

Report on Skill Development Workshop

A two-day skill development workshop titled “**Molecules in 3D: Structure to Drug Discovery**” was conducted on **21st and 22nd March 2025** by **Excel Education Services, Hyderabad**. The workshop was attended by **36 M.Sc. final year students**, aiming to provide them with hands-on experience and practical insights into the tools and techniques involved in molecular modeling and structure-based drug discovery.

The event commenced at 9:30 AM with an inaugural session, presided over by Dr. GSVRK Choudary, Principal of Bhavans Vivekananda College and Mrs M. Raja Rajeshwari, Director of Excel Education Services, who welcomed the participants and emphasized the importance of computational tools in modern drug discovery. This was followed by a keynote address by Prof. D. Kashinath, Department of Chemistry, NIT Warangal, who highlighted recent advancements in molecular modeling and drug design.

The first day focused on foundational concepts and practical sessions related to molecular docking which included a detailed hands-on session covering Introduction to molecular docking, Protein selection and retrieval of structural data from PDB, Evaluation of active site cavities using CastP Server, PrankWeb, and InterPro, Protein structure preparation and grid parameter evaluation, Ligand data retrieval and preparation from databases such as PubChem and ZINC. Participants were trained in using tools like PyMOL for molecular visualization and AutoDock Vina for receptor-ligand interaction simulations.

The second day involved advanced docking procedures and analytical techniques. The Session Highlighted on Setting up and executing docking studies, Analysis of protein-ligand complex interactions, Generation of high-quality molecular images, Comparative analysis of site-specific vs blind docking approaches, ADMET analysis for evaluating the pharmacokinetic properties of ligands. The afternoon session included a guest talk by industry expert Dr. Amit Kumar Banerjee on “*Evolution of Drug Designing and Drug Discovery*”. His insights offered a valuable industry perspective on modern drug development pipelines.

The workshop concluded with a valedictory session and distribution of participation certificates to all attendees. The feedback received from students was overwhelmingly positive, with many expressing increased interest in pursuing careers in computational biology and drug discovery.





**BHAVAN'S VIVEKANANDA COLLEGE
OF SCIENCE, HUMANITIES AND COMMERCE
SAINIKPURI, SECUNDERABAD-500 094**

(Reaccredited with A grade by NAAC)

Autonomous College - Affiliated to Osmania University

Report

National Science day-2025

28-02-2025

National Science day-2025 was celebrated by faculty of Life sciences and Physical sciences at **BHAVAN'S VIVEKANANDA COLLEGE OF SCIENCE, HUMANITIES AND COMMERCE SAINIKPURI, SECUNDERABAD** on 28th February, 2025. The theme of the program was "EMPOWERING INDIAN YOUTH FOR GLOBAL LEADERSHIP IN SCIENCE AND INNOVATION FOR VIKSIT BHARAT". The celebrations started with lighting of lamp by dignitaries including the Principal, Dr. G. S. V. R. K Choudary, Chief Guest Dr. S. Rajendra Prasad, member Secretary of Telangana Council of Science & Technology, Hyderabad, Mrs. M. Prasanna, Head Department of Physics and Electronics and Dr. K. Anuradha, Head Department of Microbiology. The program began with a message from the Principal, Dr. G. S. V. R. K. Choudary who highlighted the major scientific achievements in the field of space research and Life Science research. Chief Guest, Dr. S. Rajendra Prasad, member Secretary of Telangana Council of Science & Technology, Hyderabad, delivered the keynote address where he stressed on need to work on innovations. He encouraged students to put consistent effort in setting goals and working towards them. During his address, Dr. Rajendra Prasad explained the significance of Viksit Bharat for sustainable development. He advised the students to be focused and derive inspiration by reading books on scientists and also from notable alumni students from the college. He motivated students to use the philosophy of *Think Science, Digest Science, and Implement Science*- not just for personal growth, but for the benefit of society. The inaugural program ended with vote of thanks by Dr. K. Anuradha, Head Department of Microbiology.

