

AICTE TRAINING AND LEARNING (ATAL) ACADEMY

AICTE is committed for the development of quality technical education in the country by initiating various schemes launched by Govt. of India, Ministry of Education. The Council understands that it is the need of the day to train the young generation in skill sector and faculty & technicians in their respective disciplines. To keep an institute competitive and more productive, faculty training on the latest tools and technologies is vital. Training is required for increasing the knowledge and skills of students to make them more employable to acquire global competencies. Accordingly, it was decided to the formation of AICTE Training And Learning - (ATAL) Academies. As a part of its activities, Indian Institute of Technology, Jodhpur along with AICTE ATAL Academy will conduct Multi-omics Data Science Faculty Development Program (FDP) from December 20-24, 2021 at the Indian Institute of Technology, Jodhpur through online mode.

WHO SHOULD ATTEND?

As the field being highly transdisciplinary and holds potential for high learning growth and application, the workshop is open to all the participants who are interested in Biology and Data Science. The faculty members of the AICTE approved institutions, research scholars, PG Scholars, participants from Government, Industry and staff of host institutions can attend the course.

PATRON

Prof. Santanu Chaudhury
(Director, IIT Jodhpur)

CONVENERS

Dr. Dilpreet Kaur
Dr. Priyanka Singh
Dr. Pankaj Yadav

CO-ORDINATOR

Dr. Pankaj Yadav
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REGISTRATION (FOR PARTICIPANTS)

There is no registration fee. The participants may register for this course using the link: <https://atalacademy.aicte-india.org/signup>. A test shall be conducted at the end of the program and participants will be awarded a certificate of participation by ATAL Academy. The certificate shall be issued to those participants who will have minimum 80% attendance and will score minimum 60% marks in the test.

RESOURCE PERSONS

The course content will be delivered from a pool of experts on the subject from IITs, NITs and other institutions of repute.

Indian Institute of Technology, Jodhpur

announces



**AICTE Training And Learning
(ATAL) Academy sponsored
FDP
On**

Multi-omics Data Science

December 20-24, 2021



Organized by:

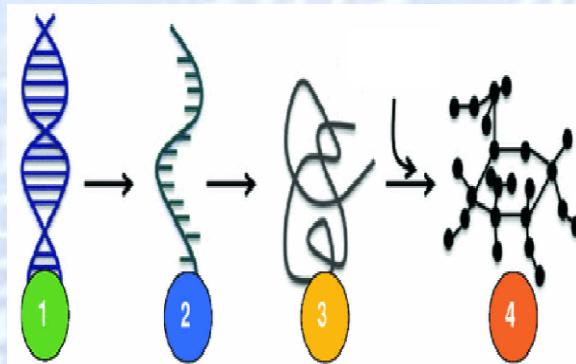
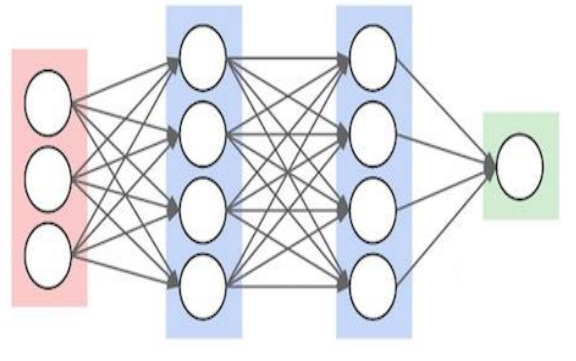
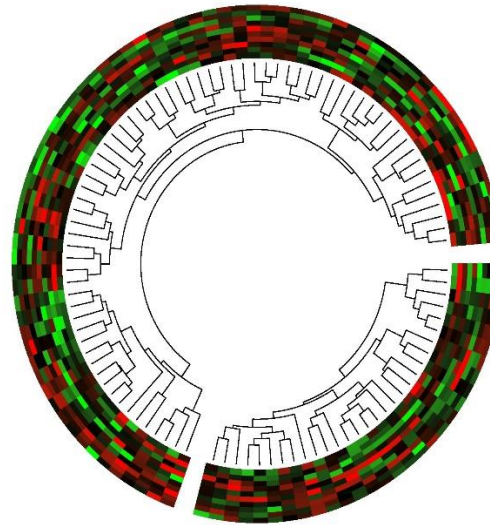
**Department of Bioscience & Bioengineering
Indian Institute of Technology Jodhpur**

COURSE OBJECTIVES

To expose and provide fundamental knowledge about the diverse facets of multi-omics technologies, data science, algorithms in biology, omics data analysis.

