PRATHYUSHA ENGINEERING COLLEGE

ESTD. 2001

CRITERIA 6

Governance, Leadership and Management

6.3 Faculty Empowerment Strategies

6.3.3 Professional development /administrative training programs organized by the institution

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Dept	Year	Dates (From-To) (dd-mm-yyyy)	Title Of The Professional Development Program Organised For Teaching Staff	Title Of The Administrative Training Program Organised For Non-Teaching Staff	No. Of Participants
ACADEMIC YEAR 2015-2016					
BIOTECH	2015-2016	16-12-2016 to 17-12-2016	National level workshop on animal cell culture	-	143
CIVIL	2015-2016	29.10.2015	FDP- Remote Sensing and Geographic Information System	-	21
CSE & IT	2015-2016	17.12.15 to 23.12.15	AU FDTP on DAA	-	25
CSE & IT	2015-2016	11.01.2016	Data analytics using R	-	25
CSE & IT	2015-2016	12.01.2016	CCNA : Introduction to network, routing and Switches	-	12
CSE & IT	2015-2016	04.01.2016-10.01.2016	Mobile Application Development on Android	-	31
ECE	2015-2016	10/02/2016-11/02/ 2016	Network Simulation tools	-	48
EEE	2015-2016	27.02.2016 - 28.02.2016	International Conference -AEEICB-2016	-	43
MECH	2015-2016	-	-	-	-
S&H	2015-2016	-	-	-	-

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Dept	Year	Dates (From-To) (dd-mm-yyyy)	Title Of The Professional Development Program Organised For Teaching Staff	Title Of The Administrative Training Program Organised For Non-Teaching Staff	No. Of Participants
ACADEMIC YEAR 2016-2017					
BIOTECH	2016-2017	15-12-2017 - 16-12-2017	Two days workshop on grow more mushroom earn more money at PEC	-	99
BIOTECH	2016-2017	15-12-2017 - 16-12-2017	-	Two days workshop on grow more mushroom earn more money at PEC	4
CIVIL	2016-2017	-	-	-	-
CSE	2016-2017	22/11/16 to 28/11/2016	FDP on Human Computer Interaction	-	15
CSE	2016-2017	13/12/2016 to 14/12/2016	Programming in Python	-	15
CSE & IT	2016-2017	1/12/2016 & 2/12/2016	BIG DATA ANALYTICS	-	20
ECE	2016-2017	19.08.2016& 20.08.2016	LabVIEW core training with applications	-	32
ECE	2016-2017	07.11.2016& 08.11.2016	LabVIEW applications for Communication Engineers	-	32
EEE	2016-2017	23.11.2016	Hands on training on illumination software	-	15
IT	2016-2017	21/11/2016- to 22/11/2016	Exploring R Tool for Statistical Data Mining	-	-

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Dept	Year	Dates (From-To) (dd-mm-yyyy)	Title Of The Professional Development Program Organised For Teaching Staff	Title Of The Administrative Training Program Organised For Non-Teaching Staff	No. Of Participants
ACADEMIC YEAR 2017-2018					
BIOTECH	2017-2018	-	Conference	-	-
CIVIL	2017-2018	-	-	-	-
CSE & IT	2017-2018	30/11/2017 - 1/12/2017	Machine Learning With R	-	12
CSE & IT	2017-2018	19/08/2017	Python Programming	-	21
CSE & IT	2017-2018	19/12/2017	Infosys Campus Connect Peer Enablement Programme On Fp4.1	-	21
CSE & IT	2017-2018	31/07/2017	Infosys Campus Connect Peer Enablement Program On Soft Skills	-	6
ECE	2017-2018	19.06.2017-20.06.2017 & 03.07.2017-08.07.2017	My Daq & Rio	-	26
EEE	2017-2018	27.02.2018 & 28.02.2018	International Conference -Aeeicb-2018	-	29
MECH	2017-2018	7.06.2017	Workshop “Design Of Experiments (Doe)”	-	15
S&H	2017-2018	-	-	-	-

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Dept	Year	Dates (From-To) (dd-mm-yyyy)	Title Of The Professional Development Program Organised For Teaching Staff	Title Of The Administrative Training Program Organised For Non-Teaching Staff	No. Of Participants
ACADEMIC YEAR 2018-2019					
BIOTECH	2018-2019	17-08-2018 - 18-08-2018	Lecture workshop on Biotechnology, Bioprospecting and Bioresource conservation	-	177
BIOTECH	2018-2019	10.06.2019 -	-	Molecular Blotting Techniques	4
BIOTECH	2018-2019	-	National conference on application of biotecnology and human health care	-	-
CIVIL	2018-2019	05.12.2018	National Level Seminar- Water Resources Engg & Management	-	25
CSE & IT	2018-2019	7.12.2018-8.12.2018	Blockchain of Things	-	15
CSE & IT	2018-2019	21/06/2018	Peer Enablement Program on DATA VISULAIZATION	-	15
CSE & IT	2018-2019	31/07/2018	Peer Enablement Program on Foundation Program 5.0	-	17
ECE	2018-2019	16.08.2018 & 18.08.2018	Recent advancements in EDA tool	-	22
EEE	2018-2019	-	-	-	
MECH	2018-2019	03.12.2018 & 04.12.2018	WORKSHOP “Design of Experiments (DOE)”	-	10

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Dept	Year	Dates (From-To) (dd-mm-yyyy)	Title Of The Professional Development Program Organised For Teaching Staff	Title Of The Administrative Training Program Organised For Non-Teaching Staff	No. Of Participants
ACADEMIC YEAR 2019-2020					
BIOTECH	2019-2020	10-01-2020 to 11-01-2020	Animal tissue culture workshop	-	132
BIOTECH	2019-2020	10-01-2020 to 11-01-2020	-	Animal tissue culture workshop	4
BIOTECH	2019-2020	6-3-2020 to 7-3-2020	International conference on noval approach of biotechnology and bioengineering in healthcare system	-	-
BIOTECH	2019-2020	4-3-2020 to 5-3-2020	workshop on application of statistics using excel and SPSS in research	-	-
CIVIL	2019-2020	11.05.2020	STRUCTURAL STEEL DESIGN CONCEPTS	-	100
CSE & IT	2019-2020	01.11.2019	Pedagogy and Active Learning	-	43
ECE	2019-2020	29.05.2020 to 30.05.2020	Impact of 5G technology	-	16
EEE	2019-2020	04.01.2020	Recent trends in Renewable energy and grid integration	-	20
EEE	2019-2020	2.8.19	Energy Audit	-	10
EEE	2019-2020	25.05.2020	Webinar on " The Art of Writing a Scientific Article and its Nuances in high impact factor journals"	-	147
MECH	2019-2020	19.7.19 & 20.7.19	Two Days National Workshop on Recent Trends in Automobile	-	11

