



ABOUT US

NATIONAL INSTITUTE OF TECHNOLOGY, ROURKELA

NIT Rourkela is an institute of national importance formerly known as Regional Engineering College, Rourkela. It is a premier institution in Odisha, offering technical education and ranked 15th and 24th in NIRF engineering and research, respectively. Our institute offers PhD, M.Tech., B.Tech., MBA, and M.Sc. programmes in 21 branches of Engineering, Management and Science. The institute research centers are engaged in consultancy, research and developmental activities and have received funding from several bodies such as BARC, BRNS, CSIR, DST, DBT, DAE, DRDO, ISRO, ICMR and other private industries. The Department of Life Science was founded in the year 2008 and has a total of fourteen faculties currently working on the forefront areas of life science like molecular medicine, nanotechnology, RNA biology, plant immunity, molecular genetics, microbial ecology, developmental biology, etc. Our department offers Integrated M.Sc., M.Sc., and PhD programs in life science. We have state-of-the-art research facilities and produce numerous quality publications annually. Our students are placed well in many private organisations, and many opt for higher education in renowned foreign universities/institutions and various research institutions across the country after qualifying for JRF.

ORGANISING COMMITTEE

PATRON

PROF. K. UMAMAHESWAR RAO,
Director, NIT Rourkela, Odisha

CHAIRPERSON

The Head, Department of Life Science

CONVENER

PROF. BISMITA NAYAK,
Department of Life Science

CO-CONVENER

PROF. SUJIT K. BHUTIA,
Department of Life Science

NanoBioS

2025

DEPARTMENT OF LIFE SCIENCE

16th-20th June, 2025



REGISTRATION FEE-

- PG Students: Rs. 2500/-
- PhD students: Rs. 3000/-
- Academia/Faculty: Rs. 5000/-
- R&D/Industry: Rs. 7000/-
- (Limited Seats Only)

Registration fees should be bank transferred through UPI/NEFT/IMPS to the following-

Bank Name: State Bank of India, NIT Campus, Rourkela

Account Name: CONFERENCE NIT ROURKELA

Account number: 10138951784

IFSC: SBIN0002109

Important Dates:

- Registration Opens: 10th April, 2025
- Registration Closes: 15th May, 2025



Workshop On

NANOTECHNOLOGY AND BIOMEDICAL SOLUTIONS for Drug Delivery and Immunology

ABOUT THE WORKSHOP

This intensive 5-day workshop focuses on cutting-edge techniques in nanoparticle synthesis, drug delivery, cell-based assays, and immunological methods for biomedical applications. Participants will gain hands-on experience in nanoparticle fabrication (green and chemical synthesis), characterization (DLS, Zeta Potential, XRD, SEM), and drug encapsulation techniques, followed by controlled drug release studies. Advanced cell culture methods, cytotoxicity assays (MTT), and flow cytometry for cell cycle analysis will be covered to evaluate nanoparticle interactions with biological systems.

The workshop also integrates immunological techniques (ELISA, Ouchterlony diffusion) and biophysical analysis (Western Blot, SDS-PAGE) to enhance understanding of nanoparticle-based drug delivery mechanisms. Expert keynote sessions and panel discussions will explore emerging trends in nanomedicine, providing a platform for interactive learning. The program culminates with participant presentations and a certification ceremony, ensuring a comprehensive skill-building experience in nanotechnology-driven drug delivery research.

OUR GOAL

- Master Nanoparticle Synthesis and Characterization – Hands-on training in green and chemical synthesis, with analysis using DLS, Zeta Potential, SEM, XRD, and Freeze Drying.
- Understand Drug Delivery Systems – Practical exposure to drug encapsulation, targeted delivery, and controlled release mechanisms.
- Learn Cell-Based and Immunological Assays – Training in cell culture, cytotoxicity assays (MTT), flow cytometry, and ELISA for nanoparticle interactions.
- Integrate Nanotechnology and immunological assay for Biomedical Applications – Explore translational research bridging nanotechnology, immunology, and drug delivery.

HOW TO APPLY?

Interested candidates can apply to the convener directly through a duly filled-up registration form before the closing date. The application should be accompanied by a bonafide certificate issued by the head of the department or by the supervisor in the case of research scholars. The registration form and other payment details can be accessed through the below link or by scanning the QR code.

<https://docs.google.com/forms/d/e/1FAIpQLSe0xkaVwkFeDdJzrRnp5TVqYdDRlrsL0SLqTqLeznWvfq2V9w/viewform?usp=header>

ELIGIBILITY

Post-graduates and Ph.D. students from any branch of Life Science or Engineering.

The organizer deserves the right to scrutiny and selection of the candidates based on the criteria mentioned above.



Scan Me!!

ACCOMMODATION

PARTICIPANTS HAVE TO ARRANGE THEIR OWN ACCOMMODATION INSIDE THE CAMPUS (ACCOMMODATION CHARGES NOT INCLUDED IN REGISTRATION FEES. ASSISTANCE WILL BE PROVIDED TO BOOK ACCOMMODATION IN THE CAMPUS) ACCOMPANYING PERSON WILL BEAR OWN EXPENSES..

MODULES OF THE WORKSHOP

Day 1: Nanoparticle Synthesis and Characterization

Day 2: Drug Delivery Systems and Release Mechanisms

Day 3: Cell Culture and Cytotoxicity Analysis

Day 4: Immunological Techniques

Day 5: Integration and Advanced Biophysical Analysis



CONTACT US

THE CONVENOR
NANOBIOS - 2025

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