



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)

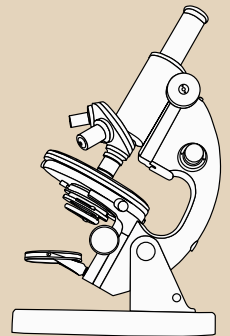
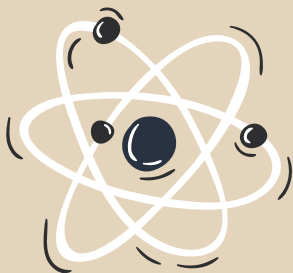
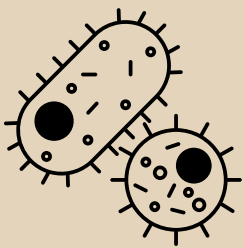


— DEPARTMENT OF BIOTECHNOLOGY —

PRESENT'S

BIOBYTES NEWSLETTER

BT-Q3- 22 SEPTEMBER, 2022

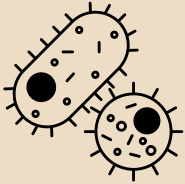




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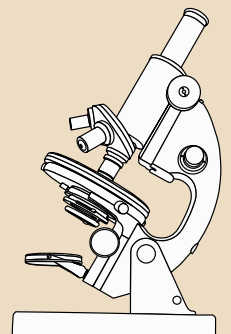
DEPARTMENT VISION & MISSION

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





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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.

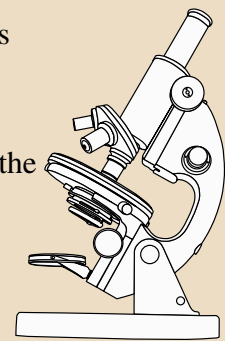
PO2: Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

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.

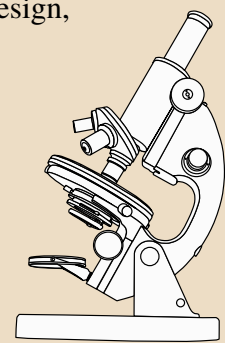
PO12: Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change holders (Industry experts, and with the other reputed universities) have been received.

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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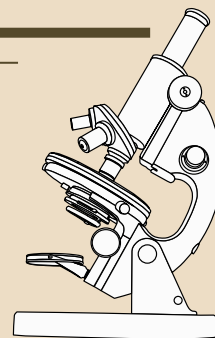
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DESK MESSAGE



Dr. Rajeswary Hari
HOD of Biotechnology Department



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 publishish 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



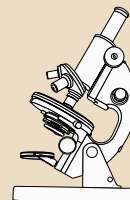
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STUDENT CORNER



Our freshers day was not just an event it is filled with happiness, joy and celebrations! Our seniors did a tiring fullfilness of making ends meet, Firstly we all gathered in college with our Dress code in our respective Years, we started our day in our MT block with all mind-blowing decorations for this occasion then followed by MC by our Students and the programme started involving Great Duo, Trio and Group Dances of 4th Year and 3rd year and then carried on by our Games conducted like first to do a certain Pushups and the one who is consistent is the winner then Spin ur head on a cane and walk straight even when u r feeling Dizzy and the winners were given a chocolate for appreciation. Lunch which was provided as a combo set which was good and after our feast we started our exact freshers celebration by gathering in our college Ground area at the garden with a stage setup and wonderful decorations. Our 4th year Boys did Duo dance followed by a Group singing performance and then Our 3rd Year Boys did an Entertaining and wonderful Group Dance and Solo Dances were also conducted. On a whole, our Day was well executed and organized as the fresher's enjoyed with their cheers of joy and happiness and it ended with a positive mind of joy and enthusiasm.



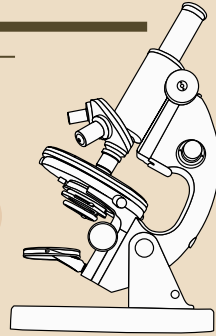
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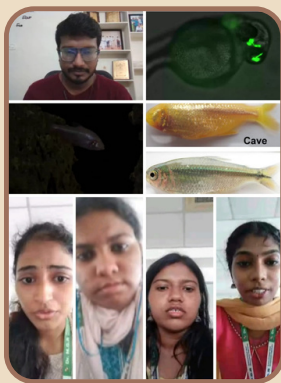
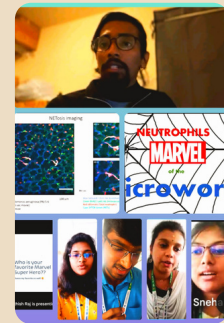
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EVENT CORNER

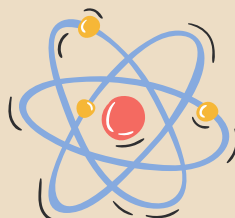
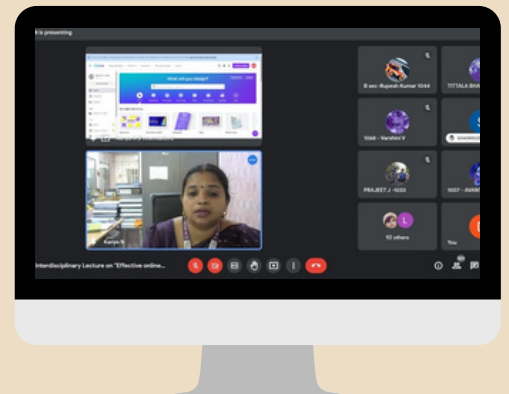


On 8th Aug our department organized an alumini talk from our Alumini Mr.Nithish Raj Prasad currently pursuing his (PG) Biomedical engineering at University of Illinois,Chicago to give an exposure regarding the knowledge and career in biotechnology and he made an open talk on "Research on Neutrophils and its mechanism" and where students made utmost use and cleared all their doubts.