			Engineering		
S&H	2019-2020	07.12.19	Quantitative Aptitude Training	-	8
S&H	2019-2020	28.05.20	Recent Advances in Crystal Technology	-	461

Dept	Year	Dates (From-To) (dd-mm-yyyy)	Title Of The Professional Development Program Organised For Teaching Staff	Title Of The Administrative Training Program Organised For Non-Teaching Staff	No. Of Participants
ACADEMIC YEAR 2019-2020					
BIOTECH	2019-2020	10-01-2020 to 11-01-2020	Animal tissue culture workshop	-	132
BIOTECH	2019-2020	10-01-2020 to 11-01-2020	-	Animal tissue culture workshop	4
BIOTECH	2019-2020	6-3-2020 to 7-3-2020	International conference on noval approach of biotechnology and bioengineering in healthcare system	-	-
BIOTECH	2019-2020	4-3-2020 to 5-3-2020	workshop on application of statistics using excel and SPSS in research	-	-
CIVIL	2019-2020	11.05.2020	STRUCTURAL STEEL DESIGN CONCEPTS	-	100
CSE & IT	2019-2020	01.11.2019	Pedagogy and Active Learning	-	43
ECE	2019-2020	29.05.2020 to 30.05.2020	Impact of 5G technology	-	16
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EEE	2019-2020	2.8.19	Energy Audit	-	10
EEE	2019-2020	25.05.2020	Webinar on " The Art of Writing a Scientific Article and its Nuances in high impact factor journals"	-	147
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S&H	2019-2020	07.12.19	Quantitative Aptitude Training	-	8
S&H	2019-2020	28.05.20	Recent Advances in Crystal Technology	-	461

Speakers' Biography

Dr. K. MARIMUTHU

Professor, Dept of Biotechnology

AIMST university, Malaysia.

Prof.Dr. K. Marimuthu has obtained his Ph.D. in (Zoology/ Environmental Biotechnology interdisciplinary) from ManonmaniamSundaranar University, Tamilnadu, India. He is currently a Professor at the Department of Biotechnology AIMST University, Malaysia for the last 10 years. He teaches Aquaculture, Biostatistics, Research Methodology, Biology of Invertebrates and Vertebrates courses for BSc (Hons) Biotechnology. He is specialized in Aquaculture, fish reproduction & breeding, fish immunology and aquatic toxicology related research. He has published more than 100 research publications in fisheries and aquaculture fields in various reputed and indexed journals. He has participated in more than 35 local and international conferences, seminars, and workshops. He is an external examiner for six Indian Universities (ManonmaniamSundaranar University, Annamalai University, Bharathiar University, Bharathidasan University, Madras University, Chennai, and Priest University, Thanjavur), Tamilnadu, India. He has been using SPSS statistical software for the past 15 years and conducted several sessions of SPSS workshop and training for researchers and students in Malaysia, India Thailand, and Srilanka. He was also served as Deputy Vice-Chancellor, Academic and International Affairs (2016-2017), AIMST University, Malaysia.

Dr.S. SURESH KUMAR

Professor,

Dept. of Medical Microbiology & Parasitology

University Putra Malaysia, Malaysia

Dr. S. Suresh Kumar has degrees in Microbiology (B.Sc), Life sciences specialization in bio- macromolecules (M.Sc.,) and Microbiology (Ph.D.,). He is currently working as an Associate Professor in Universiti Putra Malaysia, Malaysia. He has been Post-Doctoral research Fellow in National Central University and National Taiwan University, Taipei-Taiwan in the field of yeast genetics and Stem cells. His research interests have focused on Host pathogen interactions, Stem cells with Infectious diseases, Infectious Diseases in Tuberculosis, Dengue and Leptospirosis, Bio-macromolecules, Yeast genetics, Fermentation and purification of Microbial drugs and enzymes, Stem cell niches, Induced Pluripotent stem cells. So far, he published nearly 155 international publications, in which he published 3 publications in Progress in Polymer science having impact factor of 27.414, Progress in Material Science having impact factor of 23.450 and 5 publications in Biomaterials having impact factor of 10.273, and 8 publications in different Nature publishing group, and many more high impact publication submitted. Also, he filed 2 patent as a member, for this technology his team received bronze medal in PRPI 2016. Currently, he is handling various projects, and he graduated many PhD and master students. He has lots of International research Collaboration with Japan, Taiwan, Singapore, Malaysia, India, Saudi Arabia and Italy. Currently, he is an Academic Editor in PLOS ONE journal (Q1 article and 3.057 Impact factor), and also academic editor of Data in Brief (Elsevier) and Special Issue editor in Frontiers in Pharmacology (IF 4.5), and also he is also an editor for American Journal of Tissue Engineering, Columbia international Publishing. He received a Gold Medal in B.Sc. Microbiology and University First Rank holder, Dept of Microbiology and Best Outgoing student awardat S.C.K College, Tamilnadu, best lecturer awardat Universiti Putra Malaysia, Malaysia, top Researcher(Faculty of Medicine and Health Sciences), Universiti Putra Malaysia. He was also selected as Top researcher of entire UPM in the year 2018. Currently, he was invited from IBS, UPM as a research associates and also he was appointed as a Head of ReGen, its one of the research center of UPM.

Dr. R.BRAWIN KUMAR

Chinese Academy of Science

Beijing, China - 100101

Dr. R. Brawin Kumar is currently working in Chinese Academy of Science, Beijing, China. He has got his Ph.D in Zoology at University of Chinese Academy of Sciences, Beijing, China.He worked as Research fellow at ZOO Outreach Organization, Coimbatore. He has received many scholarships from various funding agencies such as TNSCST, Western Ghats Portal Research Grant by French Institute of Pondicherry, WWF India Small Grant Research Fellowship, ISZS Travel Scholarship, Chinese Academy of Sciences (CAS) & The World Academy of Sciences (TWAS) (Italy) Research Fellowship, Inlaks Ravi Sankaran Fellowship Program – Small Grant Project, IDEA WILD Research Equipment Grant, ZSL – EDGE Fellowship and National Post-Doctoral Fellowship (NPDF).

