



Dr. M.G.R.
EDUCATIONAL AND RESEARCH INSTITUTE
(Deemed to be University with Special Autonomy Status)
Maduravoyal, Chennai - 600 095, Tamilnadu, India.
(An ISO 9001-2015 Certified Institution)



Q4 EDITION

DEPARTMENT OF BIOTECHNOLOGY

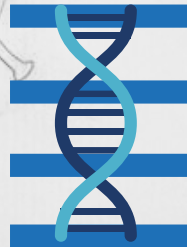
PRESENT'S

BIOBYTES NEWSLETTER

A QUARTERLY NEWSLETTER

2021

"Only those who dare to fail greatly can ever achieve greatly."



A newsletter is a tool used by businesses and organizations to share relevant and valuable information with their network of customers, prospects and subscribers.



ISSUE NO : Q4



DEPARTMENT OF BIOTECHNOLOGY

DEPT. - ISSUE NO. - DATE / MONTH / YEAR : BT - Q1& Q2 & Q3 & Q4 -

DEPARTMENT VISION AND 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

“Our world is built on biology and once we begin to understand it, it then becomes a technology”



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PROGRAM EDUCATIONAL OBJECTIVES OF THE DEPARTMENT

PEO No.	Program Educational Objectives Statements
PEO 1	<ul style="list-style-type: none">Pursue higher studies or involve themselves in R&D activities in Biotechnology Industries and related organizations
PEO 2	<ul style="list-style-type: none">Be a successful entrepreneur in creating jobs related to health science and Biomedical Society.
PEO 3	<ul style="list-style-type: none">Promote ethics, sustainability, social environmental responsibility in their profession and career.

List of Program Outcome for the program Engineering Graduates will be able to:

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 considerations.

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 modelling to complex engineering activities with an understanding of the limitations.

PO6: The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.



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PROGRAM EDUCATIONAL OBJECTIVES OF THE DEPARTMENT

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.

PO: 9 Individual and team work: Function effectively as an individual, and as a 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 in 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 holders (Industry experts, and with the other reputed universities) have been received.

LIST OF PROGRAM SPECIFIC OUTCOMES (PSOs)

PSO1: Ability to Apply knowledge of basic Life sciences for Biotechnological innovation and promoting entrepreneurship

PSO2: Proficiency to develop value-added Biotechnological products through implementation, Design, optimization, and scale-up of Biotechnological processes.

PSO3: 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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HEAD OF DEPARTMENT

DESK MESSAGE



Dr. Rajeswary Hari

HOD of Department Biotechnology

The Department of Biotechnology was started in the year 2003 with an objective of generating trained manpower in Biotechnology with disciplinary skills from Chemical engineering, Computer Science and Management Skills. Biotechnology is the application of Biology for industrial purposes such as development of vaccines, biomaterials, reducing toxic waste by using microbial or enzyme based processes, development of new drugs for treating emerging and reemerging diseases, development of newer diagnostic methods for diagnosis of human diseases, development of crops with additional productivity or added advantages etc. The Research focus in our Department involves methods to reduce environmental pollution by using micro organisms, identifying the plant products which can be used to treat diabetes, fasten the wound healing processes; understanding the role of SNP in critical gene in the development of cancer; and monitoring and understanding the mechanisms of antibiotic resistance in bacteria. The Dept. is supported by grants from the SERB, DST, DBT & CSIR. The department is motivating the students and faculties to actively involve in research programme and also to publish articles in national and international journals & Conference. The Department offers B.Tech and M.Tech Programs in Biotechnology, M.Tech in Medical Biotechnology and Ph.D. programs also

Rajeswary Hari

HOD Sign



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ACHIEVEMENTS

As we saw some of our department achievement students in Q3 edition , Here we cherishing the Q4 edition students Mr. V. Ramkumar of third year B section currently studying Btech in Biotechnology at Dr. M.G.R Educational and Research Institute



V. Ramkumar
3r year B.tech
Biotechnology

performed an altruistic act of welfare service and awarded for his volunteer work at Panimalar Medical College Hospital and

Research Institute located at Poonamallee. His welfare service was done as a part of 'General Medical Camp' hosted by the Udhayanidhi Stalin Welfare Association, Thiruninravur of Thiruvallur district. followed by this Our Department of Biotechnology organized the 'National Level Symposium' called 'Biozone 2021' which had an array of incredible events covering both technical and non technical fields. Under technical we had Quiz, Paper presentation and Poster presentation. Habitha Shree of third year biotech department, 'A' sec won the first prize for quiz, Girshani of 2nd year Btech won the first prize for paper presentation and Kamali from Bsc.

Biotech second year won first for poster presentation. Under non technical events we had rangoli, poem, painting and fruit and vegetable carving. Bhuvaneshwari I. of Bsc. Biotech second year stood first for rangoli. And for poem, the first place was grabbed by Kamali C. of Bsc. Biotech 2nd year. Aksay from 2nd year Btech stood first for painting and Vadlamudi Satish Kumar from 2nd year Btech won first for vegetable and fruit carving

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Publications

CVR JC
STAR AUTHOR
OCTOBER 2020



Dr. M. Vijayalakshmi
PROFESSOR
DEPARTMENT OF
BIOTECHNOLOGY

We are happy to appreciate the staff members who have endeavored to publish their paper in WOS and Scopus Indexed Publications, which was updated in the month of October 2020. We are also gratified to announce the " CVR JC STAR AUTHOR of October 2020 " , Dr. M. Vijayalakshmi , Professor Department of Biotechnology. We are very happy about her colossal success .



