

**WORKSHOP**  
**ON**  
**ANIMAL CELL CULTURE TECHNIQUES AND SCREENING OF**  
**DRUG MOLECULES (ACTSDM-2022)**

**Under**

**Department of Science & Technology (DST)-STUTI**  
(Synergistic Training Program Utilizing the Scientific and Technological Infrastructure)

**During: 10<sup>th</sup> -16<sup>th</sup> October 2022**



*Coordinated by*  
**Prof. Pradeep K. Naik**

**Department of Biotechnology & Bioinformatics**

**Sambalpur University**  
**Jyoti Vihar, Burla, Dist- Sambalpur, State- Odisha, India-768019**

*In collaboration with*  
**Indian Institute of Technology Gandhinagar**

## Acknowledgement

We convey gratitude for the encouragement and support received from multiple sources during the execution of this training since its beginning. First and foremost, I want to express my sincere appreciation to the Indian Institute of Technology Gandhinagar, Gujarat and the Department of Science and Technology (DST) for entrusting our Department for the execution of this training project. The workshop on "Animal Cell Culture Technique and Screening of Drug Molecules (ACTSDM-2022)" was coordinated by the Head of the Department, Prof. Pradeep Kumar Naik and was successful due to instruments and facilities sponsored by the FIST program (Sanction No.: SR/FST/LS-1/2017/9 Date: 16.01.2018). The organizing team acknowledges the contributions of the resource persons for helping our Department to execute the program and achieve the objectives of the training project, particularly Dr. Iswar Baitharu (Asst. Professor, Sambalpur University), Dr. Samir Kumar Patra (NIT Rourkela), Dr. Ramavatar Meena (JNU, New Delhi), Prof. Subba Rao (JNU, New Delhi) and the research scholars (Dr. Pratyush Pragyandipta Mohanty, Dr. Subhoswaraj Pattnaik, Abhijit Sahu, Biswajit Mohanty, Namita Bhoi, Eeshara Naik, Monika Mishra and others).

I also acknowledge all the teaching and non-teaching staff for their contributions, without which these sessions could not have been possible.



Prof. Pradeep K. Naik

HOD and ACTSDM-2022 Coordinator  
Department of Biotechnology and Bioinformatics  
Head

**P.G. Dept. of BT & BI  
Sambalpur University  
Jyoti Vihar-768 019, Odisha**

## ***Summary***

The goal of this ACTSDM-2022 training session is to popularize cell culture techniques and drug screening protocols among students, faculty, scientists, and industry professionals through a week-long training workshop. The workshop was conducted at the Department of Biotechnology and Bioinformatics, Sambalpur University, Odisha from 10<sup>th</sup> to 16<sup>th</sup> October 2022 and comprised of both lectures and hands-on training sessions. This initiative is funded by Department of Science & Technology under the program ***STUTI*** (*Synergistic Training Program Utilizing the Scientific and Technological Infrastructure*). This workshop is aimed to provide an insight into the basic equipments and various techniques essential for an animal cell culture lab and screening of drug molecules. The participants were introduced to the principles of the equipments and aseptic techniques essential for animal cell culture lab maintenance followed by procedures for efficient utilization of the cell culture facility to screen potential bioactive molecules. The participants were provided hands-on experience for media preparation, sub-culturing, and growth curve analysis followed by drug screening through MTT assay and DAPI staining. The participants also had a chance to interact with experts and analyse their own samples during the practical sessions. *More emphasis was given on hands-on use of equipment for demonstration by each participant and analysis of participant's samples*".

## **1. Introduction**

The Department of Biotechnology and Bioinformatics (Dept. of BT and BI) Sambalpur University, Jyoti Vihar, Burla, Odisha organized seven-day long workshop on “Animal Cell Culture Technique and Screening of Drug Molecules (ACTSDM-2022)” in its campus from 10<sup>th</sup> to 16<sup>th</sup> October 2022 with Indian Institute of Technology Gandhinagar as financial collaborator under DST-STUTI programme. Participants from various backgrounds, namely faculty members, research scholars and post graduates personnel were invited from nineteen different universities/Institutions (Annexure-I). During the whole workshop, there were 3 hours of lecture sessions before lunch and a technical session of 5-6 hour post lunch to increase both the theoretical and practical knowledge of the participants (Annexure-II and III). This report provides a quick overview of the Lecture and technical sessions.

