



AICTE sponsored Online Short Term Training Programme

on

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

Phase IV - 26.07.2021 to 31.07.2021

Organized by
Department of Biotechnology



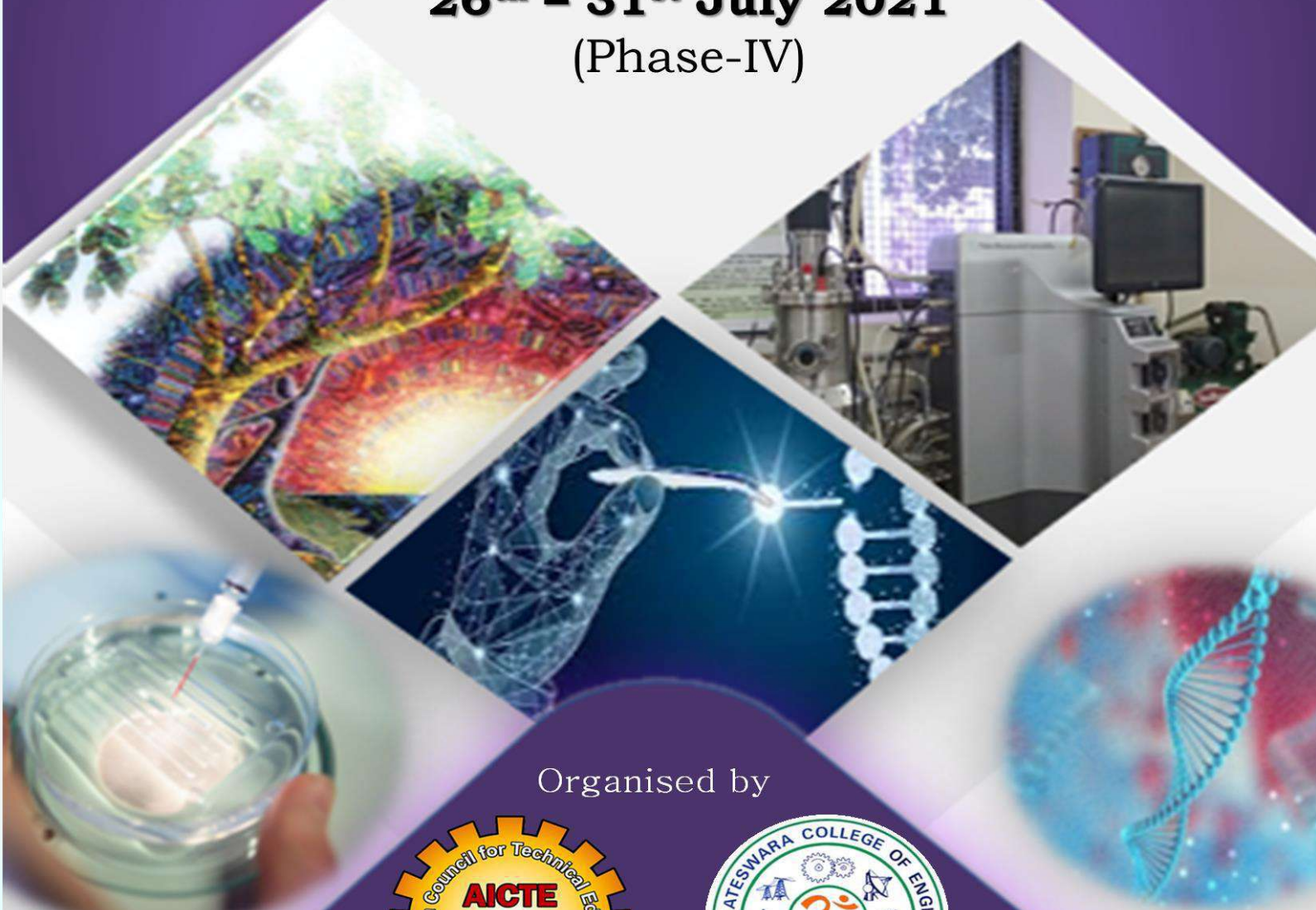
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On

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

26th – 31st July 2021
(Phase-IV)