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STUDENT CORNER

We Department of Biotechnology organized the 'National Level Symposium' called 'Biozone 2021' which had an array of incredible events covering both technical (Quiz, Paper presentation and Poster presentation) and non technical (rangoli, poem, painting and fruit and vegetable carving). In technical event Habitha Shree of third year biotech department, 'A' sec won the first prize for the technical quiz and the second and third place went to Poojashree and Faiqa Naveen respectively; both from the Biotech department. Girshani of 2nd year Btech won the first prize for paper presentation and Keerthi Shri from Bsc Biotech-second year was runner up and the position of second runner up was shared between Kami Poojitha and Priyadarshini; both from Bsc biotech, currently in their second year. Kamali from Bsc. Biotech second year won first for poster presentation. Blessy from Bsc Biotech bagged the second and Pranav from Btech came third. In non technical events Bhuvaneshwari I. of Bsc. Biotech second year stood first for rangoli and Lekhi Shri M from Bsc Biotech won the second place. And for poem, the first

first place was grabbed by Kamali C. of Bsc. Biotech 2nd year and the second place went to Praveen Kumar and third place to Rajashree. Aksay from 2nd year Btech stood first for painting and Keerthi S from Btech 2nd year came second and the third place went to Chaitanya Parveen from second year Btech. Vadlamudi Satish Kumar from 2nd year Btech won first for vegetable and fruit carving and Bhuvaneshwari R from Bsc Biotech 2nd year was the runner up. Then Technical talk by Dr.K.Ashok Kumar Associate Professor Vels Institute of Science, technology and advanced sciences. The Eminent speaker discussed about Nutraceuticals for cancer prevention. The department of Biotechnology of Dr. M.G.R. Educational and Research Institute in association with National Small Industries Corporation conducted a technical skill training for Btech students on the topics Raspberry Pi and Nutrition Science and Food safety from October 18th 2021 to October 22nd 2021. It was an informative and educational online workshop which benefited the students immensely





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DEPARTMENT MEET

We are much excited to share with you, our department occurrence in this semester. On September 27th to October 1st, 2021, the Department of Biotechnology at the Dr.M.G.R. Educational and Research Institute hosted a five-day online faculty development workshop on "Research Opportunities in Biotechnology." Dr. P. Prithviraj Nagarjan, Research scientist, Medical college and hospital, Vinayaka Mission, Research Foundation, provided us an insight into the topic "Bioactive natural compounds and their therapeutic applications" on Day 1 (27/09/2021) and Day 3 (29/09/2021). On DAY 2 (28/09/2021), Dr. Murugan N, Scientists and Deputy General Manager, Infectious Disease-Molecular Genetics Division, Lifecell International Pvt Ltd lab, led a lively session on "Applications of NGS & Molecular Diagnosis." Dr. Bharathi Ravikrishnan, Head Department of Biotechnology, Guru Nanak College, on the following day (30/09/2021). The speaker's presentation was titled "Biotechnology Industry-4.0." Mr. Laven Lokesh Barani, Founder & Chief Trainer at plant green Inertia, on the last day (01/10/2021). His lecture on "Trends in Biotechnology" provides students with more useful information and engaging sessions. The department's Frederick Sanger Journal Club organized a

meeting on the topic "choosing right journal for publication" held on 5.10.2021 through google meet. The speaker insisted the importance of right publication. We are grateful to the staff members who have worked hard, to have their articles published in WOS and Scopus Indexed Publications, which was updated in October 2020. The CVR JC STAR AUTHOR of October 2020 has been announced. The colossal achievement of Professor M Vijayalakshmi, Department of Biotechnology makes us pleased.

Newly Appointed Members :

We department of biotechnology has appointed two more faculties for our dept. to procure additional enormous outcome of our students. Namely Mr. K. Gnanamoorthy M.Sc., M.Phil., Biotechnology, who is appointed as assistant professor. Then Mrs. Suganya M.Sc. designated as a Lab assistant & programmer in our department.



Mr. K. Gnanamoorthy
Assistant Professor
Dept. of Biotechnology



Mrs. Suganya
Lab assistant / programmer
Dept. of Biotechnology



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EVENT CORNER

The Department of Biotechnology, Dr.M.G.R. Educational and Research Institute Organised The Interdisciplinary lecture was conducted on "Artificial Intelligence in Biomedical Application

Interdisciplinary Lecture



Dr K Sujatha
Professor EEE Dept.
at MGR University

” held through Google meet on 1.10.2021. The Eminent speaker of this session was

Dr. K Sujatha, professor Department of EEE, Dr MGR Educational Research Institute. The illustrious speaker discussed application of AI and various scope in related fields. Then we Organised a five-day online faculty development program on "Research Opportunities in Biotechnology" , On DAY 1 (27/09/2021) and DAY 3(29/09/202), Dr. P.

