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IIT Madras partners with French University to offer sustainable biomanufacturing course

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This course comes in the wake of the Government of India's recently announced 'BioE3' policy

Indian Institute of Technology Madras (IIT-M) is partnering with University of Tours, France, to offer a course on 'Sustainable Bio-Manufacturing of high-value Phytochemicals'.

This course is being offered through the 'Global Initiative of Academic Networks' (GIAN) programme to promote collaboration with international universities.

The course is in line with the vision of the Government of India's recently-announced 'BioE3' Policy, which aims to promote and facilitate large-scale manufacturing of bio-products for sustainable development with high-performance biomanufacturing.

The course deals with sustainable biomanufacturing of high-value plant-derived natural products using plant and microbial bio-factories, which can also conserve nature while fulfilling the increasing market demand for phytochemicals for various commercial applications.

This course is also open for those outside IIT Madras. Researchers, industry professionals, students (BTech, MTech, MSc, PhD) in plant biotechnology/bioprocess engineering/biotechnology and faculty from recognised institutions can apply. Applicants are expected to have a basic knowledge of plant cell and microbial technology and fermentation.

There will be 30 seats available for in-person participation. Registration for the course is open till 22nd November 2024. The course will be taught from 2nd to 14th December 2024.

It will address the need for fundamental research on the identification of biosynthetic pathways and modern approaches that allow their acceleration as well as new developments in plant biotechnology approaches of rationally integrating bioprocess and metabolic engineering principles to maximise the yield of high-value phytochemicals from plant and yeast cell biofactories for economic feasibility in these bioprocesses.

The objective of this course is to introduce to the participants, current state-of-the-art available technologies to sustainably produce high-value plant metabolites (phytochemicals like drugs and cosmetics) as an alternative to natural plant extraction and total chemical synthesis. These techniques are based on the application of plant and microbial cell technology called ‘cell factory’ for sustainable biomanufacturing of phytochemicals.