Several events were organized by the faculty of Life sciences and Physical sciences on the occasion of National Science Day.

Faculty of Life sciences conducted three events, including paper presentations, Quiz and Reel making competitions for students. The topic for Reel making competition was “Empowering Indian Youth for Global Leadership in Science and Innovation for Viksit Bharat”. Faculty of Physical sciences conducted two events including project and paper presentations. The National Science Day celebration provided an excellent platform for students to express their innovative ideas and creativity in all the areas of Life Sciences and Physical sciences. The program concluded with valedictory session in which prizes were awarded to winning teams in the various events by Principal, Dr. G. S. V. R. K Choudary. Overall the program received good response from the students, who took active part in the various events conducted on the occasion.



Fig :1 Inaugural by the Chief guest & Key note speaker Dr. S. Rajendra Prasad, Dr. G. S. V. R. K. Choudary, Principal BVC, Mrs. M. Prasanna, Dr. K. Anuradha , Coordinators, NSD 2025



Fig 2. Lighting of the lamp by the Chief Guest -28-02-2025



Fig 3. Greetings to the Chief Guest with a Plant hamper, 28-02-2025



Fig 4. Prayer song by Faculty and students on National Science Day, 28-02-2025



Fig 5. Address by the Chief Guest- 28-02-2025





Fig 6 & 7 Presentation by UG Students on curriculum based projects Judged by Dr. Aruna Priya, Faculty, Dept of Chemistry – 28-02-2025



Fig 8. Reel making competition presented by students and Judged by Dr. B. Kalpana, Head, Dept of Genetics and Biotechnology- 28-02-2025



Fig 9 & 10. Quiz organizers and student participants- 28-02-2025



Fig 11, 12 & 13. Valedictory, students receiving certificates from Dr. G. S. V.R. K. Choudary, Principal and Coordinators (NSD) - 28-02-2025

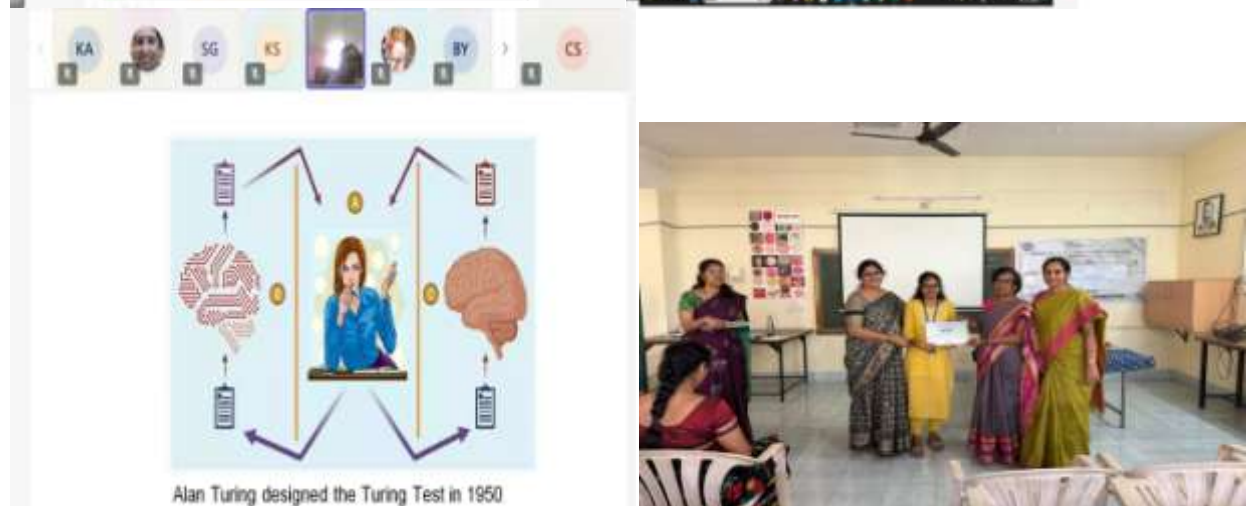
Report on Value Added course on AI in Biology

