



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



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

## DEPARTMENT OF BIOTECHNOLOGY

PRESENTS

**BIOBYTES NEWSLETTER**

**APR 2025 - JUN 2025**

# NEWS

## Q2

A Newsletter  
for the Year  
2025

## BT



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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

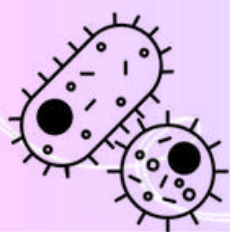
## Program Educational Objectives of the Department

### 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)

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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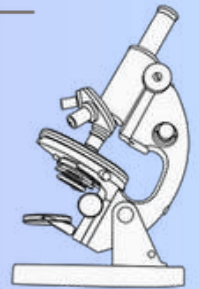
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**PRESENTS**  
**BIOBYTES NEWSLETTER**  
**APR 2025 - JUN 2025**



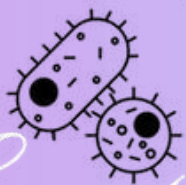
**DESK MESSAGE**

**Dr. Gomathi K**

**HOD of Biotechnology Department**



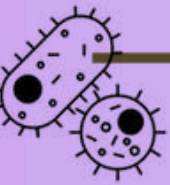
This edition of our department newsletter is a great way for me to get to know you. Our department is dedicated to remaining at the forefront of innovation, research, and academic excellence as biotechnology continues to advance at a rapid rate. Our students and teachers have been actively involved in 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.



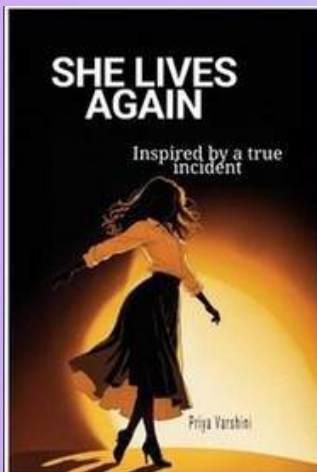
*Gomathi*  
(Dr. Gomathi K)  
**HOD Sign**



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**PRESENTS**  
**BIOBYTES NEWSLETTER**  
**APR 2025 - JUN 2025**



**ACHIEVERS**



**Priya Varshini**  
**4TH YEAR**



Heartfelt Congratulations to Priya Varshini- ARising Literary Star of 2025! We proudly celebrate final-year student Priya Varshini for her outstanding literary accomplishments. Her short story "She Lives Again," inspired by a true incident, was published under the National Book Writing Fest by BW Education & Bripublish. The story powerfully portrays grief, healing, and resilience, deeply moving its readers. Adding to her achievements, her poem featured in The Heart That Raised Me (Vol. 2), published by Blue Star Publication for Mother's Day. This anthology is part of a world record-holding collection now available on Amazon. Priya's writing beautifully honors the strength and love of mothers and maternal figures. Her ability to turn emotion into meaningful literature is truly inspiring. We admire her dedication, passion, and creative spirit. Wishing her continued success on her remarkable literary journey!

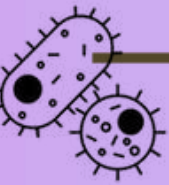


Congratulations to our talented students for winning 1st Prize in the Singing Competition at Rain Culturals, Dr. M.G.R. Educational and Research Institute! Kudos to Shakthishree, Sreepooja, Preethi, Padmapriya, Rishikeshwaran, and Usha for their soulful and harmonious performance that made us proud.



## DEPARTMENT OF BIOTECHNOLOGY PRESENTS

# BIOBYTES NEWSLETTER APR 2025 - JUN 2025



### ACHIEVERS

We proudly congratulate our talented students for securing 3rd Prize in the Dance Competition at the Rain Cultural's hosted by Dr. M.G.R. Educational and Research Institute. Special cheers to our 3rd-year performers – Mahalakshmi K, Priyanka, Sethukarasi, Kanishya, Meenakshi, Shivathmika, Swetha – and 2nd-year stars – Praharshidha, Nakshatra, Mahalakshmi, Gayathri – for their dedication and vibrant performance. Their achievement beautifully reflects their passion and pride in representing our institution.



Congratulations to Mahalakshmi K and Pawan Kumar from Biotechnology for being awarded Best Female and Male Performers at Rain'25 Cultural Fest, Dr. M.G.R. Educational and Research Institute. Their talent and dedication have made the department proud.



Kudos to Pawan for making it to the Chennai Fresh Face finalists! His presence among the top dancers reflects his talent, passion, and dedication, proudly representing Chennai's vibrant youth.

