



**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**

**OCT 2025 - DEC 2025**

**NEWS**

**Q4**

**A Newsletter  
for the Year  
2025**

**BT**





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## DEPARTMENT OF BIOTECHNOLOGY

### PRESENTS

## BIobytes NEWSLETTER

OCT 2025 - DEC 2025

### 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.



# DEPARTMENT OF BIOTECHNOLOGY

## Program Educational Objectives of the Department

### PROGRAM OUTCOMES (PO)

PO1

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

**PO2 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.

**PO3 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.

**PO4 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.

**PO5 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.

**PO6 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.

**PO7 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.

**PO8 Ethics:** Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

**PO9 Individual and team work:** Function effectively as an individual and as member or leader in diverse teams and in multidisciplinary settings.

**PO10 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.

**PO11 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.

**PO12 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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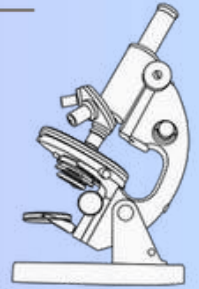
# DEPARTMENT OF BIOTECHNOLOGY PRESENTS BIOBYTES NEWSLETTER OCT 2025 - DEC 2025



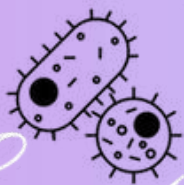
## DESK MESSAGE

**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.



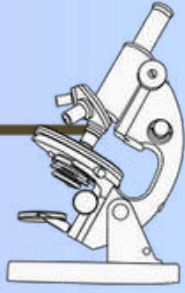
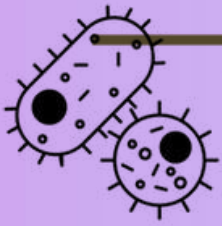
*K. Gomathi*  
(Dr. Gomathi K)

**HOD SIGN**



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### ACHIEVERS



**Sreepooja Parthasarathy and S. Viswes Kanna have successfully completed their Internship Training on Molecular Biological Techniques at AviGen BioTech Pvt. Ltd. from 23.06.2025 to 03.07.2025. Their participation reflects strong practical exposure, dedication to learning advanced laboratory techniques, and a commendable commitment to enhancing their skills in the field of biotechnology.**



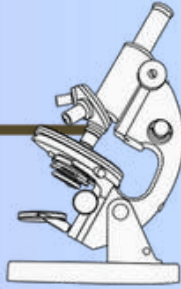
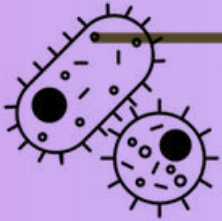
**G. K. Saisri has achieved an outstanding academic milestone by securing a GPA of 9.95 in her 7th semester and continuing her excellence into the 8th semester of the B.Tech Biotechnology program. Her consistent performance reflects exceptional dedication, academic brilliance, and a strong commitment to excellence in her field.**





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### STUDENT CORNER

Dhanushya B and Kishor MK have successfully completed their internship training at Metropolis Healthcare from 01st September 2025 to 18th September 2025. During the training, they demonstrated strong commitment, eagerness to learn, and the ability to effectively carry out responsibilities across various laboratory departments. Their performance reflects professionalism and dedication, marking them as promising individuals with strong potential in their respective fields.



Janani. R has achieved excellent academic performance by securing a GPA of 9.26 in her 4<sup>th</sup> sem B.Tech Biotechnology program. Her dedication and consistent effort reflect a strong commitment to academic excellence and a promising future in the field.



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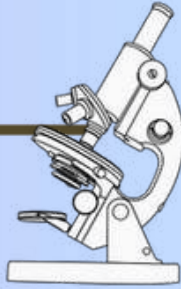
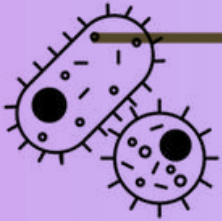
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### STUDENT CORNER

**B. Sriram, S. Rohit, and B. Swetha have successfully completed their internship training in the Clinical Biochemistry Laboratory, Department of Biochemistry, ICMR–NIRT. Their participation reflects strong dedication, technical learning, and practical exposure in clinical and diagnostic research. This achievement highlights their commitment to academic excellence and their growing expertise in the field of biotechnology.**





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### EVENT CORNER

#### National Symposium - Biozone 2025

Biozone'2k25 was successfully conducted on 13th and 14th October 2025, beginning with an inaugural ceremony that included a welcome address by Dr. K. Gomathi, Head of the Department of Biotechnology, and a keynote lecture by Chief Guest Ms. Sivaranjani Sankaranarayanan on "Leveraging Artificial Intelligence for Healthcare Innovation." The symposium aimed to integrate biotechnology with emerging technologies and promote research-oriented learning among students. The event featured a variety of technical activities such as paper and poster presentations, along with non-technical events including Questrun, Mimezone, and Who Am I, which encouraged creativity, teamwork, and analytical thinking. The second day continued with engaging events like Connexa and Talentrix, providing a platform for problem-solving and talent expression. The valedictory session was graced by Dr. V. Naveen Kumar, who shared insights on innovation and entrepreneurship in biotechnology. The event concluded with prize distribution and acknowledgements, marking the successful completion of Biozone'2k25.





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## EVENT CORNER

### Hands - on workshop on "Fermentation Techniques"



The hands-on workshop on fermentation techniques and molecular biology tests focused on Clinical Biochemistry and Molecular Diagnostics, providing practical exposure to laboratory procedures and diagnostic methods. It covered fermentation types such as batch, fed-batch, and continuous systems, along with blood sample collection, handling, and analysis using various vacutainers and biochemical methods. Key disease profiles including lipid, liver, renal, and diabetic tests were discussed with their clinical significance. The workshop also introduced molecular techniques like PCR, nucleic acid extraction, and RT-PCR. Emphasis was given to laboratory safety, biosafety cabinets, and biomedical waste management, ensuring comprehensive hands-on learning.



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## STAR OF Q3 (STAFF)

Dr. Deepalakshmi, Ph.D., of Dr. M.G.R. Educational and Research Institute, has successfully completed her doctoral research on *Pedaliumpurex* seed extract, focusing on its ameliorative effects on MSU-induced gouty arthritis. Her work explores plant-based therapeutic strategies for inflammatory conditions and highlights the potential of phytoniosome-based drug delivery systems in enhancing treatment efficacy, contributing to the development of effective and sustainable biomedical solutions.



Dr. Manimegalai, Ph.D., of Presidency College (Autonomous), Chennai, has successfully completed her doctoral research titled “Hepatoprotective Activity of the Leaves of Indian Medicinal Plant, *Merremia tridentata* (L.) Hallier F.” Her study highlights the therapeutic potential of medicinal plants in liver protection and provides valuable insights into natural product-based treatment strategies. Her work contributes significantly to advancements in plant biotechnology and pharmacological research, reflecting her dedication to scientific excellence and academic contribution.



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**MEENAKSHI.M**  
A - section  
4th year  
B.TechBiotechnology

