

**Workshop on High - Throughput
Biological Data Analysis**
23rd - 26th February, 2016

Registration Form

1. Name (Dr./Mr./Ms): _____
2. Date of Birth: _____ M/F: _____
3. Designation: _____
4. Department/Institute: _____
5. Educational Qualifications: _____
6. Teaching/research area: _____

7. Address for Communication: _____

- Phone: _____
- E-mail: _____
8. Whether you have attended any training programme in Bioinformatics earlier: _____
9. State briefly how the present training will benefit you in the field of your teaching/research :

10. Registration Fees: _____
- DD. No:Dt: _____ Name of bank:....
11. Accommodation Required (Yes/No): _____

Date: _____ **Signature**
Place: _____ **of the Candidate**

**Signature of
Principal/Head**

*(A photocopy of the form may also be used)

Important Dates

Receipt of Application begins: 21st January 2016

Application Deadline: 7th February 2016

(Advance copy can be sent through E-mail.

Registration will be confirmed only after DD is received.)

Intimation of selection: 14th February, 2016.

(Selected candidates will be informed through E-mail.)

Venue

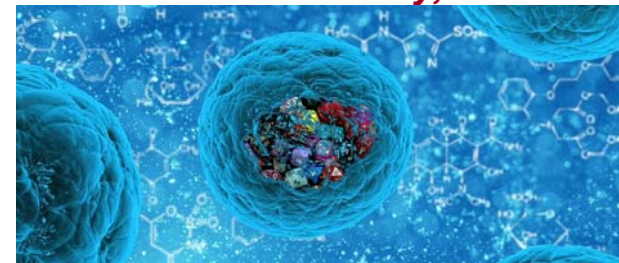
**Department of Marine Living Resources (NB)
Andhra University, Visakhapatnam-530 003**

**For any queries regarding programme,
contact**

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**Organized by
BIOINFORMATICS INFRASTRUCTURE
FACILITY**

Dept. of Marine Living Resources
Andhra University
Visakhapatnam – 530 003
Andhra Pradesh, India

Sponsored by



**Department of Biotechnology
Ministry of Science & Technology
Government of India, New Delhi**

Background

The Department of Biotechnology (DBT), Ministry of Science & Technology, Govt. of India has been pleased to establish Bioinformatics Infrastructure Facility (BIF) under BTISnet programme for the promotion of Biology teaching through Bioinformatics at dept. of Marine Living Resources Andhra University, Visakhapatnam, Andhra Pradesh in November; 2008. It provides services to the teachers, research scholars and students of the host University and other neighboring institutions in terms of networked computers with leased line and broadband internet connectivity in the retrieval of online and offline biological databases, bioinformatics software and tools. The Centre's facilities include dedicated lease line Internet connectivity from BSNL, HP servers, HP PCs with vista operating system, HP Printers, Xerox etc. It fosters research and developmental activities in major thrust areas like Sequence Alignment & Phylogenetic analysis, Molecular Modeling, Drug Designing and Vaccinology and also promotes marine bioinformatics works/research.

Objectives

The BIF Centre is established with the main objectives:

1. To support the teaching activities of biology and its allied areas
2. To build up information resources, prepare databases of interest to its users and to develop relevant information handlings tools and techniques.
3. To establish linkage with BTISnet of DBT for sharing information resources and expertise.
4. To organize training/workshops for familiarizing the application of Bioinformatics in biology teaching and learning activities.

About the Workshop

High-throughput sequencing is the process of identifying the sequence of millions of short DNA fragments in parallel. The main advantage of this technology is that it allows a very high-throughput; billions of DNA fragments can be sequenced in parallel in a single run, to produce hundreds of Gbp (HiSeq 2000, version 3 kits). As the amount of experimental data increases, the demand for development of ways to analyze these results also increases. Rapidly advancing

technologies such as Next Generation Sequencing Technology, Mass Spectrometry based experiments generate huge data. Extracting meaningful information from vast set of data and approaching biological problems from systems biology perspective have become highly difficult in bioinformatics. A target capture and high- throughput massive sequencing approach will reduce whole genome sequencing cost & effort. Further, while analyzing restriction - based reduced representation genomic data, by setting optimal clustering threshold, false homozygosity or heterozygosity can be effectively minimized (D. C. Ilut et al.)

This work-shop is organized with an objective of providing knowledge to the participants, concerning methods and experiments that demonstrate novel platforms and systems & new bioinformatics tools and models as well as new data analytical methods for high-throughput biological data.

Topic content

1. Introduction to bioinformatics, biostatistics, testing of hypothesis
2. Introduction to 'R' Programming and advanced topics
3. Micro array data analysis
 - a. hands-on session on data downloaded from GEO using 'R' and from 'bioconductor' website
4. NGS data analysis; MiRNA count data analysis using 'R'
5. Chip Seq. data analysis

Faculty

Faculty will include eminent guest speakers of neighboring institutions working in the field of Bioinformatics, Biotechnology, and Structural Biology, conducting teaching / research in HTBDA.

Methodology

Lectures, Demonstration by Hands-on sessions. Revision and an exam will be conducted on the last day. Participants more than 40% marks will be eligible for award of certificate with statement of marks. Others will be given only participatory certificates.

Level of participants

Research Scholar, Post Doctoral fellows and Faculty of Bioinformatics, statistics, computer sciences, life sciences, pharmaceutical sciences and electronics.

Prerequisites

Knowledge in basic computer applications and Bioinformatics. programming knowledge in C,C++, Java, Perl, Linux, R, Python is desirable. Participants should have preferably carry their laptops with ≥ 3 GB RAM with INTEL core i.3/i.5/i.7 or AMD Dual Core/Quad Core processor. 100% attendance is compulsory for all sessions. participants should be interactive and willing to spend more time if session demands.

Number of Participants

Number of participants will be restricted to 20.

Accommodation

Outstation participants will be given shared accommodation upon prior request with nominal charges (ranging from Rs. 200/- to Rs. 500/- extra) participants should pay for accommodation.

Registration Fee:

Rs.500/- for Research Scholars, Post doctoral fellows and for faculty **Rs.1500/-**.The registration fee includes training material and working lunch and tea for all the days of the programme.

How to apply?

Interested candidates can use the Registration form for applying. Applicants may submit their registration forms duly filled in, to the following address:-
Coordinator, DBT-BIF Programme, Dept. of Marine Living Resources, Andhra University, Visakhapatnam-530 003, Andhra Pradesh, India,
(E-mail: andhrauniv.btisnet@nic.in) through proper channel along with one page write up (500 words only) of their knowledge (previous work experience or research project) in Bioinformatics.

Demand Draft towards registration fees as per eligibility and requirement for accommodation (optional) should be drawn in favour of "**Coordinator, DBT-BIF Programme, Dept. of Marine Living Resources, Andhra University**" payable at **Visakhapatnam**.