

CITAR CENTRE FOR INNOVATION AND TRANSLATIONAL RESEARCH



BioNEST@CSIR-IITR



“SAFETY TO ENVIRONMENT & HEALTH AND SERVICE TO INDUSTRY”

CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH

VISHVIGYAN BHAWAN, 31, MAHATMA GANDHI MARG, LUCKNOW-226001, U.P., INDIA



सीएसआईआर-भारतीय विषविज्ञान अनुसंधान संस्थान
CSIR-INDIAN INSTITUTE OF TOXICOLOGY RESEARCH



वैज्ञानिक तथा औद्योगिक अनुसंधान परिषद्
COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH

CITAR-BioNEST-IITR

VISION

The vision of CITAR-BioNEST, CSIR-IITR is to provide an integrated platform to develop and translate the most important technological challenges in health and environmental sectors.

Focus area of Innovation/Incubation



Agro Biotechnologies



Pharma and Biopharma



Food and Cosmetics



Waste management and Environmental solutions

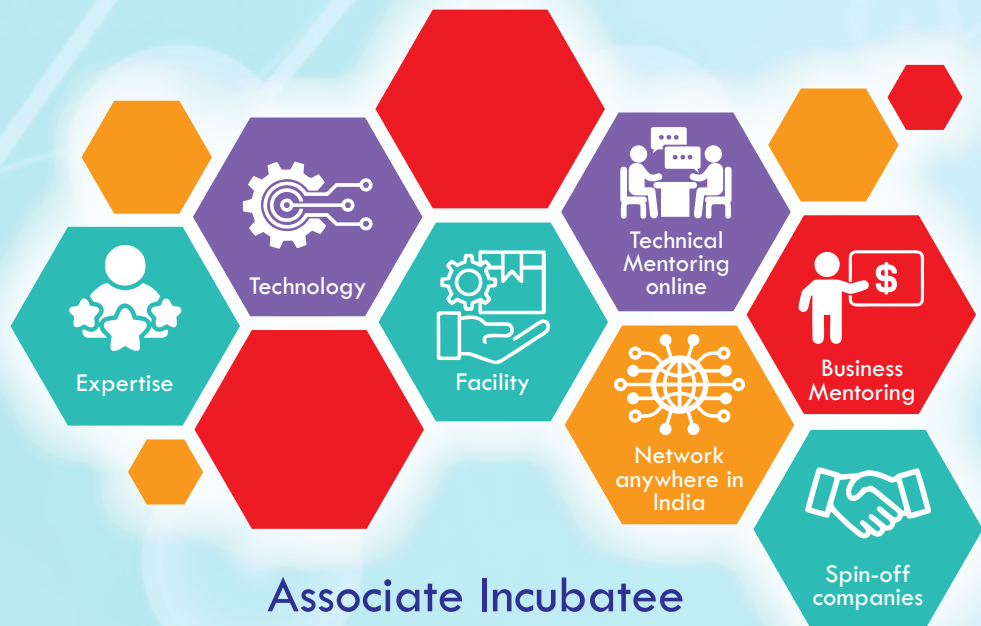
BioNEST @CSIR-IITR is an ecosystem that provides researchers, startups, innovators and entrepreneurs from academia and industry to access the state-of-the-art facilities and mentorship in a multi disciplinary collaborative environment. It is ideally placed at CSIR-IITR overlooking the Gomti River front and spread over 20000 sq. ft.

Scaling Biotech Startup Ecosystem in India through BIRAC's BioNEST

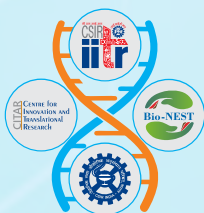


Models of services offered at BioNEST@CSIR-IITR

This facility is equipped with the state-of-the-art instrumentation, laboratories, and computational resources. It provides access to in-house NABL accredited and GLP certified facilities for toxicology/safety assessment and product development.



