

REGISTRATION FORM

NAME:

Designation:

Institution:

Address:

E-mail ID:

Contact no:

Signature:

Date:

Payment details:

DD Number

Amount:

Date:

Issuing Bank:

Registration fee will be accepted either in cash or DD in favor of The Registrar, IIT INDORE, payable at Indore. Don't forget to mention your name, contact no and course name "Chemical Biology: The Integration of Chemistry, Biology and Medicine" at the back side of the DD

REGISTRATION FEES:

Participants from outside India	USD 500/-
Industry/Business Organizations	Rs.20000/-
Academics Institutions	Rs.2000/-
Students	Rs.2000/-

IMPORTANT DATES

- Date of course: 12-23rd Dec. 2016
- Last date of registration: Dec. 11, 2016
- Free transportation will be available from Silver Springs to Simrol Campus for participants.
- Certificate to all participants



COURSE

on

Chemical Biology: The Integration of Chemistry, Biology and Medicine

12–23rd Dec. 2016

Organized by

Indian Institute of Technology Indore

in association with

Purdue University, USA



Campus: Khandwa Road, Simrol Indore- 452 020, MP, India

Website: www.iiti.ac.in

Sponsored by

MHRD Scheme on Global Initiative on

Academic Network

(GIAN)



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ABOUT INSTITUTE

Indian Institute of Technology, Indore, located in Madhya Pradesh, is an institute of national importance established by government of India in 2009. The institute has developed state of the art infrastructure, well equipped laboratories, sophisticated instrumentation center, modern library, computer center etc. IIT Indore's campus is at Simrol which is approximately 25 km from down town Indore. The campus is spread over 525 acres of land in natural surroundings providing ideal atmosphere for the students.

GIAN & ITS OBJECTIVES

Union cabinet has approved a program titled **Global initiatives for academic networks (GIAN)** in higher education aimed at tapping the talent pool of scientists and entrepreneurs internationally to encourage their engagement with the industries of higher education in India so as to augment the countries existing academic resources, accelerate the pace of quality reforms, and elevate India's scientific and technological capacities to global excellence .

CHEMICAL BIOLOGY

This multidisciplinary course will discuss how intractable problems in biology can be solved through the application of synthetic organic chemistry and how biology can be harnessed to advance chemistry. The central dogma of molecular biology is the organizing principle for this course.

Starting from DNA, RNA, proteins and their post-translational modifications we will initially focus on the origin, chemistry, structure and functions of these fundamental building blocks of life in cells. We will then proceed for an in-depth review of highly innovative chemical approaches that are used to harness these macromolecules to regulate and monitor numerous biological processes in real time. In addition, we will also discuss several innovative approaches to manipulate biological systems to facilitate novel chemical syntheses. Recent discoveries and their applications, particularly in human diseases, from both literature and industry will be a cornerstone of the course.

- DNA encoded chemical libraries (DECL) and DNA templated organic synthesis (DTS)
- DNA assisted reaction discovery, adapting DECL for DNA microarrays synthesis
- G Quadruplex ligands and inhibitors, high ordered DNA packaging, application in cancer
- Wrinkle in the central dogma, types of non-coding RNAs, RNA interference, Transposons
- Transcription profiling, RNA Aptamers, RNA as therapeutics
- Selective labeling of proteins using orthogonal probes, chemical probes/disruptors of protein-protein Interactions
- Fragment based drug discovery, DARTS etc.,

SPEAKER

Prof. Dr. Kavita Shah

Department of Chemistry

Purdue University

Westlafayette, USA

ORGANIZING SECRETARY

Prof. Dr. Venkatesh Chelvam

Prof. Dr. Prashant Kodgire

Centre for Biosciences and Biomedical Engineering, IIT Indore, Madhya Pradesh

email: cvenkat@iiti.ac.in; pkodgire@iiti.ac.in

Phone: 0731-2438789; 2438782; (O)

07898514502 (M)

PROGRAM SCHEDULE

12–17th Dec - Lectures Day 1-6

19–22nd Dec - Lectures Day 7-10

23rd Dec -Exam-AM & Social Hour-PM

- Lectures: 09.30-11.45 am
- Lunch: 12.30-1.30 pm
- Tutorials: 1.30-3.30 pm

VENUE

Indian Institute of Technology Indore

School Building, Simrol Campus

Indore-452 020