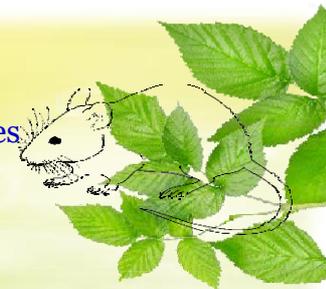




## Hands on Training Program

### Safety profiling of Medicinal and Aromatic plant molecules and Herbal Products in Laboratory Animals

Training schedule: 20-24<sup>th</sup> January, 2025



#### Aim of the Training Program

Safety profiling of Medicinal and Aromatic plant molecules and Herbal Products in Laboratory Animals is targeted for individuals who desire to refresh/upgrade/acquire professional skills in the specific area of pre-clinical safety evaluation of MAPs under the broad category of herbal products and nutraceuticals. This course is practical intensive with ~24-26 hours hands on laboratory experiments along with ~12-15 tutorials to understand the basic principle of pre-clinical safety evaluations.

Objective of this training program is to generate a passion among the researchers and budding entrepreneurs to orient themselves to field of safety evaluations using *in-vitro*, *in-vivo* and *in-chemico* and *in-silico* approaches required for the development of herbal products and MAPs based nutraceuticals for health management.

The training program would cover the following aspects

**Practical's:** Handling of Laboratory Animals (Mice, Rats, Rabbits) and their applications in safety evaluation/ *in-vitro* genotoxicity assessment in microbial platform, *in-vitro* toxicity assessment in mammalian cells/demonstration of acute, sub acute, sub chronic oral toxicity, acute and sub acute dermal toxicity and inhalation toxicity/*in-chemico* skin sensitization; *in-silico* profiling of ADMET, predictive toxicity in the area of hepatotoxicity, carcinogenicity etc.)

**Attributes:** Observational study, Hemodynamics, Hematology, Serum biochemistry, MTT assay, Bronchial tissue reactivity, HPLC based assay for *in-chemico* skin sensitization, Histopathology, *in-silico* predictive ADMET and toxicity analysis etc.

**Tutorials:** Introduction to safety evaluation; brief history, aspects related to safety evaluation: definitions, classifications, toxicodynamics, kinetics, metabolism of xenobiotics, rules and regulations governing safety evaluations of herbal products, method of acute, sub acute, sub chronic oral toxicity, dermal toxicity, inhalation toxicity, scope and their limitations, use of animal models for toxicity testing, basics of *in-vitro* mammalian cells based toxicity MAPs, *in-vitro* genotoxicity using bacterial platform, *in-chemico* dermal toxicity using HPLC based bioassay; *in-silico* computation and predictive analysis of the phytomolecules for ADMET and toxicity profile.

Duration	: 05 working days
No. of seats	: 20
Educational Qualification	: B. Pharm, M. Pharm, BSc-MLT, MSc-MLT, BAMS, MD, M.VSc, MSc in biological Sciences or equivalent
Age Group	: 21-50 years
Date of Commencement	: 20 <sup>th</sup> January, 2025
Venue of the Course	: CSIR-CIMAP, Lucknow
Course Fee	: INR-10,000/- (including food and accommodation; INR-7,000/- excluding food and accommodation)
Mode of Training	: Offline (physical mode)

Candidates may apply through attached form latest by 30<sup>th</sup> November, 2024 by email to [d.chanda@cimap.res.in](mailto:d.chanda@cimap.res.in). Eligible candidates will be shortlisted based on first come first serve basis, the selected candidates will be informed through email for the submission of the course fee either online mode to SBIBank A/c No. 00000030267691783, SBI Main branch, Hazratganj, Lucknow (IFSC code: SBIN0000125) or through Demand Draft in favour of 'Director, CIMAP', payable at Lucknow.

Organized by: Bio-prospection & Product Development Div. CSIR-CIMAP, Lucknow.

Course Coordinator/Nodal person: Dr. Debabrata Chanda

Contact Persons: Dr. Debabrata Chanda (9919873638); Dr. Anirban Pal (9415011404); Dr. DU Bawankule (9415329719)



## Application Form



**Safety profiling of Medicinal and Aromatic plant molecules and Herbal Products in Laboratory Animals (20.01.2025 - 24.01.2025)**

Name of the Applicant:

Address for Correspondence:

Date of Birth & Age:

Gender (M/F):

Mobile No.:

E-mail id:

Educational Qualification:

Field of Specialization:

University/Organization:

Statement of Purpose (around 50-80 words):

Signature of Applicant (with date)

Suggestion: **Delete if it not essential. Need to have some relevance with the training**

**Organized by:** Bio-prospection & Product Development Div. CSIR-CIMAP, Lucknow.

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Website: <http://www.cimap.res.in/skilldevelopment>