Our department of Biotechnology, Dr.MGR Educational And Research Institute organized a Technology Talk on "Unorthodox model Organism in life science : Zebra fish, Cave fish & African fish" via gmeet on 16.08 2022 . The event started by the day speaker Sudharshan Varatharajan , CEO Founder - B for Biology, a Biotech community , he gave knowledge regarding basic Model organism research and some types and emphasized on variety of topics to be researched with Zebra fish. As outcome many of our students got an idea of using model organism for research as their final year thesis.

On 25th Aug , we had an interdisciplinary oration organized by the department of Biotechnology on "Effective Online Content Creation" presented by Dr.N.Kanya, additional Dean of Engineering and Technology ,also a Professor and head of Information Technology provided great ideas regarding how to create an efficient online content , templates, posters and presentations using CANVA (smartphones)students got significant informations .

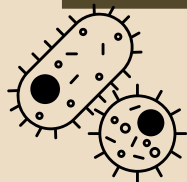




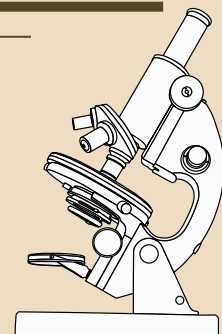
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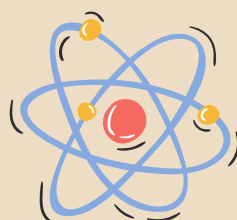
EVENT CORNER



On 14th Sept our department of Biotechnology organized a talk on "Convergent Bioprocessing: An Evolutionary Journey Across Many Disciplines" by Dr.K.J.Sharmila, associate Professor (dept of Biotech). The event started by addressing our Chief speaker continued with the oration regarding the significance and opportunities in the field of Bioprocess , about history on production of antibiotics , fermentation Industry and conversion of microbes into medical resources and we had an clear view on industrial production of antibiotics and the event ended with an vote of thanks to the Speaker, event organizers .



Department of Biotechnology, Dr.MGR Educational And Research Institute organized an open talk on 22.09.2022 by Mrs.Aparna.K , Assistant Professor (dept of biotech) on "Role of Selective Estrogen Receptor Modulator in Cancer." The chief Speaker gave informations about various roles of Estrogen in Cancer, Production of Estrogen hormones in Cancer about its receptors and early detection of Cancer like breast and ovarian cancer. Event made its success with a doubt clearance and interaction based on the lecture.





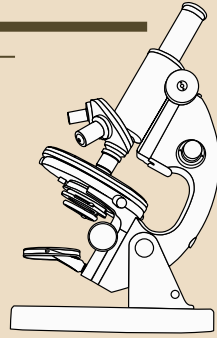
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STAR OF Q3



D A LALITH KUMARR

We are delighted to publish the star person of our department, ever passionate Mr. D A Lalith Kumarr, studying (UG) 3th year B.tech BT at our esteemed Dr.MGR Educational And Research Institute. He got an opportunity to do a one month internship training in the Univertisi Malaysia Terengganu (UMT) on the topic "Cytotoxicity of Acacia leucophloea (Roxb.), Willd against HepG2 & LO2 cells". Plant extracts are used for checking the cytotoxicity of HepG2 and LO2 cells. He studied more about the Cancer cells and their Characteristics. The leaves of A. leucophloea were used to make the extracts. And checked the cytotoxicity of cells using MTT Assay. Then he learned about the animal cell culture process, cell counting, MTT assay and cryopreservation. I gained knowledge about the handling of equipment such as the Rota evaporator, Bsc cabinet and Microplate reader. This kind of opportunities of knowledge gaining, network building with the people outside our country, team working experience with seniors and new community of people, Hands on training in new environment provides a great experience for him.....Participated and got selected in IIT PALs "Think Create Engineer" Residential workshop at IIT Madras Campus for 3 days. He had completed the program and the mini project on "System to Nudge people to shorten online meetings" which will help the people to finish the session on time as well as allow speaker to know his/her time limits. He got 2 certificates, Certificate of participation in workshop and also he got 1st price for his project so he got awarded the Certificate of appreciation with cash price of 2500. An engineer not just thinks, he thinks creatively and approaches things innovatively. This program developed skills in use by giving on spot challenges.



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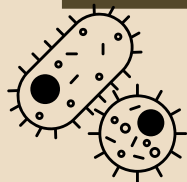
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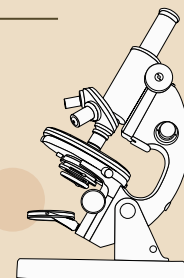
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