

CSIR-CIMAP

Training School on Advanced Instrumentation & Analytical Techniques for Natural Products (AIAT-19)

(17 to 23 July'19)

CIRCULAR

Plants have the ability to produce a wide range of chemicals that are used to perform important biological functions, as well as to defend against attack from insects, fungi and herbivorous mammals. Photochemical, particularly small molecules have number of applications. The harnessing of herb for human health management is centuries old science, practiced in our country. Natural products serve as basic skeleton and play crucial role in modern drug discovery program. Number of drugs and supplements in use today are derived from natural products. The process of drug development and quality control required multi-skill. The identification of lead molecule and quality assurance control of herb/products required skill and knowledge of analytical instrumentation. The requirement for consistent high standards of competence in chromatography- spectroscopy and analytical science is now, more than ever, a matter of priority for industries pharmaceutical, chemical, biotechnological research organizations mandated for applied research.

Over the years the development of these tools has become increasingly sophisticated to make their use simpler and now these have become as indispensable tool for R & D work. To keep pace with the sophistication in these tools, it is necessary to simultaneously upgrade the skills of all concerned in this field as a human resource development venture. To fulfill this important objective, CSIR-CIMAP is organizing seven days summer school on applications and principles of working of the sophisticated instrumentation from 17th to 23rd July 2019.

About CSIR-CIMAP

CSIR-CIMAP is a national R&D Laboratory of CSIR having a unique mandate on medicinal and aromatic plants for their production and exploitation as value added product for the industry and society. The research and development program of the institute is greatly supported by modern sophisticated instrumentation to provide base for development of technologies through plant sciences, Lucknow “The historical city of Nawabs “has developed as an advance city of science education and research with a good number of prestigious R & D and academic institutions like CDRI, NBRI, IITR, IISR, IET, BSIP, KGMU, SGPGI, IIM and many more including Lucknow University.

Objective

The course will provide sound knowledge in natural product extraction, separation, purification and identification practices of phytochemicals. The focus of the training programme was to enhance experience and practical knowledge of chromatographic and

spectroscopic and Scanning Electron Microscopic research in natural products development and develop human resource capacities by offering training to personnel from industry, academic institutions and government laboratories.

Course Content

During course there will be theory lectures on basic instrumentation principle, applications and also the practical exposure on use of sophisticated instruments and analysis of data.

- 1 GC-MS, GLC,
- 2 HPLC, HPTLC
- 3 FT NIR, LC-MS/MS, ICP
- 4 NMR 1D AND 2D Experimentations
- 5 Scanning Electron Microscopy (SEM)
- 6 Isolation and purification of natural products

Who should participate?

The type of training/exposure has been planned to be useful for scientists, academicians, industry and research scholars equally.

No doubt students/ scholars related to the fields will be highly benefited as they will have an exposure to modern R & D tools. This course is designed keeping the requirements of both beginners and intermediate-level users.

The lectures, supplemented by problems sets, power point slides, and hand on training, will provide the fundamentals needed to understand the techniques and instrumentation. *No prior experience in advanced mathematics, theoretical chemistry, or physics is required for this course.*

Some experience in introductory course work in organic chemistry is desirable but not necessary.

Course Fee

The training fee includes boarding, lodging, course material, etc. The DD / NEFT/RTGS drawn in favour of Director, CSIR-CIMAP, Lucknow should be sent after getting intimation of selection for training.

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| (I) For Scientists, Industry, Academicians | Rs. 20,000/- +18% GST |
| (II) For Students/Scholars | Rs. 15,000/- + 18% GST |

How to Apply

The application along with brief bio data should be forwarded to the Director, CSIR-CIMAP, Lucknow. The criteria of selection will be relevance of the applicant with training as well as covering maximum geographical and institutional (R&D/ academic/

industries) representation. The last date for receiving the application is 10th June'19. The selected candidates will be informed and they will have to send the course fee through DD/NEFT/ RTGS in favour of Director, CSIR-CIMAP, Lucknow on or before 20th June'19. **No TA/DA will be admissible to the participants for attending the training/school.**

Course Structure

There will be lectures and practical demonstrations by the faculty of leading scientists and experts of different fields. The school will be of seven days duration with long hours of working from early morning to late evening. The participants will be exposed to different aspects of natural product chemistry like Isolation, chromatographic purification, characterization of molecules with help of modern sophisticated instruments. The participants are expected to fully involve themselves in training without leave. The hostel stay will be compulsory due to late hours of working.

Dates to remember

- (i) Last date for submitting application form (to CSIR-CIMAP) : **10th June'19**
- (ii) Intimation of selection for school (by CSIR-CIMAP) : **15th June'19**
- (iii) Last date of submitting school fee (by selected candidate): **20th June'19**
- (iv) Start of CSIR-CIMAP training school : **17th July'19**

All communications to:

Director

CSIR-Central Institute of Medicinal and Aromatic Plants

PO- CIMAP

Lucknow-226015 [Uttar Pradesh]

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APPLICATION FORM

**CSIR-CIMAP Training School on Advanced Instrumentation
&
Analytical Techniques for Natural Products
[AIAT-2019]**

(Please attach one page bio data separately)

Name :

Address :

Age/ :

Male/Female :

Phone /Fax :

E-mail :

Qualification & Field of Specialization:

University/Organization :

Participant's Declaration: I shall fully involve myself in the training activities as participant during the whole period.

Date:

Place:

Signature of the participant

Recommendation of supervisor /Head of department (please state the suitability of the candidate to the training and its utility to the organization)

Date:

Place:

Signature & Seal of the
Supervisor/Head of Department