He has received many awards such as Swami Vivekananda Award from Madurai - BharathiYuva Kendra, Madurai, Tamil Nadu, Best Student ExNoRa Award from ExNoRa International – environmental organization, Sivakasi, Alumni Achiever Award from Sri ParamaKalyani College, Tamil Nadu Environment Award from Government of Tamil Nadu for the extensive works on spreading the environmental awareness and biodiversity education in Tamil Nadu rural schools and communities., Best Researcher Award in the field of biological sciences from Pearl Foundation, Madurai, Best Research Scholar Awardby Nature Science Foundation (NSF), Coimbatore, Outstanding International Graduateof Chinese Academy of Sciences Award from University of Chinese Academy of Sciences Beijing, China. Excellent Oral Presentation Award by Summer School on Frontier and Inter disciplinary Sciences for Overseas students, organized by Chinese Academy of Sciences, China. He is the member of Chiroptera Conservation & Information Network of South Asia (CCINSA), Rodent, Insectivore and Scandentia Conservation & Information Network of South Asia (RISCINSA), ZOO's Educator Network (ZEN), International Society of Zoological Sciences (ISZS), SSC-IUCN Small Mammal Specialist Group, USA (IUCN -SSC), World Lagomorphs Society (WLS), European Hedgehog Research Group (EHRG).

Dr.A.K. MUNIRAJAN
Professor and Head
Department of Genetics
Dr ALM PG Institute of Basic Medical Sciences
University of Madras, Taramani Campus
Chennai.

Dr. A. K. MUNIRAJAN is working as Professor and head in Department of Genetics at Dr ALM PG Institute of Basic Medical Sciences, University of Madras. His area of specialisation isCancer Biology and Genetics. He has put more than twenty five years of research and teaching experience in Genetics. He is a recipient of several grants and work including NIG Collaborative Research Grants (A1) National Institute of Genetics Japan , Short Term Fellowship Program inNational Institute of genetics, DST-JSPS Special Lecture Tour Program fellowship , Department of Science and Technology, DBT Travel Award to attend a workshop entitled “Exome sequencing, genotyping and Array CGH: Technologies for genome analysis” in Wellcome Trust, UK Department of Biotechnology, Post-Doctoral Fellow in Division of Biochemistry, Chiba Cancer Center Research Institute, Japan, Post-Doctoral Fellow Department of Genetics, Boston University School of Medicine, Boston, USA, Post-Doctoral Research Associate Department of Molecular Cellular Oncology, Tokyo Medical &Dental University, Tokyo, Japan, Perarignar Anna Memorial Medal in Madurai Kamaraj University, Young Scientist grant Ministry of Education, Culture, Sports, Science and Technology, Japan.CSIR-Junior and Senior Research Fellowship Council of Scientific and Industrial Research, India,International Cancer Technology Transfer Award UICC, Geneva, Switzerland.He hasMOU with University of Naples Federico II to participate in the joint International Doctorate Program in Molecular Oncology and Endocrinology and exchange research students. Further he is a member of several committees like UGC-CAS Advisory Committee Member, Coordinator in UGC-SAP DRS II Programme, Nodal Officer - Directorate of Health Research-Multi-Disciplinary Research Unit (DHRMRU), (established with a research grant of Rs 5,00, 00,000) Dr. ALM PG Institute of Basic Medical Sciences, University of Madras, Taramani Campus, DBT Nominee - Institutional Bio-Safety Committee, IIT-Madras, Member secretary - Institutional Bio-Safety Committee, University of Madras and Co-ordinator, Biomedical Science program. UGC-UPE Phase II.He has published more than 44 research papers and delivered more than 30 lectures in National and International programmes.

Dr.RAMASAMYMUTHU

Senior Consultant

Transplantation Immunology & Molecular Diagnostics

Global Health city, Chennai

Dr.Ramasamy Muthu, former Senior Consultant, Transplantation Immunology & Molecular Diagnostics, Global Health city and at present Director-Immunogeneic diagnostic, Chennai. His area of specializationImmunology. He has put 25 years research exposurein immunogentics of Diseases,immunobiology of Transplantation and Molecular Diagnostics.Formally he was Sr.Research Officer/Sr.Scientist/Asst .Professor in All India Institute of Medical Sciences,New Delhi-110059 and he has received DGHS Fellowship for M.Phil study and ICMR Fellowship for doctoral thesis.

He has several awards and honors to his credits. He is a member inIndian Immunology Society,International Immunology Society,Indian Society of Human Genetics and Life Member in IIS, ISHG, AACC. He has more than 16 publications, 2 books, Manuals and 50 abstracts and Poster Presentations in Indian and International Conferences.

Dr.SAILAJA ELCHURI
Associate Professor,
Department of Nanobiotechnology,
SankaraNethralaya, Chennai.

Dr.Sailaja Elchuri is working asAssociate Professor in Department of Nanobiotechnology, SankaraNethralaya. Her area of research includesLabel-free imaging of cells and tissues using Raman microspectroscopy, SERS nanotags for multiplex detection,Graphene composites for biological application. Proteomics, Phosphoproteomics, lipidomics and glycoproteomics for disease studies Novel biomaterials for cancer therapy, Mass spectral imaging using ambient ionization techniques, Cancer therapy using aptamer chimeras. She did her PG education in Molecular Biology and Physiology, University of Hyderabad, India and she worked in various capacities, Research Scientist Department of Microbiology and Immunology, Baxters Labs for Genetic Pharmacology, Stanford University Palo Alto CA, Postdoctoral Fellow in the Dept. of Neurology & Neuroscience - Stanford University, Palo Alto CA, Dept. of Pediatrics – San Francisco University San Francisco, CA, Post Doctoral Fellow in the Arizona State University, Department of Plant Biology, Post DoctoralAssociatein the Department of Biology, Stanford University.

She is a member of several professional bodies and got awards such as National merit scholar ship after High School, Gold Medal in Masters Program for standing first in the class, Sri Rajiv Gandhi (Late Prime Minister of India) award for academic excellence, NET and UGC qualified ,CSIR fellow ship for PhD and Research Associate, ICAR certification for faculty appointments in Agriculture, Reviewer for RSC journals, Molecular Biosystems, Expert Review of Proteomics, Cancer Biomarkers, 3 Biotech, Experimental Eye Research, BMC Opthalmology, All Dove press journals, Journal of Proteomics Research. Task Force Member for Indo-US DBT grants. Grant reviewer for SERB and DBT. She is having several international publications and web releases such as new images tool would improve cancer diagnosis, nanoparticles using tagman tags to highlight features within cells.

Dr. G. RAMESH KUMAR
Professor & Head,
Dept of Bioinformatics,
AUKCB, MIT Campus,
Chennai.