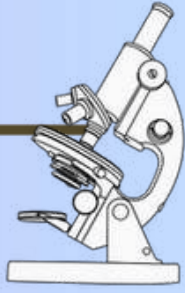
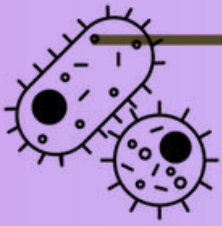


Congratulations to Sreepooja Parthasarathy and Swathi for their creative excellence! Sreepooja and Swathi, B.Tech Biotech students from Dr. M.G.R. Educational and Research Institute, won 2nd Prize in the Recycled Craft competition held during the National Youth Day 2025 celebrations. Your innovation and effort are truly commendable!





## DEPARTMENT OF BIOTECHNOLOGY PRESENTS BIOBYTES NEWSLETTER APR 2025 - JUN 2025



### STUDENT CORNER



**Congratulations to Abdur Rahman A and Meenakshi M for successfully completing their internship in the Clinical Biochemistry Lab at ICMR–NIRT from 10th to 24th February 2025. Your dedication and hands-on efforts in B.Tech Biotechnology from Dr. MGR University are truly commendable.**



**Congratulations to Janani B.L, Mayuri, and Bupithaa for actively participating in CHEMILOPLAST'25 at Anna University on 12th March 2025. Their involvement in hands-on training on Gel Permeation Chromatography and 3D Printing showcases their dedication to practical and technical learning.**



**Appreciation to Sreepooja Parthasarathy and Viswes Kanna, B.Tech Biotechnology students from Dr. M.G.R. University, for actively participating in the One-day Workshop on Biomass Fermentation and Bioethanol Production held on 25th January 2025 at Sathyabama Institute, Chennai.**



**We're proud to celebrate Sai Sri G.K., B.Tech Biotechnology (III Year), for winning 1st Prize in the Creative Writing Competition held as part of National Youth Day 2025, organized by the Department of English, Faculty of Humanities and Science, Dr. M.G.R. Educational and Research Institute.**





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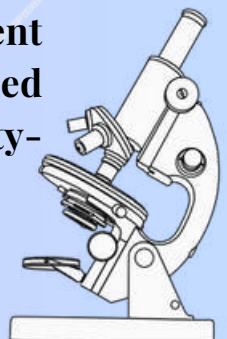
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## EVENT CORNER

### ISR event on "Transforming Lives"



The Department of Biotechnology organized an impactful ISR event titled "Transforming Lives" on May 7, 2025, at Maduravoyal. The early morning initiative witnessed vibrant community engagement as over 100 saplings—including Indian gooseberry, Pungai, Guava, and Hibiscus—were distributed to residents, students, and staff who pledged their commitment to nurturing them. The event served as a green call to action, raising awareness on biodiversity, soil conservation, and oxygen generation through inspiring talks and thought-provoking posters. Reinforcing its commitment to environmental responsibility, the department strengthened its role as a catalyst for sustainable living and community-driven ecological stewardship.





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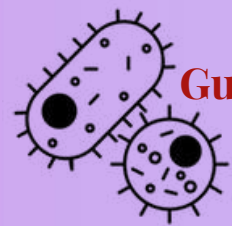
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## EVENT CORNER

### Guest Lecture on "Nanotechnology: Pioneering the Future of Medicine and Industry"

The Department of Biotechnology hosted an

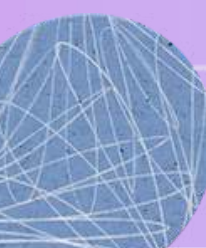
insightful guest lecture titled "Nanotechnology: Pioneering the Future of Medicine and Industry" on April 30, 2025, at the RA Auditorium. The event emerged as a grand success, sparking keen interest among students and encouraging dynamic participation in futuristic dialogues surrounding nanotechnology and its vast research potential. With thought-provoking discussions and visionary insights, the lecture ignited academic curiosity and enthusiasm, paving the way for continued exploration and innovation in this transformative field.



### Cultutrals "Cultures of Life: A Biotech Celebration"



The Department of Biotechnology brought vibrance and unity to the stage with "Cultures of Life: A Biotech Celebration," held on April 30, 2025, at the RA Auditorium. This spirited cultural event transformed the venue into a hub of creativity and collaboration, as students came together through energetic group songs and captivating performances. More than just a showcase of talent, the celebration fostered team spirit, encouraged participation, and strengthened bonds within the biotech community, marking the event as a joyful and inspiring highlight of the academic year.





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### ALUMINI



### **Alumni Interaction Series on "Lessons Beyond the Classroom: Alumni Wisdom Unveiled" - XV**

The Department of Biotechnology hosted the fifteenth edition of its Alumni Interaction Series, "Lessons Beyond the Classroom: Alumni Wisdom Unveiled," on April 25, 2025, at the RA Auditorium. The session featured Mr. T. Shriram Arun, whose engaging presence and insightful guidance captivated an audience of 80 budding biotechnologists. With powerful reflections on perseverance, effective communication, and self-motivation, Mr. Arun's dynamic interaction sparked inspiration and broadened horizons, leaving students with invaluable takeaways that extended far beyond the classroom. The event stood out as a vibrant blend of wisdom, enthusiasm, and real-world relevance.





