# **REGISTRATION FEE**

	Foreign Participants	18	US\$ 200
•	Students* (UG, PG, PhD)	:	Rs. 1000
•	Faculty/Scientist/Post doc	-	Rs. 2000
•	Industry Members	:	Rs. 5000
(8)	Fee for SC/ST Students	1	Rs. 500

Note- Registration fee includes instructional materials and experimental facility only.

#### REGISTRATION WORK FLOW

MHRD- GIAN is a global program, participants are required to register online at GIAN portal: http://www.gian.iitkgp.ac.in. Follow instructions at "Courses Registration Portal" and submit login details with brief academic achievements. Rs. 500 has to be paid online for registration at GIAN portal. Participants then need to select course from the list at "Course Registration". Selected participants will be informed by e-mail and they need to submit the "Course Registration Fee" by Demand Draft in favor of "The Registrar, Dr. Harisingh Gour Vishwavidyalaya, Sagar M.P.

#### PATRON

#### Prof. R. P. Tiwari

Vice- Chancellor

Dr. Harisingh Gour Vishwavidyalaya, Sagar, Madhya Pradesh (India) (A Central University)

#### PROGRAM ADVISORS

Prof. R. A. Singh Prof. J.D. Ahi

Director Dean

Academic Affairs School of Biological Sciences

Prof. Subodh Kumar Jain Prof. Devasish Bose

Head Local Coordinator for GIAN

Department of Biotechnology Department of Criminology & Forensic Science

#### **COURSE COORDINATORS**

Dr. Chandrama Prakash Upadhyaya

# Dr. Rajneesh Anupam

Department of Biotechnology
Dr. Harisingh Gour Vishwavidyalaya, Sagar, India.

Contact: 7587194330, 9981124426

Email: cpupadhyay@gmail.com

GIAN Portal: http://www.gian.iitkgp.an.in University web: http://www.dhsgsu.ac.in

## **HOW TO REACH**

Sagar is a Divisional head quarter, well connected by rail and roads. Sagar railway station is mentioned as Saugor (SGO) in Railway time table. Saugor station is located on Bina-Katni section of West Central Railway. It is directly connected by train to Bina Jn. (75 km), Bhopal (213 km.) Jabalpur (279 km) and Jhansi (200km). It has direct train connectivity for Delhi, Mumbai, Kolkata. Sagar is connected with excellent roads with Bhopal (190 km), Jabalpur (185 km), Jhansi (200 km) and Bina (75 km). Nearest airport-Bhopal (200 km).



Sagar, Madhya Pradesh (India)





A Course Under

Global Initiative of Academic Networks Ministry of Human Resource Development Government of India

on

# Molecular Virology: Biotechnology tools for controlling viral diseases

14th-20th November 2016

By
Expert Foreign Faculty
Mikhail M. Pooggin (Ph.D.)
University of Basel
Switzerland

Organized by

Department of Biotechnology

Dr. Harisingh Gour Vishwavidyalaya,

Sagar - 470 003 (M.P.), India. Contact: 7587194330, 9981124426

Email: cpupadhyay@gmail.com

GIAN Portal:. http://www.gian.iitkgp.an.in

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#### SCOPE OF THE PROGRAM

MHRD has approved a new program entitled Global Initiative of Academic Networks (GIAN) in higher education aimed at tapping the talent pool of scientists and entrepreneurs, Internationally to encourage their engagement with the institute of higher education in India so as to augment the country's existing academic resource, accelerate the pace of quality reform, and elevate India's scientific and technological capacity to global excellence. In order to garner the best international experience into our system of education, enable interaction of students and faculty with the best academic and industry expert from all over the world and share their experience and expertise to motivate people to work on Indian problems.

One week course on "Molecular Virology: Biotechnology tools for controlling viral diseases" has been approved by MHRD under the GIAN program which is being organized by the University. This course will be conducted under the supervision of expert foreign faculty Dr Mikhail M. Pooggin (Pugin), University of Basel, Switzerland. The program will cover sharing of theoretical & experimental knowledge among students, researchers, faculties and scientists.

#### **ABOUT THE COURSE**

Internationally acclaimed researcher with expertise in the field of molecular biology & plant virology, biotechnology will deliver lectures. The participants will be exposed to the fundamentals of molecular biology, viral diseases of plants and techniques of viral identification. The participants will develop the capability of using the molecular biology and biotechnology techniques to identify, control and treatment of the viral diseases of plants.

#### ABOUT THE FOREIGN FACULTY



**Dr. Mikhail M. Pooggin,** the world renowned molecular virologist is group leader and Professor at Botanical Institute, University of Basel, Switzerland. Dr. Pooggin worked at Friedrich Miescher Institute (FMI) Switzerland, first as a visiting scientist funded by EMBO, INTAS and FEBS as project scientist and then as a project leader. He studied translational control mechanisms evolved by Cauliflower mosaic virus and other Gemini viruses. Presently, Dr Pooggin has established his own research group at University of Basel (UniBasel) and working on

RNA silencing and antiviral defence mechanism. Dr. Pooggin has published several papers in International peer-reviewed journals (Nature Biotechnology, Nucleic Acids Research, Journal of Virology, PLoS Pathogens, Nature Plants etc.). He is also serving as the reviewers of research foundations of Switzerland (SNSF), France (ANR), Israel (BARD) and Denmark (DCIR). He has actively participated in the Indo-Swiss collaboration in Biotechnology programme which proved the most successful joint scientific Indo-EU programme where several important scientific developments were made to understand the control of viral diseases of plants.

#### WHO CAN PARTICIPATE

- Students of UG, PG, PhD and postdoctoral fellows from reputed academic and technical institutions.
- Faculty members/scientists working in the area of Biotechnology, Animal Virology, Molecular Biology, Viral Pathology & Genetic Engineering.

# **COURSE SCHEDULE**

# 14 November 2016 (Monday)

## Inauguration

Lecture 1 Introduction to Molecular virology
Tutorial 1 Molecular detection of viruses

## 15 November 2016 (Tuesday)

- Lecture 2 Molecular plant virology
- Lecture 3 Introduction to RNAi and gene silencing
  Tutorial 2 Viral identification & TEM/SEM of samples

## 16 November 2016 (Wednesday)

- Lecture 4 Application of RNAi and gene silencing
- Lecture 5 Viral diagnostics and diversity studies using Molecular techniques
   Tutorial 3 Proteomic method of virus detection, Western/ ELISA techniques

# 17 November 2016 (Thursday)

- Lecture 6 Viral diagnostics and diversity studies using next generation sequencing
- Lecture 7 Antiviral RNAi in invertebrate animals and mammals
- Tutorial 4 Detection of virus based on Real time PCR and DNA/RNA sequencing

## 18 November 2016 (Friday)

- **Lecture 8** Applications of bacterial antiviral system CRISPR for editing plant genome
- Lecture 9 CRISPR for targeting plant DNA viruses
- Tutorial 5 Experimental demonstration of plant/animal genetic engineering

# 19 November 2016 (Saturday)

- Lecture 10 Retro-virus in animal diseases
  - Discussion and Troubleshooting Evaluation of Participants

# 20 November 2016 (Sunday)

Valedictory function

#### ACCOMMODATION

Accommodation, if required can be arranged for the participants on payment basis subject to availability. For accommodation booking participant may contact the course coordinator.