Dr. Ramesh Kumar is working as Scientist, AU-KBC Research Centre, MIT Campus of Anna University, Chennai. Currently he is Research Staff in AU-KBC Research Centre, Program Coordinator & Faculty –Advanced Certificate Course in Clinical Research (ACC CR) Joint programme with Apollo Hospitals, Chennai, Course Coordinator & Faculty - Certificate course in Next Generation Sequencing (NGS) & Bioinformatics. He was formerly Welcome Trust Post Doctoral Fellow (2004) And Project Director - (2001 - 2003) - Molecular Bioscience Pvt Ltd. Chennai. India. Faculty in Microbiology / Biotechnology SRM, Adhiparasakthi and Asan Memorial Colleges (1999-2001).Chief Microbiologist (1998) ABL Biotechnologies Ltd., Chennai.Chief Chemist (1994-1997) S & S Industries and Enterprises Ltd., Chennai.Scientist Fellow (1992-1994) National Environmental Engineering Research Institute (NEERI) (CSIR, Govt., of India) Nagpur. He is a member of several bodies such as ISCB- International Society for Computational Biology, AMI –Association of Microbiologist of India, ISID - International Society for Infectious Diseases, National Resource Centre-Free open source software (NRC FOSS) Member (Bioinformatics).

He has several awards includes Council of Scientific and Industrial Research (CSIR) Fellowship (1989-90) JRF-NET, GOVT., OF INDIA, Intellectual Ventures (Asia) (2008) Award for development of Functional Genomics Tool (FGT). He has been operating Project on 'Bioinformatics approach for identification of hypothetical ORF in bacterial genomes and hydrogen production pathways' sponsored by Department of Information Technology, MCIT, Govt., of India, New Delhi (2006-2009). He has developed many databases (CanGeneBase, BCDB, TaxKB, RECDB, ECOMP, GCGT, ASPMP and HDAC) and Bioinformatics tools (MCGT, AIM BLAST).

Dr. M. DEEPANRAJ

AI- Robotics,

Corporate Trainer.

Visteon Technical Services Centre,

Chennai.

Dr.M.Deepanraj is an expert in Artificial Intelligence and corporate trainer in AI, Robotics, programminglanguages, etc.His area of specialization is AI-ROBOTICS and his experience is four years ofresearch and training experience. Research engineer dealing with product research by patentingnew technological concepts in Agni's Center for Research and Development, Embeddedsoftware Engineer dealing with Artificial Intelligence Solutions tools for automating thevalidation process in automotive diver information, HUD and info systems at Visteon Technical Services Center, Organised 100+ workshops and training programmes and his awards andrewards are Appreciated in person by the former President of India "Dr. A.P.J. Abdul Kalam"for creating a 5-feet cost effective Humanoid robot , International Award winner forcontributing a real time project using robots for easing the work of farmer in the farm fields, held at Tuticorin , International Award winner for contributing a novel approach in effectiveBrain Computer Interface by coining a never before concept named "Neural LinguisticDictionary", Awarded the most impressive project of the year in IIT Kharagpur, for ISRO MarsRover Challenge , Won 25 + Technical Events in Tech fests all over India .He has more than 5Journal Publications.

Dr.A. USHA RAJA NANTHINI
Professor,
Department of Biotechnology,
Mother Teresa university,
Kodaikanal.

Dr.A.Usha Raja Nanthini is working as an Associate professor and head in the Department of Biotechnology, Mother Teresa Women's University, Kodaikanal since 2014. She has completed her Ph.D IN 2010 and PDF-UGC women doctoral fellowshipduring 2011-2014. Her qualifications are M.Sc., M.Phil. PGDIPR., Ph.D., and she has 13years of Teaching Experience. And her Research Experience is UGC Women Post Doctoral Fellowship during 2011-2014 at Sri Paramakalyani College of Arts and Science, Alwarkurichi. At present she is the Dean of Science, Coordinator of RUSA and NSS Coordinator in Mothertherasa women's University. She worked in various capacities like Co ordinator cultural cell,Rotaract Staff Coordinator, Dean Student Affairs, IP Cell Coordinator , Campus incharge . She is expert in Mycotechnology, Medicinal Biotechnology and has guided 8 M.Phil project, 23 project fellows. She has published 15 papers in reputed journals and written 5 books. She is operating a research project in Identification of Potential antidermatophytic essential oils among the fifteen Eucalyptus species in Palani Hills and the grant is 10,62,300 and Identification, Barcoding of Palani Hills *Basidiomycetes* and *Mycosynthesis* of biodegradable packing material alternative to Sytrofoam. She has completed a project titled as Application and standardization of natural dyes on natural fibres to enhance the quality of handicrafts. She has won several awards , she received second prize in National seminar on "Frontiers in Bioprocess Technology and Microbial Ecology [FBTME-2016] organised by Department of Microbiology, Periyar University , best paper award for the paper titled as "Mycosynthesis of silver Nano particles using red yeast rice by Department of Biotechnology, Thiruvalluvar University, Vellore. She is a member of various professional bodies include Life member of Indian Lichenological Society, Membership number: 160, Life member Mycological society of India Life member of Mushroom society of India. She submitted 3 gene sequences in Gen Bank such as KY611856,KY611854,MF621053.

Dr.ARUNACHALAM RAMAIAH

Dept. Of ecology and evoluationary biology,

University of California,

Irvine.

Dr.Arunachalam (Arun) Ramaiah, is a Project Scientist/TIGS Visiting Scientist working with Assistant Professor J.J. Emerson at the University of California - Irvine, USA. Dr.Ramaiah is primarily a Senior Scientist based at the Tata Institute for Genetics and Society (TIGS), Bangalore, India. He received his PhD in Bioinformatics jointly from the Manonmaniam Sundaranar University, India, and Abo Akademi University, Finland. Before joining UC Irvine/ UC San Diego/ TIGS-India, he worked as a Visiting Researcher in the laboratory of Professor Annadurai Gurusamy at Manonmaniam Sundaranar University studying the influenza A/H7N9 virus, followed by completion of Postdoctoral research in the laboratory of Professor Annapurna Vyakarnam at the Indian Institute of Science (IISc) / King's College London studying Mycobacterium tuberculosis. Dr.Ramaiah then worked as an APHL-CDC Bioinformatics Postdoctoral Fellow in the laboratory of Supervisory Microbiologist Gregory Dasch at the U.S. Centers for Disease Control and Prevention (CDC) studying arthropod metagenomics and as a Senior Postdoctoral Scholar in Professor Kari Nadeau's laboratory at the Stanford University School of Medicine focusing on food allergy. He has collaborated with Associate Professor Vaithi Arumugaswami from University of California at Los Angeles (UCLA) on Zika virus. Dr.Ramaiah's current research focuses on studying genome and structural variation in Anopheles (mosquito) and Drosophila (fruit fly) species using omics, bioinformatics, and active genetics approaches. His investigation provides new avenues for control of the vector (i.e. mosquitoes, ticks, mites) and the reduction of the public health and economic burdens in India and around the world.