### **1.1. Lecture sessions**

**Day one:** Honorable Vice Chancellor, Prof. Sanjukta Das and The Registrar Mr. Ashok Kumar Behera, Sambalpur University welcome the participants and informed the participants about past and present activities of the Sambalpur University. Prof. Pradeep Ku. Naik explained the activities and facilities of department and importance of DST-STUTI programme. The participants gave their self-introduction and explained why this workshop is important for them.

**Day two:** *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) explained the principle and importance of equipments highly required for animal cell culture and discussed various aseptic techniques that have to be followed while designing or establishing an animal cell culture laboratory. *Dr. Iswar Baitharu* (Dept. of Environmental Sciences, Sambalpur University) delivered an invited lecture on “Road Map to Drug Discovery” where he explained the stages of drug discovery and development of a neuroprotective drug from a herb called *Withania somnifera*.

**Day three:** *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) explained the physiological properties, composition and supplements added in animal cell culture media and method of preparation of media. *Prof. Pradeep Ku. Naik* (Dept. of BT and BI, Sambalpur University) explained about basics of drug design.

**Day four:** *Prof. Pradeep Ku. Naik* (Dept. of BT and BI, Sambalpur University) discussed the virtual method of drug design using bioinformatic tools and its importance with case studies from his own research. *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) explained the principle and protocol for animal cell sub-culturing, cryopreservation and reviving cells from cryopreservation.

**Day five:** *Prof. Subba Rao* (School Computational and Integrative Sciences, Jawaharlal Nehru University, New Delhi) delivered a lecture on ligand based drug design taking examples from drugs that target G-protein coupled receptors. *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) explained how to prepare water soluble and water insoluble samples, how to decide the doses of treatment and to design experiments for testing cytotoxicity of drugs.

**Day six:** *Prof. Sameer Kumar Patra* (School of Life Sciences, NIT Rourkela) delivered a guest lecture on “Exploiting Epigenetic Tools for Understanding Cancer and Search for Phytochemicals to cure” where he discussed about importance of epigenetics and how therapeutic molecules from medicinal plants can modulate epigenetic mechanisms for cure of cancer. *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) discussed various methods of determining cytotoxicity giving more emphasis on principle, protocol, data acquisition, analysis and presentation of MTT assay or tetrazolium salt reducing assay.

**Day seven:** *Dr. Ramavatar Meena* (School of Environmental Sciences, JNU New Delhi) delivered an invited talk on “Engineered Nanoparticle: Therapeutic Applications and Health Risk Assessment” where he explained how to test toxicity of various nanoparticles with examples from his own research.

## 1.2. Technical Sessions

**Day one:** Participants were divided into groups of five persons, each using a lottery system. Each group of participants visited all laboratories (*viz.* Parasite lab, Phytochemistry and Plant Tissue culture lab, Microbiology lab, and Animal cell culture lab) and all instrumental facilities available at the Dept. of BT and BI, which promoted healthy interaction and exchange of knowledge among research scholars of the department and participants.

**Day two:** *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) and research scholars demonstrated the working principles and trouble shooting of instruments used for cell culture. Participants also learned the packaging, autoclaving and how to maintain aseptic conditions for cell culture media preparation.

**Day three:** *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) and research scholars guided the participants group wise so that the each of them have hands-on experience regarding how to prepare cell culture media, how to filter sterilize it and what are the supplements to be added to it. The participants also revived the cells from cryopreservation group wise.

**Day four:** *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) and research scholars demonstrated the procedure to subculture animal cells and participants did the subculturing in their own in the presence of the trainers. The participants also learned to make cell dilutions and seeded cells in 96-well cell culture plates for drug treatment.

**Day five:** In presence of *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) and research scholars, the participants filter sterilized the testing samples and made dilutions thereof. They also gave treatment of samples to the cells that they have seeded on day four. All total 16 types of samples (including 14 samples of participants) were tested at three concentrations and in triplicates using two cancer cell lines (MCF7 and MDA-MB-239).