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

Dr. A. Pazhanimuthu
Managing Director
AURA Biotechnologies Private Limited, Chennai

Dr. G. Baskar
Professor
Department of Biotechnology
St. Joseph's College of Engineering, Chennai

Dr. Arnold Emerson I
Associate Professor
School of Bio Sciences & Technology
VIT Vellore

Dr. B. Ramaraju
Assistant Professor, Department of
Biotechnology, National Institute of Technology
Warangal

Dr. Nagendra Thakur
Assistant Professor
School of Life Sciences
Sikkim University, Gangtok, Sikkim

Dr. Joseph Selvin
Professor and Head
Department of Microbiology
Pondicherry University, Puducherry

Dr. Jagan Obbineni
Assistant Professor
School of Agricultural Innovations and Advanced
Learning, VIT Vellore

Dr. K. Anbarasu
Assistant Professor
Department of Biotechnology
Periyar Maniammai Institute of Science &
Technology, Tanjoore

Mr. Roland Lamuel
Founder & Director
Genbloc.ai
Bengaluru

Dr. Sathyanarayana N. Gummadi,
Professor
Department of Biotechnology
Indian Institute of Technology, Madras

Dr. Tony Grace
Department of Genomic Science, Central
University of Kerala & Adjunct Assistant
Professor, Kansas State Univesity, USA

Dr. Mahejibin Khan
Senior Scientist, Microbiology & Fermentation
Technology, CSIR- Central Food Technological
Research Institute, Mysuru

Dr. V. Naveen Kumar
Founder & Managing Director
ImmuGenix Biosciences Pvt Ltd, Chennai

Dr. P. A. Balakumaran
Scientist, CSIR- National Institute for
Interdisciplinary Science and Technology (NIIST)
Thiruvananthapuram

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

Organising Secretaries

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

Coordinators

Ms. R. Rathna, Assistant Professor/BIO
rrathna@svce.ac.in

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





AICTE sponsored Online Short Term Training Programme

on

“Functional Metagenomics and Bioprocessing of Therapeutic Enzymes (FMBTE - 2021) Phase -4”

26th – 31st July, 2021

Organized by Department of Biotechnology, SVCE

STTP - SCHEDULE

Google Meet Link : <https://meet.google.com/adp-yhsm-snh>

TIME/ DAY	09:30-11:30 AM	11:30 AM - 01:30 PM	02:00-04:00 PM	
Day-1	Inaugural Talk by Dr. A. Pazhanimuthu Managing Director AURA Biotechnologies Private Limited, Chennai	Functional Metagenomics for Bioprospecting of Novel Nitroreductases Dr. K. Divakar Associate Professor Department of Biotechnology SVCE, Sriperumbudur	Fungal Asparaginase as a Therapeutic Agent for Cancer Treatment Dr. G. Baskar Professor Department of Biotechnology St. Joseph's College of Engineering, Chennai	
Day-2	Functional Metagenomics: Current Progress and Future Challenges in the Discovery of Novel Therapeutic Enzymes Dr. Arnold Emerson I Associate Professor School of Bio Sciences & Technology VIT Vellore	Role of Metagenomics in Prospecting Novel Cellulases for Bioethanol Production Dr. B. Ramaraju Assistant Professor Department of Biotechnology National Institute of Technology Warangal	Microbiome of Extreme Environments Dr. Nagendra Thakur Assistant Professor School of Life Sciences Sikkim University, Gangtok, Sikkim	
Day-3	Metagenomic Approaches in Discovery of Enzymes and Bioactives Dr. Joseph Selvin Professor and Head Department of Microbiology Pondicherry University, Puducherry	Functional Genomics for Therapeutics Dr. Jagan Obbineni Assistant Professor School of Agricultural Innovations and Advanced Learning VIT Vellore	Recent developments in bioprocessing of therapeutic proteins Dr. K. Anbarasu Assistant Professor Department of Biotechnology Periyar Maniammai Institute of Science & Technology, Tanjoore	
Day-4	Deep Tech Architectures for Genomics by GeneBloc.ai Mr. Roland Lamuel Founder & Director Genbloc.ai Bengaluru	Characterization of Xylose Reductase from <i>Debaryomyces nepalensis</i> (DnXR): Potential Biocatalyst for Xylitol Production Dr. Sathyanarayana N. Gummadi Professor Department of Biotechnology Indian Institute of Technology, Madras	Metagenome Analysis Tools and Workflow Dr. Tony Grace Department of Genomic Science Central University of Kerala & Adjunct Assistant Professor Kansas State Univesity, USA	
Day-5	Metagenomics: A tool to Understand the Unknown Dr. Mahejibin Khan Senior Scientist Microbiology & Fermentation Technology CSIR- Central Food Technological Research Institute, Mysuru	National Education Policy - NEP 2020 Prof. S. Ganesh Vaidyanathan Principal Sri Venkateswara College of Engineering, Sriperumbudur	The Road to Metagenomics: From Microbiology to DNA Sequencing Technologies Dr. V. Naveen Kumar Founder & Managing Director ImmuGenix Biosciences Pvt Ltd, Chennai	
Day-6	Hands-On Session Ms. R. Rathna Assistant Professor Department of Biotechnology SVCE, Sriperumbudu	Fermentative Production of Enzymes - A Case Study on Pectinases Prof. E. Nakkeeran Professor Department of Biotechnology SVCE, Sriperumbudur	Recombinant Protein Production in Yeast Dr. P. A. Balakumaran Scientist CSIR- National Institute for Interdisciplinary Science and Technology (NIIST) Thiruvananthapuram (02:00 -04:00 PM)	Valedictory & Assessment/Test (04:00 -04:30 PM)

