

**DEPARTMENT OF
BIOTECHNOLOGY**

NEWSLETTER

Volume-2 | Issue-8 | August-2023

BIOGAZETTE

Echoing multidisciplinary perspectives



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



DR. J. G. ASWIN JENO
Assistant Professor
Biotechnology

STUDENT EDITORIAL TEAM



MS. R. JYOTSNA
IV Year Student
Biotechnology



MS. G. JEEVITHA
II Year Student
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

BIOBLITZ

A Hands-on Workshop titled “BIOBLITZ” was organized by the Department of Biotechnology, Sri Venkateswara College of Engineering in association with iGEM team SVCE-CHENNAI on August 24th and 25th 2023. Dr. V. Naveen Kumar, Founder & Managing Director of ImmuGenix Biosciences Pvt Ltd, Chennai inaugurated the event and delivered a guest lecture on application of bioinformatics in synthetic biology. Followed by six hands-on sessions in the workshop, which featured informative sessions on topics like bioinformatics, protein-ligand docking, and genome data viewing, along with a department tour. Dr. K. Divakar, Associate Professor, Mr. J. Hariharan, Assistant Professor, Mr. S. Naga Vignesh, Assistant Professor, Department of Biotechnology organised/coordinated to conduct the hands-on workshop.

Snapshots of the event



Inauguration of workshop



Lecture given by the Chief Guest



Hands-On Sessions



Certificate distribution during valedictory function

Alumni Contribution to iGEM

The Department of Biotechnology of Sri Venkateswara College of Engineering (SVCE) is happy to announce that our alumnus, **Mr. Prasanna Kumar Somasundaram Baskar (2014-2018 Batch)**, also a member of the previous iGEM Team (2016 & 2017) has contributed generously to the current iGEM Team 2023 - SVCE Chennai an amount of \$500. The same amount shall be used by the current iGEM Team to perform all their research and relevant activities. We take this opportunity to thank our alumnus for his support and wish the current iGEM students all success in their endeavours.



Research activities

Prof. E. Nakkeeran (Principal Investigator) and his full-time Research Scholar, **Ms. linekha radhakrishnan (Co-Principal Investigator)** received the SVCE Intramural Research Grant of Rs. 1,00,000/- for the Research Project titled “**A Strategic Investigation on the Acrylamide Mitigation Potential of L- Asparaginase in Indigenous Indian Snacks**”.

The infographic features a dark blue header with the text "SVCE INTRAMURAL RESEARCH GRANT OF Rs. 1,00,000/-" in white. Below this, the text "for the project titled" is centered. The project title, "A Strategic Investigation on the Acrylamide Mitigation Potential of L- Asparaginase in Indigenous Indian Snacks", is displayed in a larger blue font. At the bottom, two circular portraits are shown. The left portrait is of Prof. E. Nakkeeran, a man with a mustache, with a blue callout box below it containing his name and title. The right portrait is of Ms. R. Linekha, a woman, with a blue callout box below it containing her name and title.

SVCE INTRAMURAL RESEARCH GRANT OF Rs. 1,00,000/-

for the project titled

"A Strategic Investigation on the Acrylamide Mitigation Potential of L- Asparaginase in Indigenous Indian Snacks"

PROF. E. NAKKEERAN
Principal Investigator

MS. R. LINEKHA
Co-Principal Investigator

Research Scholar Corner



Ms. Hemalatha R

Ms. R. Hemalatha, Full-Time Research Scholar, Department of Biotechnology for being awarded the 'SVCE Research Fellowship.' She will be conducting research under the guidance of **Prof. Praveen Kumar PK** at the Department of Biotechnology with a monthly stipend of Rs. 18000/-.

Faculty Activities

- ❖ **Prof. P.K.Praveen Kumar** delivered a guest lecture on “Prototype design and development in Biotechnology Research” on IIC-SVCE organizing workshop on “Prototype/Process design and development” on 15th August 2023.
- ❖ **Prof. P.K.Praveen Kumar** has attended a one day orientation session on "Business Model Canvas" organized by the Institution Innovation Council, SVCE, 05th August 2023.

Students Activities

Ms. Salonica D and Mr. Srihari J of B. Tech Biotechnology, 2022-26 batch students have attended the orientation session on "Angel investment/VC funding opportunity for early-stage entrepreneurs" organized by Institution Innovation Council (IIC) of Sri Venkateswara College of Engineering on 17th August 2023.

Ms. Jeevitha G, Ms. Mrudula U and Ms. Reshma R of B. Tech Biotechnology, 2022-26 batch students World IPR Day (26th April 2023) & as a part of Quarter III IIC Celebration activity, Institution Innovation Council of SVCE (IC201810371-IIC SVCE Sriperumbudur) Organizing a Seminar on” Intellectual Property Rights" on 18th August 2023.

Prof. S. Pandi Prabha, AHOD, Department of Biotechnology, along with **Ms. Srinithi A, Ms. Mrudula U and Ms. Jeevitha G** of B. Tech Biotechnology, 2022-26 batch students attended BE First 2023 on “Startup and Entrepreneurship Skills organized by The Federation of Indian Chambers of Commerce and Industry (FICCI), New Delhi on 30th August 2023 at ITC Grand Chola.