Department of Microbiology organized a value-added course titled "Artificial Intelligence in Biology and Its Applications" which was successfully conducted from 9th December to 28th December 2024 with a course duration of 30 hours. The course was open to undergraduate students, postgraduate students, and research scholars from biology-related disciplines. Total 53 students participated from different colleges ie St. Pious X Degree College, St. Mary's College, Yousufguda, Reddy Women's College, and BVC. The course was structured to provide a blend of theoretical knowledge and practical applications of AI in various biological contexts. The coordinators for the VAC are Dr. K. Anuradha, Dr. Y. Aparna and Dr. T. Chaitanya. The resource persons for this course were from Departments of Microbiology, Computer Science, Mathematics and Statistics, Biochemistry and Management studies of BVC.

The course was designed with an objective of Introducing the fundamentals of artificial intelligence and its relevance in biology and also to Develop hands-on expertise through assignments and a capstone project. The curriculum focused mostly on significant areas like with structured modules that covered Introduction to AI and Machine Learning, Data in Biology, Data Preprocessing and Visualization, Supervised and Unsupervised Learning, Applications of AI in Medicine, Agriculture, Genomics, Ethical Considerations in AI and ended with a Capstone project

The course was conducted through a mix of lectures, practical sessions, case studies, and group discussions. Python programming and online tools like Google Colab, NCBI, and UniProt were extensively used. Participants were evaluated based on their project presentations at the end of the course. Participants expressed satisfaction with the course, appreciating the balance between theoretical insights and hands-on sessions. The capstone projects showcased diverse applications of AI in Biology







Visit to State TB Center

Department of Microbiology organized an industrial visit to State TB center for M.Sc Microbiology Final year students on 21st November 2024. A group of 12 M.Sc Microbiology students, accompanied by faculty members Dr. K. Anuradha and Dr. Y. Aparna, visited the State TB Center for a hands-on learning experience. The visit included demonstrations of advanced diagnostic techniques used in tuberculosis detection.

The students observed the Fluorescent staining technique for *Mycobacterium tuberculosis* (MTB), a critical method for identifying the pathogen in clinical samples. They also witnessed the Polymerase Chain Reaction (PCR) amplification process and explored cutting-edge rapid testing methods, including chip-based Real-Time PCR tests for MTB detection and Rifampicin-resistant MTB identification.

Additionally, the students were educated on the ZN Microscopy grading system for MTB, emphasizing its role in disease management. The visit provided a valuable opportunity to understand the practical applications of molecular and microscopic techniques in TB diagnosis, enriching their academic knowledge and laboratory skills.





Department of Microbiology

Report on visit to Vijaya Dairy Plant

Department of Microbiology, Bhavans Vivekananda College, had organised a visit to Vijaya Dairy Plant, situated at Tarnaka, Hyderabad. Dr. S. Anju and Dr. K. Mahalakshmi accompanied 29 M. Sc final year students for the same on 16th Nov' 2024.

The students were initially briefed up regarding various quality control parameters that are carried out for all milk samples to determine their sensory characters and microbial count from time to time. Incharge personnel also arranged to go around the plant to learn about production of various milk products such as curd, flavoured milk, butter, ghee etc. Students also had an opportunity to observe the packaging of all the above products. This visit helped them in getting acquainted with different tests that are routinely performed for the time milk is supplied from vendors to packaging for milk and its derivatives.





