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Uppal, Hyderabad

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### **LEAD TO ILLUMINATE**



MICRO BIOLOGY 2020-21



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### **DEPARTMENT OF MICROBIOLOGY**

### **ANNUAL REPORT FOR ACADEMIC YEAR 2020 - 21**

### **INDEX**

SL. No	Date	Event	Venue	No of
1	15.07.2021 to	FDP on Fundamentals and Advancements in Research Methodology	online	Participants 72
	21.07.2021			
2	06/07/2021	Microorganisms puzzle	Online	09
3	25/07/2021	Microbiome Quiz	Online	14
4	04/10/2021	Manav Scientific Reading and Comprehension Self-	Online	35
5	01/12/2021	Assessment Module Worlds AIDS Day	I 43, Seminar Hall, LFDC	07
6	08/12/2021	e poster competition	I41, LFDC	07
7	30/01/2022	World Leprosy Day	online	14
8	24/02/2022	Field trip to OU	OU	15
9	28/02/2022	Field trip	NIN, Tarnaka	13
10	15/03/2022	National seminar on Frontiers in food and Agricultural Microbiology	St. Francis Degree and PG college, Begumpet	5
11	09/04/2022	International Conference "Fungal Diversity & Its Novel Applications"	Online S. M. Joshi College, Hadapsar, Pune-28	03
12	23/04/2022	Guest Lecture	Shyamala Devi Degree College for Women, Barkathpura	18
13	02/05/2022	Webinar Intellectual Property Rights	online	1



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# Faculty Development Program Fundamentals and Advancements in Research Methodology

**Topic:** Fundamental and Advancements in Research Methodology

Resource Person: Dr. Bhima, Dr. Y. Aparna, Dr. K. Anuradha, Prof Christopher, Dr.

J Sarada, Dr. Anupma Harshal W, and Dr. B. Siva Prasad

**Organised:** Department of Microbiology & Department of Zoology in collaboration

with Department of Microbiology, Osmania University

**Time: 0**2:00 to 04:00 pm

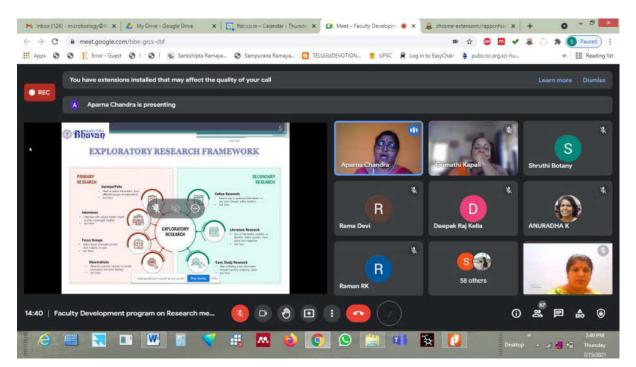
Venue: Online

Date: 15.07.2021 to 21.07.2021

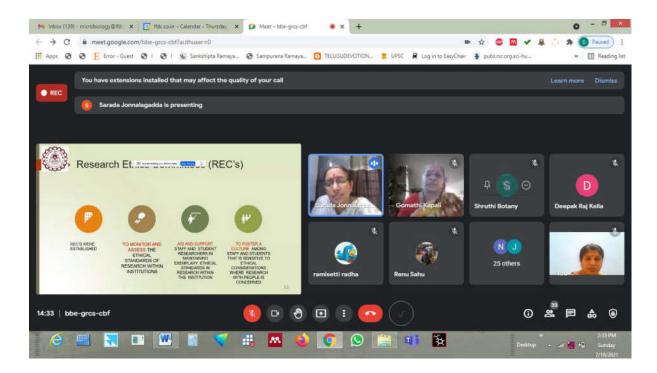
No of Participants:72

Department of microbiology and Zoology in collaboration with Department of Microbiology, Osmania University conducted a one-week online Faculty Development Program on Fundamentals and Advancements in Research Methodology from 15th July 2021 to 21st July 2021. The Dr. Bhima, from Osmania university HOD Microbiology was Keynotes speaker addressed on importance of research to be implemented at academics. Dr. Y. Aparna, on Introduction to Research Design Framework Dr. K. Anuradha, on Defining the Research Problem - Solution, Dr. J Sarada, on Research Ethics and Publication Ethics, Prof Christopher, on Research Report Writing - Major findings, Conclusions, and suggestions. Dr. Anupma Harshal W, on topic Research Methodology & How to read and write a scientific paper and Dr. B. Siva Prasad on Tools and Techniques in Research Methodology for Novice Scholars. The participants were given e certificates.