**Day six:** With the guidance of *Dr. Birendra Behera* (Dept. of BT and BI, Sambalpur University) and research scholars, the participants carried out MTT assay, obtained the results and analyzed it. The

participants also stained the cells with DAPI fluorescent dye and took pictures of apoptotic cells under fluorescent microscope.

**Day seven:** Feedback from the participants has been obtained regarding the workshop. *Dr. Ramavatar Meena* (School of Environmental Sciences, JNU New Delhi) acted as the chief guest in the valedictory ceremony and distributed the certificates to participants.

### **1.3. Types of samples tested**

As already mentioned in above section, the participants treated human breast cancer cells (MCF-7) and non-tumorigenic mouse fibroblast cells (L929) with a total 16 (sixteen) different samples at three different concentrations (50, 100 or 200 µg/ml) each along with appropriate controls. Among the samples, fourteen were from participants; the other two were standard drug molecules, i.e. Noscapine and Noscapine derivative. Among the fourteen samples of participants, four samples were organic solvent extract of leafy vegetable, and ten were alginate or alginate-based metal polymers. Cytotoxicity of the leafy vegetable was tested in contact mode, whereas the cytotoxicity of metal polymers were tested in non-contact mode, means the metal polymers were kept in soaked in media for 12 hours and the media was taken as the test sample.

### **1.4. Outcome of the workshop**

The STUTI workshop attracted participants from 19 different institutes (**Figure 1**). About 30 participants enrolled and attended the “Animal Cell Culture Technique and Screening of Drug Molecules (ACTSDM-2022)” training sessions. The goal of this training event was to bring together participants from many disciplines and raise awareness of the institute's advanced facilities. Throughout the sessions, participants asked major questions regarding theoretical and practical aspects of animal cell culture, the equipments required to establish a cell culture lab, how to prepare media, isolate animal cells from tissues, and how to screen toxicity of samples through MTT assay. This ACTSDM-2022 workshop brought more than 5 collaborations from many small institutions and national level institutes. Finally, the feedback from the participants was considered in the workshop evaluation (**Annex4**). The majority of the participants were pleased with the training session and suggested that more workshops to be held in the future.

