



**Dr. M.G.R.**  
Educational and Research Institute



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(An ISO 21001: 2018 Certified Institution) (University with Graded Autonomous Status)

Poonamallee High Rd, Vishwas Nagar, Maduravoyal, Chennai, Tamil Nadu 600095

## DEPARTMENT OF BIOTECHNOLOGY

PRESENTS

**BIobytes NEWSLETTER**

**JUL 2025 - SEPT 2025**

# NEWS

## Q3

A Newsletter  
for the Year  
2025  
**BT**



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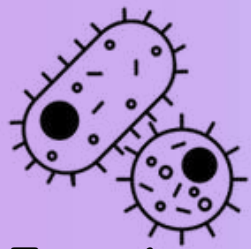
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**DEPARTMENT VISION & MISSION**

**VISION**



To strive towards the innovative knowledge in the domains of biotechnology for the development of new processes and product useful to the society and enrich economy

**MISSION**



To impart knowledge and skills in the biological sciences to improve human health, protect environment and to enrich economy. To provide an outstanding environment to learn for facing the global need in the fields of Biotechnology. We focus on excellence in teaching and research as well as to promote entrepreneurship .





# DEPARTMENT OF BIOTECHNOLOGY

## Program Educational Objectives of the Department

### PROGRAM EDUCATIONAL OBJECTIVES STATEMENTS (PEOs)

PEO No.	PROGRAM EDUCATIONAL OBJECTIVES STATEMENTS
<b>PEO 1</b>	Pursue higher studies or involve themselves in R&D activities in Biotechnology Industries and related organizations
<b>PEO 2</b>	Be a successful entrepreneur in creating jobs related to health science and Biomedical Society.
<b>PEO 3</b>	Promote ethics, sustainability, social environmental responsibility in their profession and career.

### LIST OF PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO No.	LIST OF PROGRAM SPECIFIC OUTCOMES (PSOs)
<b>PSO 1</b>	Ability to apply knowledge of basic life sciences for Biotechnological innovation and promoting entrepreneurship
<b>PSO 2</b>	Proficiency to develop value-added Biotechnological products through implementation, design, optimization, and scale-up of Biotechnological processes.
<b>PSO 3</b>	Competency to promote Biotechnological research in the fields of biomedical, food and environment-related fields and also to publish papers in highly reputed journals.



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# DEPARTMENT OF BIOTECHNOLOGY

## Program Educational Objectives of the Department

### PROGRAM OUTCOMES (PO)

PO<sub>1</sub>

**Engineering Knowledge:** Apply the Knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

**PO<sub>2</sub> Problem analysis:** Identify, formulate, review research literature, and analyze complex engineering problems reaching, substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

**PO<sub>3</sub> Design/development of solutions:** Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental consideration.

**PO<sub>4</sub> Conduct investigations of complex problems:** Use research based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

**PO<sub>5</sub> Modern tool usage:** Create, select and apply appropriate techniques, resources and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

**PO<sub>6</sub> The engineer and society:** Apply reasoning informed by the contextual knowledge to access societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

**PO<sub>7</sub> Environment and sustainability:** Understand the impact of the professional engineering solutions in societal and environmental contexts and demonstrate the knowledge of and need for sustainable development.

**PO<sub>8</sub> Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO<sub>9</sub> Individual and team work:** Function effectively as an individual and as member or leader in diverse teams and in multidisciplinary settings.

**PO<sub>10</sub> Communication:** Communicate effectively on complex engineering activities with the engineering community and with society at large such as being able to comprehend and write effective reports and design documentation, make effective presentations and give and receive clear instructions.

**PO<sub>11</sub> Project management and finance:** Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work as a member and leader in a team to manage projects and multidisciplinary environments.

**PO<sub>12</sub> Life-long learning:** Recognize the need for and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.



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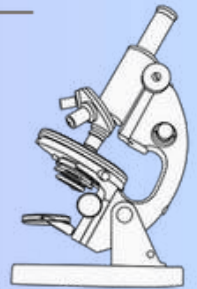
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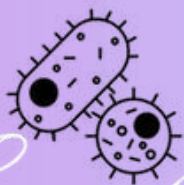
## DESK MESSAGE

**Dr. Gomathi K**

**HOD of Biotechnology Department**



This edition of our department newsletter is a great way for me to get to know you. Our department is dedicated to remaining at the forefront of innovation, research, and academic excellence as biotechnology continues to advance at a rapid rate. Our students and teachers have been actively involved in a variety of academic, technical, and extracurricular activities during the previous semester. Our department's accomplishments demonstrate the talent and commitment that make us unique, from winning awards in intercollegiate competitions to presenting research papers at reputable conferences. We take special pride in the efforts made to close the gap between theory and practice through cooperative projects, skill development workshops, and experiential learning. Through their contributions to academia, research, and industry worldwide, our alumni also continue to inspire us. A celebration of our progress and spirit as a group, this newsletter highlights some of those achievements, turning points, and memories. I urge every student to continue to be inquisitive, involved, and proactive in directing their academic path. Let's keep up the principles of integrity, innovation, and scientific investigation.