Day 1 Dr. Y. Aparna, spoke on Introduction to Research Design Framework

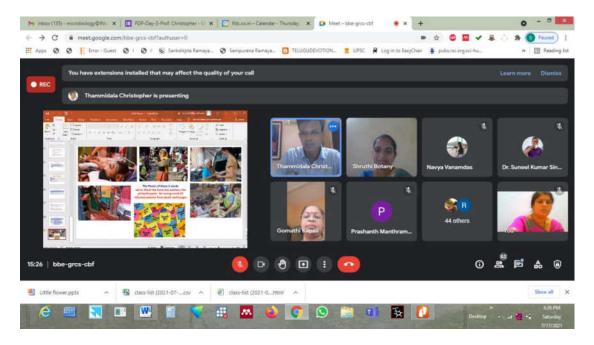


Day 2 & 3 Dr. K. Anuradha, on Defining the Research Problem - Solution, Dr. J Sarada, on Research Ethics and Publication Ethics sessions

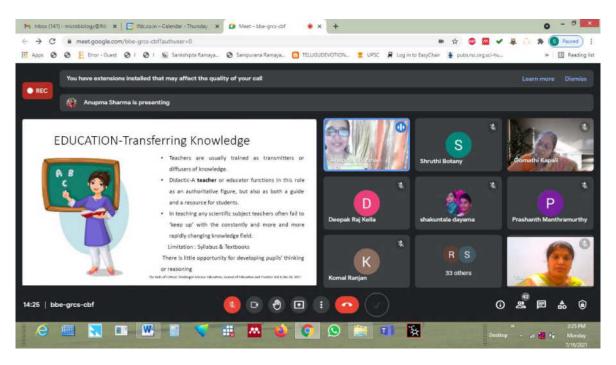


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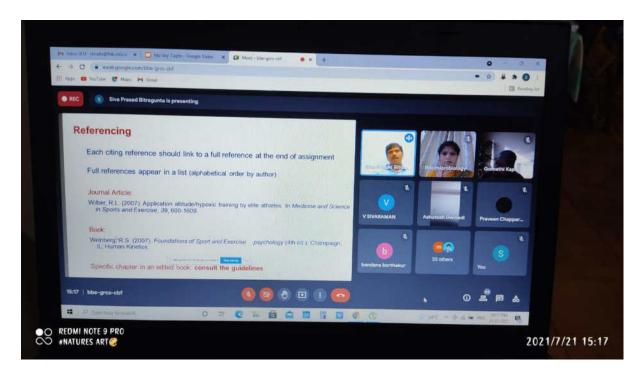


Day 3 Professor Christopher, spoke on Research Report Writing - Major findings, Conclusions, and suggestions



Day 5 and 6 Dr. Anupma Harshal W, on topic Research Methodology & How to read and write a scientific paper





Day 7 Dr. B. Siva Prasad session on Tools and Techniques in Research Methodology for Novice Scholars.



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### **Intra collegiate competition**

**Event: Microbiome Puzzle Date:** 6th JULY 2021

Topic Microorganisms Puzzle

**Venue**: online No of Participants: 09

Department of Microbiology conducted Intra Literary collegiate competitions, LFDC 2021 an online microbiome Intra Literary competition. To bring awareness among students about microbial activities, and terminology. Students gained practical knowledge about the microbial world and their significance with reference to terminology. a total of 09 students from LFDC colleges attended the puzzle. The participants were given certificates.



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#### **Inter collegiate competition Microbiome Quiz**

**Event:** Online Microbiome quiz **Date:** 25th JULY 2021

Venue: online

No of participants: 54

The Department of microbiology has conducted an online microbiome intercollegiate competition. The objective of the program was to bring awareness about microbiomes. Students from various colleges took part in the event.