## 1.5. Picture Gallery

### Day 01



Inaugural Session with Honourable Vice Chancellor



Group of participants and Trainers



Self Introduction of participants



Visit to all laboratory facilities

### Day 02



Session 2A by Dr. B. Behera



Session 2B by Dr. I. Baitharu



Preparation for Media by participants



Explanation of working principle of equipments



Session 3A by Prof. P. K. Naik



Session 3B by Dr. B. Behera



Media preparation by participants



Media Filtration and Cell revival by participants



Session 4A by Prof. P. K. Naik



Session 4B by Dr. B. Behera



Demonstration of animal cell subculturing



Subculturing, counting and seeding of cells by participants





Session 7A by Dr. Ramavatar Meena



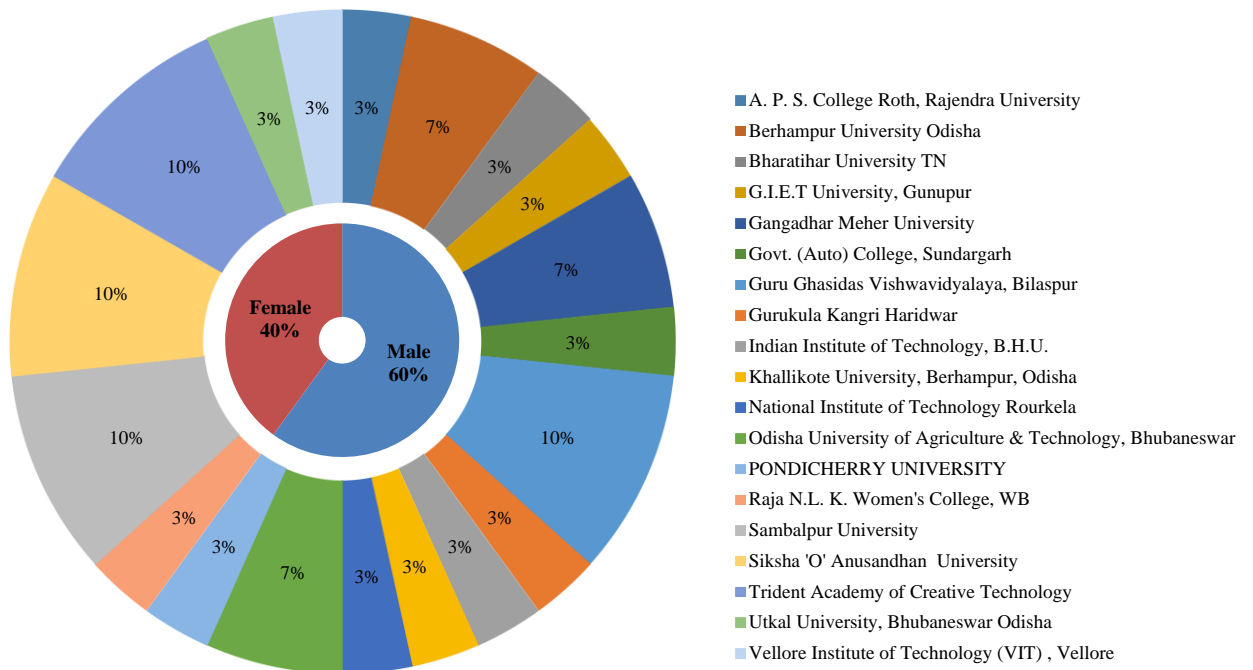
Taking Feedback from students



Valedictory function and Certificate distribution



Closing session



**Figure1:** Participants registered for the workshop on “Animal Cell Culture Technique and Screening of Drug Molecules” from 19 different institutes.

## Annex 1: Brochure for the program

### Trainers



**Prof. Pradeep K. Naik,**  
Professor and Head  
Dept. of Biotechnology  
and Bioinformatics  
Sambalpur University  
**Specialization:**  
Anticancer therapeutics,  
Computer Added Drug  
Designing



**Dr. Birendra Behera,**  
Asst. Professor  
Dept. of Biotechnology  
and Bioinformatics  
Sambalpur University  
**Specialization:**  
Anticancer therapeutics,  
Cancer immunotherapy

### Acknowledgement



### Registration and Contact Details

Interested participants must register and only selected candidates would be invited for the workshop.

For selected candidates Registration fees, local travel, Boarding and lodging will be covered by Sambalpur University.



**Link for Registration:**

[https://docs.google.com/forms/d/e/1FAIpQLSc5zJWXncVoB3IkG3lEYteGnEbF4yc4s-1NgLYRfKOUaYkA/viewform?usp=pp\\_url](https://docs.google.com/forms/d/e/1FAIpQLSc5zJWXncVoB3IkG3lEYteGnEbF4yc4s-1NgLYRfKOUaYkA/viewform?usp=pp_url)

**Registration Deadline:** 30<sup>th</sup> September 2022

Short listed candidates will be intimated by email, latest by 1<sup>st</sup> Oct 2022

### Eligibility Criteria

- Minimum qualification: Post Graduate (Sciences) or B. Tech. (Biotechnology)
- Professors/Scientists/ Post-Doc Fellows/Ph. D. Fellows/ Industry persons who are actively involved in R&D
- Not more than three people from one institute.

### For more Information

**Access:** <https://events.iitgn.ac.in/stuti/> or

<http://www.suniv.ac.in/notice-board.php>

**Mail:** [btbistuti@gmail.com](mailto:btbistuti@gmail.com)

[pknai1973@suniv.ac.in](mailto:pknai1973@suniv.ac.in)

[bbehera@suniv.ac.in](mailto:bbehera@suniv.ac.in)

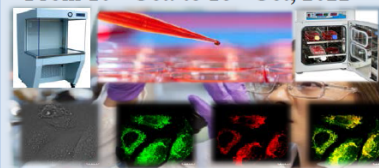
**Address:** Sambalpur University,

Po: Jyotivihar, Burla, Dist: Sambalpur,

State: Odisha, INDIA-768019

### 7 Day Workshop on ANIMAL CELL CULTURE TECHNIQUES AND SCREENING OF DRUG MOLECULES

From 10<sup>th</sup> Oct. to 16<sup>th</sup> Oct, 2022



### Department of Science & Technology (DST) funded Training workshop under STUTI

(Synergistic Training Program Utilizing  
the Scientific and Technological  
Infrastructure)



