

## Overview

Translational research applies findings from basic sciences to enhance human health and well-being. Genomics, proteomics, and bioinformatics are important tools in current research & development and major contributions in the biotech industry. The advanced lectures we undertake are challenging and are committed to, but the results are extremely rewarding. The teaching material provided during the lectures is at an advanced level that might promote individuals with independent research, solving in-depth problems in their career. By the end, they'll have the right skills to work at the forefront of research anywhere in the world.

This GIAN programme will offer wider knowledge and scope to the brightest students from a variety of backgrounds including natural science, Biotechnology engineering, who would like to have further training to disseminate translational wider knowledge etc. This will advance skills & understanding, in order to enable effective & efficient use of biotech applications in research and in industry. Further, this joint GIAN programme is proposed with an aim to offer the state-of-the-art cutting-edge day-to-day current technology with an advanced resource. The multidimensional expertise with a learning outcome of skills & understanding for basics and advanced modules of translational life science applications will be implemented after this course elsewhere, including clinics and in other areas of research and industry.

The rationale of the course is to enhance the attractiveness to the students, researchers and staff of highly capable individuals in their functions. Courses of this type have been shown to make graduates highly appealing to the industry, government and academia.

## Objectives

- ❖ The primary objectives of the course are as follows:
- ❖ Provide students with progressive practical skills in Biology that will allow them to (i) explain important discoveries in life sciences, materials and other great technology capacities to commercial exploitation, and (ii) adapt readily to the challenges presented in a diverse range of industrial divisions that can profit from process bioengineering approaches;
- ❖ Allow students to solve problems within a technical environment, particularly with regard to problem definition, team-working, organization and delivery of objectives within the limitations imposed by the interval and information available;
- ❖ provide students with engineering administration skills, such as restructuring of existing company arrangements and technology licensing, together with the requisite knowledge of raising capital, financing, marketing, environmental legislation and sustainability; and
- ❖ Offering training in research, such that students are able to define, organize and undertake a research project within a specified period of time and to report it in an acceptable manner.

## Module

**Day 1: Current perspectives on Molecular Imaging, and Drug Discovery and Development.**

**Day 2: Proteomic approaches in clinical applications and Molecular Characterization of microbial communities in situ.**

**Day 3: Infectious, inflammatory and Neurodegenerative diseases, and protein purification techniques.**

**Day 4: Genetic Engineering and Genomics, and Techniques used for proteomics-MALDI-TOF & LC-MS/MS.**

**Day 5: *In-vitro* cell culture applications in Life Sciences and Nano Science and Tissue engineering.**

**Total number of participants: 40**

## Fee

**The participation fees for taking the course is as follows:**

**Participants from abroad : US \$ 300**

**Industry/Research Organizations : Rs. 4000/-**

**Academic Institutions : Rs. 3000/-**

**Students : Rs. 1500/-**

**Account Details : Coordinator GIAN Course**

**Account No. : will be given shortly**

**IFSC CODE :**

**The above fee includes all instructional materials and lunch only.**

**The participants are advised to arrange their accommodation.**

## Faculty



Dr. Sururaman Padmanabhan is currently working as Deputy Director (Translational Neuroscience), Nanyang Technological University, Singapore. He obtained his Doctoral degree from Annamalai University in Zoology. Then did his post-Doc research in Stanford Medical School, USA. He is well versed in the area of molecular imaging, image processing, regenerative medicine, nano-medicine, cell and molecular biology, viral mediated gene delivery and biomedical optics. Apart from that he also actively engaged to deliver lecture, visiting scientist in various countries including India. Moreover, he has published number of research articles in peer reviewed journals. He also served as editorial as well as reviewer role in peer reviewing journals. He became member in a number of professional bodies such as Academy of Molecular Imaging (AMI), European Association of Nuclear Medicine 2012, Society for Molecular Imaging (SMI), USA and so on. He has completed several research projects and obtained patent his pioneering research work.

## Co-ordinator



Dr. Govindaraju Archunan, obtained his Ph.D. in Zoology from Banaras Hindu University, Varanasi in 1989. In recognition of his research contribution, he has been conferred Doctor of Science (D.Sc.,) in Zoology from Bharathiar University in 2015. He has published more than 180 research papers in peer reviewed journals. He guided 25 doctoral students. His main research is on pheromone biology and proteomics. He has got several projects from various National and International funding agencies. He has two patents. He has visited and delivered many invited lecture's in many Universities/Institutes in and abroad. He is a editorial board member in many reputed journals. He is recipient of few awards i.e. Commonwealth Fellowship (Indo-UK), Heiwa Nakajima Foundation Fellowship (Indo-Japan), INSA – DFG Bilateral Exchange Programme (Indo - German), TWAS – CAS Visiting Fellowship, China and Tamil Nadu Scientist Award (TANSA) 2009 (Biological Sciences).

**Venue:** Bharathidasan University, Tiruchirappalli-620024.

### For course details contact

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Ministry of Human Resources Development  
Government of India  
Global Initiative on Academic Networks (GIAN)  
Course on

**A Recent Trend in Life Science Research with Special Reference to  
Molecular Imaging, Proteomics and Metabolomics**  
Bharathidasan University, Department of Animal Science,  
**12-16 February 2018.**