# Information Brochure

for

Certificate cum Training Course on

# "Improving the Quality and Outcome of Experimental Research"

## Oct 31st -Nov 5th, 2022


**National Institute of Pharmaceutical Education and Research (NIPER) Raebareli**

***(www.niperraebareli.edu.in)***

**National Institute of Pharmaceutical Education and Research (NIPER) Raebareli**

**Certificate cum training course**

**on**

# "Improving the Quality and Outcome of Experimental Research:

# through Laboratory to Investigators Approach"

**October 31st -November 5th, 2022**

**Course Fee: Rs 6500/-**
***(Including fooding and accommodation at shared dormitory for course duration)***
**Last date of application: 20 October 2022.**
**Venue: *NIPER-R Lucknow Campus***
***Total seats: 20***
***Online application link: https://form.jotform.com/211135573176453***
***Account details:*** **A/C Name: Director NIPER Fund**
**A/c No. 35788952646**
**IFSC Code: SBIN0010174**
**Branch State Bank of India, CDRI Branch, Lucknow.**

## Focus

**Hands on Training and workshop on improving the outcomes of**

- *Cellular Imaging and Confocal Techniques*
- *Live Cell Imaging*
- *In-vivo Imaging Techniques*


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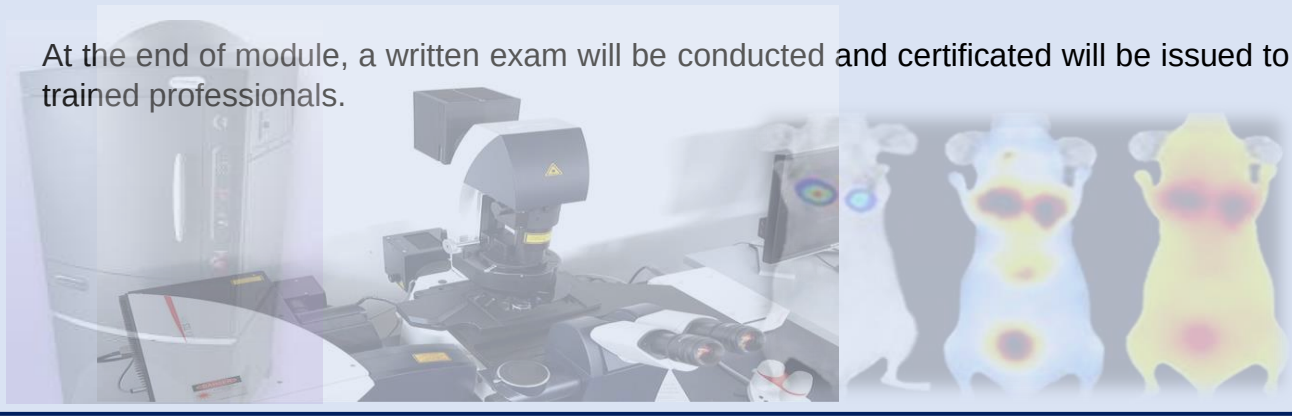
## *About the Course*

There are increasing demands of trained personal working in the healthcare industries including the biomedical research, drug discovery and disease diagnosis. Experimental research is an integral part of health care eco-system and there are huge demands for the trained professional with update knowledge in the era of new challenges and current rapidly changing regulatory requirements. Successful research/discovery largely depends on outcomes of early research *viz in-vitro* experiments, preclinical investigation using animals and right interpretation of recorded data etc and required multidomain skilled human resources. The current academic curriculum unable to fulfill the needs for multi-domain skilled human resources required for biomedical industries/research establishments due to its own limitation. To fulfill this demands, NIPER-R is conducting certificate Course for young health care professional and biomedical researcher to enhance their skills sets for quality data outcomes. Institute had conducted 1st batch of certificate program with 20 participants in November 2021.

The course program includes lectures, resource materials, problem based practical laboratory approach for quality data, quality readouts. Certification will be done based on lecture/training wise assignments and a final proctored exam. Following modules will be included in programs along with practical training on quality immunostaining, microscopy (live cells, confocal imaging etc) and in-vivo imaging.

- Evidence based biomedical Research
- Quality of information and quality outcome
- In-vitro research
- Uses of laboratory animals in biomedical research
- Laboratory material management
- Analytical and Quantitative Light Microscopy
- Fluorescence Microscopy and Fluorophores
- Image Analysis
- In-vivo Imaging Techniques and application
- GLP requirements in Research
- Animal welfare rules and management
- Alternative to animals in experimentation
- Social Responsibility and Bioethics
- Laboratory behavior and ethics
- Experimental data collection and management
- Statistical tools and data interpretation Bid DATA analysis and management
- Data Reporting and Science communication

At the end of module, a written exam will be conducted and certificated will be issued to trained professionals.



## *Eligibility and Selection*

1. Student of masters and PhD programs in life science and allied area.
2. Post-doc scholars, junior/senior research fellow at university/Institutions
3. Working professional at medical college/biomedical labs etc.
4. Industry/CRO professional involved in biomedical research.

## *The Institute*

The Institute was established in 2008 under the aegis of the Ministry of Chemicals and Fertilizers, Govt. of India and has been declared as Centre of Excellence owing to its importance in imparting pharmaceutical education and research. Since July 2018, NIPER, Raebareli is independently functioning from new transit campus at Bijnor-Sisendi Road, Lucknow. and having academic and administrative blocks, hostel blocks separate for boys and girls and cafeteria. Institute ranked 13th position in the NIRF Ranking in the Pharmacy category. At present, Postgraduate (M.S. (Pharm) and Doctoral (Ph.D.) programs are offered by the Departments Biotechnology, Pharmacology and Toxicology, Pharmaceutics, Medicinal Chemistry, Regulatory Toxicology program in Climate Studies is offered by the corresponding group.

NIPER, Raebareli is actively engaged in addressing therapeutic needs of the country especially focusing on locally prevalent diseases. Tuberculosis being one of the most lethal diseases of the country which warrants urgent attention as most of the available drugs are undergoing resistance issues. As per mandate, NIPER-R has started research programs directed towards design and development new anti-tubercular agents for treatment of TB. The intense research programs are also aimed towards treatment of neurodegenerative diseases like Alzheimer's disease. The Department of Pharmaceutics is actively involved in the development of nanoformulations for BCS class II and IV drugs and peptides. The primary focus for developing nanoformulations is to target brain, through nanoemulsions, drug nanofibres, polymeric drug nanoparticles, pharmaceutical nanocrystals/ cocrystals, mesoporous silica nanoparticles etc. The primary research focus of Department of Pharmacology and Toxicology's is on the understanding mechanisms central to neurodegenerative disorders such as Alzheimer's disease. The research programs are also directed in studying pathomechanisms driving neurological consequences of arsenic, copper, and pesticide exposure.