

GLOBAL INITIATIVE OF ACADEMIC  
NETWORK (GIAN)

Ministry of Human Resources Development  
Government of India

COURSE ON

**“Inflammation, immunity and bioactive lipids  
with emphasis on the role of bioactive lipids  
(BAL) in cancer, autoimmune diseases and  
immune check point inhibitors”**

24<sup>th</sup>-29<sup>th</sup> January, 2022



**Venue:**

**JNTUH College of Engineering,  
Kukatpally, Hyderabad.**

**About GIAN:**

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 in India which initially include all IITs, IIMs, Central Universities, IISc Bangalore, IISERs, NITs and IIITs, also subsequently cover good State Universities where the spinoff is vast. The GIAN website may be visited for detailed information.

**Overview:**

Inflammation is one of the fundamental cellular processes that plays a significant role in many common clinical conditions including cardiovascular diseases, hypertension, type 2 diabetes mellitus, Alzheimer's disease, depression, and cancer. Inflammation is closely intervened with immune response (both innate and adaptive immune responses) and so they show overlapping features and common mediators. Understanding inflammation and the immune response thus, forms the cornerstone of many common diseases including diabetes mellitus and cancer. Thus, knowing the pathophysiological features of inflammation and immune response will lead to a better understanding of immune check point inhibitors, the latest form of cancer therapy that is also associated with autoimmune diseases and preventing cardiac fibrosis.

**Number of participants is limited to fifty**

**Benefits of Attending the Course (Course Objectives):**

1. Discuss about the fundamentals of inflammation and factors that regulate the shift of acute inflammation to chronic inflammation stage.
2. To highlight factors that regulate inflammation.
3. To discuss some common clinical conditions in which inflammation plays a critical role.
4. To highlight how low-grade systemic inflammation plays a role in diseases such as: cardiovascular diseases, hypertension, type 2 diabetes mellitus, Alzheimer's disease, depression, and cancer.
5. To discussion inflammatory events in chronic inflammatory diseases such as TB, leprosy, multiple sclerosis, etc. And how they differ from type 2 diabetes mellitus and cancer.

6. To highlight the significance of immune checkpoint inhibitors in cancer and autoimmune diseases.

At the end of the course, the students and the faculty will be able to not only understand the fundamentals of inflammation and immune response but will also be able to design studies in these processes and related conditions.

**Who can attend?**

This course is intended for Engineering and science faculty and students at all levels (B.Tech, MBBS, M.Sc, M.Tech, Ph.D). Faculty from other academic and technical institutions, Engineers, researchers, and managers from R&D laboratories and government organizations are also welcome.

**For 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/- will be charged for this service. For registration, please visit the website: [www.gian.iitkgp.ac.in/GREGN/index](http://www.gian.iitkgp.ac.in/GREGN/index)

**Course Fee:**

The participation fee for the course is as follows:

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

**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 during the course. Based on the evaluations a final letter grade will be awarded to the participant. A completion certificate shall also be issued.

#### **The Faculty:**



#### **Prof. Undurti N Das:**

Being a physician/scientist, he performed translational research in the area of cancer, diabetes mellitus, lupus, coronary heart disease, atherosclerosis, sepsis and radiation protection. His studies led to a deeper understanding on the role of polyunsaturated fatty acids and their metabolism in several diseases that have the potential to be translated into newer therapeutic strategies. He has research experience of more than 30 years (since 1976) with more than 370 research papers in various journals and 5 patents to his credit. He was formerly Professor of Internal Medicine in India for more than 10 years, teaching graduates and specialist candidates in Internal Medicine, Endocrinology, Rheumatology and Diabetology. His areas of specialization and interest include essential fatty acids, eicosanoids, cytokines, free radicals, nitric oxide, melatonin and their role in various clinical conditions with special interest in angiogenesis and its role in cancer. Liposomal, nano

and SiRNA delivery of drugs for cancer and metabolic syndrome.



#### **Dr. A. Uma:**

Associate Professor, CBT, IST, Jawaharlal Nehru Technological University Hyderabad. She has completed her M.Tech degree from IIT-Delhi and Doctoral degree from S.V. University, Tirupati in 2006, worked as Research Associate (IIT-Delhi), Assistant Professor in SPPMVV, Tirupati, DST- Fast track fellow at CCMB before joining as Assistant Professor in the Centre for Biotechnology. Having twenty three years of PG teaching including fifteen years of research experience, she has five patents and eighty one research publications in various International and National journals. She completed eight major and one minor research projects backed by CSIR, AICTE, DBT and UGC respectively. Currently, she is working on three projects which are being supported by DBT, DST-FIST and AICTE-MODROBS. She has active collaboration with HPCL, ICRISAT, IICT, IIMR, CCMB, NIN & Shiv Nadar University.

#### **About the JNTUH:**

The J.N.T University was in existence since 1972. It is a teaching and research oriented University consisting of 4 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, Sultanpur (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 Coordinator:**

#### **Dr. A. Uma,**

Associate Professor, Centre for Biotechnology, Institute of Science and Technology, Jawaharlal Nehru Technological University, Kukatpally, Hyderabad-500085  
e-mail: [vedavathi1@jntuh.ac.in](mailto:vedavathi1@jntuh.ac.in)

#### **GIAN Local Coordinator:**

#### **Dr. A . Jaya Laxmi**

Professor & Head,  
Department of Electrical & Electronics Engineering,  
JNTUH College of Engineering,  
Kukatpally, Hyderabad-500085  
e-mail: [ajl1994@jntuh.ac.in](mailto:ajl1994@jntuh.ac.in)