

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

Under the aegis of the Academy of Scientific & Innovative Research (AcSIR), the Ph.D. programme at this institute is aimed to create highest quality researchers with multidisciplinary knowledge in the field of toxicology and associated areas of science and technology. AcSIR-Ph.D. programme 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, 174 students have been enrolled. Total 54 students (46 in biological and 08 in chemical sciences) have completed PhD degree successfully. Every year, several 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 societal programme related project work) prior to submission of their thesis.

In the August 2017 and August 2018 session of AcSIR-IITR Ph.D. programme, the courses offered in biological and chemical sciences cover various facets of toxicology with emphasis on both translational and fundamental research. Experienced faculty of CSIR-IITR teaches the courses with great enthusiasm every year. Fifty eight scientists have been recognized as faculty of AcSIR-IITR till August 2018. In January/August 2018, 24 students were enrolled taking the total tally of 120 students enrolled in the AcSIR-IITR Ph. D. programme up to 2018. Recently AcSIR had established a Memorandum of Understanding (MoU) with Royal Melbourne Institute of Technology (RMIT), Australia, for a joint badged Ph.D. program. CSIR-IITR is one of the active participants in this programme and has also enrolled two of its AcSIR students to work at RMIT, Australia.

During the last financial year, 42 students completed their course work while 18 finished their comprehensive examination as well. Further, 19 students submitted their thesis after acquiring the necessary 20 credits. Furthermore, 14 students successfully defended their theses in viva-voce examination and were awarded provisional/final doctoral degrees. Several CSIR-IITR graduates have bagged postdoctoral fellowships in US and European universities, jobs in 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 societal 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 numbers of village population have been educated for proper disposal of wastes and used chemical containers, preventing exposure to farm chemicals and general hygiene for better health care.