IIT-I launches course on techniques in drug design

OUR STAFF REPORTER
Indore

Indian Institute of Technology Indore launched an active learning course on "Tools and Techniques in Drug Design, Discovery and Delivery" on Monday. This short-term course is sponsored by the technical education quality improvement programme (TEQIP), Ministry of Human Resource Development (MHRD),. Students and faculties from various engineering colleges from Madhya Pradesh, Chhattisgarh, Uttarakhand and Gujarat are participating in this course.

"On an average, a successful transformation of a drug from bench side to bedside takes somewhere around 12-15 years of vigorous research and development andcosts more than $500-1000 million. Therefore, efficient tools and techniquesare needed to predict the lead compound before committing that huge amount of investments. Similarly, preclinical studies play an instrumental rolebefore taking the drugs into clinical trials," said III Indore media coordinator Rahul Sharma.

This course covers the full spectrum of the development of a drug starting from the synthesis/discovery of lead compound to computational studies for the optimization of the structure of the lead, and finally talking about the deliveryof the drug into the target site to minimize adverse effects, a release issued by IIT Indore said.

Various topics like synthesis/discovery of lead compound, computer aided drug design (CADD), use of "Omics Technology" to understand the mechanism of action for a given drug will be covered.

Advancement of the biomedical field through nanotechnology in diagnosis and therapy of diseases will also be discussed.

"Overall, the key concepts that we would like to address through this interactive session are factors to consider before designing a drug, optimization of lead via Quantitative Structure-Activity Relationship (QSAR), computational modeling as an important tool for drugdiscovery, drug delivery systems, and mechanism of action," the release said.

PROGRAMME ON SUSTAINABLE ENERGY ALSO

IIT Indore also launched an active leaning TEQIP course on "Characterization of Materials for Renewable and Sustainable Energy".

"This course will provide knowledge about material useful for energy generation and storage, their growth and characterization," said Sharma.

About 40 participants from all over India will attend this six-day course and learn about materials synthesis techniques and characterization.

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