**Organized by:**

**Department of Biotechnology &  
Bioinformatics**

**Sambalpur University**

Jyoti Vihar, Sambalpur.- 768 019, Odisha

**In collaboration with:**

**India Institute of Technology Gandhinagar,  
Gujrat**

### Over view of STUTI

DST welcomes all their participants for the workshop on Animal Cell Culture Technique and Screening of Drug Molecules organized under STUTI. The STUTI program envisions hands-on-training and sensitization of the state-of-the-art equipment as well as towards sharing while ensuring transparent access to S&T facilities. Department of Science and Technology has identified IIT-Gandhinagar to function as a Project Management Unit (PMU) and as co-ordinator for this workshop.

### Over view of the Workshop

This workshop is aimed to provide an insight into the equipments and techniques essential for an animal cell culture lab and screening of drug molecules. The participants will be introduced to the principle of the equipments and aseptic techniques essential for maintenance of animal cell culture lab followed by procedures for efficient utilization of the cell culture facility to screen potential bioactive molecules. The participants will be provided with hands on experience for media preparation, sub-culturing, and growth curve preparation followed by drug screening through MTT assay and SRB assay etc. The participants will also have a chance to interact with experts and analyse their own samples (with prior approval).

### Content of the Workshop

**Session 1:** Inauguration and welcome note

A. Introduction of the Participants and the Host

B. Overview of DST sponsored Programme

**Session 2:**

A. Principle of equipments in cell culture lab

B. Traditional method of drug screening

**Session 3:**

A. Basics of Animal cell culture media

B. Basics of drug design techniques

**Session 4:**

A. Basics of cell culture initiation

B. Virtual screening methods and advantages

**Session 5:**

A. Basics of sub-culturing and growth curve

B. Ligand based techniques of drug screening

**Session 6:**

A. Cytotoxicity testing and analyzing the data

B. ADME screening and its importance

**Session 7:**

A. Screening of anticancer agents and experimental validation: a case study

B. Analyzing and presenting results of the cytotoxicity data

C. Collection of feedback from participants

D. Valedictory meeting

### Schedule

**Day 1**

09.00 : Breakfast and Registration

10.00 : Inaugural Meeting

11.00 : Session 1A

12.00 : Session 1B

13.00 : Lunch

14.00 : Lab and Campus Visit

15.30 : User requirements of Participants

16.00 : Tea/Coffee Break

**Day 2**

10.00 : Session 2A

11.00 : Tea Break

11.30 : Session 2B

13.00 : Lunch

14.00 : Lab Session

17.00 : Tea Break

**Day 3**

10.00 : Session 3A

11.00 : Tea Break

11.30 : Session 3B

13.00 : Lunch

14.00 : Lab Session

17.00 : Coffee Break

**Day 4**

10.00 : Session 4A

11.00 : Tea Break

11.30 : Session 4B

13.00 : Lunch

14.00 : Lab Session

17.00 : Tea Break

**Day 5**

10.00 : Session 5A

11.00 : Tea Break

11.30 : Session 5B

13.00 : Lunch

14.00 : Lab Session

17.00 : Coffee Break

**Day 6**

10.00 : Session 6A

11.00 : Tea Break

11.30 : Session 6B

13.00 : Lunch

14.00 : Lab Session

17.00 : Tea Break

**Day 7**

10.00 : Session 7A

