GLOBAL INITIATIVE OF ACADEMIC NETWORKS

Government of India
Ministry of Education

Translational Science for Health-Promotion, Food and Feed

Course code 176021H02

One Week GIAN Course (Online Mode)

November 21-27, 2023

Sponsored by

Ministry of Education

under

the scheme Global Initiative of Academic Network (GIAN)

Organized by

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

Translational Science for Health-Promotion, Food and Feed

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 Leonidas 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 (Online Mode)

3.2 Tentative Lecture Schedule

21 November, 2023 (Day 1)

Lecture 1: 4:30 pm to 5:30 pm
Title: Probiotics: Introduction
Lecture 2: 6.00 pm to 7.00 pm
Title: Probiotics for gastro-intestinal health

22 November, 2023 (Day 2)

Tutorial 1: 11.00 am to 1.00 pm
Tutorials based on previous lectures
Lecture 3 : 4:30 pm to 5:30 pm
Title: Probiotics for urogenital tract and oral health
Lecture 4: 6.00 pm to 7.00 pm
Title: Probiotics in pediatric health: developments and challenges

23 November, 2023 (Day 3)

Tutorial 2: 11.00 am to 1.00 pm
Tutorials based on previous lectures
Lecture 5: 4:30 pm to 5:30 pm
Title: Probiotics, microbiota and obesity
Lecture 6: 6.00 pm to 7.00 pm
Title: Probiotics: functional genomics and engineering

24 November, 2023 (Day 4)

Tutorial 3: 11.00 am to 1.00 pm
Tutorials based on previous lectures
Lecture 7: 4:30 pm to 5:30 pm
Title: Probiotics for agriculture
Lecture 8: 6.00 pm to 7.00 pm
Title: Pre-, pro-, and post-biotics: do we need all three of them?

27 November, 2023 (Day 5)

Tutorial 4: 11.00 am to 1.00 pm
Tutorials based on previous lectures
Lecture 9: 4:30 pm to 5:30 pm
Title: Probiotics: formulations and delivery
Lecture 10: 6.00 pm to 7.00 pm
Title: Bacteriocins

25 November, 2023

Tutorial 5: 11.00 am to 1.00 pm
Tutorials based on previous lectures.
Examination: 4:30 pm to 5: 30 pm

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. **This course will be conducted in online mode.**

5.0 Course Fee

The participation fees for taking the course is as follows:

Participants from abroad: US$ 200
Industrial Participants: INR 5,000/-
Faculty: INR 1,500/-
Students/Research Scholars: INR 1000/-
Students/Research Scholars from host university: INR 500/-
Students/Research Scholars (SC/ST): INR 250/-

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/gregn/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 along with proof of registration fee to the course coordinator by email on santoshgenetics@mdurohtak.ac.in before **20th November 2023.**

Foreign Faculty

Prof. Michael Leonidas Chikindas is an applied molecular microbiologist studying health-promoting (probiotic) bacteria and natural antimicrobials for their 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). His research is focused on food-borne pathogens, probiotics, and natural antimicrobials. 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". Prof. 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 is Assoc. Professor, Department of Genetics, Maharshi Dayanand University, Rohtak. He 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 Research Fellowship and Indo-Australia Research Fellowship for 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 recognized by international journals of repute such as Biotechnology Advances, Applied and Environmental Microbiology, Applied Microbiology and Biotechnology, Biochemical and Biophysical Research Communication etc. He is member of several national and international bodies. He has served as coordinator of UGC-STRIDE programme for capacity building of young researchers under the thrust of "Natural products for human health".

Course Coordinator
Dr. Santosh Kumar Tiwari
Department of Genetics
M. D. University, Rohtak, Haryana
Tel (M) +91-9996006990
Email: santoshgenetics@gmail.com

Local Coordinator
Prof. Narasimhan B.
Director IQAC
M. D. University, Rohtak, Haryana
Tel (M) +91-9416649342
Email: coordinatorgian.mdu@gmail.com

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PERSONAL DETAILS

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

Paste recent passport size coloured photograph

REGISTRATION FEE DETAILS

Amount (Rs) :_____
Account Number :_____
Account Holder's Name :_____
Transaction ID and Date : _____

Signature

Note:
Registration should be made in favour of **GIAN, M. D. University, Rohtak** A/c via online transfer mode only. (**Bank Name & Address**: SBI, MDU, Rohtak-124001; **Account No. 37868756829; MICR 124002008; IFSC SBIN0004734**)
The proof of registration fee and scanned copy of filled registration form duly signed by the applicant along with the proof of fee submission should be sent by e-mail to Dr. S. K. Tiwari before **20th November 2023**.

CONTACT PERSON
Dr. Santosh Kumar Tiwari
Course Coordinator
Email: santoshgenetics@mdurohtak.ac.in
Mobile: 9996006990