



Gian
GLOBAL INITIATIVE OF ACADEMIC NETWORKS



Translational Science for Health-Promotion, Food and Feed

Course code 176021H02

One Week GIAN Course
March 23-28, 2020

Sponsored by
Ministry of Human Resource Development (MHRD)
under
the scheme Global Initiative for Academic Network (GIAN)



Organized by
Department of Genetics
Maharshi Dayanand University
Rohtak-124001, Haryana,
INDIA

Translational Science for Health-Promotion, Food and Feed

MHRD Scheme on Global Initiative on Academic Net work (GIAN)

1. Course-overview

The proposed short course will be taught by the Rutgers University (RU) professor, Dr. Michael Chikindas to the advanced level students and young faculties. This course will consist of several lectures, covering major aspects of modern developments in the field of health-promoting nature-derived formulations for applications in human health, personal care, functional food and feed. Specifically, these lectures will deliver the most up to date information on health promoting bacteria and novel nature-derived approaches used for formulation and delivery of biologically functional substances consumed with food or feed.

2. Objectives

- i. Introduction of the course participants into health-promoting natural-derived formulations for applications in human health, personal care, functional food and feed.
- ii. Skill development in design, formulation, and application of probiotics for human health and agriculture.
- iii. Learning from specially designed scenarios (e.g. product development) and examples of clinical trials, their failures and solutions, through case studies and ongoing research projects (tutorials/practical training).
- iv. Training the course participants in identification of project-related challenges and ability to solve project related problems (tutorials/practical training followed from the learning experience gained in #iii).

3.0 Course details

3.1 Tentative Duration: One week (March 23-28, 2020)

3.2 Tentative Lecture Schedule

23rd March 2020 (Day 1)

Lecture 1: 10.00 to 11.000

Title: History of probiotics: Role of microorganisms in health and disease

Lecture 2: 11.30 to 12.30

Title: Antimicrobial production by probiotics: bacteriocins and secondary metabolites

Tutorial 1: 14.30 to 16.30

Tutorials based on above concepts

24th March 2020 (Day 2)

Lecture 3 : 10.00 to 11.000

Title: Pre-, pro-, and post-biotics: do we need all three of them?

Lecture 4: 11.30 to 12.30

Title: Probiotics for gastro-intestinal health

Tutorial 2: 14.30 to 16.30

Tutorials based on above

25th March 2020 (Day 3)

Lecture 5: 10.00 to 11.000

Title: Urogenital tract and its healthy microbiota

Lecture 6: 11.30 to 12.30

Title: Probiotics in pediatric health: developments and challenges

Tutorial 3.: 14.30 to 16.30

Tutorial based on above topics

26th March 2020 (Day 4)

Lecture 7: 10.00 to 11.000

Title: Probiotics, microbiota and obesity

Lecture 8: 11.30 to 12.30

Title: Human gut microbiome and its distribution

Tutorial 4: 14.30 to 16.30

Tutorial based on above topics

27th March 2020 (Day 5)

Lecture 9: 10.00 to 11.000

Title: Probiotics for agriculture

Lecture 10: 11.30 to 12.30

Title: Probiotics: delivery and formulations

Tutorial 5: 14.30 to 16.30

Tutorials based on above

Date of Examination: March 28, 2020

4.0 Who can attend?

This is an advance level course on health promoting bacteria and nature derived products to train master students, research scholars and faculties/scientists from academic and research institutions.

5.0 Course Fee

The participation fees for taking the course is as follows:

Participants from abroad: US\$ 300

Industrial Participants: INR 8,000/-

Faculty: INR 3,000/-

Students/Research Scholars: INR 1500/-

Students/Research Scholars from host university: INR 1000/-

Students/Research Scholars (SC/ST): INR 750/-

The above fee include all instructional materials, computer use for tutorials and assignments and 24 hr internet facility.

The paid hostel/guest house accommodation may be provided to out-station participants with prior request.

6.0 How to participate:

In order to register for the course, one has to apply online through the following steps -

1. Register yourself at GIAN WEB PORTAL (<http://www.gian.iitkgp.ac.in/greggn/index>)
2. Choose course, i. e. “**Translational Science for Health-Promotion, Food and Feed**” by drop down menu
3. Fill the **registration form** and pay the course fee (which is separate than the registration fee INR 500/-) by NEFT/RTGS at SBI A/C No. **37868756829**, IFSC: SBIN0004734)
4. Scan filled registration form and send to the course coordinator(santoshgenetics@gmail.com).