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Salikpuri, Secunderabad - 500094
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**SKILL TRAINING ON
MUSHROOM CULTIVATION**

Organized by
Department of Microbiology

Under DBT Star College Scheme

DATE : 28th SEPT 2024

Resource Person

P.BALASWAMY

**MUSHROOM CULTIVATION TRAINER
AT RUDSETI & AGRICULTURE
ASSESSMENT OFFICER AT RUDSETI**

FACULTY COORDINATORS

Dr. K. ANURADHA

Head, Department of Microbiology, BVC

Dr. SHALINI DEVI

Asst.Prof.Dept of Microbiology, BVC

Report on Skill Training – Mushroom Cultivation

Skill training program on Mushroom cultivation was organised on 28th September 2024 by Department of Microbiology, BVC under DBT Star college scheme. Thirty two students of B.Sc life sciences 2nd year took part in this training program. Resource person, Mr Balaswamy, Mushroom Cultivation Trainer & Agriculture Assessment Officer at RUDSETI explained and trained the students on substrate sterilization, spawning, packing of bags and marketing of mushrooms.





Report on Visit to Prathista industries

An industrial visit was organised by Department of Microbiology on 24th September 2024. Thirty seven students of final year M.Sc Microbiology accompanied by three faculty members (Dr K. Anuradha, Dr S.Anju and Dr S.Shalini Devi) visited Prathista industries located at Yadadri-bhauvanagiri. Dr Ranganathan, scientist at Prathista industries explained about production process of various microbial products. Students were given the opportunity to visit the raw material processing unit, large bioreactors, quality control and research labs to understand steps involved in production of fermentation products.



Report on THE MICROBIAL ODYSSEY Quiz competition

Organised by Department of Microbiology, Bhavan's Vivekananda College in collaboration with Microbiologist society of India.

- **Occasion:** International Microorganisms Day.
- **Date:** 20-09-2024.

The department of Microbiology at Bhavans Vivekananda College, in collaboration with the Microbiologist Society of India (MSI), organised a quiz competition on the occasion of International Microorganisms Day successfully organized a captivating quiz competition titled "The Microbial Odyssey: Unlocking the Secrets of Science" on 20-09-2024. The event was aimed at raising awareness about the fascinating world of microorganisms and their immense significance in various scientific domains.

- **Faculty coordinators**

The event was coordinated by respected faculty members:

- **Dr. Anuradha**, Department of Microbiology, Bhavan's Vivekananda College.
- **Dr. Anju Nair**, chief president of MSI Telangana.

- **Student coordinators**

- **Alankritha. N**- Msc. Microbiology
- **B. Sri Harshitha** - Msc. Microbiology
- **M. Santhoshi** - Msc. microbiology
- **Y.V. Tanishq** - Bt.M.C 3rd year
- **K. Mahesh** - Bt.M.C 3rd year
- **V.Seshi Deepak** - Bt.M.C 3rd year
- **B. Sahithi** - Bt.M.C 2nd year
- **G. Satya Tarun** -- Bt.M.C 2nd year
- **B. Sadhbhavana** - Bt.M.C 3rd year

- **Participation**

A total of 10 students were involved in the competition, they were segregated into 5 teams. Which together had a blend of knowledge grabbing aspects all over the competition

- **Teams**

1. Bhavani and Akansha
2. Prakruti and Vaishnavi
3. Keerthi and Asritha
4. Gouthami and Khushi
5. Anirban and Sai Shruthi.

- **Event Highlights**

- The event fostered a competitive yet educational environment, with both participants engaging actively throughout the competition.
- All Teams competed in a series of intellectually stimulating rounds that tested their knowledge approaching towards the various fields of life sciences.

The quiz was divided into several rounds, including:

- Round 1: **TANDEM TRIVIA**

Which challenged the participants with MCQ's.

- Round 2: **BIOCRYPTIC CHALLENGE**

This round featured crosswords, missing words, and jumble words.

- Round 3: **VISUVAL ENIGMA**

This round challenged with the attention engaging pictures displayed regarding microbiology

- Round 4: **DISCOVER AND DECODE**

This round had seeking attention of participants to embrace their knowledge towards the pictorial questions.

