

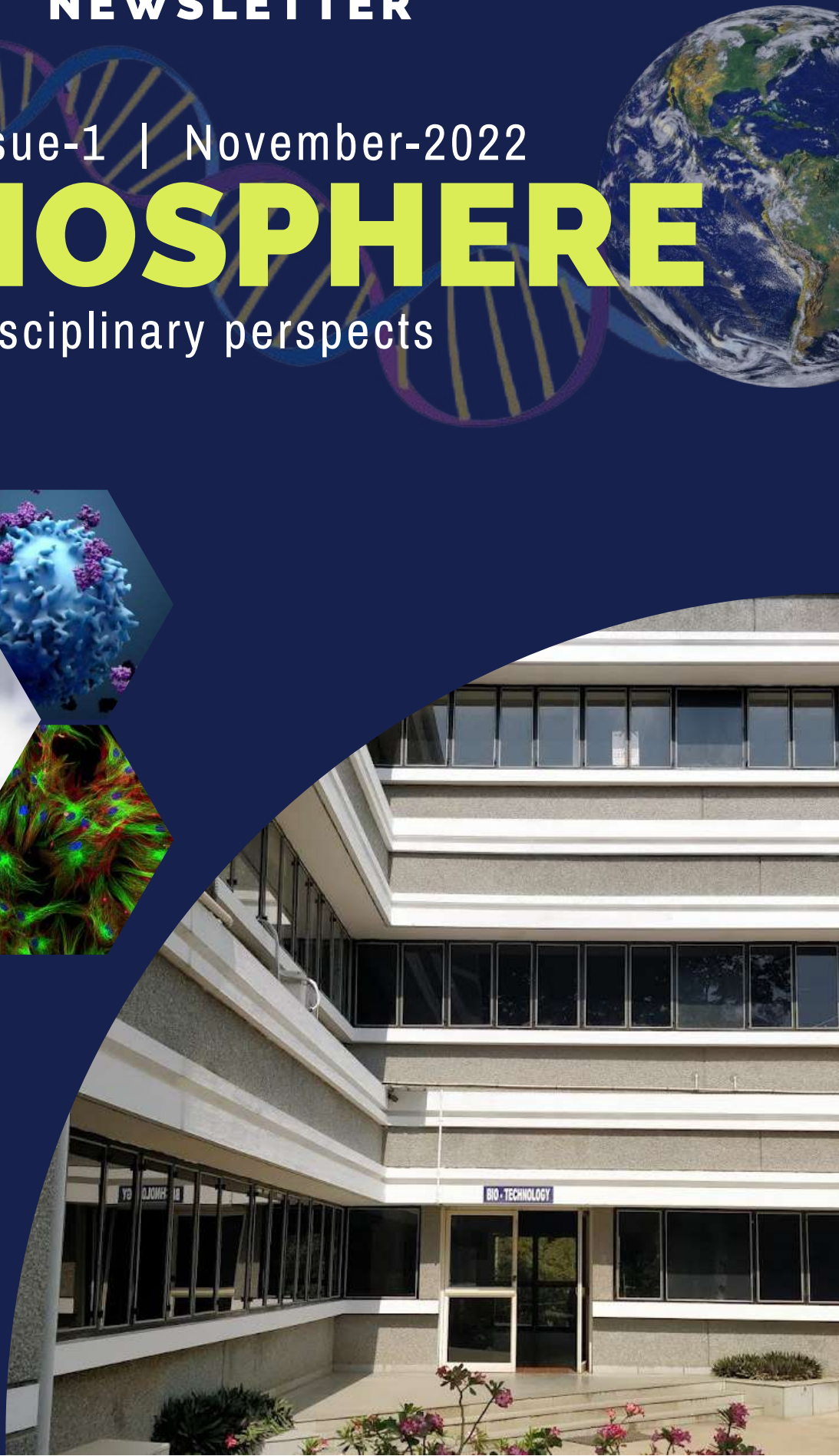
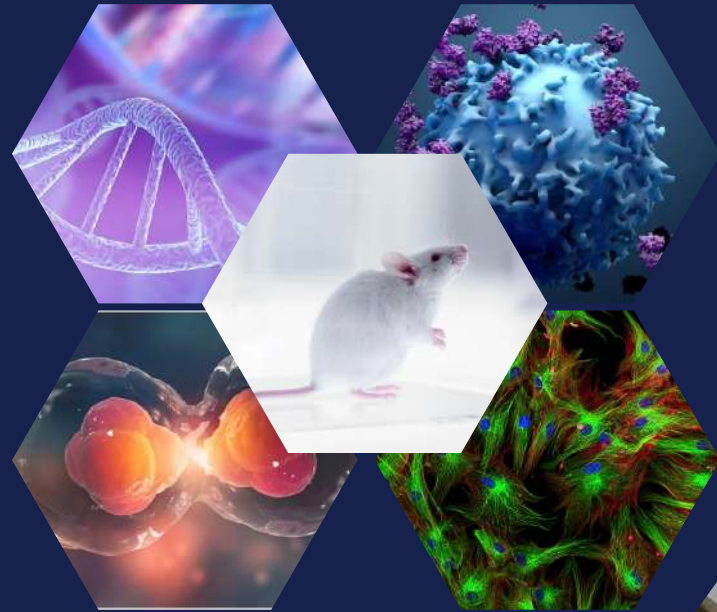
DEPARTMENT OF BIOTECHNOLOGY

