

AICTE Sponsored Online Short Term Training Programme
On

Functional Metagenomics and Bioprocessing of Therapeutic Enzymes (FMBTE – 2021)

22nd – 27th February 2021
(Phase-II)



Organised by



Department of Biotechnology
(Accredited by NBA)

Sri Venkateswara College of Engineering

(Autonomous – Affiliated to Anna University)
Sriperumbudur Tk. – 602 117, Tamil Nadu

About the Institute

Sri Venkateswara College of Engineering (SVCE), is a unit of Sri Venkateswara Educational and Health Trust (SVEHT). The Trust was founded on 1 August 1985 at the behest and benign blessings of His Holiness Pujashree Kanchi Kamakoti Peedathipathi Sri Jayendra Saraswathi Swamikal. Dr. A. C. Muthiah, a renowned engineer, industrialist and philanthropist, is the Chairman of the Governing Council of the college. SVCE is one of the premier technical institutions in Tamilnadu, the College is situated on the Chennai – Bangaluru National Highway (NH4) about 37 km south-west of Chennai. The college is in a 95-acre lush green Campus. It is housed in architecturally exquisite buildings with ample infrastructure such as classrooms, laboratories, libraries, sports arena, canteen, hostels, dispensary etc. The college offers 11 UG programmes and 7 PG programmes. The National Board of Accreditation accredited many of the eligible programmes, and SVCE is an ISO 9001:2015 certified institution.

About the Department

Sri Venkateswara College of Engineering noted the growth in Modern Industrial Biotechnology. In order to support the growth in Biotechnology, SVCE started the Department of Biotechnology in 2005 under the guidance of our Chairman Dr. A.C. Muthiah, a well-known Industrialist who understands the strength of Industrial Biotechnology.



The department offers B.Tech and M.Tech Biotechnology programmes approved by AICTE. B.Tech programme is accredited by NBA. It is also approved as a Research

Center in Biotechnology for MS (by Research) and Ph.D. programmes by Anna University, Chennai. The Department has well established laboratory facilities namely Genetic Engineering, Bioprocess, Research Lab, Animal house and Computational System Biotechnology Lab. The Department received Research Grants (1.7 Crore) from various funding agencies such as SERB, ICMR, AICTE, CTS and also several grants for organising Short Term Training courses, Workshops, Faculty Development Programmes from various funding agencies such as DBT, SERB, ICMR, CSIR and EDII.

Video tour of the department: <https://youtu.be/p6TZo15pL7U>

About the Short Term Training Programme

Vast majority of microbes (around 95-99%) in any chosen environment are uncultivable and therefore these microbes cannot be studied using traditional microbial techniques. Metagenomics provide a new paradigm for researches to look at the uncultivable microbial communities and to transform the way we seek for solutions to biomedical/therapeutic, energy and environmental related problems. There is an inherent lag in teaching and learning of the concepts in metagenomics and recombinant protein production due to lack of exposure/opportunity to learn by hands-on experience. Faculty members need to update and reorient themselves to meet the rapidly changing professional and scientific needs of the society. This STTP is designed to bring together the experts working in metagenomics and bioprocess engineering to impart knowledge to the participants about metagenomics and its application in industrial biotechnology. This STTP is expected to benefit faculty members from AICTE approved engineering colleges, scientists and researchers who are working/ teaching in the area of Biotechnology/Bioinformatics/Chemical Engineering. **This online STTP will be conducted through Google Meet platform.** The exact program with slot-wise distribution of lectures will be made available in the website ([Click Here](#)) in due course of time to all those who register their “Expression of Interest” to attend the programme.

Resource Persons

Eminent personalities from Department of Biotechnology (DBT), Government of India, IIT's, Anna University, R&D centers and Industries will share their expertise on metagenomic and its implication in bioprocess engineering.

KEYNOTE SPEAKERS

Prof. Ashok Pandey

Distinguished Scientist, Centre for Innovation and Translational Research , CSIR-Indian Institute of Toxicology Research, Lucknow

Dr. R. Vidyalakshmi

Professor and Head, Department of Food Safety and Quality Testing, Indian Institute of Food Processing Technology, Tanjavur

Dr. E. Selvarajan

Assistant Professor, Department of Genetic Engineering, School of Bioengineering, SRMIST, Chennai

Prof. Joseph Selvin

Professor and Head, Department of Microbiology, School of Life Sciences, Pondicherry University, Puducherry

Dr. V. Naveen Kumar

Founder & Managing Director, ImmuGenix Biosciences Pvt Ltd, Chennai

Dr. G. Arthaaanreeswaran

Professor, Department of Chemical Engineering, National Institute of Technology, Tiruchirapalli