- All the rounds together had a typical impact on participants to question their knowledge and perceptions.

- **Outcomes**

- The triumph of "The Microbial Odyssey" quiz competition marked an inspiring tribute to International Microorganisms Day, reminding everyone of the ongoing quest to unlock the many secrets of the microbial world.
- The competition not only highlighted academic excellence but also fostered a sense of curiosity and enthusiasm for scientific exploration. the atmosphere was filled with anticipation as the winners were announced.

- **Winners**

1st prize: Anirban and Sai Shruthi.

2nd prize: Prakruti and Vaishnavi.

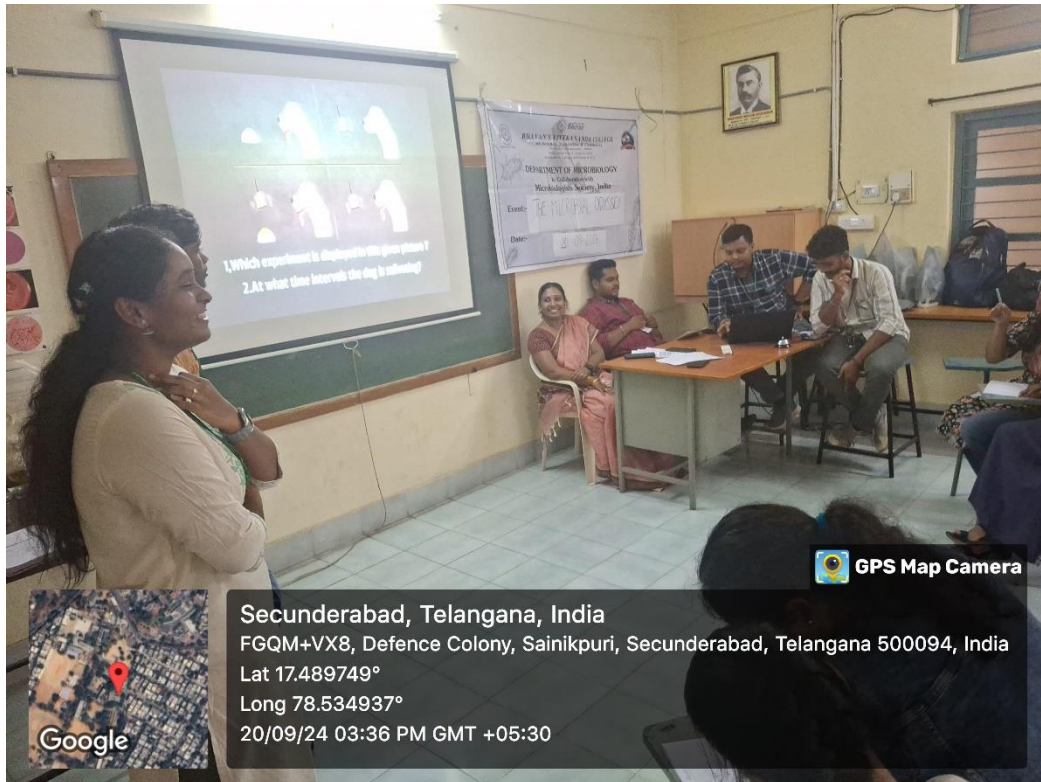
- **Vote of thanks**

In his closing remarks, Dr. Anuradha, the Head of the Microbiology Department, congratulated all the participants for their efforts and praised the dedication of the organizing team.

"Exploring the microbial universe is an odyssey into the very essence of existence."