COURSE CONTENT

Basics of genomics - sequencing technologies, single molecule real time sequencing technology, genetic association studies; introduction to systems genomics; comparative genomics, Oncogenomics, concepts in proteomics - protein extraction, fractionation, separation & purification, protein sequencing, gel electrophoresis based approaches, gel imaging equipment & analysis software, mass spectrometry for gel based proteomics, gel-independent separation & mass spectrometry, introduction to quantitative proteomics; phenomics; Introduction to Omics databases; fundamentals of data science; deep learning in omics, principles of drug discovery and development, biological networks, lncRNA and miRNA data science.



ABOUT IIT Jodhpur

Indian Institute of Technology (IIT), Jodhpur is one of the IITs established by Ministry of Human Resource Development, Government of India. The Institute was established in 2008, to foster technology education and research in India. The Institute is committed to technological thought and action to benefit the economic development of India. IIT Jodhpur functions from its sprawling residential permanent campus of 852 acres on National Highway 65, north-northwest of Jodhpur towards Nagaur. This campus is meticulously planned and envisioned to stand as a symbol of academics - simple, but deep. As on date, the Institute has 1602 Students along with more than 128 Faculty Members and 59 Staff Members. The Institute is committed to multidisciplinary approach of technology development.



Program Schedule

DATE	SESSION 1 10:00 AM – 11:30 AM (IST)	SESSION 2 11:30 AM – 1:00 PM (IST)	SESSION 3 3:00 PM – 4:30 PM (IST)
Day 1 Dec 20, 2021 (Monday)	<p>Inaugural: Director, IIT Jodhpur (15 mins) Head, Department of BSBE (10 mins) FDP Co-ordinator (5 mins)</p> <hr/> <p>Title: Yoga is way of life Guneet Monga Bhargava, Yogacharya, Pacific University, Udaipur</p>	<p>Title: Phenomics Mitali Mukerji, Professor, IIT Jodhpur</p>	<p>Title: Cancer treatment using multi-omics G. P. S. Raghava, Professor, IIIT Delhi</p>
Day 2 Dec 21, 2021 (Tuesday)	<p>Title: Genetic association studies Suresh Kumar Sharma, Professor, PU Chandigarh</p>	<p>Title: Basics of deep learning Alisha Parveen, Rostock University, Germany</p>	<p>Title: Microbial genomics Avinash Sharma, Scientist, NCCS Pune</p>
Day 3 Dec 22, 2021 (Wednesday)	<p>Title: Introduction to systems genomics Prash Suravajhala, Principal Scientist, Amrita University, Kerala</p>	<p>Title: Breast cancer prediction (hands-on) Arpit Deepak Yadav, INSOFE, Bangalore</p>	<p>Title: Translational models in neurology M. Muthuraman, Assistant Professor, University Hospital, Mainz, Germany</p>
Day 4 Dec 23, 2021 (Thursday)	<p>Title: Introduction to oncogenomics Abhishek Kumar, Senior Scientist, IOB Bangalore</p>	<p>Title: Ruminating microRNAs Ravi Shankar, Principal Scientist, IHBT Palampur</p>	<p>Title: Matrix methods in data science Dilpreet Kaur, Assistant Professor, IIT Jodhpur</p>
Day 5 Dec 24, 2021 (Friday)	<p>Title: Hit to lead in drug discovery Sandip Murarka, Assistant Professor, IIT Jodhpur</p>	<p>Title: Tools & techniques in proteomics Priyanka Singh, Assistant Professor, IIT Jodhpur</p>	<p>Valedictory, Feedback and Test</p>