In 2016, Dr.Ramaiah received the highly prestigious ISID New Investigator Award from the International Society for Infectious Diseases, USA, for his research on T-cell epitope evolution in Mycobacterium tuberculosis strains from India. Dr.Ramaiah is an Academic Editor in PLoS ONE, Review Editor in Frontiers in Microbiology, Frontiers in Genetics and Frontiers in Ecology and Evolution journals, and also a reviewer for more than ten international peer-reviewed journals. Dr.Ramaiah is a member of the International Society for Infectious Diseases, Infectious Diseases Society of America, International Society for Computational Biology, American Society for Microbiology, and American Society for Rickettsiology. He has 12 years of academic experiences gained from leading Institutions in India, USA and Finland and has made academic visits to several countries. He received 25 awards/fellowships/recognitions from both national and International organizations.

Dr. R. R. MOSAESELVAKUMAR
Associate Professor,
Asian University for women,
Chittagang Bangladesh.

Dr. R. R. Mosae Selvakumar is working as Associate professor of chemistry science and math program, Asian University for women, Bangladesh. His passion is learning, teaching and doing science towards achieving sustainable development, understanding the hidden secrets of nature and conservation of the same. He has got his Ph.D in Chemistry from Bhavnagar University/ Central Salt & Marine Chemicals Research Institute (CSIR), Gujarat, India. He has received several awards including Alumni Achiever Award from Sriparamakalyani college, achiever Award from Karunya University, DST Fast Track Young Scientist Award (INR 24.56 lakhs) from Department and Science and Technology, Government of India (SB/FT/CS-068-2013), DAAD Fellowship from German Academic Exchange Service and visited Technical University, Kaiserslautern, Germany, Young Scientist Award at National Conference Environ Nano2010, conducted by Manonmaniam Sundaranar University and SPKCES, Senior Research Fellowship from the Council of Scientific and Industrial Research (CSIR), Government of India, Second prize in intercollege level ChemPuzzle and ChemQuiz conducted by VHSN College, Viruthunagar, India, First prize in Science Teaching Competition organized by Government Teacher Training Institute, Tirunelveli, India. Formally he worked as Scientist in Chemo-Informatics division of Jubilant Biosys Ltd, Bangalore. He has operated many research projects includes Karunya Short Term Research Grant (INR 40,000)for Helicates for Anion Sensing, DST-SERB fast track young scientist award Project (INR 24,56,000) entitled“Design, Synthesis and characterization of novel supramolecular Helicates for their application in molecular recognition”.He is having research collaboration with Central Salt and Marine Chemicals Research Institute (CSIR)&NITTR, India and Technical University, Kaiserslautern, Germany, King Saud University, Riyadh, Saudi Arabia, National Dong Hwa university, Hualien, Taiwan, National Chung Cheng University, Taiwan. He has published more than 50 research papers and 4 book chapters.

Programme Schedule

Day - 1		
08.00- 09.30	Registration	
09.30 -10.30	Inauguration	
	College & Department Video	
	Prayer song	
	Welcome address	**Dr. P. Dhasarathan**, Head- Dept of BT, PEC
	About the conference	
	Guest Felicitation	PEC Management
	Felicitation address	PEC **Advisor**
	Presidential Address	**Principal & Chairman**
	Release of Souvenir	
	Inaugural Address	**Dr. K. Marimuthu**, AIMST University, Malaysia
	Keynote address	**Dr. S. Suresh Kumar**, University Putra Malaysia, Malaysia
	Felicitation address	**Dr R. Brawin Kumar**, Chinese Academy of Science Beijing, China
10.30-10.45	Tea Break	
10.45-11.45	**Dr. K. Marimuthu**, Professor, Dept of Biotechnology AIMST university, Malaysia	Application of Biotechnology in Aquaculture and Fisheries
11.45 – 12.45	**Dr. S. Suresh Kumar** Professor, Dept of Medical Microbiology & Parasitology University Putra Malaysia, Malaysia.	Promising stem cell therapy for the future
12.45-01.30	Lunch Break	
01.30-02.30	**Dr.RamasamyMuthu** Senior Consultant, Transplantation Immunology & Molecular Diagnostics Global Health city, Chennai	Molecular technologies during donor selection for multi organ and stemcell transplantation
02.30-03.15	**Dr. M. Deepanraj** AI- Robotics, Corporate Trainer, Chennai	Artificial intelligence – A turn key for Health care sector
03.15-04.00	**Dr R. Brawin Kumar** Chinese Academy of Science Beijing-, China.	New and future developments in microbial biotechnology: effect of drought and season on *Arbuscularmycorrhizal* fungi in a subtropical secondary forest, China.
04.00- 05.00	Oral/poster/Skype presentation **Dr. R. R. MosaeSelvakumar** Assoc. Prof. Asian University for women Chittagang Bangladesh.	Fabrication of biogenic silver nanoparticle incorporated medical textile based antimicrobial fabric using *Musa acuminataCollasap*
Group Photo		

Programme Schedule

Day – 2		
08.30 – 09.30	Oral/poster/Skype presentation **Dr.ArunachalamRamaiah** Dept. Of ecology and evolutionary biology University of California, Irvine.	Insights into Cross-Species Evolution of Novel Human Coronvirus 2019 –nCoV and Defining Immune Determinants for Vaccine Development
09.30-10.30	**Dr.SailajaElchuri** Professor SankaraNethralaya, Chennai.	Omic approaches and metabolic modelling in eye disease research with emphasis on eye cancers.
10.30-11.30	**Dr.G. Ramesh Kumar** Professor & Head, Dept of Bioinformatics AUKCB, MIT Campus, Chennai.	Next Generation Sequencing and its Applications in Healthcare
11.30-11.45	Tea break	
11.45-12.45	**Dr.Usha Raja Nandhini** Professor, Dept of Biotechnology Mother Teresa university, Dindugal.	Perspectives on the neurological network of nature.
12.45-01.30	**Lunch**	
01.30-02.30	**Dr. A.K. Munirajan** Professor and Head Department of Genetics Dr ALM PG Institute of Basic Medical Sciences University of Madras, Taramani Campus, Chennai.	Pharmacogenomics and pharmacogenetics for personalized medicine: A research Update
02.30-02.45	Tea break	
Valediction		
02.45-04.00	Valediction - Conference video	
02.50-02.55	Welcome address & Conference Report	**Dr A.J.A.Ranjitsingh**, Professor –Dept of BT, PEC
02.55-03.00	Guest felicitation	Principal, PEC
03.00-03.10	Presidential Address	Principal, PEC
03.10-03.20	Valedictory Address	**Dr. A.K. Munirajan**, Professor IBMS, Madras University
03.20-03.30	Feedback	Participants
03.30-03.45	Prize Distribution	Guest and Principal
03.45-04.00	Certificate distribution	Guest and Principal
Group Photo		