*Gomathi K*  
(Dr. Gomathi K)

**HOD SIGN**



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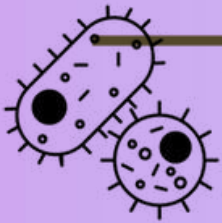
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### ACHIEVERS

Madhukavi G has actively participated in the State Level Youth Astronomy and Space Science Congress (YASSC 2025), organized by the Tamil Nadu Astronomy and Science Society in collaboration with leading scientific institutions. Her participation in events such as paper presentation, poster presentation, and astro-based activities reflects her keen interest and enthusiasm in astronomy and space science. This accomplishment highlights her interdisciplinary learning approach and dedication to expanding knowledge beyond her core field.



Thoufique Ayubkhan M, a B.Tech Biotechnology student of Dr. M.G.R Educational and Research Institute, participated in a One-day Training cum Workshop on Biomass Fermentation and Distillation for Bioethanol Production organized by Sathyabama Institute of Science and Technology, Chennai on 25.07.2025, demonstrating his interest in sustainable biotechnology and practical learning in bioenergy applications.

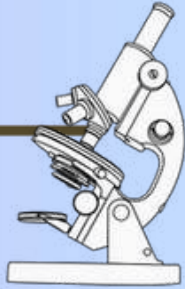
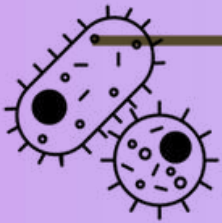




## DEPARTMENT OF BIOTECHNOLOGY

### PRESENTS BIOBYTES NEWSLETTER

### JUL 2025 - SEPT 2025



## STUDENT CORNER



The successful completion of the internship in Bioinformatics by Ms. Salla Kousu Venkata Swathi is highly commendable. Her dedication and active participation reflect a strong commitment to academic and professional excellence. This achievement marks a significant step in her journey toward a promising career in biotechnology.

Madhukavi G, a student of Dr. M.G.R Educational and Research Institute, has been awarded a Certificate of Appreciation for securing First Prize in the Drawing Competition on the occasion of the 8th GST Day 2025, held at Maduravoyal, Chennai. Her achievement reflects creativity, dedication, and excellence in co- curricular activities. This recognition highlights her talent and commitment beyond academics, bringing pride to the institution.





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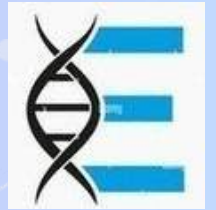
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**EVENT CORNER**

**"Biotechnological Approaches for Crop Improvement and Conservation"**



The Department of Biotechnology organized a guest lecture on "Biotechnological Approaches for Crop Improvement and Conservation" on 04/08/2025 at the University Auditorium. The session began with a welcome address by Mr. B.M. Pawan, followed by the introduction of the Chief Guest, Dr. K. Prakash, by Mr. Thoufiq Ayub Khan. Dr. Prakash delivered an informative lecture on post-harvest biotechnology, emphasizing challenges such as storage conditions and spoilage. He discussed innovative approaches including gene editing and microbial interventions to enhance shelf life, reduce post-harvest losses, and improve food quality and sustainability.





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## STAR OF Q<sub>3</sub> (STUDENT)



Ms. Madhukavi G has demonstrated outstanding academic performance by securing a GPA of 9.14. Her consistent dedication and excellence in the B.Tech Biotechnology program are highly commendable. This achievement reflects her strong academic commitment and promising potential in the field of biotechnology.

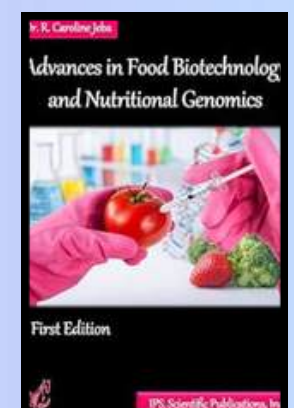
## STAR OF Q<sub>3</sub> (STAFF)

### Dr. R. Caroline Jeba

Dr. R. Caroline Jeba, Professor, Department of Biotechnology, Dr. M.G.R Educational and Research Institute, has made a notable academic contribution as the editor of the book “Advances in Food Biotechnology and Nutritional Genomics” . With over 20 years of teaching experience, more than 33 research publications, patents, and expertise in environmental and herbal biotechnology, her work reflects excellence in research and academic leadership.

The book presents recent advancements in food biotechnology, including microbial applications, gene editing, biofortification, and sustainable food systems, serving as a valuable resource for students and researchers.

Student Contributors: Sreepooja Parthasarathy, Viswes Kanna Sundaramoorthi, B. Swetha, S. Rohit; Bupithaa Murali; G. K. Saisri, R. Rajakumari, Sallakolusu Venkata Swathi, A. Mayuri, Keerthika; V. Vedhika, Sandhya.





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**B.TechBiotechnology**