BREAK



DETAILED REPORT ON PHASE - IV

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-4) was organized during 26th-31st July, 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. 87 were registered in this STTP from various colleges/Institutions across the country.

On the first day, the inaugural address followed by Keynote lecture on Metagenomic screening of enzymes was delivered by Dr. A. Pazhanimuthu, Managing Director, AURA Biotechnologies Private Limited, Chennai. After this, a lecture on Functional Metagenomics for Bioprospecting of Novel Nitroreductases was delivered by Dr. K. Divakar, Associate Professor, DBT-SVCE in the forenoon. This was followed by a lecture on Fungal Asparaginase as a Therapeutic Agent for Cancer Treatment by Dr. G. Baskar, Professor, Department of Biotechnology, St. Joseph's College of Engineering, Chennai in the afternoon.

On day two, Dr. Arnold Emerson I, Associate Professor, School of Bio Sciences & Technology, VIT Vellore delivered a lecture on Functional Metagenomics: Current Progress and Future Challenges in the Discovery of Novel Therapeutic Enzymes. This was followed by a lecture on Role of Metagenomics in Prospecting Novel Cellulases for Bioethanol Production by Dr. B. Ramaraju, Assistant Professor, Department of Biotechnology, National Institute of Technology, Warangal, in the forenoon. This was followed by a lecture on Microbiome of Extreme Environments by Dr. Nagendra Thakur, Assistant Professor, School of Life Sciences, Sikkim University, Gangtok, Sikkim in the afternoon.

On day three, Dr. K. Divakar, Dr. Joseph Selvin, Professor and Head, Department of Microbiology, Pondicherry University, Puducherry delivered a lecture on Metagenomic Approaches in Discovery of Enzymes and Bioactives. This was followed by a lecture on Functional Genomics for Therapeutics by Dr. Jagan Obbineni, Assistant Professor, School of Agricultural Innovations and Advanced Learning, VIT Vellore in the forenoon. This was followed by a lecture on Recent developments in bioprocessing of therapeutic proteins by Dr. K. Anbarasu, Assistant Professor, Department of Biotechnology, Periyar Maniammai Institute of Science & Technology, Tanjore in the afternoon.

On day four, Mr. Roland Lamuel, Founder & Director, Genbloc.ai, Bengaluru delivered a lecture on Deep Tech Architectures for Genomics by GeneBloc.ai. This was followed by a lecture on Characterization of Xylose Reductase from *Debaryomyces nepalensis* (DnXR): Potential Biocatalyst for Xylitol Production by Dr. Sathyanarayana N. Gummadi Professor,

Department of Biotechnology, Indian Institute of Technology, Madras in the forenoon. This was followed by lecture on Metagenome Analysis Tools and Workflow by Dr. Tony Grace, Department of Genomic Science, Central University of Kerala & Adjunct Assistant Professor, Kansas State University, USA.