Invited lecture series

Application of Biotechnology in Aquaculture and Fisheries

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Aquaculture is the farming of aquatic organisms, including fish, molluscs, and crustaceans, seaweeds in natural or captive marine or freshwater environments. The world fish production from capture fisheries decreases and many large fish stocks indicate reductions in abundance due to overfishing and further rises in harvest are not expected under the current global climate change.In the last few decades, aquaculture production from inland and marine sources has grown dramatically. We also face huge challenges in providing food and livelihoods for the expected 9 billion people by the mid-21st century.Aquatic products are important sources of protein and essential nutrient components for global food security and eliminating malnutrition. Furthermore, aquaculture plays an important role in rural economies by creating new jobs and generating income.Biotechnology applications can play a key role in enhancing productivity, improving efficiency and ensuring sustainability in aquaculture. The key phases of the fish culture including fish growth, nutrition, health,andfish reproduction can be improved through biotechnological applications with enhancement of growth rate and feed conversion efficiency, nutrition and product quality, stress management, vaccination, disease resistance, disease diagnosis and treatment, ploidy induction, genetic selection, and transgenesis. Sex reversal and breeding and polyploidyinitiated to have a major impact on aquaculture production. There is also growing concern about the impact of biotechnology in the aquaculture and fishery industries on sustainable development. This review will thus discuss the importance and use of biotechnology for fish production in aquaculture and fisheries.

Keywords: Aquaculture, Fisheries, Biotechnology, Induced spawning

Promising stem cell therapy for the future

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In recent decades, the burgeoning medical technology has made great contributions to human health. However, the world still lacks effective methods to cope with major diseases such as cancer, AIDS and diabetes. In this context, stem cells have become the focus of biomedical research.In 1999, the research findings on stem cells were named the first of the top 10 scientific advances of the year by Science magazine. In 2000, the research on stem cells was named again one of the top 10 scientific advances of the year. Stem cells can give rise to various cell types in the human body and is important in cell repair and regeneration. Research has been done for years to develop biomaterials that can guide stem cells into specific fates, such as using physical cues. Given that stem cells can differentiate into all kinds of somatic cells to grow human tissues and organs, it is expected to radically treat such major diseases as Parkinson's disease, Alzheimer's disease, cancer and diabetes. Therefore, the research on stem cell therapy is considered to have great implications for science and society and also identified as a promising application in the industry.Stem cells can give rise to various cell types in the human body and is important in cell repair and regeneration. Research has been done for years to develop biomaterials that can guide stem cells into specific fates, such as using physical cues. In my post doctorate experience in National Central University (Taiwan) and National Taiwan University, I have gained more experience in stem cells culture and manipulation using biomaterials. Culture materials with certain physical properties and feeder layer can favour certain differentiation of cells. In the recent years, researchers are focus more on biological and physical cues to direct stem cell differentiation. For instance, the elasticity of biomaterials use for culturing stem cells can decide the pluripotency and differentiation direction of the stem cells. In addition, continuous harvest technology has been developed to harvest stem cells from culture plate continuously by manipulating the culture temperature. Such techniques allow faster, cheaper and simpler procedures in stem cells culture. At present, cell therapy based on stem cells is a hot and cutting-edge topic in the field of regenerative medicine research. It is of great significance to explore the potential of stem cells for the development of stem-cell-based regenerative therapy and to solve many difficult clinical problems in the future.

Keywords: stem cells; physical cues; biomaterials; infectious diseases

Molecular technologies during donor selection for multi organ and stemcell transplantation.

MuthuRamaswamy
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The transplant of organs is one of the greatest therapeutic achievements of the twentieth century. In organ transplantation, the adaptive immunity is considered the main response exerted to the transplanted tissue, since the principal target of the immune response is the MHC (major histocompatibility complex) molecules expressed on the surface of donor cells. However, we should not forget that the innate and adaptive immunities are closely interrelated and should be viewed as complementary and cooperating. When a human transplant is performed, HLA (human leukocyte antigens) molecules from a donor are recognized by the recipient's immune system triggering an alloimmune response matching of donor and recipient for MHC antigens has been shown to have a significant positive effect on graft acceptance.

The HLA system includes a complex array of genes located on chromosome number 6 and their molecular products that are involved in immune regulation and cellular differentiation. Human leukocyte antigen (HLA) molecules are expressed on almost all nucleated cells, and they are the major molecules that initiate graft rejection. There are three classical loci at HLA class I: HLA-A, -B, and -Cw, and five loci at class II: HLA-DR, -DQ, -DP, -DM, and -DO. The system is highly polymorphic. The contribution of the allelic diversity of class I and II genes to immune recognition and alloreactivity can be analyzed by serological methods and molecular methods at the DNA level by different methods like sequence specific primer (SSP) and oligotyping with locus- and allele-specific oligonucleotide probes (SSOP). HLA class I and II matching is important in organ transplantation especially in kidney and bone marrow transplantation. In heart and lung transplantation, HLA match at the DR locus is important but there is some difficulties like ischemic times, availability of donors and clinical need of recipients. Corneal grafts are not usually influenced by HLA matching, unless being transplanted into a vascularized bed. Transplantation of foreign tissue induces both humoral and cellular immune responses in the recipient, which leads to graft rejection or, for bone marrow transplantation, graft versus host disease (GVHD).

Previously, HLA typing was done by two methods: serologic method using antiserum and mixed lymphocyte culture (MLC). After that a more precise DNA-based HLA typing methods using molecular techniques, such assequencespecific oligonucleotide probe hybridization (SSOP), sequence-specific primer amplification (SSP), sequencing-based typing (SBT), and reference strand-based conformation analysis (RSCA), have been developed and are frequently used. In 2013, a new project of the 16IHIW demonstrated the potential benefits of nextgeneration sequencing (NGS) in the HLA laboratory. NGS may resolve the issue through the combination of clonal amplification, which provides phase information, and the ability to sequence larger regions of genes, including introns, without the additional effort or cost associated with current methods. Another simplified method using short tandem repeat (STR) genotyping provided additional information allowing determination of the extent of

HLA identity in families where HLA haplotype inheritance was ambiguous, due to extensive homozygosity or shared parental haplotypes. The HLA STR assay is a reliable and rapid test that used inexpensive.