NEWSLETTER

Volume-1 | Issue-1 | November-2022

BIOMOSPHERE

Echoing multidisciplinary perspecks



EDITORIAL TEAM



DR. M. SIVANANDHAM
Secretary, SVEHT
Visiting Professor
Biotechnology



DR. E. NAKKEERAN
Professor and Head
Biotechnology



DR. K. DIVAKAR
Associate Professor
Biotechnology



DR. K. GANESH PRASATH
Assistant Professor
Biotechnology



MR. J. G. ASWIN JENO
Assistant Professor
Biotechnology

Vision

To produce higher caliber Biotechnologists to attain new heights in bioinformatics and bioprocess technology as per industrial needs and to provide leaders in the field of Biotechnology.

Mission

- To progress the department to attain center of excellence in bioinformatics and bioprocess technologies by providing best Undergraduate, Postgraduate, Doctoral programs and R&D activities within a decade.
- To develop special skilled training programs for graduates to meet the personality characters stipulated by the industries within a period of five years.
- To build potential biotechnologists capable of dealing with new challenges and socio-ethical implications.

B. Tech. Biotechnology

Program Educational Objectives

PEO-1. To produce Biotechnology graduates who will be employable in core Biotech/Pharma industries and domain-based software services.

PEO-2. To produce research-oriented Biotechnology graduates who will be employable in academic/Industry sponsored research and also who will be pursuing higher studies.

PEO-3. To produce bioentrepreneurs.

Program Outcomes

PO-1. Engineering Knowledge: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO-2. 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-3. 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.

PO-4. 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-5. 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-6. 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.

PO-7. 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-8. 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.

PO-10. 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-11. Project management and finance: Demonstrate knowledge and understanding of the engineering 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.

PO-12. Life-long learning: Recognize the need for and have the preparation and ability to engage in independent and lifelong learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO-1: To make the students understand and apply the knowledge of computational systems biotechnology to design and develop biologics to meet societal needs.

PSO-2: To train the students to meet the requirement of bioprocess industries for developing techno-economical processes.

PSO-3: To empower the students with competent skill sets for bridging the gap between academia and the requirements of the healthcare industry.

M. Tech. Biotechnology

Program Educational Objectives

PEO-1: To prepare the students to excel and succeed in biotechnology research or industry through the latest state-of-art postgraduate education.

PEO-2: To train students with good scientific and technical knowledge so as to comprehend, analyze, design and adopt innovative and new technology that provides solutions for developing novel biotechnological products.

PEO-3: To create bioentrepreneurs with good communication and leadership skills, respect for authority and the life-long learning needed for a successful professional career.

Program Outcomes

PO-1: Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems.

PO-2: An ability to write and present a substantial technical report/document.

PO-3: Students should be able to demonstrate a degree of mastery over the area as per the specialization of the program. The mastery should be at a level higher than the requirements in the appropriate bachelor program.