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## STAR OF Q2 (STUDENT)



**Suresh**  
4th  
year

We proudly appreciate Suresh, a dedicated final-year Biotechnology student, for his outstanding contribution to the student project titled "Revolutionary Non-Invasive Early Detection of Lung Cancer: Special Reference to miRNA Biomarkers." His project, approved and funded by the Tamil Nadu State Council for Science and Technology (TNSCST) under the Student Project Scheme 2024–2025, reflects innovation, scientific rigor, and a commitment to impactful healthcare research. Suresh's dedication, along with his team, has brought pride to the department and serves as a strong inspiration to fellow students pursuing research with purpose. Congratulations on this remarkable achievement!

## STAR OF Q2 (STAFF)



**Dr. Thirunavukkarasu**

We extend our heartfelt appreciation to Dr. Thirunavukkarasu Palaniyandi of the Department of Biotechnology for being awarded a prestigious Seed Grant from our Hon. President, Er. ACS Arunkumar Sir. This recognition is a testament to his dedication and contributions to the field of biotechnology. His gratitude expressed towards our Hon. President, Vice Chancellor, Registrar, ACS AMRI Director Dr. Suba, Dr. Vidya Mam, and the Department of Biotechnology reflects his humility and collaborative spirit. Congratulations, Dr. Thirunavukkarasu, on this commendable achievement—your success inspires academic excellence and research innovation within our department.



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## RESEARCH & INNOVATIONS



The Department of Biotechnology takes immense pride in congratulating Dr. Mugip Rahaman on the successful completion of his Ph.D. from Dr. M.G.R. Educational and Research Institute. Dr. Rahaman's journey has been one marked by relentless dedication, innovative thinking, and a true spirit of academic excellence.

His outstanding performance during his final presentation, especially his confident handling of the Q&A session, left a lasting impression on all attendees. Such poise and clarity reflect not only his mastery of the subject but also his depth of understanding and originality in research. Dr. Rahaman's contributions to the field of research and innovation have been truly inspiring. His work exemplifies the values we uphold as a department—intellectual curiosity, resilience, and the pursuit of impactful solutions through science. We extend our warmest congratulations to Dr. Mugip Rahaman and look forward to seeing his continued success as a scholar and innovator in the years to come.



**Kudos to Our Research Team!**

We proudly congratulate Ranjani Renugopal, Dr. Thirunavukkarasu Palaniyandi, Dr. Barani Kumar Rajendran, Dr. K. Senthilkumar, Ravi Maddaly, Gomathy Baskar, Mugip Rahaman, and team for their remarkable contribution to green nanotechnology through their recent publication on *Tribulus terrestris*-mediated nanoparticles. Your innovative and eco-friendly approach sets a benchmark in sustainable research. Keep inspiring!



## DEPARTMENT OF BIOTECHNOLOGY PRESENTS BIOBYTES NEWSLETTER APR 2025 - JUN 2025

### CREATIVE CORNER

#### Do you know ?!

“Smarter Proteins, Designed by Code”

In a groundbreaking fusion of AI and biology, scientists in 2025 created entirely new proteins—not found in nature—using powerful models like AlphaFold and ESMFold. These artificial proteins are custom-built to perform specific tasks such as targeting cancer cells, breaking down plastic waste, or acting as smart drug carriers.

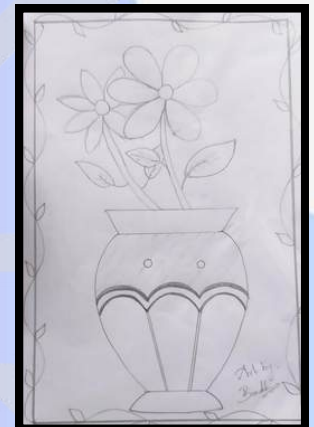
This innovation pushes the boundaries of protein engineering, allowing researchers to design molecules with precision, speed, and purpose—opening up new pathways in drug discovery, sustainable materials, and synthetic biology.



-MEENAKSHI.M

#### \*\*Her\*\*

Sparkle in her eyes,  
A tint on her lips,  
Beautiful curve smile,  
And unpolished fingertips.  
The sparkle in her eyes you see,  
And in which she glimmers,  
Is the vitreous, past tears.  
The tint on her lips,  
Is a hint of the blood,  
That flows through her scars.  
Her smile, beautiful and curve,  
Is an objectification for those who gaze,  
Special emphasis on the "curve".  
And then there are her unpolished fingertips,  
The sole symbol of her revolt against the world,  
And the fake perfection it adores.  
You see;  
Like the winds that sway across the bay,  
Her mind refuses at once to stay,  
Dazzling all upon that sundew hay,  
Her being a savage, but nonetheless a slay.



- BY R. PADMAPRIYA

.... BY HITARTHI SHARMA



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