Bhavan

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Department Of Microbiology
in Collaboration with
Microbiologists Society, India
is conducting a

GUEST LECTURE

Under DBT Star College Scheme

Topic:- "Stem cells & Regeneration"

By



Dr. C B Tripura Sundari
Principal Scientist
CCMB, Hyderabad

Date:- 28th August 2024

Time:- 10:30 am

Venue:- Room Number 208
MBA Seminar Hall

Faculty Coordinators

Dr. K. Anuradha
Head,
Department of Microbiology

Dr. S. Shalini Devi
Assistant Professor,
Department of Microbiology

REPORT ON GUEST LECTURE

STEM CELLS AND REGENERATION

A guest lecture was organized by department of Microbiology, BVC on 28th august 2024 at 10.30 am. The guest speaker Dr Tripura, principal scientist, CSIR-CCMB, Hyderabad has elaborated on the topic “Stem cells and Regeneration”. She emphasized on various types of stem cells and its applications in the field of regenerative medicine. She also discussed about different career opportunities for in the area of life sciences and allied branches. A total of 100 students from BSc and MSc Microbiology were benefited from this lecture. All the students actively participated in the interactive session with guest speaker. This guest lecture was coordinated by Dr K. Anuradha and Dr S. Shalini Devi.



B. Sc BTMC 5th Semester

Roll Number	Student Name
107222444001	Alluri Varsha
107222444002	ChSwethaSreevalliManaswini
107222444003	CherlapallyHarshitha Reddy
107222444004	E S Keerthi
107222444005	G SaiNihal Kumar
107222444006	GundlapalliCharanya
107222444007	JanwadkerSaiNagaraajan
107222444009	KasaPraneeth
107222444010	Kuchula Yamuna
107222444011	SowmyaKurella
107222444012	MahendradaDhanaVarshitha
107222444014	Ranga S Akshitha
107222444016	TikareMeghana
107222444017	UppalaSai Kumar
107222444018	UppariNarender
107222444020	YamsaniRakshitha
107222444021	A Vaahini
107222444022	BathulaNaganjali
107222444023	ChintalapatiPoornima
107222444024	Isha Deep
107222444025	Jai Shree Sharma
107222444026	KalvakuntlaHarshini
107222444028	KasajuChandana
107222444029	PadhyRitwik
107222444030	PamballaPreethi Jasmine
107222444031	PriyankaSarma
107222444032	ShankargariSaiAbhilash
107222444033	Shreya Andrews
107222444035	V Seshi Deepak
107222444036	Yama Vaishnavi
107222444037	AddagiriSahithi
107222444038	BazaruSadhbhavana
107222444039	Kedharashetty Mahesh
107222444040	YedurlaVenkataTanishq
107222444041	AlakuntaShireesha
107222444042	AnuguthalaAkhila
107222444043	Bazaru Varsha
107222444045	DanagiriHarshini
107222444046	KarreHarshavardan
107222444047	KondeSumanjali
107222444048	RamavathDhanraj
107222444049	RudraboinaKalyan
107222444050	TallamYashashwini

MGC 5th Semester

Roll Number	Name of the Student
107222459001	Annam Vaishnavi
107222459002	BodalSejal
107222459003	ChandragiriSaiSupriya
107222459004	KotiVarshini
107222459005	KukkadapuVandhana
107222459006	MaheshuniVinay Kumar
107222459007	MallaboinaAkshaya
107222459009	Munukutla Lakshmi Nikhita
107222459010	Nandini S. Walikar
107222459011	NukalaHarshitha
107222459012	PasikantiSravani
107222459013	RajarapuSukeerthi
107222459014	RajeshwariGundeboina
107222459015	Ramisetti Baby Sarojini
107222459017	Aman Khan
107222459018	Brijesh Kumar
107222459019	Arka Dutta
107222459020	Gayatri Sharma
107222459021	KalpaneshSen
107222459022	KannamallaHarika
107222459023	MohdYousuf
107222459024	NehaPanday
107222459025	ShruthiSrivastav
107222459026	Syed Waheduddin Ansari
107222459027	Anirban Dash
107222459029	KovvuruPrakruti
107222459030	MirzaFareedullaBaig
107222459031	NangurNishanth
107222459032	ChinthamaneniHarshitha
107222459034	Sarikonda Jaya Sahithi
107222459035	MiryalaHavishmathi
107222459036	AmaravadhiVarshini
107222459037	Eruku Ajay kumar
107222459038	Bade SaiKeerthana
107222459039	BanalaYagnasri