PO-4: Ability to examine the technological problems in various domains of Biotechnology apply modern engineering tools for the prediction and modeling of complex engineering problems with a focus on sustainable development.

PO-5: Students should be able to acquire self-management and teamwork skills to collaborate with multidisciplinary teams from academic, industry and research institutes of national or international repute, with a commitment to lifelong learning.

PO-6: Potential to apply biotechnological solutions by adhering to the standards of bioethics with social responsibilities.

Program Specific Outcomes (PSOs)

After the successful completion of M.Tech. Biotechnology program, the students will be able to:

PSO-1: Demonstrate the biotechnology concepts and research approach and apply them for healthcare and industrial applications.

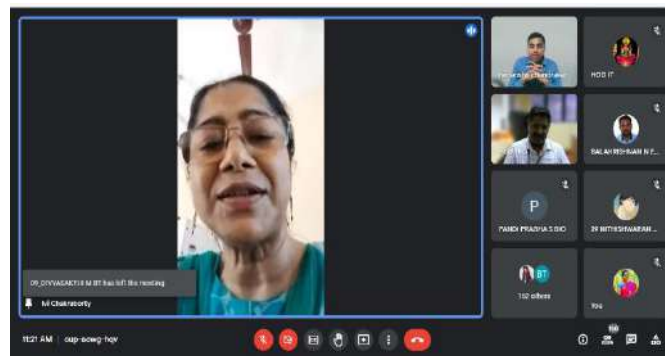
PSO-2: Possess scientific and technological skills to design and develop novel bioproducts for addressing biological and healthcare challenges.

PSO-3: Analyze the socio-economical needs and possess the necessary expertise to become a bioentrepreneur.

Events Organized

Workshop

Dr. K. Vasantharaj, Assistant Professor and Dr. G. Karthigadevi, Assistant Professor, Department of Biotechnology, SVCE in association with Rajiv Gandhi National Institute of Intellectual Property Management, Nagpur (Government of India) organized an online workshop on "Intellectual Property Rights & Patents and Design Filing" under National Intellectual Property Awareness Mission during 2nd November, 2022. Himanshu Chandrakar, Examiner of Patents & Designs, RGNIIPM, Nagpur acted as the resource person.



Guest Lecture

"Managing Cancer: From Understanding the Cause to Developing Treatment"

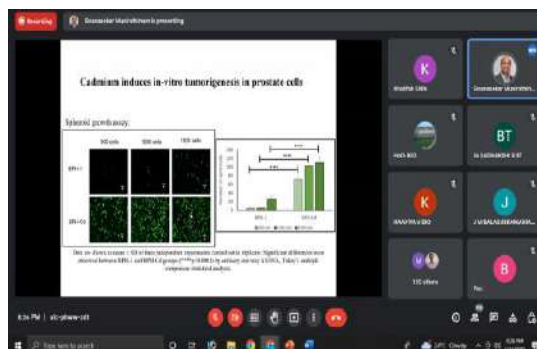
04th November 2022 (08.00 to 09.15 PM IST)



Dr. Gnanasekar Munirathinam, Associate Professor, Biomedical Sciences, University of Illinois College of Medicine Rockford, United States

A guest lecture was organized by the Department of Biotechnology, Sri Venkateswara College of Engineering, Sriperumbudur through Virtual mode. The guest lecture was conducted by Dr. K. Ganesh Prasath, Assistant Professor, Biotechnology with Prof. E. Nakkeeran, Head of the Department, Biotechnology as Organizing Secretary and Prof. M. Sivanandham, Secretary, SVEHT and as Convener.

The session started with a welcome address by Ms. B. Sadhakshi, III Year, B. Tech Biotechnology and she introduced the guest speaker **Dr. Gnanasekar Munirathinam**. The main objective of the Guest Lecture was to provide the impact of cancer management that covers the factors involved in causing cancer and the treatment development. Also, he has discussed the exposure of Cadmium to the Benign prostatic hyperplasia (BPH-1) cells causes tumors in *In vitro* condition and the exposure causes stemness and increasing expression of Wnt/ β -catenin expression at mRNA level in BPH-1 cells.



The session was concluded with a vote of thanks delivered by Ms. V. Kaaviya, II Year, B. Tech, Biotechnology. The Guest speaker, Dr. Gnanasekar Munirathinam thanked the organizers and the management of SVCE for organizing this event.