On day 5, Dr. Mahejibin Khan, Senior Scientist, Microbiology & Fermentation Technology, CSIR- Central Food Technological Research Institute, Mysuru delivered a lecture on Metagenomics: A tool to Understand the Unknown. This was followed by a lecture National Education Policy - NEP 2020 by Prof. S. Ganesh Vaidyanathan, Principal, Sri Venkateswara College of Engineering, Sriperumbudur. This was followed by lecture on The Road to Metagenomics: From Microbiology to DNA Sequencing Technologies delivered by Dr. V. Naveen Kumar, Founder & Managing Director, ImmunoGenix Biosciences Pvt Ltd, Chennai

On the last day, Hands on Session on Metagenomic Tools – Galaxy Server was handled by Ms. R. Rathna, Assistant Professor, DBT-SVCE. This was followed by a lecture on Fermentative Production of Enzymes - A Case Study on Pectinases by Prof. E. Nakkeeran, Professor, Department of Biotechnology, SVCE, Sriperumbudur in the forenoon. In the afternoon, lecture on Recombinant Protein Production in Yeast was delivered by Dr. P. A. Balakumaran, Scientist, CSIR- National Institute for Interdisciplinary Science and Technology (NIIST) Thiruvananthapuram followed by the valedictory address to the participants.

The organizing secretary, Prof. E. Nakkeeran summarized the proceedings of the STTP phase-4. 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. 27 registered participants were actively participated and cleared the assessment test in this STTP and received the certificate. 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.



Sri Venkateswara
College of
Engineering



Screenshots taken during the sessions:

Phylogeny-based genome mining to detect new enzyme classes
EvoMining and CORASON

- EvoMining is based on the premise that primary metabolic enzymes often undergo duplication or horizontal gene transfer events, both of which may lead to the emergence of new enzyme functions in secondary metabolic pathways.
- A related tool, CORE Analysis of Syntactic Orthologs to prioritize Natural product BGCs (CORASON), generates cluster variation databases for intuitive phylogenetic visualization of core and ancillary genes in BGC families.

Prakash et al. Nat. Prod. Rep. 2021

Metagenomics

The term metagenomics was coined by Jo Handelsman, Jim Cullis, Robert M. Goodman and Bill Stevenson in publication in 1998.

Metagenomics defined as "the genetic analysis of microorganisms by direct extraction and cloning DNA from an assemblage of microorganisms"

Dr. Hanabachan

Metagenomic Library Creation

Process: Samples → DNA extraction → DNA Fragmentation → Ligation with vector → Metagenomic library → Transformation into host cells → Screening of clones (selective plates, microscopy) → Isolation of genes → Sequence analysis → Cloning into expression vectors → Expression in host cells → Purification of proteins → Characterization of protein function.

Screening

Methods: Identification of gene products, Comparative biochemistry analysis, Identification of antibiotic synthesis, Screening of clones (selective plates, microscopy).

Applications: Discover new enzymes or pathways, Discover novel biological applications.

Role of Metagenomics in Prospecting Novel Cellulases for Bioethanol Production

Dr. Rama Raju B
(Assistant Professor, Grade-1)
Integrated Biorefinery Research Lab
Department of Biotechnology
National Institute of Technology
Warangal
mrbs@nitw.ac.in

Ramachandran Plot

- The Ramachandran plot is a plot of the torsional angles - phi (ϕ) and psi (ψ).
- phi (ϕ) is the C_i-1, N_i, C_i, C_i
- psi (ψ) is the N_i, C_i, C_i, N_i+1

The plot was developed in 1963 by G. N. Ramachandran, et. al.

Source: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2701121/>

Biofilms: a house of AMR emergence and transmission

Biofilms are communities of microorganisms in a matrix that joins them together and to living or inert substrates.