11.00 : Tea Break

11.30 : Session 7B

13.00 : Lunch

14.00 : Session 7C

15.00 : Session 7D

16.00 : Coffee Break

**Annexure 2: List of participants registered and their attendance for the “ACTSDM-2022”**

<b>Sr. No</b>	<b>Candidate Name</b>	<b>Gender</b>	<b>Educational Qualification</b>	<b>Email address</b>	<b>Host Institution Name</b>
01	Buddhadeb Panda	Male	M.Sc. Botany	bdpsrk@gmail.com	A. P. S. College Roth, Rajendra University, Odisha
02	Abhijit Pati	Male	M.Sc. Biotechnology	patiabhijit19@gmail.com	Berhampur University, Odisha
03	Debabrata Dash	Male	M.Sc. Bioscience and Bioinformatics	2017debabratadash@gmail.com	Berhampur University, Odisha
04	Antony Anista M	Female	M.Sc. Zoology	anista2127@gmail.com	Bharathiar University, Tamilnadu
05	Baishali Basundhara Naik	Female	M.Sc. Biotechnology	baishaligolu@gmail.com	G.I.E.T University, Gunupur, Odisha
06	Priyanka Gartia	Female	M.Sc., Bioinformatics	gartia.priyanka@gmail.com	Gangadhar Meher University, Sambalpur, Odisha
07	Smaranika Sahu	Female	M.Sc. Biotechnology	sahusmaranika95@gmail.com	Gangadhar Meher University, Sambalpur, Odisha
08	Sriya Pattnaik	Female	M.Sc. Biotechnology	pattnaiksriya@gmail.com	Govt. Autonomous College, Sundargarh, Odisha
09	Sinchan Das	Male	M.Sc. Pharmacy	sinchandas1996@gmail.com	Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G)
10	Varsha Yadav	Female	M.Sc. Pharmacy	231995varsha@gmail.com	Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G)
11	Nirupama Rani Dewangan	Female	M.Sc. Pharmacy	nirupamarani211096@gmail.com	Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G)
12	Dibya Ranjan Sahoo	Male	M.Sc. Pharmacy	dibyaranjan321@gmail.com	Gurukula Kangri (Deemed To Be University), Haridwar, Uttarakhand
13	Somesh Agrawal	Male	M.Sc Pharmacy	someshagrawal.phe18@ itbhu.ac.in	Indian Institute of Technology, B.H.U., Varanasi

14	Bikash Chandra Behera	Male	M.Sc. Biotechnology	bikashjoker.bb@gmail.com	Khallikote University, Berhampur, Odisha
15	Rahul Sahoo	Male	M.Sc. Life Science (Zoolgy)	rahulsahoo60@gmail.com	National Institute of Technology, Rourkela, Odisha
16	Radhakanta Nag	Male	M.Sc. Microbiology	nagrufus@gmail.com	Odisha University of Agriculture & Technology, Bhubaneswar, Odisha
17	Animesh Pattnaik	Male	M.Sc. Bioinformatics	pattnaik.animesh0@gmail.com	Odisha University Of Agriculture & Technology, Bhubaneswar, Odisha
18	Adhitthan S	Male	M.Sc. Bioinformatics	adhitthan.shanmugam@bicpu.edu.in	Pondicherry University, Kalapet, Puducherry
19	Maitreyee Gope	Female	M.Sc. Physiology	mg06041998@gmail.com	Raja N.L Khan Women's College (Autonomous) West Midnapore, West Bengal
20	Deepali Naik	Female	M.Sc. Life Science	deepalinaik2104@gmail.com	Sambalpur University, Odisha
21	Ritvik Guru	Male	M.Sc. Biotechnology	rguru1997865@gmail.com	Sambalpur University, Odisha
22	Reshma Pradhan	Female	M.Sc. Bioinformatics	pradhanreshma456@gmail.com	Sambalpur University, Odisha
23	Swagat Mohanty	Male	M.Sc. Biotechnology	swagatrude@gmail.com	Siksha'O'Anusandhan Deemed To Be University, Bhubaneswar, Odisha
24	Omprakash Mohanta	Male	M.Sc. Biotechnology	imomofficial@gmail.com	Siksha'O'Anusandhan Deemed To Be University, Bhubaneswar, Odisha
25	Soumya Swarup Panda	Male	M.Sc. Biotechnology	soumyapanda38@gmail.com	Siksha'O'Anusandhan Deemed To Be University, Bhubaneswar, Odisha