"Biomedical Implants: What We Should Know"

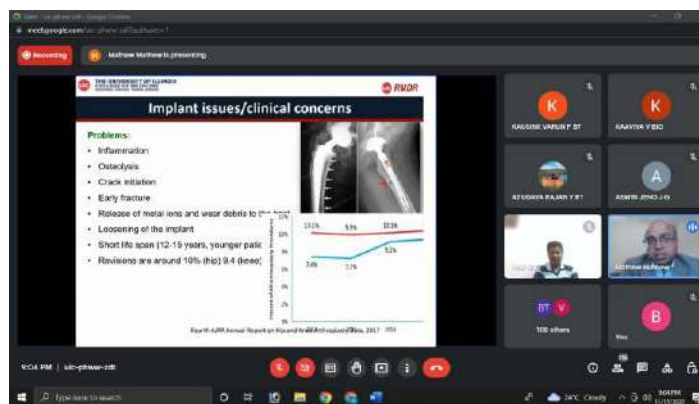
11th November 2022 (08.00 to 09.15 PM IST)



Prof. Mathew T Mathew, Director of Faculty Research, Biomedical Sciences, University of Illinois College of Medicine Rockford, United States.

A guest lecture was organized by the Department of Biotechnology, Sri Venkateswara College of Engineering, Sriperumbudur through Virtual mode. The guest lecture was conducted by Dr. K. Ganesh Prasath, Assistant Professor, Biotechnology with Prof. E. Nakkeeran, Head of the Department, Biotechnology as Organizing Secretary and Prof. M. Sivanandham, Secretary, SVEHT as Convener.

The session started with a welcome address by Ms. B. Sadhakshi, III Year, B. Tech Biotechnology and introduced the guest speaker, **Prof. Mathew T Mathew**. The main objective of the Guest Lecture was to provide the importance of biomedical implants on different locations of bones and joints. Also, he discussed the different kinds of materials used as a biomedical implant, especially titanium on various locations such as bones, joints and dental. The discussion also included the adverse effects of biomedical implants with respect to immunology and microbiology perspectives.



The session was concluded with a vote of thanks delivered by Mr. Adithya Krishnan, III Year, B. Tech, Biotechnology. The Guest speaker, Prof. Mathew T Mathew thanked the organizers and the management of SVCE for organizing this event.

Gateway to DBT Sponsored PG Programmes through GAT-B: An Overview
15th November 2022, 8.00 - 9.00 PM (IST)



Prof. N. S. Vasanthi, Former Head, Biotechnology, BIT, Sathyamangalam and Former Visiting Scientist, Copenhagen University, Denmark

The Department of Biotechnology of Sri Venkateswara College of Engineering organized a Guest Lecture on “Gateway to DBT Sponsored PG Programmes through GAT-B: An Overview” by Prof. N. S. Vasanthi, Former Head, Biotechnology, BIT, Sathyamangalam and Former Visiting Scientist, Copenhagen University, Denmark.

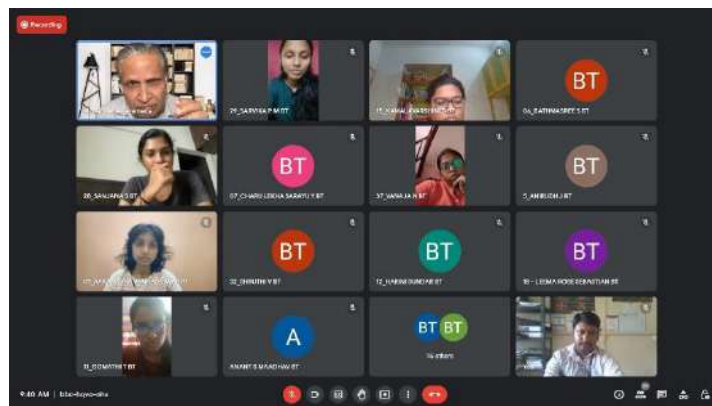
Industry Expert Lecture on Curriculum



Dr. Mohan, Director, Experteze (USA).