Biofilms are remarkably difficult to treat with antimicrobials. Antimicrobials may be readily inactivated or fail to penetrate into the biofilm. In addition, bacteria within biofilms have increased (up to 1000-fold higher) resistance to antimicrobial compounds, even though these same bacteria are sensitive to these agents if grown under planktonic conditions.

Davies, D. Understanding biofilm resistance to antibacterial agents. *Nat Rev Drug Discov* 2, 114-132 (2003). <https://doi.org/10.1038/nrd1208>

List of eligible/shortlisted participants registered for the STTP Phase - IV

S.No	Name	Gender	Designation	Name of the Institute	State	Email Address	Phone number
1	Mr. Md abu mushtaque	Male	Research scholar	NA	Bihar	abu.mushtaque786@gmail.com	9507595283
2	Mr. Ravi Kumar Majhi	Male	Junior Research Fellow	AIIMS, New Delhi	Delhi	Majhiravi655@gmail.com	9971871442
3	Ms. Deepika Suresh	Female	Junior Research Fellow	VIT	Tamil Nadu	deepikasuresh1208@gmail.com	7871285294
4	Mr. Kartik Majila	Male	Research Scholar	NCBS	Delhi	majilakartik123@gmail.com	9810984153
5	Mrs. R Sharmil Suganya	Female	Assistant Professor	Government College of Engineering Salem	Tamil Nadu	Sweetsharmil@gmail.com	8056297563
6	Mrs. Jyothi Cherukuri	Female	Assistant Professor	St. Ann's College for Women	Telangana	jyothi.cherukuri78@gmail.com	9989302439
7	Mrs. T.S. Amritha	Female	Research scholar	Anna university, Chennai	Tamil Nadu	amrithats89@gmail.com	9566046324
8	Dr. P. Amali	Female	Assistant Professor	DG Vaishnav College, Chennai	Tamil Nadu	amalip@dgvaishnavcollege.edu.in	9176662275
9	Mrs. Aysha Sherieff	Female	Research Scholar	JNTUA, Ananthapuramu	Andhra Pradesh	ash.kohinur2000@gmail.com	9701567834
10	Mrs. Sylaja AM	Female	Assistant Professor and HoD	St. Ann's College For Women	Telangana	sylaja.biochem@gmail.com	9849174742
11	Ms. Srilatha	Female	PhD Scholar	Osmania University	Telangana	latasree14@gmail.com	9347179396
12	Dr. Parameswari R	Female	Assistant Professor	Auxilium college	Tamil Nadu	eashvit@gmail.com	8608207679
13	Mr. R. Arulvel	Male	Assistant	Saveetha	Tamil	arulvelr.sse@saveetha.com	8870921600

			Professor(S enior Grade)	University, Chennai	Nadu		
14	Mr. Anurag Panchal	Male	Junior Research Fellow	DPMB, University Of Delhi	Haryana	tanurag34@gmail.com	8586096141
15	Mr. Pravat Kumar Swain	Male	Assistant Professor	Satyasai Engineering College Balasore	Odisha	pravatvision2020@gmail.com	9078288499
16	Dr. Vidya Niranjana	Female	Head of the Department	R V College of Engineering	Karnataka	Vidya.n@rvce.edu.in	9945465657
17	Mr. Sathish Kumar Marimuthu	Male	Senior Research Fellow	Anna University BIT campus	Tamil Nadu	msathishbio@gmail.com	8610840871
18	Dr. Manasa D. J	Female	Assistant Professor	SVCE (Internal Participant)	Karnataka	manasadj310@gmail.com	7892631239
19	Mrs. Suba Sri M	Female	Assistant Professor	Karpagam Academy of Higher Education	Tamil Nadu	subasridhanushraja@gmail.com	8220031049
20	Mrs. Hanisha R	Female	Assistant Professor	Vel tech high tech Dr.Rangarajan Dr.Sakunthala Engineering college	Tamil Nadu	hanisharavindran94@gmail.com	9944569483
21	Mr. Panga Rajesham	Male	Research scholar	UCS Osmania University Hyderabad Telangana state	Telangana	rajeshampanga1974@gmail.com	7893537284
22	Dr. P.Rajasulochana	Female	Professor	Bharath University	Tamil Nadu	drprsgestudents19@gmail.com	9003074715
23	Mrs. K Venkata Naga Rajeswari	Female	Assistant Professor	Chaitanya (Deemed to be University)	Telangana	kvnrajeswari@gmail.com	9849109370
24	Dr. V.Srilekha	Female	Assistant	Chaitanya	Telagana	vsrilekhavennam@gmail.com	9676447448

