

Objectives

The program will be focused on the advancement and exploration of modern trends in drug discovery viz. Computational strategies, Bioinformatics tools, biological databases, molecular modeling, analyzing bio-molecular interactions and rational drug design.

Subject Area

Bioinformatics, Computational Biology, Protein Modeling & Computer Aided Drug Designing.

Course Content

Introduction to Drug Designing, molecular modeling, QSAR studies, protein optimization & energy minimization, molecular dynamics, exploring chemical databases, virtual screening, ligand and structure based docking approaches, various online tools for predicting ADME and Drug-likeness, bioavailability, toxicity, Lipinski's Rule of 5 etc..

Level of Participants

The "Computational Approaches to Drug Designing" workshop is directed to young scientists/researchers (Ph.D. students), post-doctoral fellows, PG & PGDBI students as well as experienced scientists/researchers from academia and industry with a background in Chemistry, Pharmacy, Biology, Medicine and Biotechnology. Young faculty members of universities/colleges working in the field of Drug Discovery, Bioinformatics, Computational Biology and related fields are invited to participate.

Prerequisites : Knowledge in basics of Computers

Number of Participants : 20 (on first-come, first-served basis)

Registration Fee

Research Scholars/students: Rs.2000/- (includes workshop kit, tea and working lunch)

Faculty: Rs.3000/- (without accommodation)

Industry sponsored personnel: Rs.5000/-

For correspondence

Bioinformatics and Computational Biology Centre

Assam University, Silchar -788011, India

Mobile: 9401987033, E-mail: monjur@bioinfoaus.ac.in

/ aunivsilchar.btisnet@nic.in

Website: www.bioinfoaus.ac.in

Organising Committee

Chief Patron

Prof. Rajive Mohan Pant

Vice Chancellor and Chairman, Bioinformatics and Computational Biology Centre, Assam University, Silchar

Patron

Dr. Pradosh Kiran Nath

Registrar, Assam University, Silchar

Dr. Subhadeep Dhar

Finance Officer, Assam University, Silchar

Prof. Sarbani Giri

Dean, Hargobind Khurana School of Life Sciences

Chairman

Prof. Manabendra Dutta Choudhury

Director, Bioinformatics and Computational Biology Centre, Assam University, Silchar

Course Coordinator

Dr. Anupam Das Talukdar

Deputy Director, Bioinformatics and Computational Biology Centre, Assam University, Silchar

Resource persons (invited)

External

- Prof. Anand Anbarasu, VIT University, Vellore
- Prof. A. Dinakara Rao, Pondicherry University
- Prof. Ramesh Chandra Deka, Tezpur University
- Dr. Pankaj Chetia, Dibrugarh University
- Mr. Debashis Panda, DBT - APSCS&T Centre of Excellence for Bioresources and Sustainable Development

In-house

- Prof. Manabendra Dutta Choudhury, Department of Life Science and Bioinformatics
- Prof. Paritosh Mondal, Department of Chemistry
- Dr. Sudip Choudhury, Department of Chemistry
- Dr. Nirupam Das, Department of Pharmaceutical Sciences
- Dr. Monjur Ahmed Laskar, Project Scientist, Bioinformatics and Computational Biology Centre
- Mr. Abhishek Chowdhury, Research Scholar, Department of Life Science and Bioinformatics



Workshop on

Computational Approaches to Drug Designing

7th September 2022 to 13th September 2022

Organised by:

Bioinformatics and Computational Biology Centre

(Sponsored by: Department of Biotechnology, Govt. of India)

About the centre

Bioinformatics and Computational Biology Centre, Assam University, Silchar is the continuation of Bioinformatics Centre (DBT-BIF) established in 2008. Based on the performance of past years, Department of Biotechnology (DBT), Govt. of India has granted continuation of the centre in the new name and style as Bioinformatics and Computational Biology Centre. Out of 176 centres operating in the whole country only 66 centres have been given continuation and from 28 centres operating in the North East India only 3 centres have been allowed to continue of which this centre is one. It is an independent centre under School of Life Sciences with full financial assistance from Department of Biotechnology, Govt. of India. Centre is running Post Graduate Diploma in Bioinformatics (PGDBI) Course of 1 year (2 semester) duration. Till date twelve batches of students have already completed the course. The 13th batch is on the roll. The main aim of this course is to create skilled manpower in the field of Bioinformatics. The main thrust area of research of the centre is Computer Aided Drug Designing.

Computational Approaches to Drug Designing

Now-a-days Computational Approaches to Drug Designing (CADD) tools are cast-off in Medicinal and Pharmaceutical Chemistry, Molecular Biology, Biochemistry etc. The main benefit of CADD is its cost effectiveness in research and development of new drugs. Wide ranges of software are used in CADD via grid computing to accomplish various research goals in drug discovery process. There are different techniques used in CADD homology modelling, molecular docking, energy minimization, QSAR, pharmacophore modelling, and molecular dynamics simulations etc. Thus, the workshop "Computational Approaches to Drug Designing" will provide a stage to critically analyze and understand the methods and mechanisms involved in computer aided drug design.