BAMANDLA BHANU PRASAD from Avanthi Degree & PG College Himayat Nagar received first prize



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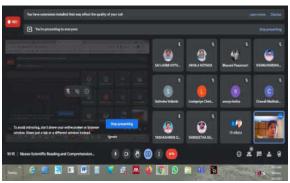
#### "Manay Scientific Reading and Comprehension Self-Assessment Module"

**Topic:** "Manav Scientific Reading and Comprehension Self-Assessment Module"

**Date: 0**4/10/2021 **Venue:** online

No of participants: 35

Department of Microbiology in collaboration with MANAV IISER PUNE conducted "Manay Scientific Reading and Comprehension Self-Assessment Module" BTMC II and III yr. students. The Module was divided into Part 1General Information on Scientific Reading Practices (Nongraded exercise) the time given was 20 min by mentor Assistant Professor Ms. J. Usha Rani. The Part 2 Self-assessment of English proficiency pertaining to scientific text (Excerpt from a popular science article.) was a Graded exercise and time given was 25 mins, and part 3 Reading and Comprehension of two primary scientific literature based on the subject of students' choice. Students were told to read scientific paper to test their comprehension abilities in I) Research Design, ii) Graphical representation of data, iii) Statistical analysis, and iv) Comprehension of scientific text (Graded Exercise). In Section B - Evaluation of the complexity of the given research articles (Nongraded exercise) 2 days' time was given. Part 1 and 2 was completed on the same day. Since Part 3 requires reading of two research article two days' time was given the program was aimed to improve scientific paper reading and analysis. The students were able to analyze the data and learned annotation of the research paper. The students were given participation certificate by MANAV, IISER Pune.



Online session taken by Usha Rani Jalagari on **Manav Scientific Reading and Comprehension Self-Assessment Module''.** 



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**EVENT: WORLD HIV DAY** 

**TOPIC:** HIV / AIDS PowerPoint presentation

VENUE: I 43

DATE: 1 DECEMBER 2021

No of Participants: 07

Department of Microbiology Organized **Worlds AIDS Day** PowerPoint presentations on **1st December 2021** in Little Flower Degree College, Uppal.to all B. Sc., students to raise awareness about HIV/AIDS and educate students about how it can be minimized, prevented, and dealt with in future. Students from first year, second year and final year prepared the presentations on the given topic. The students who presented and the others who joined them were educated about the life-threatening disease, HIV/AIDS. Feedback that the department received were positive. The event was a success.



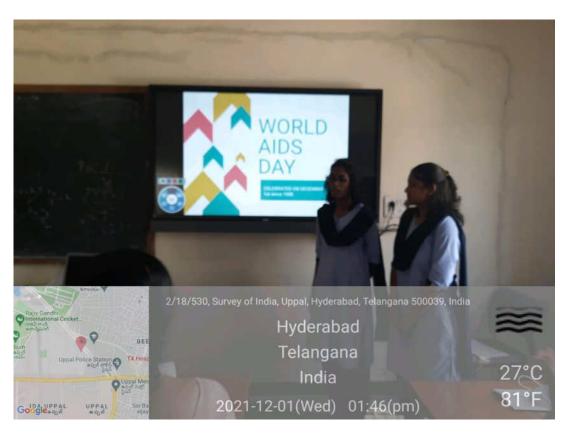
BTMC II Year student Aditi Singh presenting PowerPoint presentation



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BTMC II Year student Madhu Pravalika and Joshika presenting PowerPoint presentation





Participants presenting PowerPoint presentation to audience



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#### **Intra collegiate competition**

Name of Competition: e Poster competition on antimicrobial resistance

**TOPIC:** Antimicrobial Resistance

VENUE: I 41

**DATE:** 08/12/2021

**No. of Participants: 07** 

To raise awareness about the importance of knowledge on Antimicrobial Resistance among student, **the Department of Microbiology** organized the event: **E poster competition** on topic **Antimicrobial Resistance** on 8<sup>th</sup> December 2021 in I 41 Hall Little flower degree college, Uppal as Intra collegiate competition. The objective of the program was to sensitize students about antimicrobial resistance and its effects on human and environmental health. Students from first year, second year and final year prepared the presentations on the given topic. Presentation was presented in presence of Judges Mrs. Ramadevi, Department of Chemistry and Ms. T. Shruthi, Department of Botany. Antibiotic resistance is a growing public health issue and needs urgent attention in countries around the world. Students were given exposure to recent topics on controlling measures and research needs to combat antimicrobial resistance.





Students presenting e poster in Intercollegiate competition & Judge for the Department of Chemistry Mrs. M. Ramadevi evaluated the presentations.