A Series of International guest lectures in Unit-II of Bioinformatics and Computational Biology (BT18703) was presented by **Dr. Mohan, Director, Experteze (USA)** from 26th October 2022 to 10th November 2022 at 08.30 AM - 09.20 AM (IST) organized by **Dr. P. K. Praveen Kumar, Professor, Department of Biotechnology, SVCE**. The main objective of the Lecture Series is to provide the importance of methods, databases and tools of sequence alignment. Also, he has interacted with students related to the project guidance followed by the submission of assignments in Bioinformatics. The discussion also included the motivation to learn technical skills in Bioinformatics.

Lecture notes and assignments are posted in the website URL:<https://class.experteze.org/501AC/>.



Alumni Interactions

Alumni interaction on “Higher Studies Opportunities in Denmark”

5th November 2022 9.00-10.00 AM (IST)



- **Mr. Sharan Ravi, MS in Food Science and Technology, University of Copenhagen, Denmark**

The Department of Biotechnology of Sri Venkateswara College of Engineering organized an Alumni interaction on “Higher Studies Opportunities in Denmark” by Mr. Sharan Ravi, Alumni (2016-2020 batch), Food Science and Technology, University of Copenhagen, Denmark. He explicitly shared the higher studies opportunities at various Universities in Denmark.

Alumni interaction on “Higher Studies Opportunities in Denmark”

12th November 2022 2.00-03.00 PM (IST)



- **Ms. Sai Harshini Valluri, University of Erfurt, Germany**

The Department of Biotechnology of Sri Venkateswara College of Engineering organized an Alumni interaction on “Higher Studies Opportunities in Denmark” by Ms. Sai Harshini Valluri, Alumni (2015-2019 batch), University of Erfurt, Germany. She explicitly shared the higher studies opportunities at various Universities in Denmark.

Gateway to GATE, Tips & Tricks by SVCE-BIO GATE toppers (Session-3)
13th November 2022, 10:00-11:00 AM (IST)



Ms. Shakunthala N, M.Tech Biotechnology at IIT-Madras

The Department of Biotechnology in association with the Students' Biotech Forum of Sri Venkateswara College of Engineering organized an Alumni Talk on "Gateway to GATE, Tips & Tricks by SVCE-BIO GATE toppers (Session-3)" by Ms. Shakunthala N, 2017-2021 Batch, GATE-2021 (AIR-3), currently pursuing M.Tech Biotechnology at IIT-Madras.

Gateway to GATE, Tips & Tricks by SVCE-BIO GATE toppers (Session-1)
10th November 2022, 2.15-3.15 PM (IST)



Ms. Anusuya Narayanan, M. Tech, Biomedical Engineering, IIT Bombay

The Department of Biotechnology in association with Students' Biotech Forum of Sri Venkateswara College of Engineering organized an Alumni Talk on "Gateway to GATE, Tips & Tricks by SVCE-BIO GATE toppers (Session-1)" by Ms. Anusuya Narayanan, 2017-2021 Batch, GATE-2021 (AIR-29), currently pursuing M.Tech Biomedical Engineering at IIT-Bombay.

Gateway to GATE, Tips & Tricks by SVCE-BIO GATE toppers (Session-2)
12th November 2022, 10:00-11:00 AM (IST)



**Ms. Akshatha RR, M.Tech Industrial Biotechnology at NIT,
Surathkal**

The Department of Biotechnology in association with the Students' Biotech Forum of Sri Venkateswara College of Engineering organized an Alumni Talk on Gateway to GATE, Tips & Tricks by SVCE-BIO GATE toppers (Session-2) by Ms. Akshatha RR, 2018-2022 Batch, GATE-2022, currently pursuing M.Tech Industrial Biotechnology at NIT, Surathkal.

Placement Update

The core and information technology companies made a swift campus drive for the B. Tech Biotechnology students of 2019-2023 Batch. The students who opted for the placements drive (Option-A), were placed with maximum CTC of 4.76 Lakhs PA.



Mr. Sharath Ramesh placed in M/s Zifo Technology Private Limited as Associate Analyst with CTC of 4.76 Lakhs PA



Ms. S. Dhakshapadmaja placed in M/s Joy Technologies for the position of Digital Marketing with CTC of 2.6 Lakhs PA.