Dr. Alok Prasad Das

Assistant Professor,
Department of Life Sciences, RDW University

Dr. N. Kumaresan

Scientist - Microbiome,
Tata Chemicals, Pune

Key Points for the Participants

- The faculty members/ Post-Doctoral Fellows/ Research Scholars of AICTE approved technical institutions, Universities, Research laboratories, Industry personnel's and staff of the host institute may participate in this STTP.
- **Interested persons can fill the details in the registration link available in the programme website (Click Here) under registration tab.** Copy of institute/college ID card shall be uploaded while submitting the registration form. Confirmation of their participation will be sent through E-mail.
- Last date for registration: **On or before 1 January 2021** (Limited seats Available).
- Intimation about selection: On or before 2 January 2021. (Registration dates for Phase 2, 3 and 4 will be published soon)
- **No Registration fee for attending this online STTP. A test shall be conducted at the end of the programme. The Certificate shall be issued to those participants who have minimum 80% attendance and scored minimum 60% of marks in the test after submission of feedback.**

Organising Committee

Chief Patron

Prof. M. Sivanandham
Secretary, SVEHT

Patron

Prof. S. Ganesh Vaidyanathan
Principal, SVCE

Convenor

Dr. V. Sumitha
HoD-Incharge/BIO

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Dr. E. Nakkeeran, Professor/BIO
Dr. K. Divakar, Associate Professor/BIO

Coordinators

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For Queries contact the coordinators. Website: <https://sites.google.com/view/fmbte-2021/home>



DEPARTMENT OF BIOTECHNOLOGY

**REPORT ON AICTE-SPONSORED ONLINE SHORT TERM TRAINING
PROGRAMME ON “FUNCTIONAL METAGENOMICS AND BIOPROCESSING OF
THERAPEUTIC ENZYMES” (PHASE - 2)**

22nd - 27th FEBRUARY, 2021

The All India Council for Technical Education (AICTE), New Delhi sponsored online short term training programme (STTP) on “Functional Metagenomics and Bioprocessing of Therapeutic Enzymes” (Phase-2) was organized during 22nd-27th February, 2021 by the Department of Biotechnology at Sri Venkateswara College of Engineering, Sriperumbudur through Google Meet platform. This one week STTP included series of lectures from eminent personalities of various industries and institutions and practical demonstration sessions by the in-house faculty members. 33 registered participants were actively participated in this STTP from various colleges/Institutions across the country.

On the first day, the inaugural address followed by Keynote lecture on Biotechnology of Industrial and Therapeutic Enzymes was delivered by Prof. Ashok Pandey, Distinguished Scientist, Centre for Innovation and Translational Research, CSIR-Indian Institute of Toxicology Research, Lucknow. After this, hands on Session on Bioprocess Modeling by Dr. A. Senthil Nagappan, Assistant Professor, DBT-SVCE was delivered in the afternoon.

On day 2, Dr. K. Divakar, Associate Professor, DBT-SVCE delivered a lecture on Functional Metagenomics for Discovery of Enzymes-A Case Study on Metagenomic Screening of Nitroreductases. This was followed by Hands on Session on Metagenomic Tools – Galaxy Server by Ms. R. Rathna, Assistant Professor, DBT-SVCE in the forenoon. This was followed by a lecture on Functional Metagenomics: Methodological Approaches for Tannin Acyl Hydrolase (TAH) production from Agricultural Byproducts using Bioprocessing Technology by Dr. R. Vidyalakshmi, Professor and Head, Dept. of Food Safety and Quality Testing, Indian Institute of Food Processing Technology, Tanjavur in the afternoon.

On day 3, Dr. E. Selvarajan, Assistant Professor, Department of Genetic Engineering, School of Bioengineering, SRMIST, Chennai delivered a lecture on Enzyme in Biomedical Application in the forenoon. This was followed by a lecture on Metagenomic Approaches in Discovery of Enzymes and Bioactives by Prof. Joseph Selvin, Professor and Head, Department of Microbiology, School of Life Sciences, Pondicherry University, Puducherry in the afternoon.

On day 4, Dr. V. Naveen Kumar, Founder & Managing Director, ImmuGenix Biosciences Pvt Ltd, Chennai delivered a lecture on The Road to Metagenomics: From Microbiology to DNA Sequencing Technologies in the forenoon. This was followed by a lecture on Fermentative Production of Enzymes-A case study on Pectinases by Prof. E. Nakkeeran, DBT-SVCE in the afternoon.

