



## AcSIR Ph.D. Programme at CSIR-IITR

Under the aegis of the Academy of Scientific & Innovative Research (AcSIR), the Ph.D. programme at CSIR-Indian Institute of Toxicology Research (CSIR-IITR) is aimed to create highest quality personnel with multidisciplinary knowledge in the field of toxicology and associated areas of science and technology. AcSIR-Ph.D. programmes in Biological Sciences and Chemical Sciences at CSIR-IITR provides state-of-the-art research facilities and a unique platform for research and innovation in toxicological sciences. The programme aims to strengthen the required skills and capabilities among research professionals under the mentorship of leaders in the field of toxicology. In addition to developing discipline-specific research skills, AcSIR-IITR PhD programme is structured to train and support the development of personal and professional competencies. This programme offers exciting opportunities to the candidates holding Master's degree with a valid fellowship (such as UGC/CSIR-NET/DBT/ICMR/DST-INSPIRE or any other equivalent fellowship), having a keen aptitude and scientific inquisitiveness for pursuing advanced scientific research of global standards.

The AcSIR PhD programme in CSIR-IITR started in January 2011 and since then 159 students have been enrolled. Total 40 students (34 in biological and 6 in chemical sciences) have been completed PhD degree successfully. Every year hundreds of young enthusiastic candidates apply for few available seats and undergo rigorous screening and interview process. AcSIR-IITR Ph.D. students are expected to acquire a total of 20 credits (12 credits from the course work, 4 credits from Project proposal and Review Article writing and the remaining 4 credits from CSIR-800 project related work) prior to submission of their thesis.

In the August 2016 session of AcSIR-IITR Ph.D. programme, following courses were offered in Biological Sciences:

- Computation/Bioinformatics
- Basic Chemistry
- Research Methodology: Communication/Ethics/Safety
- Biotechniques/Instrumentation
- Xenobiotic Interaction and Response
- Stem cells Regeneration and Aging
- Seminar
- Target Organ Toxicity
- Nanomaterial Toxicology
- Model Systems in Toxicological Research
- Chemical Carcinogenesis in Chemo Prevention and Genes
- Environmental Diseases and Environmental Toxicology
- Meticulous project and review article preparations

Experienced faculty of CSIR-IITR teaches the course work with great enthusiasm every year. Fifty seven scientists have been recognised as faculty of AcSIR-IITR till March 2017. Seventeen students were enrolled till January/August 2017 taking the total tally of one hundred and fifty nine students enrolled in the AcSIR-IITR Ph. D. programme up to 2017. These students are the major work force of the institute carrying out research work in areas of national/international importance and societal relevance for their Ph.D. degree.

During the last financial year, twenty four students completed their course work while fifteen others finished their comprehensive examinations as well. Further, ten students submitted their thesis after acquiring the necessary 20 credits. Furthermore, fourteen students successfully defended their theses in viva-voce examination and were awarded by Provisional doctoral degrees. Their Ph.D. degrees shall be conferred at the forthcoming Convocation ceremony of AcSIR. Several IITR graduates have successfully scored reputed post-doctoral fellowships among US and European universities, jobs in Indian government institutions and leading private companies.

In order to promote research in science and technology that has a bearing on social, economic, cultural and intellectual welfare of the people, AcSIR has mandated that the students aspiring to obtain a Ph.D. degree from the academy undertake a 6-8 weeks project concerned with societal/rural issues under the '**CSIR-800 programme**'. Some of the targeted issues include deteriorating water quality (drinking water as well as groundwater), over-use of plastics, malnutrition, tobacco usage, groundwater contamination due to exposure to industrial waste (fertilizer industry and pharmaceutical industry), high pesticide usage, poor sanitation facilities, microbial contamination in the water of river Gomti (one of the tributaries of the river Ganges), food adulteration and improper maintenance of hygiene. Large number of villages have been educated for proper disposal of wastes, used chemical containers, preventing exposure to farm chemicals and general hygiene for better health care.