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**EVENT: WORLD LEPROSYDAY** 

**TOPIC: LEPROSY PRESENTATION REPORT** 

**VENUE: ONLINE** 

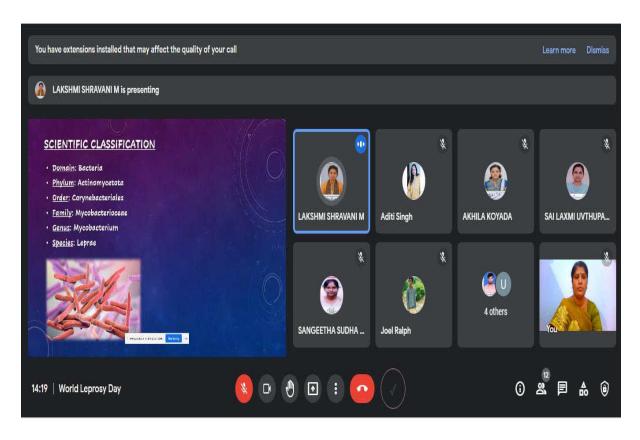
DATE: 30 January 2022 No of Participants: 14

Department of Microbiology organised World Leprosy Day on 30th January 2022 online. World Leprosy Day is observed every year on the last Sunday of January. In India, it is observed on 30 January every year, coinciding with the death anniversary of Mahatma Gandhi. Leprosy is a neglected tropical disease (NTD) that still occurs in more than 120 countries, with more than 200,000 new cases reported every year.

The aim of observing World Leprosy Day is to create awareness against the stigma attached to the disease, by making the general community aware that it is a disease spread by a type of bacteria and it can be easily cured. Students from the I, II, and III years of BTMC prepared the presentations on the given topic. Topics like signs and symptoms, treatment, prevention, causes, and statistical data were presented. Students explained the various Leprosy to educate and spread awareness about the disease. They focused on introduction, signs and symptoms, diagnosis, treatment, spread, prevention, statistical data, and the cases that were collected from various sources. The students who presented and the others who joined them were educated about the life-threatening disease, Leprosy. The feedback that the department received was positive. The event was a success.







Student Lakshmi Sravani presenting PowerPoint presentation



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#### Field Trip

**Event: Osmania open day celebrations** 

Venue: Department of Microbiology, Osmania University.

Date:24/02/2022

No of Participants: 15

Students of B. Sc. BTMC II year and faculty J. Usha Rani from Department of microbiology attended Osmania open day celebrations-Department of Microbiology, Osmania University on 24<sup>th</sup> February 2022. Students were shown various instruments, research scholars explained various research activities conducted in the department. Students attended Centre for Microbiology and Fermentation Technology (CMFT) where demonstration of instruments like Lyophilizer, HPLC, Fermenter, etc. were shown. Students interacted with Professors and Research scholars in the department and gained more information. The field trip was useful to the students in gaining knowledge about various activities occurring in Microbiology Department



Students of B. Sc. BTMC II year and faculty J. Usha Rani from Department of microbiology attended Osmania open day celebrations-Department of Microbiology, Osmania University



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Research scholar explaining the research work carried out in department to Students and staff. They also attended the center for microbiology and fermentation technology (CMFT) Osmania open day celebrations-Department of Microbiology, Osmania University.



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#### Field Trip

Event: National Science Week Festival at National Institute of Nutrition (NIN) -

ICMR.

Venue: National Institute of Nutrition (NIN) – ICMR, Tarnaka

Date: 28/02/2022

No of Participants: 13

Students of B. Sc. BTMC II and III year and faculty J. Usha Rani from Department of microbiology attended National Science Week Festival at National Institute of Nutrition (NIN) – ICMR, Tarnaka on 28<sup>th</sup> February 2022. ICMR-National Institute of Nutrition (NIN) hosted the National Science Week Festival from February 22-28. National Science Day when Sir C.V. Raman discovered the 'Raman Effect' in 1928, will be celebrated on February 28. Vigyan Prasad, an autonomous body under the Department of Science and Technology, organized the festival under its flagship program, Science Communication Popularization and Extension (SCOPE). Various displays, posters, and live demonstrations for the benefit of students and common public by reputed science institutes from DRDO, CSIR, ICMR, ISRO, DAE MoES. In addition, a book fair will have national-level book houses showcase several titles related to science, innovations, biographies of scientists and India's freedom struggle. Students were benefitted with the field trip.





