

MICROBIOLOGY INSIGHTS

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About the Department

The Department of Microbiology was established in 1999, offers a wide range of undergraduate and postgraduate courses, ensuring comprehensive education and research opportunities in this field. The department boasts a faculty of highly qualified experts who bring with them vast experience and expertise in various domains of Microbiology. Their commitment to teaching and research is reflected in their active involvement in cutting-edge research projects and their contributions to scientific publications and conferences. The department is equipped with state-of-the-art infrastructural facilities, including modern laboratories and research equipment, creating an ideal environment for teaching, experimentation, and innovation. Additionally, the department maintains strong collaborations with industry partners, providing students with valuable industry exposure and internship opportunities. The emphasis on research, professional development workshops, and a collaborative atmosphere nurtures the overall growth of students, preparing them for successful careers in academia, research, or the industry.



Objectives of Department:

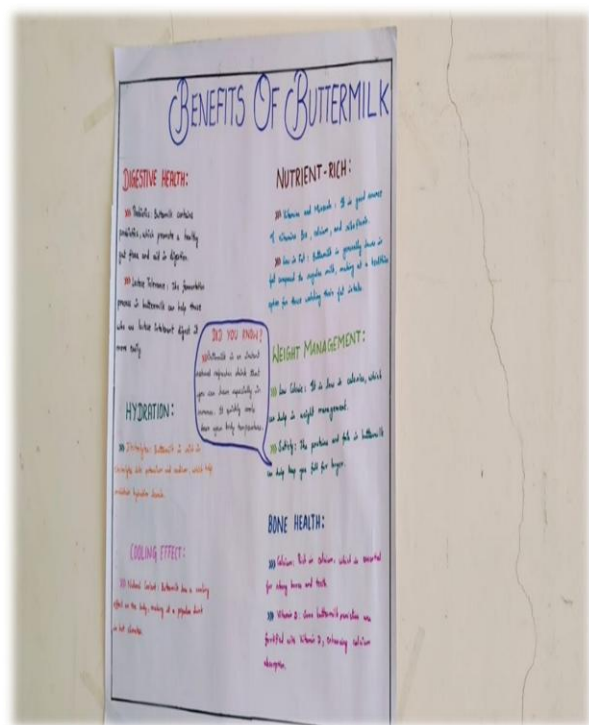
- To provide skill based scientific and technical knowledge to students
- To train students in the field of microbiology, provide value-based education with innovative research
- To undertake research activities relevant to present day needs

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Events

“Buttermilk Drive- An awareness program on the benefits of Buttermilk”

The Department of Microbiology successfully organized a *Buttermilk Drive* on 7th April 2025, with the goal of offering a refreshing and healthy drink to the students and faculty members during the hot summer day. The initiative was a collaborative effort by faculty and student volunteers, aiming to promote awareness about the importance of hydration and traditional



Informative materials were displayed and handed out, explaining the microbiological process of fermentation, probiotic content, and the nutritional benefits of buttermilk. Faculty members shared insights on the role of *Lactobacillus* species and other beneficial microbes in maintaining gut flora and digestive health.

The event saw enthusiastic participation from all departments. Over **1000** cups of buttermilk were served. Students and faculty members appreciated the thoughtful initiative and expressed interest in learning

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Freshly prepared, spiced buttermilk was distributed to students, faculty, and staff members. The Buttermilk Drive was a successful and well-received event that blended science with tradition. It not only provided a refreshing drink to beat the heat but also served as a platform to educate the campus community about the microbiological and health significance of fermented dairy products. The Department of Microbiology looks forward to conducting more such engaging and impactful programs in the future.



“Awareness Program on Mental Health & Well-being”

The Department of Microbiology, MSRCASC-Autonomous organized an insightful and impactful awareness program focused on **Mental Health and Wellbeing**, in collaboration with research scholars from the **National Institute of Mental Health and Neurosciences (NIMHANS)**. The program aimed to foster an understanding of mental health challenges faced by students and promote proactive wellbeing strategies.

The session featured a team of trained mental health professionals and research students from NIMHANS, who led discussions on common mental health issues such as anxiety, stress, depression, and burnout, especially in academic settings.



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The event concluded with a strong message: **Mental health is as important as physical health**, and there is strength in seeking help. Feedback from participants was overwhelmingly positive, with many expressing appreciations for the safe space created and the approachable format of the program. The Department of Microbiology extends sincere thanks to the NIMHANS team and ICMR for their collaboration and commitment to student wellbeing. Further programs and follow-ups are being planned to ensure ongoing support for our academic community



Guest Lectures

“Exploring the Microbes of Saline Environments”

The Department of Microbiology, MSRCASC, organized an insightful guest lecture on “Exploring the Microbes of Saline Environments” on 10th May 2025 for II year B.Sc. students. Dr. Vivek Upasani, Scientist at Genexplore Diagnostics Pvt. Ltd., Ahmedabad, highlighted the diversity, adaptations, and biotechnological importance of halophilic microorganisms thriving in saline and hypersaline habitats.



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With 59 students participating, the session offered an engaging overview of extremophiles, their survival strategies, and current research approaches such as metagenomics.



The interactive lecture sparked curiosity among students and encouraged them to explore emerging research avenues in environmental microbiology.

“Health in 21st Century: Challenges & Innovation”

The Research & Development Cell of MSRCASC organized a Guest Lecture Series on “Health in the 21st Century: Challenges & Innovation” on 29th April 2025 at Kuvempu Seminar Hall. Two expert speakers addressed MSc students on crucial contemporary topics. Ms. Navitha Pinto delivered an



engaging session on “Safe Food is Divine,” highlighting food safety, hygiene practices, and the role of GMP and HACCP in preventing foodborne diseases.



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The second lecture by Mr. C. B. Appaiah from GangaGen Technologies focused on innovative protein antibiotic therapy and its significance in combating antimicrobial resistance. Both sessions provided valuable insights, bridging academic concepts with real-world applications and inspiring students to explore career opportunities in biotechnology, food safety, and public health.



Faculty Research Publication

Dr. Prashanthi, Assistant Professor, Department of Microbiology, has published a research paper titled **“Antimicrobial and Food Coating Applications of Iron Oxide Composite Embedded with Pectin and Xanthan Gum”** in the reputed journal **ACS Food Science and Technology**. Her study presents an eco-friendly, biodegradable food-coating material with excellent antibacterial activity, water resistance, mechanical strength, and biocompatibility.



When applied to apples and guavas, the coating significantly reduced spoilage and microbial contamination, extending freshness up to **30 days in apples** and **10 days in guavas**. This innovative work offers a promising sustainable alternative to plastic packaging and contributes meaningfully to research in environmental sustainability.