			Professor	(Deemed to be University)			
25	Ms. Sangeeta Singh	Female	Assistant Professor	ICMR NIMR	Rajasthan	sangeeta31singh1988@gmail.com	8949012434
26	Dr. Sivashankar Raja	Male	Assistant Professor	Hindustan Institute of Technology and Science, Chennai	Tamil Nadu	rssshankar@hindustanuniv.ac.in	8547884994
27	Dr. H.Jemmy Christy	Female	Asst Professor	Sathyabama Institute of science and Technology	Tamil nadu	jemmyjacob@gmail.com	9444963185
28	Mr. Pallepamu Tirupathi rao	Male	Research scholar	Adhikavi Nannaya University	Andhra Pradesh	naniphysics20@gmail.com	7419615808
29	Dr. Rogimon P Thomas	Male	Assistant Professor	CMS College Kottayam (Autonomous), Kerala	Kerala	rogimon@cmscollege.ac.in	9895197689
30	Mr. Vijay Samuel G	Male	Assistant Professor (S.G)	Hindustan Institute of Technology & Science	Tamil Nadu	VIJAYSAMJULY@GMAIL.COM	9952451033
31	Ms. M.Sai Pallavi Jenifar	Female	Lecturer	St.Theresa College	Andhra Pradesh	jenifar999@gmail.com	8985117568
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35	Dr. Chinnakannu Jayakumar	Male	Assistant Professor	Anna university, Chennai.	Tamil Nadu	c_jayakumar73@yahoo.com	8838429067
36	Dr. Vimalabangarusam	Female	Research	Queen Mary's	Tamil	vimalaphd@gmail.com	9500117339

	y		scholar	College	Nadu		
37	Mrs. Bhagyashree goswami	Female	Assistant Professor	Hygia Institute of Pharmacy , Lucknow	Uttar Pradesh	shreegoswami9@gmail.com	9696957922
38	Dr. Manimegalai Sengani	Female	Assistant Professor	SRM Institute of Science and Technology	Tamil Nadu	smanimegalaimsc@gmail.com	9790948811
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41	Dr. Amar Deep Ankalgi	Male	Professor	Laureate Institute of Pharmacy	Himachal Pradesh	amarchemlogin@gmail.com	9772782108
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43	Ms. Sakshi Kumari	Female	Research Assistant	AIIMS, New Delhi	New Delhi	sakshii1016@gmail.com	8377076937
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45	Dr. M. Kalpana devi	Female	Assistant Professor	Karpagam Academy of Higher Education	Tamil Nadu	klpadev08@gmail.com	9487693273
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49	Dr. SS Meenambiga	Female	Assistant	Vels Institute of	Tamilnadu	meenambiga.se@velsuniv.ac	9003461468

			Professor	Science Technology and Advanced Studies		.in	
50	Dr. Brindha Devi P	Female	Head of the department	VISTAS	Tamil Nadu	hodb.techbiotech@velsuniv.ac.in	9488012440
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61	Mr. S. Ivo Romauld	Male	Assistant Professor	Vels Institute of Science	Tamil Nadu	ivoromauld.se@velsuniv.ac.in	0950006885 7

				Technology and Advanced Studies			
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63	Ms. Ruksana F	Female	Research scholar	Davanagere University	Karnataka	ruksanaf465@gmail.com	9606467919
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65	Mrs. Rajakumari K	Female	Assistant Professor	Vels Institute of Science Technology and Advanced Studies	Tamil Nadu	rajakumari.se@velsuniv.ac.in	9445716063
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List of participants received the certificate in Phase - IV