BioNEST supported incubatee/start-ups/entrepreneurs will get preferential charges of 25% discounted rate* on toxicology testing at CSIR-IITR



NABL Accredited and GLP Compliance Facility

National GLP Compliance Monitoring Authority (NGCMA)
Certificate of GLP Compliance No. GLP/C-154/2020

Areas of Expertise:

- Toxicity Studies
 - Acute Toxicity
 - Repeated Dose Toxicity
 - Skin Irritation/Corrosion (*in vivo*)
 - Skin Sensitization Studies
- Mutagenicity Studies
 - Chromosome Aberration Test (*in vivo* and *in vitro*)
 - Micronucleus Assay (*in vivo* and *in vitro*)
- Environmental Toxicity Studies on Aquatic and Terrestrial Organisms
- Analytical and Clinical Chemistry Testing



Test Items: Agrochemicals, Cosmetic Products, Feed Additives, Food Additives, Industrial Chemicals, Pharmaceuticals (Human).
Test Systems: Algae, Cell lines, Daphnia magna, Earthworm, Guinea Pig, Mouse, Rabbit, Rat and Zebra Fish.



ISO/IEC 17025:2017

NABL Certified
Biological & Chemical Testing

Scope of NABL accreditation

Product/Material of test

1. BIOLOGICAL TOXICOLOGY

- A) Plastics/ Polymeric Products
- B) Water (Drinking/ Surface/ Ground Water)

2. CHEMICAL TOXICOLOGY

- A) Atmospheric Pollution (Ambient Air Monitoring/Stack Emission Monitoring/ Flow Rate)
- B) Plastic and Resins (Plastic and Polymeric Products)
- C) Pollution and Environment (Liquid Effluent/ Sewage)
- D) Residues in Food Products (Meat/ Fish/ Oils/ Fruits/ Vegetables/ Cereals)
- E) Residues in Water (Heavy Metals/ Pesticide)



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Incubation Services and Facilities



Translational Research Facility



Computational Toxicology Facility



Cell & Molecular Biology Facility



Sophisticated Analytical Instrument Facility



Advance Imaging Facility



Industry labs for start-ups & MSMEs in niche areas

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Incubation Services and Facilities

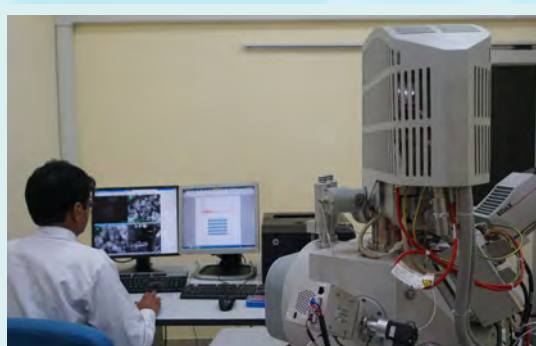
Sophisticated Analytical Instrumentation Facility

- LC MS/MS Quadrapole based ultra-performance liquid chromatography -mass spectrometer
- Gas chromatography MS/MS
- High performance liquid chromatography
- Atomic absorption spectrophotometer
- Atomic fluorescence spectrophotometer
- FTIR spectrometer
- Zetasizer nanaoZS
- Multimode plate reader
- IPC MS/AFM-Ramans



Advance Imaging Facility

- Transmission Electron Microscope (Tecnai™ G2 spirit, FEI, The Netherlands)
- Scanning electron Microscope (Quanta 450 FEG, FEI, The Netherlands)
- Atomic Force Microscope (AFM - NTMDT, INTEGRA, Russia)
- Confocal Microscope (Zeiss LSM-880 with live cell imaging and airyscan) Atomic absorption spectrophotometer





Incubation Services and Facilities

Dedicated Hub Instrumentation Facility

- Bio-safety cabinets
- CO₂ incubator
- UV Spectrophotometer
- PCR
- Orbital shaker
- Sonicator
- Autoclave
- Milli Q Water system
- Icematic Ice flaker
- 3D printing facility
- Incubation Shaker-Stackable Multiple Model
- Third Generation Sequencer
- COD analyzer | Cooling centrifuge
- BOD sensor system
- Ultrafine particle (PM1) sampler
- Real time ammonia analyzer from ambient air
- Real time SO₂, CO₂, CO, ozone and particulate analyzer
- Hydrocarbon analyzer methane and non-methane
- VOC Monitor
- Bacteria and fungi sampler Electro spinning coater
- Denaturing gradient gel electrophoresis (DGGE) System
- BET surface area analyzer
- Size distribution analyzer
- Sensor system for water quality assessment
- Mercury Sampler





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BioNEST@CSIR-IITR PORTFOLIO



Contact us at :

director@iitrindia.org, bionest.citar@iitr.res.in