Students of B. Sc BTMC II and III observing various displays, posters and live demonstrations-National Institute of Nutrition (NIN) – ICMR, Tarnaka.



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#### National Seminar on "Frontiers in Food & Agricultural Microbiology

**Department Name: Microbiology** 

Event name: National Seminar on "Frontiers in Food & Agricultural Microbiology

Date & Time of Event: 15th March 2022, 10 am to 4 pm

Venue: St. Francis College for Women, Begumpet

**Number of Participants: 3** 

National Seminar on "Frontiers in Food & Agricultural Microbiology was organized by the Department of Microbiology, St. Francis College for Women, Begumpet and MicroAura@SFC, Local Chapter of Microbiologists Society of India. The Chief Guest, Dr. Geeta Vemuganti, highlighted on the following, Food & Nutrition can't be over emphasized; Food is a new medicine; Kitchen is the pharmacy; Food & nutrition are like oxygen mask for all & specially for women; Enjoy the cooking; Understand the science & principles of how food is prepared. Guest of Honor, Professor. Bhima, Head, Department of Microbiology, Osmania University, Hyderabad delivered the Keynote Address. He highlighted the improvement of infrastructure facilities to strengthen the research skills; Probiotic bacteria of fermented food – Boon to the humans; Agriculture & food are interconnected and interdependent; Impact of gut health on maintaining good. There were three sessions, Technical Session 1 was on "Microbe mediated strategies to cope with climate change Impacts on Cropping systems" by Dr. Suseelendra Desai Sir, Dean, NMIMS, School of Agricultural Sciences & Technology, Shirpur. Dr, Desai emphasized on Climate change & climatic variability, Climatic variability impact on Ecosystem, overcoming climatic variability by using microbial system, open mind system to understand the biology. He also discussed microbial inoculants, production system, fermentation, marketing the product and dispatching system. Video Presentations on Fermented Foods were shared by registered participants through online, Aditi Singh and Swati Kumari from BTMC II yr. presented video on Fermented foods video presentation on Dhooska coordinated by Mr. Ram, Department of Mass Comm, Dr. Gayatri, & Dr. Anita Organizing Secretary of the Seminar St. Francis college. Technical Session 2 was on "Impact of COVID - 19 on Food Security " by Dr. Uma Chitra, Fulbright Nehru Scholar ICMR- NIN. Dr. Uma Chitra highlighted



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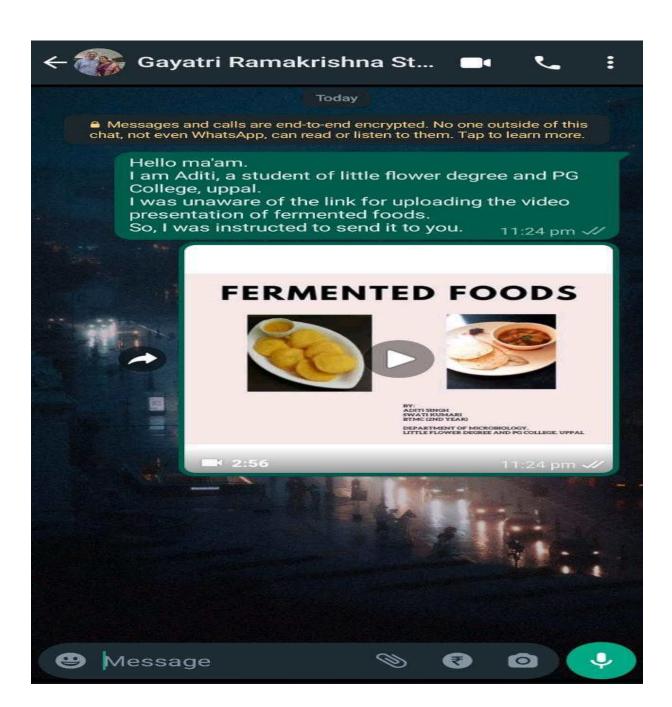
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on human health; human crises; four pillars of food security: Availability of the food, Access to the food, Utilization of food, Stability of food; Increased malnutrition, Stunting, Wasting in children, anemic condition in women due to long term effect of COVID-19. Dr. Uma Chitra discussed the direct market through online platforms, Strategies to strengthen the Agricultural Sector after post COVID-19; PM-KISAN Cash transfers to farmers; ATMA NIRBHAR KRISH-Government Disaster Relief Package and Sustainable World System. Technical Session 3 was on "Plant Microbiome" by Dr. Hameeda Bee, Associate Professor, O.U. Dr. Hameeda Bee emphasized on Culturing of microorganisms, Microorganisms involved in preparations of Food products a Biogas production, Petri Art, Metagenomics, Human Gut Health, India Namaste Culture, Oral microbiome, Plant microbiome and Effect of good food on good microbiota. Video Presentations on "Plant Growth Assessment" were shared by registered participants through online, Mrs. J. Usha rani HOD Microbiology attended online session and received e-certificate.



