

## Brief description of the work done

- Determination of arsenic concentration in underground water samples by Atomic Absorption Spectroscopy (AAS) using Vapour Generation Assembly Method.
- Determination of lead level in biological fluid by AAS.
- Determination of cadmium level in biological fluid by AAS.
- Determination of arsenic level in biological fluid by AAS. .
- Analysis of chemical synthesized compound by LCMS.
- Analysis of benzo pyrene by LCMS.
- Determination of flavone compounds from plant extract by Mass Spectrometer. .

## Other academic activities.

The departmental staffs have been engaged in enlightening various training course students with the advances of different methods related with translational research.

- Mr. Subhabrata Dey, successfully passed the training course on “Principle & Practice of clinical research” organized by CDSA (Dept. of Bio-Technology, Govt. of India) &NIH (National Institute of Health, USA) from 28th October to 3rd November’ 2012 at New Delhi.

- Mr. Subhabrata Dey, attended Investigators meeting on 12-13 May'2012 at Bangkok, conducted by Leo-Pharma for the ongoing clinical trial as lead study coordinator.
- Mr. Subhabrata Dey, attended Investigators meeting on 17-18 June '2012 at Mumbai, conducted by Piramal Healthcare for the ongoing clinical trial.
- Mr. Jyotirmoy Adhikari & Mr. Sumanta Adhikari were attended a 03 days Training programme on Liquid Chromatography in Kolkata from 10th December 2012 to 12th December 2012.

### **The prospective future areas of Translational Research**

Basic, clinical and translational disciplines which would help in understanding the molecular and cellular mechanisms during the development of the disease. Investigation of new treatment modalities and interventions aimed towards better treatment efficacy and improvement in the quality of life of cancer patients would form an intricate part of the research work.

The areas of translation research which might be explored highlight a wide range of scientific activities –

- Identification of potent human carcinogens (e.g heavy metals and other environmental pollutants)
- Chemoprevention with unknown synthetic and natural compounds and their derivatives as well as the strategic planning of their exact mechanism of action with knowledge of molecular weights of unknown compounds and their major fragmented products
- Detailed gene profiling and protein array which might lead to the eventual development of molecular markers needed for cancer therapy
- Determination of molecular pathway for targeted cancer therapy.
- Pharmacokinetic studies of different anticancer drugs which would include bioavailability and bioequivalent studies (pK sampling).