Ms. V. Vishnupriya placed in M/s TATA Consultancy Services Limited as Assistant System Engineer-Trainee with CTC of 3.36 Lakhs PA.



Ms. D. Sneka placed in M/s Accenture as Associate Analyst with CTC of 4.58 Lakhs PA.



Mr. K. Ajay placed in M/s Joy Technologies for the position of Digital Marketing with CTC of 2.6 Lakhs PA.



Mr. G. Prem Kumar placed in M/s Joy Technologies for the position of Digital Marketing with CTC of 2.6 Lakhs PA.



L&T Infotech

Ms. N. Sneha placed in M/s L&T Infotech as Graduate Engineer Trainee with CTC of 4.06 Lakhs PA.



Ms. E. Priyaranjani placed in M/s Joy Technologies for the position of Digital Marketing with CTC of 2.6 Lakhs PA.



Ms. Y. Charu Lekha Sarayu placed in M/s Joy Technologies for the position of Digital Marketing with CTC of 2.6 Lakhs PA.

Higher Studies Update



**Ms. Aakansha
Venkateswar (2019-
2023)**



**MS Medical Biotechnology at University of Illinois, Chicago,
USA**



**JOHNS HOPKINS
UNIVERSITY**

MS Biotechnology at Johns Hopkins University, USA



**Ms. Manaswini V
(2019-2023)**



**MS Medical Biotechnology at University of Illinois, Chicago,
USA**



**Ms. Leema Rose
Sebastien (2019-
2023)**



MSc Food Science at University of Leeds, UK









**Ms. Vanaja N (2019-
2023)**



**MS Medical Biotechnology at University of Illinois, Chicago,
USA**

Research Activities

PG Intramural Project for 2021-2023 Batch

Name of the Student	Title of the Project	Name of the supervisor with Designation
 Ms. Jeeva Dhanushya	<p>Genomic and Nutritional analysis of fermented Coconut milk</p> <p>Sanctioned: Rs 10000/-</p>	 Dr. K. Divakar Associate Professor
 Mr. Deva S	<p>Comparative analysis of medicinal herb hepatotoxicity in zebra fish larvae using gene expression analysis</p> <p>Sanctioned: Rs 9500/-</p>	 Dr. S. Pandi Prabha Professor
 Ms. Abisherline E	<p>Cosmeceutical Perspective of marine polysaccharides for skin aging applications</p> <p>Sanctioned: Rs 10000/-</p>	 Dr. G. Karthigadevi Assistant Professor

Publication

Ms. Viveka R
Research Scholar



Prof. E. Nakkeeran

JEB[®]

Journal of Environmental Biology

p-ISSN: 0254-6704 • e-ISSN: 2394-0379 • CODEN: JEBIDP
Journal website: www.jeb.co.in • E-mail: editor@jeb.co.in



Original Research

DOI : <http://doi.org/10.22438/jeb/43/6/MRN-5006>

Development and characterization of a novel biodegradable laboratory-made pullulan blended films

R. Viveka and E. Nakkeeran*[✉]

Department of Biotechnology, Sri Venkateswara College of Engineering, Sripurumbudur-602 117, India

*Corresponding Author Email : nakkeeran@svce.ac.in

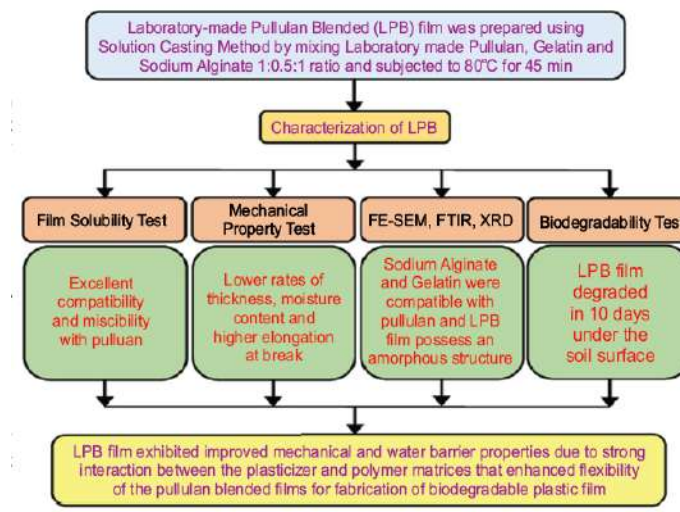
*ORCID: <https://orcid.org/0000-0002-1426-5072>