Foreign Faculty



Prof. Michael Leonidas Chikindas is an applied molecular microbiologist studying health-promoting (probiotic) bacteria and natural antimicrobials for use in food preservation, personal care, and agriculture. He is holding a degree in Microbial Genetics from the Yerevan State University, Armenia (M.S. *summa cum laude*) and a Ph.D. from the Institute of Genetics and Selection of Industrial Microorganisms (VNIIGenetika, Moscow, Russia). Prior to joining Rutgers State University, Prof.

Chikindas worked in the government sector (Institute of Applied Microbiology, Obolensk, Russia; Center for Molecular Diagnostics, Ministry of Health, Moscow, Russia), academia (Groningen University, The Netherlands), and industry (Unilever Research Port Sunlight, UK and Janssen Research Foundation, Johnson & Johnson, Belgium). Prof. Chikindas' external funding stems from private industries/organizations (e.g. Bill & Melinda Gates Foundation) and governmental agencies (e.g. NIH, USDA, NSF), summing to 20 grants/funded projects. His research is focused on food-borne pathogens, probiotics, and natural antimicrobials. Prof. Chikindas supervised 13 Ph.D. candidates, 10 M.S. students, and 25 B.S. students. His laboratory housed international visitors from 10 countries. He is a coordinator of the "Food Microbiology" Undergraduate Course and the graduate-level course "Beneficial Microbes in Food and Life". Dr. Chikindas is a member of the Editorial Boards of Applied and Environmental Microbiology, Journal of Applied Microbiology, and Beneficial Microbes. He is a founding Editor-in-Chief of "Probiotics and Antimicrobial Proteins" (Springer). He serves as a reviewer for the NIH, USDA, BARD, Foundation for Research Development (South Africa) and Science Foundation, Ireland.

Course Coordinator



Dr. Santosh Kumar Tiwari, Assistant Professor, Department of Genetics, Maharshi Dayanand University, Rohtak did PhD from University of Delhi South Campus, New Delhi. Previously, he served as Assistant Professor in Department of Bioscience and Biotechnology, Banasthali University, Rajasthan. He was awarded Indo-US and Indo-Australia Research Fellow for implementation of a collaborative research programs funded by Indo-US Science and Technology Forum, and Indian National Science Academy, New Delhi.

His area of research interest is the purification and characterization of bacteriocins of probiotic lactic acid bacteria isolated from indigenous food and natural environments. His laboratory is supported by various national funding agencies such as DST, UGC, DBT, CSIR and ICMR, New Delhi. His research work has been published in international journal of repute such as Applied and Environmental Microbiology, Applied Microbiology and Biotechnology, Biochemical and Biophysical Research Communication etc. He is member of several national and international bodies, Associate Editor of a Springer Journal, Probiotics and Antimicrobial Proteins and editor of Journal of Applied Microbiology. He has 12 years teaching and research experience.

Local Coordinator: Prof. J. P. Yadav
Department of Genetics
M. D. University, Rohtak-124001



Government of India
Ministry of Human Resource
Development

**Translational Science for Health-Promotion,
Food and Feed**
(Course Code: 176021H02)

Sponsored by
Ministry of Human Resource Development(MHRD)
Under the scheme Global Initiative for Academic Network (GIAN)

March 23-28, 2020

PERSONAL DETAILS

Name of the Applicant :
Designation :
Institution Address :
E-mail :
Mobile Number :

Paste recent
passport size
coloured
photograph

REGISTRATION FEE DETAILS

By Cheque	
Amount (INR)	:
Account Number	:
Account Holder's Name	:
Cheque No. & Date	:

By NEFT	
Amount (INR)	:
Account Number	:
Account Holder's Name	:
Transaction ID & Date	:

By Demand Draft	
Amount: DD No.
Bank: Date:

Signature

Note:

- Registration should be made in favour of **GIAN, M.D. University, Rohtak** A/c via cheque/online transfer mode only. (**Bank Name & Address:** SBI, M.D.University Rohtak; **Account No. 37868756829; MICR 124002008; IFSC SBIN0004734**)
- Proof of Registration fee should be sent to Dr. S. K. Tiwari, Department of Genetics, M.D. University, Rohtak-124001, Haryana.
- The scanned copy of filled Registration form duly signed by the applicant along with the proof of fee submission should also be sent by E-mail to Dr. S. K. Tiwari (santoshgenetics@gmail.com)
- In case the candidate requires an accommodation a separate E-mail regarding this should be sent to (santoshgenetics@gmail.com) before 19th March 2020.

CONTACT PERSON

Dr. Santosh Kumar Tiwari
Course Coordinator
Email: santoshgenetics@gmail.com
Mobile: 9996006990; 9518119421