26	R Chetan Rao	Male	M.Sc. Microbiology	rchetanrao21@gmail.com	Trident Academy of Creative Technology, Bhubaneswar, Odisha
27	Archana Pradhan	Female	M.Sc. Biotechnology	richipradhan65@gmail.com	Trident Academy of Creative Technology, Bhubaneswar, Odisha
28	Dibyajit Pattanayak	Male	M.Sc. Microbiology	dibyajit2016@gmail.com	Trident Academy of Creative Technology, Bhubaneswar, Odisha
29	Manini Hansda	Female	M.Sc. Biotechnology	maninihansda58@gmail.com	Utkal University, Bhubaneswar Odisha
30	Gutti.Pavan	Male	M.Sc. Biochemistry	gutti.pavan2020@vitstudent.ac.in	Vellore Institute of Technology (VIT) , Vellore

**Annexure 3:** Schedule date and activities during the workshop.

10 <sup>th</sup> October 2022	DAY 01	
	09.00 am	Breakfast and Registration
	10.00 am	Inaugural Meeting
	11.00 am	Session 1A
	12.00 noon	Session 2A
	1.00 pm	Lunch
	2.00 pm	Lab visit
	5.00 pm	Tea and Snacks
	8.00 pm	Networking Dinner

14 <sup>th</sup> October 2022	DAY 05	
	09.00 am	Breakfast
	10.00 am	Session 5A
	11.30 am	Tea break
	12.00 noon	Session 5B
	1.30 pm	Lunch
	2.30 pm	Lab session
	5.00 pm	Tea and Snacks
	8.00 pm	Networking Dinner

11 <sup>th</sup> October 2022	DAY 02	
	09.00 am	Breakfast
	10.00 am	Session 2A
	11.30 am	Tea break
	12.00 noon	Session 2B
	1.30 pm	Lunch
	2.30 pm	Lab session
	5.00 pm	Tea and Snacks
	8.00 pm	Networking Dinner

15 <sup>th</sup> October 2022	DAY 06	
	09.00 am	Breakfast
	10.00 am	Session 6A
	11.30 am	Tea break
	12.00 noon	Session 6B
	1.30 pm	Lunch
	2.30 pm	Lab session
	5.00 pm	Tea and Snacks
	8.00 pm	Networking Dinner

12 <sup>th</sup> October 2022	DAY 03	
	09.00 am	Breakfast
	10.00 am	Session 3A
	11.30 am	Tea break
	12.00 noon	Session 3B
	1.30 pm	Lunch
	2.30 pm	Lab session
	5.00 pm	Tea and Snacks
8.00 pm	Networking Dinner	

12 <sup>th</sup> October 2022	DAY 07	
	09.00 am	Breakfast
	10.00 am	Field tour to nearby Hirakud Dam
	1.30 pm	Lunch
	2.30 pm	Session 7A
	4.00 pm	Feedback collection
	4.30 pm	Valedictory session and certificate distribution
	5.30 pm	Tea and Snacks
	8.00 pm	Networking Dinner

13 <sup>th</sup> October 2022	DAY 04	
	09.00 am	Breakfast
	10.00 am	Session 4A
	11.30 am	Tea break
	12.00 noon	Session 4B
	1.30 pm	Lunch
	2.30 pm	Lab session
	5.00 pm	Tea and Snacks
8.00 pm	Networking Dinner	

**Annexure 4: Feedback summary**

Sl. No.	Content	% Rating
01	Overall grading of the Programme with reference to relevance of course, module/content etc.	97% rated above 8 points
02	Overall grading of the facilities provided by the institute, i.e., Hostel, Mess, Class Rooms, Transport/infrastructure etc.	100% rated above 8 points
03	Overall grading of the faculty members conducting the training	97% rated above 8 points
04	How do you rate the overall training methodology	93% rated above 8 points
05	How far the field visit is relevant and related to your research study	97% rated above 8 points
06	Usefulness of this training in your current role	97% rated above 8 points
07	Usefulness of this training in future work/ job you may handle	97% rated above 8 points
08	How far have you benefitted from interaction with the fellow participants of the training	78% rated above 8 points
09	How far the course material supplied relevant and related to the training curriculum	90% rated above 8 points
10	Overall grading of the process of training	93% rated above 8 points
11	Your recommendation to your peers/ colleagues for the training Programme	97% rated above 8 points

  
01/11/2022

Prof. Pradeep K. Naik  
HOD and ACTSDM-2022 Coordinator  
Department of Biotechnology and Bioinformatics  
**Head**  
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**Jyoti Vihar-768 019, Odisha**