Antibodies screening was done to avoid hyperacute rejection, it is very important to identify recipient anti-HLA antibodies to antigens expressed on donor with blood cells. The pioneer method to detect such antibodies is complement-dependent cytotoxicity (CDC), in the mid 1990s, it has been gradually replaced by more-sensitive solid-phase immunoassays (SPI) such as the enzyme-linked immunosorbent assay and the bead-based technology (i.e., flow cytometry: Flow PRA and Flow Analyzer-Luminex). The bead based technology transformation during donor selection for highly sensitized patient such Multiple transfusion, Multiparous women and repeated second or third transplantation patients need to screen Donor specific antibodies (DSA), virtual crossmatchand single antigen bead assay (SBA) to avoid hyper acute rejection and Post Transplantation long term graft survival.

Keywords: Antibodies screening, NGS, HLA.

Artificial intelligence – A turn key for Health care sector

Dr. M. Deepanraj

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AI is dominating all he possible fields which we know of. People often have confusion between AI with Machine learning and deep learning. The aim of the converse is to differentiating different types of Machine learning systems and latest innovations that has been made in the field and especially in health care sectors like finding medicines, cancer and other disease detection and even recently scientists have found a way to detect corona virus in just 10 seconds. Further travelling on different inputs that can be applied for machine learning system and how it can be transformed for health care sector. The session on best cases to be followed on to create a ML application and tips for researchers on how to create a standard paper in ML.

Keywords: Artificial intelligence, Machine learning, Health care.

New and future developments in microbial biotechnology: effect of drought and season on *Arbuscularmycorrhizal*fungi in a subtropical secondary forest, China.

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Drought, as one of the most important aspects of global climate change, has increased in frequency and intensity during the last century. The decreased precipitation is affecting plant communities and productivity, soil microbial communities, and ecosystem functioning. As one of the most important components of soil microorganisms, *Arbuscularmycorrhizal* (AM) fungi form symbiotic relationships with more than 80% of terrestrial plant species. Plants supply photosynthetic products for fungal growth and functioning, and thus influence the AM fungal community. In return, AM fungi may influence plant communities and productivity by increasing host nutrient and water uptake through increasing the root surface of the host plants and formation of underground common mycorrhizal networks that redistribute nutrients between plants.Elucidating the response of AM fungi to drought stress in different seasons is critical to understanding the impact of global climate change on biodiversity maintenance, community assembly and ecosystem functioning.

In comparison, less is known about the seasonal shifts in AM fungal abundance, richness and community composition in subtropical forests. Subtropical forests are widely distributed in south and east China and have high plant species diversity and AM fungal species diversity. Subtropical forest ecosystems make major contributions to global C cycling and the gross primary production of terrestrial ecosystems. Simultaneously, subtropical forests are particularly sensitive to climate change. For example, previous studies have shown that decreased precipitation influences plant productivity and community structure and soil microbial community structure, biomass and respiration. However, the response of AM fungi to drought in different seasons in the subtropical forests remains largely unknown. To better understand the response of AM fungi to drought in different seasons, AM fungal extra-radical hyphal density, spore density and root colonization rate were examined in May (summer) and December (winter) under a 4year field experiment with simulated drought in a Chinese subtropical secondary forest. The AM fungal communities in soil and roots were examined using IlluminaMiSeq sequencing of 18S rDNA sequences. In this study we hypothesize that: (H1) drought decreases AM fungal extra-radical hyphal density, spore density and root colonization rate, (H2) AM fungal extra-radical hyphal density, spore density and root colonization rate are higher in summer than in winter, and (H3) drought and season change AM fungal community composition but not richness in the subtropical secondary forest.

Keywords:*Arbuscularmycorrhizal*, rDNA sequencing, Biodiversity.

Fabrication of biogenic silver nanoparticle incorporated medical textile based antimicrobial fabric using *Musa acuminataColla* sap

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This is the first study to report the fabrication of biogenic silver nanoparticles incorporated antimicrobial fabric using *Musa acuminataCollasap*. The silver nanoparticles were synthesized using *Musa acuminataCollasap* and its optical and structural properties were analyzed using UV-Visible spectroscopy, Fluorescence spectroscopy, FTIR, SEM, FTIR, particle size analysis, XRD and EDX. A dye was extracted from berries of *Vitex altissima*L.f and characterized. An antimicrobial fabric was fabricated and incorporated with the synthesized nanoparticles and the extracted dye. Nanoparticle coated dyed fabric was subsequently analyzed for retention of silver nanoparticles after extensive treatments with detergents at various temperatures and then characterized. The antimicrobial potential of the coated nano fabric was evaluated and the silver nanoparticle coated fabric showed significant antimicrobial activity against the pathogens tested. This study shows that the previously unreported newly synthesized silver nanoparticles and incorporated into a fabric coated with the dye of *Vitex altissima*L.f possesses significant antimicrobial that can be used as a medical textile antimicrobial fabric.

Keywords: Silver nanoparticles, *Musa acuminate,* fabric, antimicrobial, dye

Insights into Cross-species Evolution of Novel Human Coronavirus 2019-nCoV and Defining Immune Determinants for Vaccine Development

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Novel Coronavirus (nCoV) outbreak in the city of Wuhan, China during December 2019, has now spread to various countries across the globe triggering a heightened containment effort. This human pathogen is a member of betacoronavirus genus carrying 30 kilobase of singlepositive-sense RNA genome. Understanding the evolution, zoonotic transmission, and source of this novel virus would help accelerating containment and prevention efforts. The present study reported detailed analysis of 2019-nCoV genome evolution and potential candidate peptides for vaccine development. This nCoV genotype might have been evolved from a bat-CoV by accumulating non-synonymous mutations, indels, and recombination events. Structural proteins Spike (S), and Membrane (M) had extensive mutational changes, whereas Envelope (E) and Nucleocapsid (N) proteins were very conserved suggesting differential selection pressures exerted on 2019-nCoV during evolution. Interestingly, 2019-nCoV Spike protein contains a 39 nucleotide sequence insertion relative toSARS-like bat-SL-CoVZC45/2017. Furthermore, we identified eight high binding affinity (HBA) CD4 T-cell epitopes in the S, E, M and N proteins, which can be commonly recognized by HLA-DR alleles of Asia and Asia-Pacific Region population. These immune dominant epitopes can be incorporated in universal subunit CoV vaccine. Diverse HLA types and variations in the epitope binding affinity may contribute to the wide range of immune pathological outcomes of circulating virus in humans. Our findings emphasize the requirement for continuous surveillance of CoV strains in live animal markets to better understand the viral adaptation to human host and to develop practical solutions to prevent the emergence of novel pathogenic CoV strains.