Received: 20.01.2022

Revised: 18.06.2022

Accepted: 25.07.2022

Abstract:



Research Supervisor Recognition



Dr. K. Vasantharaj, Assistant Professor

Dr. K. Vasantharaj, Assistant Professor, Department of Biotechnology, has been recognized as a Research Supervisor of Anna University (Ref. No: 4050017) to guide the M.S (By Research) and Ph.D. Scholars.

Area of Specialization: Bioprocessing, Bioremediation, Bioenergy and Food Processing.

The Department of Biotechnology takes this opportunity to congratulate Dr. K. Vasantharaj and wish him all success in all his future endeavors.

Research Scholar Info**Pre - Synopsis Seminar Presentation**

Ms. Viveka R
Reg. No.
18245991103/Ph.D./AR19

Ms. Viveka R, Research Scholar of Full-Time Ph.D. Program defended her Pre-Synopsis Seminar Presentation entitled “**Strain improvement for the production and purification of pullulan from *Aureobasidium pullans* using Agro-Industrial Wastes**” under the supervision of **Prof. E. Nakkeeran**, Department of Biotechnology on 28th November 2022, 10.00 AM (IST) at Biotech Conference Hall, Department of Biotechnology, Sri Venkateswara College of Engineering, Sriperumbudur.

Presentation by the Faculty

- **Dr. P.K. Praveen kumar, Professor, Department of Biotechnology**, presented a guest lecture on “Innovations in Computer Aided Drug Design”, International Seminar on National Innovation Day celebrations organized by IIC, SVCE, Sriperumbudur, 02nd November, 2022.
- **Ms. Vibhushini (2020-2024), Dr. P.K. Praveen Kumar** presented “In silico approaches on the phytochemicals of *Withania somnifera* for identification of potential inhibitor against NS2B-NS3 protease of Dengue virus” in an International Conference on Drug Discovery’2022 held at BITS Pilani KK Birla campus, GOA on 10th November, 2022.

Students/ Faculty Achievements

Ms. Kamalavarshini B
(2019-2023)



Ms. Harini Sundar
(2019-2023)



Dr. P.K. Praveen Kumar, Associate Professor, Department of Biotechnology

Ms. Kamalavarshini B and Ms. Harini Sundar of 2019-2023 batch B. Tech Biotechnology, under the guidance of **Dr. P.K. Praveen Kumar** secured First Prize with cash prize of Rs. 3,000/- for the oral presentation entitled titled "Multi-Staged Gene Expression Profiling Reveals Potential Genes and the Critical Pathways in Renal Cell Carcinoma" in the National Biotechnology Symposium organized by IE-BIOTECH, Manipal Chapter and Department of Biotechnology, MIT-Manipal on 11th November, 2022.

Awards in the 24-hour event Bug to Business'22

- **Ms. Akshara B S**, B. Tech Biotechnology of Batch 2020-2024 was a part of the team that secured the First Place for the product called Mobocart, in the 24-hour event Bug to Business'22 organized by the Department of Mechanical Engineering at Sri Venkateswara College of Engineering during 5th – 6th November, 2022.



Ms. Akshara B S
(2020-2024)

- **Ms. Priyanka Raj**, B. Tech Biotechnology of Batch 2021-2025, received Best Marketing Strategy Award in the 24-hour event Bug to Business'22 organized by the Department of Mechanical Engineering at Sri Venkateswara College of Engineering during 5th – 6th November 2022.



Achievement in Sports



Ms. Varshini K R of B. Tech Biotechnology (2020-2024) is a part of Badminton (Women) team of Sri Venkateswara College of Engineering and made a wonderful effort to secure Third position in the Anna University zone-II tournament held at Rajalakshmi Engineering College on 08th November 2022.

