### Three-Day Workshop on

## Molecular Modeling and Drug Design

14 - 16 December 2012

#### APPLICATION TO REGISTER REGISTRATION INFORMATION Title ...... First Name ..... **Timings**: 09:30 - 18:00 hrs Last Name ..... Registration 09:00 hrs Day 1 Educational Status ..... Designation/Student..... Venue Mini Conference Hall, University/Institute..... Birla Auditorium, Address (Mailing)..... Birla Institute of Scientific Research, Statue Circle, Jaipur 302001 Fee: Rs 2000/-City ...... State ..... The fee includes course documentation Pin Code .....Tel/Mobile..... as well as mid-session refreshments and lunch. Email(valid)..... Accommodation required (tick): yes / no On-spot registration is available only in condition of availability of seat with Accommodation Category: Dorm/A/B/C late fees and prior information. **DD Details** No Date Accommodation: Accommodation will be provided on Issuing Bank ..... written request to the convener and the participant will bear the cost of Reason to join this training: accommodation. **Mode of Payments** Demand Draft of Rs 2000/- in favor of "The Birla Institute of Scientific Research", payable at Jaipur. Signature..... Disclaimer Separate application form in MsWord may be In the event of circumstances beyond downloaded from the website. www.bisr.res.in its control, the Management reserves

Last Date of Application:

30 November 2012

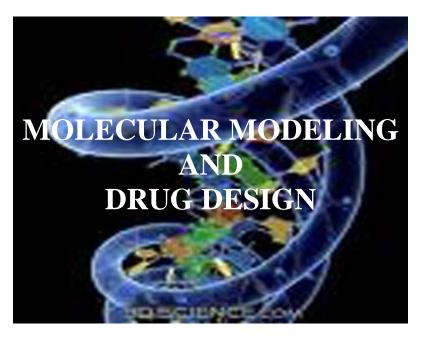
the right to alter the program, the

speakers, the date or the venue.

# BISR, Jaipur and BTIS Sub-DIC, DBT

#### BIOINFORMATICS

**Training Programs**'



14 – 16<sup>th</sup> December 2012



# Birla Institute of Scientific Research Jaipur

"Gain the competitive edge with practical experience and hands-on technical training."

#### PROGRAM DESCRIPTION

Bioinformatics has created an immense opportunity for researchers to design novel leads and therapeutic molecules. Today, computational techniques used in drug discovery process have drastically reduced down the time and cost of drug development. The In-silico studies have enhanced our understanding of molecular properties and the specific behavior of drug-receptor interaction at the molecular level.

This workshop focuses on the current techniques of Molecular Modeling and Drug designing that are being used by researchers for predicting the 3D structure of Proteins and in designing of drug molecules through guided practical training. For lab exercise, various online resources and commercial software will be used in training such as Accelrys Discovery Studio, Modeller, Arguslab, DeepView, Marvin Draw and Molinspiration. The workshop is self-contained and does not assume any special knowledge of computer programming or Bioinformatics.

#### **TOPICS COVERED**

- Introduction to Molecular Modeling
- Proteins: Structure & Properties
- Molecular Databases: Sequence & Structure
- Sketching and Building Biomolecules
- Protein Structure Prediction
- Homology Modeling of Proteins
- Fold Recognition and Ab Initio Modeling methods
- Molecular Docking Technique
- Computer Aided Drug Designing
- Virtual Screening and Lead Optimization

#### LAB EXERCISE

Accessing online resources, Structure databases, Sketching & Building biomolecules, Predicting and analyzing various properties of proteins, Homology modeling, Threading and *Ab-initio* methods for tertiary structure prediction, Virtual Screening of Drugs, Molecular Docking.

"For application form and other details visit www.bisr.res.in"

#### WHO SHOULD ATTEND?

The participants of the course may be students, research scholars, faculty and industry personnel with background in Life Sciences and/or Information Technology. The workshop is self-contained and does not assume any special knowledge of the subject.

#### TEACHING FACULTY

Besides BISR faculty, eminent guest speakers from renowned Bioinformatics Centres of India will deliver lectures and conduct demonstration on various aspects on Bioinformatics.

#### **HOW TO APPLY**

Interested candidates may apply by sending filled application form along with the DD of Rs 2000/- in favor of "The Birla Institute of Scientific Research" payable at "Jaipur" latest by November 30, 2012 to the Convener. The confirmation of participation will be informed through emails only. List of selected participants will also be displayed on the website. Selection criteria would be first come first serve. (Mark your envelop with "Bioinformatics workshop" 14 – 16 December, 2012.)

Note: The number of participants is limited to 40 only.

For any query email at workshop.bisr@gmail.com

Dr. P S Solanki

Convener Bioinformatics Workshop

Birla Institute of Scientific Research Statue circle, Jaipur – 302001, Rajasthan (INDIA)

**Tel**: 0141-2385094 ext 324 (0), **Fax**: 0141-2385121

A certificate of attendance for professional development will be given to each participant who completes the course.