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1	Dr.M.Kulandhaivel
2	Dr. Manimegalai Sengani
3	Mrs. Suba Sri. M
4	Mrs. Sylaja AM
5	Dr.M.Kalpana devi
6	Ms. Srilatha
7	Ms. Amrutha. T
8	Mrs. Sri Devi M
9	Dr. J. Madhusudhanan
10	Mrs. Jyothi Cherukuri
11	Mr. N Sathish
12	Dr. P. Amali
13	Dr R. Usha
14	Dr.T.Suganya
15	Dr.T.R.Sivashankari
16	Dr.P.Rajasulochana
17	Dr. Brindha Devi P
18	Dr.Lalitha Junna
19	Dr.H.Jemmy christy
20	Mr. Prasanna K
21	Mr. Pravat Kumar Swain

22	Rajakumari K
23	Dr.Nayomi John
24	Dr.R.Caroline Jeba
25	Dr. Suriya Prabha
26	Dr. U. Lalitha Priya
27	Dr. Vidhyadevi U

Steering Committee / Project Monitoring Committee

<p>5/6</p> <p></p> <p>Prof. S. Ganesh Vaidyanathan Principal (Chairperson)</p>	<p></p> <p>Prof. E. Nakkeeran Coordinator (Member Secretary)</p>
<p></p> <p>Dr. V. Sumitha HoD i/c-BIO (Member)</p>	<p> 11/12/21</p> <p>Prof. N. Meyyappan HoD-CHE (Member)</p>
<p></p> <p>Dr. K. Divakar Asso. Prof./BIO (Member - Subject Expert)</p>	



Sample Certificate Copy:




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CERTIFICATE OF PARTICIPATION
THIS CERTIFICATE IS PRESENTED TO

Dr. J. Madhusudhanan
Aarupadai Veedu Institute of Technology

For participating in the AICTE sponsored Online Short Term Training Programme on **“Functional Metagenomics and Bioprocessing of Therapeutic Enzymes”** organized by the Department of Biotechnology, Sri Venkateswara College of Engineering from 26.07.2021 to 31.07.2021


 Organising Secretaries


 Head (i/c) of Department


 Principal


 Top Ranked Affiliated
Institution in Tamil Nadu


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Innovation Cell


 Top
Performer

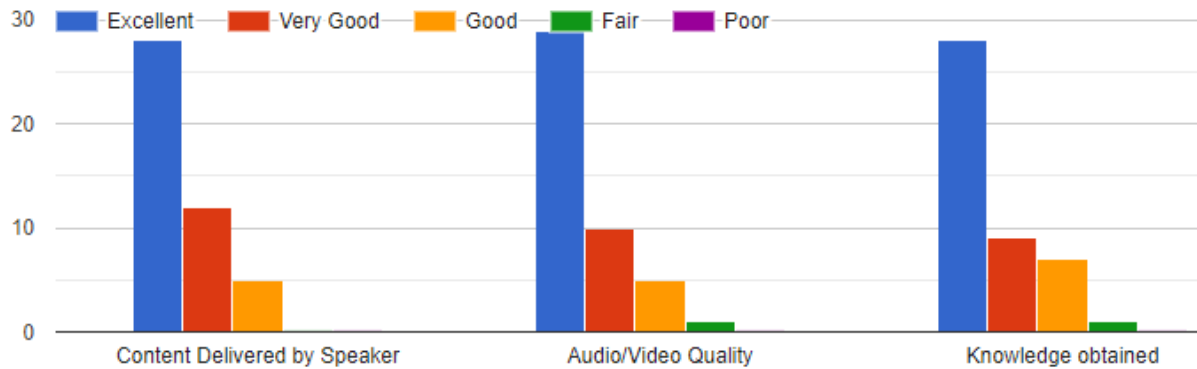

 Recognized
Incubation Center


 Certified
Organization


 Accreditations



Feedback from participants:



Other Feedback from participants:

Kindly organise many more informative sessions like this! It was very enlightening.

Thank you for organizing in the specialized area of metagenomics which is cutting edge technology now. Topics are research-oriented and will give deep insights in the specialized area

Got good insights on the topic and what can be done further

Excellent information shared, shows the presenters knowledge in the subject area

Excellent presentations with vast knowledge on metagenomics were provided and given us ideas of research

Looking forward for such type of webinars