Professor. Bhima, Head, Department of Microbiology, Osmania University, Keynote speaker and Chief Guest, Dr. Geeta Vemuganti, and the participants





Aditi Singh and Swati Kumari video presentation



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#### **International Conference**

**Event**: International Conference

Topic: International Conference "Fungal Diversity & Its Novel Applications

**Date**: 9 April 2022

Venue: Online by S. M. Joshi College, Hadapsar, Pune

Department of Microbiology attended International Conference "Fungal Diversity & Its Novel Applications organized by S. M. Joshi College, Hadapsar, Pune. Students from BTMC III year presented two oral presentations on original research work in the international conference. The paper titled with 1. Screening on Different Cultivation Media for The Isolation of Pigmented Microbes from Soil Sample & 2. Bio-Enzyme from Citrus Fruit Waste: Applications in Biological Treatment of Organic Waste.". Students and staff received participation and presentation certificate.



Students of BTMC III year performing research work





Students presenting research article in International Conference "Fungal Diversity & Its Novel Applications online



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#### **Invited Guest Lecture**

Event: Invited Guest Lecture

Topic: Project Preparation Methodology and Data Analysis

Venue: Smt. A Shyamala Devi Degree College for Women Barkatpura - Hyderabad.

**Date:** 23/04/2022

No of Participants: 18

Assistant Professor Mrs. J Usha Rani from the Department of Microbiology Little Flower Degree College was invited as guest speaker by Department of Microbiology, Smt. A Shyamala Devi Degree College for Women Barkatpura – Hyderabad on to deliver lecture to B.Sc. Life Sciences students on topic "Preparation -Methodology and Data Analysis" on 23/04/2022. Mrs Usha Rani talk on methods of Project designing in microbiology with basic equipment and resources available for graduate students. Faculty and students gained knowledge on project designing skills and their application in conceptualizing topics for their project work in final semester.



Group photo of students and staff of Smt. A Shyamala Devi Degree College for Women with Mrs. J. Usha Rani, resource person





Mrs. J. Usha Rani, delivering lecture, Student giving vote of thanks after the session



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#### National Level IP Literacy Awareness Programme on Intellectual Property Rights (IPR)

**Event**: Intellectual Property Rights (IPR)

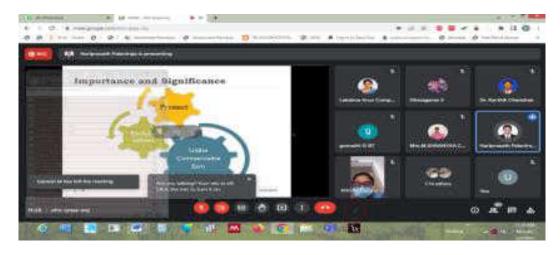
**Topic:** National Level IP Literacy Awareness Programme on Intellectual Property

**Rights** 

Venue: Online

**Date:** 2nd May 2022 **No of Participants:** 1

Students of B. Sc. BTMC III yrs. and Faculty J. Usha Rani from the Department of microbiology attended National Level IP Literacy Awareness Program on Intellectual Property Rights online webinar organized by Cauvery College for Women (Autonomous), Trichy in collaboration on 2<sup>nd</sup> May 2022. Dr. Hariprasad explained what is IPR, and the importance of IPR by giving various patented examples. He enlightened the audience with the main concepts of IPR Patents, Industrial Designs, Trademarks, Copyrights, and Geographical Indications.



Faculty J. Usha Rani from the Department of microbiology attended National Level IP Literacy Awareness Programme on Intellectual Property Rights online webinar