Prithviraj Nagarjan Research scientist, Medical College and hospital, Vinayaka Mission, Research Foundation gave us the insight on the topic

"Bioactive natural products and its clinical applications". He imparted the knowledge in stem cell tissue and its regeneration on day 3. On DAY 2(28/09/2021), The session held vibrantly with the topic "Applications of NGS & Molecular diagnosis" by Dr.Murugan N, Scientists and deputy general Manager, Infectious Disease-Molecular Genetics Division, Lifecell International Pvt Ltd lab

On next day(30/09/2021), Dr.Bharathi Ravikrishnan ,Head Department of biotechnology,Guru Nanak college.The topic presented by the speaker was on "Biotechnology Industry-4.0". On the last day (01/10/2021), Mr. Laven Lokesh Barani Founder & chief trainer at plant green Inertia. His presentation on " Trends in Biotechnology" gives more informative content to the students and more interactive sessions.he ISR event was organised on "Nep 2020-Awareness to common public" held on

NEP Awareness



Dr.P.UDHAYAKALA
M.Sc.,(Psychology)
M.Sc.,(Value Education and Spirituality)
Ph.D. M.Phil.,M.Sc., (Chemistry)

08/10/2021 which was conducted through Streamyard and live telecasted in the dept. Youtube channel . The Department also

organised a National level Symposium "Biozone 2021" held on 27.10.2021 & 28.10.2021 which was conducted through zoom meet.The technical events include Technical talk,(paper/poster presentation,Quiz and the Non-

Technical Talk



Dr. K. Ashok kumar
M.Sc., M.Phil.,
M.Tech., Ph.D., SET

technical events are Fruit/vegetable cravings,kavithai writing,Painting,Rangoli making.The Guest for the Technical talk is Dr.K.Ashok Kumar Associate Professor Vels Institute of Science, technology and advanced sciences.He discussed about Nutraceuticals for cancer prevention .At last we make time to thank our department faculty & students for their Coordination



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ALUMNI CORNER

Here we came up with a Department Alumni Talk which is titled as FUTURE PROSPECTS OF BIOTECHNOLOGY - A MIX - ALUMNI CONCLAVE. The report of the event is here The event was day 17 of MGR Alumni conclave started with the welcome address given by the Head of the Department Dr. Rajeswary Hari which was followed by the felicitation address given by our Vice Chancellor, Dr.S.Geethalakshmi, Dr.MGR Educational and Research Institute. Next speech was given by Mrs. T. Kirubadevi, Deputy Dean, representing the MAA association and highlighting the important features of it. Following this MGR Alumni conclave 2021 was briefed by Ms. Deepalakshmi, Alumni Coordinator, Department of Biotechnology. The moderator Ms. Aparna K, Department of Biotechnology, was introduced by Ms. Habitha, 3rd Year student. Then the program was taken by the moderator by welcoming the audience and the panelists. He introduced the speakers to the audience, Dr. Nibedita Dey, Dr. Twinkle Kumar Sachchan, and Er. Hari Datt Athreya. In the First round, the speakers shared their journey into dentistry and in the second round, the importance of the event topic Future Prospects of Biotechnology was discussed. In the third round moderator asked questions

regarding the best practices in their working environment. The conclusion was given by the moderator with future forward on the event

topic. Alumni of regarding the best practices in their working environment. The conclusion was given by the moderator with future forward on the event topic. Alumni of our college from different specialties of Biotechnology shared their experience, knowledge and their journey into dentistry among the present students and faculties.

Here we can say that the last time our department committee meet for 4th years happened in 2020 because of corona issues. The first meet was held on September 3, rd 2020 by Class coordinator Er. Sri Devi M & Then 2nd meet on September 7 th 2020 by Class coordinator Dr. K.J. Sharmila. In this common they discussed network issues. A few students had difficulties in joining the Google Meet & Feedback about online mode of sessions, Issues faced by students.





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STAR OF Q4



S roshini
4th year Biotechnology

She has completed the " Multiple dose vial policy " and " Vaccine Vial Monitors (VVM) " organised by UNICEF and "nutrition education program on Anemia " conducted by the Ministry of women and child development and the ICMR . She has dynamically did her part as a coordinator for " MGR Covid -19 Cowinwewin - A 21 days , 33 departments 41 innovative events on Covid 19 awareness . Roshini selvan has accomplished a professional diploma program in Bioseperation engineering provided by the European open university. She has also actively put in her appearance in various internships courses and programs conducted by several organizations and groups in particular had participated in "understanding Ebola virus " organised by Alison , taken part in the Solar light assembling and maintenance program by National Institute of rural development and panchayat Raj, participated in the open WHO course on Antimicrobial Stewardship. She have successfully completed her course on genetic engineering and an internship conducted by the Multisols . She has secured a merit in the National quiz on " Plant tissue culture and biotechnology " and have also been the community leader in the "Unschool Community Program ".



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