GLOBAL INITIATIVE OF ACADEMIC NETWORKS

**5 DAY COURSE ON**
Cancer Theranostics
**8th to 12th July, 2019**

**Venue**

JNTUH College of Engineering, Kukatpally, Hyderabad

## About GIAN Initiative.

Govt. of India approved a new program titled 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 institutes of Higher Education, viz., all IITs, IIMs, Central Universities, IISc Bangalore, IISERs, NITs and IIITs subsequently cover good State Universities where the spinoff is vast. The GIAN website may be visited for detailed information.

## Course Details.

This course provides an introduction to the concept of "Cancer Theranostics" and the design principles that form the basis for the development and evaluation of those agents. The course will cover state-of-the art concepts underlying various technologies for cancer diagnosis and treatment and how theranostics are increasingly employed in treating cancer.

We will discuss the challenges and opportunities associated with the translation of those agents into real-life applications.

The course will include a series of lectures and tutorials focused on cancer detection, specific targeting of cancer cells, design principles and synthesis of tumor targeting therapeutics and imaging agents including antibodies and nanotherapeutics. Practical aspects include laboratory techniques for making nanotherapeutics and their characterization.

## Course Timings.

***Registration at 9:00AM on 8th July 2019***
***Inauguration at 9:30AM on 8th July 2019***

***Number of participants is limited to fifty.***

## Benefits of Attending the Course (Course Objectives).

At the completion of this course, the student/participant should be able to accomplish the following.

- Identify challenges and issues surrounding cancer detection and treatment.
- Identify challenges associated with materials and instruments necessary for the development of theranostics including cancer Nano therapeutics
- Gain an overview of different options available cancer diagnosis and treatment.
- Compare and contrast various imaging techniques used for cancer detection.
- Learn latest developments in imaging in cancer theranostics and nanotherapeutics.
- Discuss the concepts of cancer nanotheranostics with examples.
- Recognize the challenges in the development of highly efficient and tumor targeting cancer theranostics.

**Who should attend:**
This course is intended to provide students, teachers, researchers, executives, engineers and researchers from manufacturing, service and government, organizations including NGOs and R&D laboratories.
Students at all levels (BTech/MSc/MTech/PhD) or Faculty from academic institutions and technical institutions are invited to attend.

**For the participation in the course, registration with GIAN is mandatory.**
Registration to the portal is one-time affair and will be valid for the lifetime of GIAN. Once registered in the portal, an applicant will be able to apply for any number of GIAN courses as and when necessary. One-time Non-refundable fee of Rs. 500/- is to be charged for this service**.** For registration, the website **is:** ***www.gian.iitkgp.ac.in/GREGN/index***

## Course Fee:

The participation fees for taking the course is as follows:

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| **Participants from abroad ( US dollars):** | **$500** |
| **Industry/ Research Organizations** | **: Rs. 5000/-** |
| **Academic Institutions** | **: Rs. 3000/-** |
| **Full time Students** | **: Rs. 1000/-** |
| **Full time SC/ST students** | **: Rs. 500/-** |

**There will be a concession of 50% of the fee for the faculty working in the constituent and affiliated colleges of JNTUH.** The above fee includes all instructional materials, computer use for tutorials and assignments, laboratory equipment usage charges, 24 hours free internet facility, Tea, Snacks, Lunch**.**

**Evaluation and Grading.**
There will be evaluation at the end of each module on the understanding of the concepts by the participant made during the course. Based on the evaluations finally a letter grade will be awarded to the participant. A completion certificate shall also be issued.

## Faculty

**Dr. Sridhar Nimmagadda:** Sridhar Nimmagadda, Ph.D. is an Associate Professor of Radiology in the Division of Nuclear Medicine and Molecular Imaging at the Johns Hopkins University School of Medicine. He holds joint-appointments in the Departments of Oncology, Pharmacology and Molecular Sciences, and Medicine. He serves as the Scientific Director of the Johns Hopkins Centre for Translational Molecular Imaging, a centre dedicated to clinical translation of molecular imaging agents.

Dr. Nimmagadda received Master of Science degrees in Chemistry from Andhra University, Visakhapatnam, and Indian Institute of Technology, Madras. He received a Ph.D. in Cancer Biology in 2005 from Wayne State University/Karmanos Cancer Institute. His Ph.D. studies involved development of nucleoside analogs as proliferation and gene expression imaging agents. His postdoctoral work in the Departments of Radiology and Clinical Pharmacology at JHU SOM focused on translating a nucleoside analog into the clinic and on using radiological methods to understand the distribution of microbicides in female and male genital tracts.

Dr. Nimmagadda's current research is focused on the development of novel imaging agents for chemokine receptors and immune cell related targets (PD-L1), and the application of those agents to quantify how drugs bind and engage the targets at the tumor. Work in his laboratory is supported by National Institutes of Health, Department of Defense Medical Research Programs and several private foundations. He has authored 60 publications that focus on targeted imaging agent development and applying imaging techniques to characterize tumor biology.

As course director, Dr. Nimmagadda has also actively disseminated the principles and applications of molecular imaging to other scientists in the form of hands-on training workshops.

**Dr. K. Venkateswara Rao** is Professor & Head of nanotechnology in the Centre for nano science and technology, Institute of Science and Technology, JNT University, Hyderabad (JNTUH). He Completed Ph.D. (Physics) in Nano-Materials and their characterization at Central University of Hyderabad. He conducted Post-doctoral research as a fellow at the John Hopkins University, Baltimore, USA and as a visiting fellow at the University of Louisville. Dr. K. Venkateswara Rao is a recipient of the Best Teacher Award from the Telangana State Government in 2017. He is a sought out speaker and regularly delivers lectures at various Engineering colleges in Telangana and Andhra Pradesh. He published 161 papers in National & International journals with high impact factor and presented at 10 international conferences in the field of Nano Science and Technology. He holds two 2 patents for the technologies developed in his laboratory.

**His interests are** Nanomaterial Synthesis, Characterization of Nanostructured materials, Oxide Nano Materials, Graphene Based Materials, Humidity sensing, Gas sensing, Glucose sensing, Battery Materials, solar cells, Seed Generation, cancer nanotherapeutics

**Dr.Ch. Shilpa Chakra** is an Assistant Professor, Centre for Nanoscience and Technology Jawaharlal Nehru Technological University Hyderabad (JNTUH), India. She received Ph.D. in Nano science & Technology JNTU Hyderabad. She participated in 8 International conferences and had published more than 50 papers in International Journals. Her research focuses on Green technology, Biomedical applications of Nanomaterials, Environmental applications of Nanotechnology, Agricultural applications of Nanotechnology and Nano Ayurveda.

## About the JNTUH:

The J.N.T University is in existence since 1972. It is a teaching and research oriented university consisting of four constituent engineering colleges JNTUH College of Engineering, Hyderabad (JNTUHCEH), JNTUH College of Engineering, Jagityala (JNTUHCEJ), JNTUH College of Engineering, Manthini (JNTUHCEM), JNTUH College of Engineering, Sulthanpur (JNTUHCES) and more than 400 affiliated colleges. In addition to the constituent colleges, the other units of JNTUH are School of Information Technology (SIT), Institute of Science and Technology (IST), School of Management Studies (SMS) and Academic Staff College (ASC). The university has numerous collaborative, teaching and research programs with universities from abroad and within India and with industries in the state of Telangana. The university offers engineering programs at both UG and PG level and many science and humanities programs at PG level. In addition, university also offers Ph. D. in engineering, science and humanities disciplines.

## Contact Information:


**Course Coordinators**

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