On day 5, Prof. E. Nakkeeran, DBT-SVCE delivered a lecture on Bioprocessing of microbial colors in the forenoon. This was followed by a lecture on Metagenomic

Exploration of Manganese Mining Microorganisms from Mine Tailings by Dr. Alok Prasad Das Assistant Professor Department of Life Sciences, RDW University in the afternoon.

On the last day, Dr. N. Kumaresan, Scientist - Microbiome, Tata Chemicals, Pune delivered a lecture on Identification of Microbes by Biochemical, Genetic and Genomic Methods in the forenoon. In the afternoon, lecture on Application of Enzyme Based Membrane Technology for Bioprocessing was delivered by Prof. G. Arthanareeswaran, Department of Chemical Engineering, National Institute of Technology, Tiruchirapalli followed by the valedictory address to the participants.

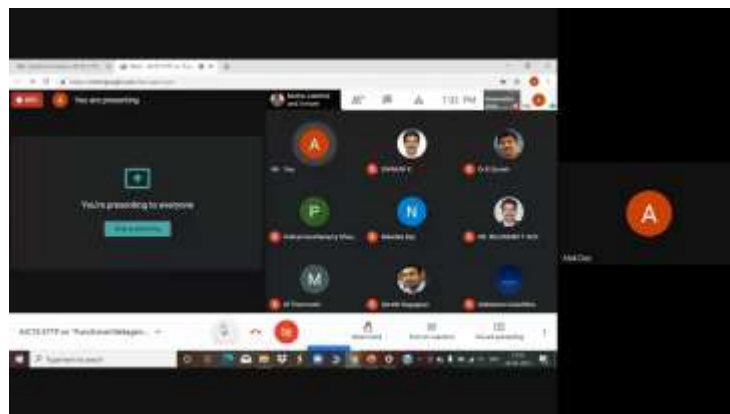
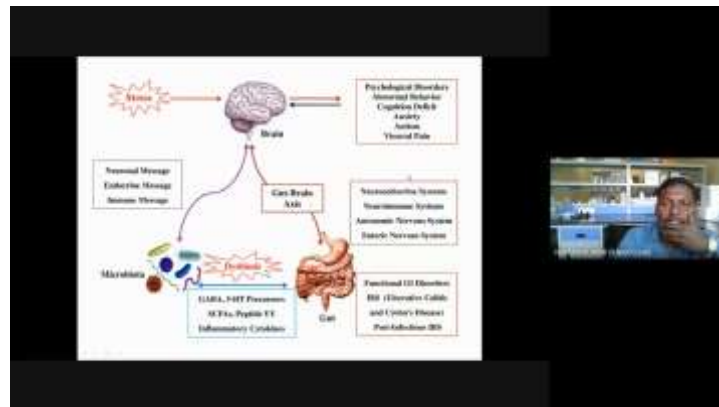
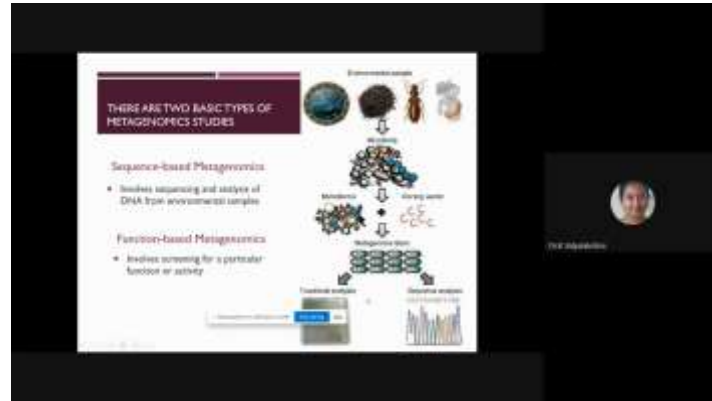
The organizing secretary, Prof. E. Nakkeeran summarized the proceedings of the STTP phase-2. The program was concluded by thanking all the contributors, the management, the funding agency, AICTE-New Delhi for sponsoring the STTP by the organizing secretary, Dr. K. Divakar. The Assessment Test to the participants was conducted through online and the feedback for all the sessions were also obtained from the participants through online Google forms. On the whole the STTP was extremely informative and helpful, and enlightened the participants. The overall feedback provided by the participants for the workshop was more than satisfactory for their needs.

Prof. E. Nakkeeran & Dr. K. Divakar

Organizing Secretaries

STTP - FMBTE - 2021

Screenshots captured during the event



Prepared by

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