Alumni Write-up



Ms. Dhanya R (UG 2011-2015)
PhD Scholar
IIT Madras, Chennai

For getting into SVCE, I had a good cut-off score (191.75) in my XII board (this is where my choice of XII group came into play) and got into the last seat available at that time during AU Counselling.

I was primarily a part of CARE, Eco club of SVCE and Phoenix, the college magazine. Apart from these we had Departmental organizations like Students' Biotech Forum and ISTE-SVCE (International Society for Technical Education), of which I was an active participant.

Sri Venkateswara College of Engineering SVCE

(Autonomous - Affiliated to Anna University), Sriperumbudur Tk - 602 117, Tamilnadu, India



Biotechnology Department

INFORMATION BROCHURE FOR ADMISSION TO M.TECH. BIOTECHNOLOGY & Ph.D. PROGRAMME (2023-2024)

ABOUT SVCE

Sri Venkateswara College of Engineering (Autonomous) is a premier self financing institution started in 1985 and received Autonomous status in 2016 and accredited by NAAC with A+ grade. Department of Biotechnology established in 2005 under the guidance of our chairman, Governing Council Dr. A.C. Muthiah, a well known industrialist, in order to explore and experience new frontiers of Biotechnology. The department has started B.Tech Biotechnology in 2005, M.Tech Biotechnology in 2010 & Ph.D. in 2011.

SCHOLARSHIPS

- PG scholarship of Rs. 50,000/year for 30% of the top scorers of sanctioned class strength for 2 years.
- Management Scholarships for tuition fees and assistance for books and instruments.
- AICTE-GATE Scholarship of Rs. 12,400/month for student having valid GATE score from AICTE.
- Intramural M.E/M.Tech Student Research Grant to carry out innovative projects in Biotechnology.
- Sponsorships for students to attend conferences.

Awardees of PG Scholarship



WHY BIOTECHNOLOGY @ SVCE

- State of the art research facilities are available to carry out research in various fields & experienced faculty members.
- Well equipped infrastructure for imparting practical knowledge to the students.
- MoU with industries to help the students for Internship, Training & Placement.
- Student Research Day to appreciate innovative students research projects.
- Encouraging students to take up Entrepreneurship through SVCE-EPIC Scheme.
- Industry Visits & Guest lectures by eminent speakers from reputed institutions & Industries.
- Handling courses by eminent visiting Professors from Abroad.
- Motivating students to participate in International competition like iGEM, USA.
- Encouraging students leadership activity through Technical symposium.
- Encouraging students to publish their research findings in reputed journals.
- Providing placement in biotechnology based core companies like Tata Chemicals Ltd., Zifo RnD Solutions, AstraZeneca, AGS Health, etc.
- Department received research grants (1.71 Crore) from various funding agencies such as DBT, ICMR, DST-SERB, CSIR, AICTE, MSME, TNSCST, etc.
- Department received several grants (23 lakhs) for organizing workshops, conferences, popular lectures, short-term training programmes and FDP from various funding agencies like DBT, CSIR & ICMR, AICTE, EDII, etc.

MAJOR FACILITIES

- Animal House facilities - CCSEA approved
- Wave Cell Bag Bioreactor for Mammalian Cell Culture
- Real Time - PCR & ELISA, FT-IR
- Automated Continuous Stirred Tank Bioreactor
- Computational Systems Biotechnology Laboratory
- Facilities for Stem Cell Technology
- Fluorescence & Phase Contrast Microscope
- High Performance Liquid Chromatography
- Column chromatographic Systems like FPLC
- Freeze Dryer & Spray Dryer
- Spectrofluorophotometer
- 2D - Gel Electrophoresis
- Exclusive cold room facility

ADMISSION INFORMATION

Eligibility: As per Anna University Guidelines.

Admissions are through Tamil Nadu Common Admissions by Anna University & Entrance Examinations conducted by Consortium for the Management seats.

For department video tour, click the below link <https://youtube.com/watch?v=Ryc3-wJ2ACY>

RESEARCH FOCUS

- Immunology & Immuno-technology
- Biomaterials & Tissue Engineering
- Stem Cell Technology
- Genetic Engineering & rDNA Technology
- Cellular & Molecular Biology
- Computational Systems Biotechnology
- Bioprocess Engineering
- Degenerative Diseases & Regenerative Medicine
- Herbal Medicines & Antioxidants Research
- Microbial Technology & Metagenomics
- Food Biotechnology
- Bioseparation Techniques
- Product Development
- Metabolic Engineering
- Aquatic Fish Toxicology
- Algal Biotechnology
- Environmental Biotechnology
- Nano-Biotechnology & Drug Delivery



BIO-SVCE

[Department webpage](#)

FOR MORE INFORMATION PLEASE CONTACT

PROF. E. NAKKEERAN
HEAD / BIOTECHNOLOGY
TEL: +91-44-27152000; EXT. 575
MOBILE: +91-9791668110
Email: hodbt@svce.ac.in

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 GLIMPSE OF OUR MAJOR FACILITIES



COLUMN CHROMATOGRAPHY SYSTEM -BIORAD LAB INDIA PVT. LTD.

**FOR
FURTHER DETAILS
OR
ENQUIRIES**

Prof. E. Nakkeeran
Head of the Department
Phone: 044-27152000 Ext. 575
Mobile: +91 97916 68110
email: hodbt@svce.ac.in