Report on Intercollegiate Poster Presentation Competition

World Sjögren's Day

On 27th July 2024, the Department of Microbiology, Bhavan's Vivekananda College, in collaboration with the Microbiologist Society of India (MSI), organized an intercollegiate poster presentation competition to commemorate World Sjögren's Day. The event, addressed by the principal Dr GSVRK Chowdary, was coordinated by faculty members DrK. Anuradha and DrAnju Nair, and supported by student coordinators K. Mahesh, Y. V. Tanishq, and Seshi Deepak from the 3rd year Bt.M.C program. The event aimed to foster scientific curiosity and encourage students to delve into the intricacies of microbiology, with a particular focus on Sjögren's Syndrome, an autoimmune disorder. A total of 10 students participated, including two from other colleges like Little flower degree college, reflecting the event's intercollegiate nature and contributing to a rich exchange of ideas and perspectives. The judging panel, led by Dr Vanitha from the Department of Biochemistry & Nutrition, BVC, evaluated the posters based on scientific content, clarity, originality, and presentation skills. The competition promoted awareness and understanding of Sjögren's Syndrome, provided a platform for scientific discussions, and offered participants the chance to receive expert feedback. The event successfully achieved its objectives of fostering scientific inquiry, encouraging research skills, and promoting collaboration among students from different institutions. The quality of presentations was commendable, and feedback from both participants and the judge was overwhelmingly positive.





Report

OUTREACH- Beyond the Naked Eye – “Discovering the Microscopic Life” (16th July 2024)

Department of Microbiology, Bhavan's Vivekananda College of Science, Humanities & Commerce, in collaboration with the Microbiologist Society of India, organized an outreach program at the Government Junior College, Malkajgiri on 16th July 2024. This program focused on the scope of microbiology involving staining techniques, probiotics and antimicrobial resistance. A total of 59 students from Intermediate first and second year of the junior college took active participation in this program. Students of B. Sc Microbiology along with Coordinators of the program, Dr S. Anju and Dr T. Chaitanya from Bhavan's Vivekananda College imparted knowledge of the subject.

The event began with a series of lectures and interactive sessions led by students and coordinators of Bhavans college. These sessions provided an in-depth understanding of various microbiology concepts, focusing on the importance of staining techniques and the benefits of probiotics. The participants showed great enthusiasm and actively engaged in discussions, interacting with insightful questions and sharing their thoughts. The lectures emphasized the vast career opportunities in microbiology, aiming to inspire students to consider this field for their future studies.

To make the learning experience more practical, several hands-on activities were organized. The students had the opportunity to observe various microbes upon staining, probiotic models up close and demonstration of antibiotic resistance. These practical sessions helped reinforce the theoretical knowledge they had gained during the lectures, making the learning experience more comprehensive and engaging. The students learned how different staining techniques could be used to identify and study various microorganisms, and they saw firsthand how probiotics could benefit health by promoting a balanced microbial environment along with perils of antibiotic resistance.

In addition to the educational sessions, a quiz competition was held on the topics covered during the program, adding an element of excitement to the event. Participants were given token of appreciation upon successful response which served as a motivation for active involvement. The quiz not only tested their knowledge but also encouraged a healthy competitive spirit among the students.

The outreach program concluded with positive feedback from both the students and the faculty. The hands-on experiences and interactive discussions were particularly appreciated, as they provided a deeper understanding of microbiology beyond textbooks. The event successfully enhanced the students' interest and understanding of subject, making it a memorable and educational experience for all participants. The organizers expressed their commitment to continuing such initiatives to foster a greater interest in science and research among students.

<https://www.instagram.com/p/C9mcy6gPvcv/?igsh=MTR6aTBrbnB5ZzNvMg==>