Industrial Visits Organized

B. Tech Biotechnology (2021-2025)

**M. Tech Biotechnology (2021- 2023)
& (2022-2024)**



Industrial Visit to Synkromax Biotech Pvt Ltd, Kurmavilasapuram Panchayat, Athipattu Village, Thiruttani Taluk, Thiruvallur District” was arranged for the II year B.Tech Biotechnology, I and II year M. tech Biotechnology students was arranged on 16th November 2022. Through this industrial visit, our students will learn about bioprocess operations and industrial-scale production of microbes (for fertilizers and enzymes).



Events attended by the Faculty

- ✓ Prof. E. Nakkeeran attended an Online program on EAT, TSA, CNA & SNA in PFMS e-Governance organized by SVCE from 31st October to 1st November 2022.
- ✓ Dr. K. Vasantharaj attended an Online STTP on Methods, Modeling, Data and Tools of Environmental Conservation organized by Raj Rishi Govt. Autonomous College from 01st November to 07th November 2022.
- ✓ Dr. K. Divakar attended a National Workshop on Intellectual Property Rights, Patents and Design Filing organized by SVCE and Intellectual Property Office, India SVCE, Sriperumbudur on 02nd November 2022.
- ✓ Dr. G. Karthigadevi attended a National Workshop on Intellectual Property Rights, Patents and Design Filing organized by SVCE and Intellectual Property Office, India SVCE, Sriperumbudur on 02nd November 2022.
- ✓ Dr. K. Vasantharaj attended a National Workshop on Intellectual Property Rights, Patents and Design Filing organized by SVCE and Intellectual Property Office, India SVCE, Sriperumbudur on 02nd November 2022.
- ✓ Dr. S. Pandi Prabha attended a National level FDP “தமிழ் பாடத்திட்டத்திற்கான ஒரு வார கால பேராசிரியர்களுக்கான பயிற்சி பட்டறை” organized by SVCE, Sriperumbudur from 07th November to 11th November 2022.
- ✓ Prof. E. Nakkeeran attended a National level FDP “தமிழ் பாடத்திட்டத்திற்கான ஒரு வார கால பேராசிரியர்களுக்கான பயிற்சி பட்டறை” organized by SVCE, Sriperumbudur from 07th November to 11th November 2022.

- ✓ Mr. J. Hariharan attended an International Webinar on Weigh It Right the First Time in Karl Fischer Titration organized by Wiley Analytical Science on 15th November 2022.
- ✓ Mr. J. Hariharan attended an International Webinar on How to Achieve Oil-Free Conditions in the Laboratory organized by Wiley Analytical Science on 17th November 2022.
- ✓ Prof. E. Nakkeeran attended a National Level Seminar on NAAC - Revised Assessment and Accreditation Framework organized by SVCE, Sriperumbudur from 24th November to 25th November 2022.
- ✓ Dr. K. Divakar attended an International level Online program - Best of Next Google Cloud 22 organized by Google from 24th November to 25th November 2022.

Alumni Write up

Mr. Raghul Kumar M (UG 2009-2013)
Scientist I
M/s. Thermo Fisher Scientific, Bengaluru

SVCE is a very special college and I had a lot of fond memories associated with it. In addition to having the most qualified faculty and excellent facilities for Research and training, the management always goes an extra mile in ensuring the students are happy and in their well-being. I wish the entire management of SVCE and the present and future students the very best



Ms. Sandhya V (PG 2018-2020)
PhD Scholar
ICMR-NIRT, Chennai

The days I spent on my colleges always be my most memorable one in my life. With the training programs conducted in my colleges like communication skill development, soft skill programs, changed the way of becoming professional.
I cracked three national level exams (GATE, CSIR-LS and DBT-JRF) for getting into Ph.D programme. Currently, I'm doing Ph.D in ICMR-National Institute for Research in Tuberculosis.

Upcoming Events

1. Workshop on “**Biomethodology of Laboratory Small Animals for Research Investigations**” in June 2023 by **Dr. S. Pandi Prabha, Professor.**

DEPARTMENT OF BIOTECHNOLOGY
SRI VENKATESWARA COLLEGE OF ENGINEERING



COURSES OFFERED

1. B. Tech Biotechnology
2. M. Tech Biotechnology
3. M. S. (By Research)
4. Ph.D. Biotechnology

A FEW GLIMPSES OF OUR FACILITIES

