plant-microbe interaction, microbial genomics and proteomics, metabolomics, stress tolerance in microbes and bioinformatics. The Bureau has initiated Grid-based bioinformatics facility under the project "National Agricultural Bioinformatics Grid".

Who can attend?

Scientists/faculty members from NARS system and departments working in biological sciences from various agricultural universities/institutes will be given priorities. Research Associates and Senior Research Fellows may also apply for the training but their selection will be subjected to the availability of seats.

How to apply?

Scientists//RAs and SRFs working with NARS system/Universities/SAUs may write to the Director, NBAIM along with their RESUME on/or before **Oct., 15, 2012**. Selected candidates will be informed regarding their participation.

Duration : Dec., 04 to 15, 2012

Total no. of participants : 25 (Twenty five)

Last date of application/nominations: Oct., 15, 2012, Monday

Applications/nominations to be sent to : The Director, NBAIM, Kusmaur, Mau Nath Bhanjan-275101 (U.P.), nbaimicar@gmail.com or Dr. Dhananjaya P. Singh, Senior Scientist & CCPI, NABG, Mob. no.: 09415291703; e mail- dpsfarm@rediffmail.com

Additional information:

1. There is no training fee and all the boarding/lodging arrangements will be borne by the organizer.
2. TA restricted to both side II AC rail fare (as per the NAIP guidelines) is admissible only to the faculty members on the first-come-first-find-basis.



National Bureau of Agriculturally Important Microorganisms, Kusmaur, Maunath Bhanjan 275101, UP. Phone: 0547-2530080, Fax: 0547-2530358, e mail: nbaimicar@gmail.com; website: www.nbaim.org.in

APPLICATION FORMAT
National Training (NABG)

Bioinformatics: Methods, Tasks and Applications in Microbial Research

Dec., 04-15, 2012

NBAIM, Mau

Name of the Applicant :

Designation :

Affiliation :

Official address :

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Telephone No. :

Mobile. :

E-mail address :

(Compulsory)

Bioinformatics Related Experience:.....

Expectation from the training:.....

Signature of the applicant

Forwarded by :

INSTRUCTIONS TO CANDIDATES

1. The complete application should be emailed to the Director, NBAIM at nbaimicar@gmail.com latest by **Oct., 15, 2012**
2. The application should be submitted through proper channel
3. Training details are also available online at <http://www.nbaim.org/>
4. Only limited provision for TA (as per ICAR/NAIP norms) is available for the participants
5. Food & accommodation will be provided by training organizer.