Keywords: Coronavirus, Vaccine, Evolution of species

Abstracts

13	Pharmacological activities, GCMS analysis of bioactive metabolites isolated from marine Actinomycetes - "reservoir of antibiotics **Saraswathi Krishna, Sivakumarkandhasamy, Karthikeyanvijayan, Arumugamperumal**	13
14	Antidiabetic property in leaf extracts **Amirtha. P, Casvin Damaris. S. J,**	14
15	Biosurfactants – types, properties and applications : a review **Shyamala. N, S.Kanimozhi**	15
16	Enhanced removal of volatile organic carcinogens by genetically modified ornamentalpotted plant, expressing the mammalian Cytochrome p450 2e1 gene. **Vishnupriya V , Shiboni J , Divya S , Helen A**	16
17	Acute and subacute oral toxicity studies of polydatin **P.Jayalakshmi ,P.T.Devika**	17
18	Isolaton and charecterization of rhizosphere microbes for plastic degradation **S.Kiruthika, L.S.Kamakshi**	18
19	Silica enriched seaweed biofertilizer to combat drought stress in V*igna radiate* **Balaji.S, Gayathri**	19
20	Green synthesis of caesium carbonate nanoparticle using *coleus amboinicus* **K. Ramya, V.Nethra, S.Shamsizzuha, V.Kanishka, A.Surudhi .**	20
21	Invitro analysis of *Berberis aristata* to combat paramoxiviridae infection **Yuktha. S. Shreenivasn, Keerthana. S, A. Praveena, R.K.Kavitha shri**	21
22	Estimation of agar components to replace zinc pyrithione present in shampoos. **Reema , K Ramya**	22
23	Isolation and characterization of marine bacteria for crude oil degradation. **Murugeswari T, Naveena J, Nihar Sultana J, Shaheerabanu,A.Monisha**	23
24	Green synthesis of magnesium oxide nanoparticle using *Plectranthusam boinicus* leaf extract **R. Harshaveena, Ramya. K**	24
25	Prevention of microbials poilage of dairy products and to enhance the shelf life period **M.Deva Dharashini , P.Mohana Priya , V.Ragavi**	25
26	Efficacy of costusigneus, (insulin plant) extract on controlling alloxan induced diabetes in rabbit, *Lepus nigricollis* **Muthuselvam, S And Sudhakaran, M. R.**	26
27	Larvicidal activity using bio nano emulsion against *ades aegypti*(dengue vector) **Devi Subha Sree S 1 , Dharshini Ravi.R 1 , Joyce Hellen Sathy.D 1**	27
28	Antibacterial, antioxident activity of bioactive compound isolated from pipper betel plant extracts **R.Abarna , N. Alagumanikumaran , S.Abirami , M.Kannan ,A.J.A Ranjithsingh**	28

29	Isolation and screening of litre waste decomposting bacterial isolates from soil samples **Anitha.S , Anithaa.S.S**	29
30	Isolation of e-waste degrading bacteria from dumpyard soil and its characterization **M.Thenmozhi, K.R.Ashwinipriya, S.Iswariya, M.G.Keerthana**	30
31	Anti bacterial activity of betel leaf extract againstesbl producing *enterobacteriaceae* isolated fromagricultural land soil sample **S.Jayabharathi,Dr.A.Helen**	31
32	Protein-protein interaction study on notch1 receptor and its ligandsinvolved in notch signalling pathway of breast cancer **Vridhivinaykiya, Namratha N, Rajeswari N, K. M. Kumar**	32
33	Antibacterial and antifungal activity of various plant extracts against skin infectious bacterial and fungal pathogens **Aparna.S, Nithica.S**	33
34	In-silico study on missense SNP s in human HFE and HJV genes associatedwith hereditary hemochromatosis **S Sunil Kumar, Sudhanva K Shastry, Udayagiri R Bhargava, V Shristi Sharma, K. M. Kumar**	34
35	Comparative study on cuticular wax extraction from medicinal plants and its coating for increasing shelf life of fruits **Anusuya M, Jerin Joshna J, K. Cholapandian**	35
36	Insilico study on human delta sarcoglycan protein involved inlimb-girdle muscular dystrophy **Kiran Franklin G, C.S. Lalith, Charitha B.S, K.M. Kumar**	36
37	SNP screening and molecular dynamics studies on human palmitoyl-proteinthioesterase 1 (ppt1) protein associated with infantile neuronal ceroidlipofuscinosis **Yashwanth R, Kiran Franklin G, Disha Mohan, Ananya N.A, K.M.Kumar**	37
38	Investigation on tissue repair effects, anti-tumor activity and anti-microbial activity of larval blood extract from *Myrmeleon formicarius* (antlion larva). **K.M.Praveen , G.Navaraj , D.Joyce Hellen Sathya**	38
39	Structural, functional and biological interaction study on oral antimicrobial peptides as potential inhibitor of TMPC membrane protein from *treponemadenticola* **Avanti Ajittatwawadi, Gowthami J, Dushyanth Rs, K. M. Kumar**	39
40	Invivo screening of C*litoria terna tea* leaves for immunomodulatory activity **Christina Isaac, Dhasarathan.P , Valivittan.K**	40
41	Comparative study of bioelectricity generation by microbial degradation of organic wastes using microbial fuel cell **Hooreen D, Sowmiya V, Thenmozhi M**	41
42	*Invitro* and *insilico* analysis to identify novel lead compound from *Musa sapientumpeels* against lung cancer **A.Praveena, Saranya.V, Saraswathi.P.L, Yuvarani.A, V.Vaishnavi, U.Thrisshya**	42

43	Antimicrobial, anti-adhesive and antibiofilm properties of different biosurfacta producing symbiotic *lactobacillus species* from probiotic sachets **Anandharaj S , Kavitha D , Sureshkumar M**	43
44	Phytochemical and pharmaceutical studies on rhizome of *Drynaria quercifolia* (linn.) j. smith **Vaiduriya B , Kavitha D ,Sureshkumar M**	44
45	Relative efficacy of *megathyrsus maximus* and *cynodon dactylon* in milk production **K.Keerthana, T.Niranjana, A.Praveena, Tharani.P**	45
46	Formulation of herbal mouth wash against oral pathogens **Maniraj.M, Vikram.R, .M.Thenmozhi, Sugirtha.P, Tharani.P**	46
47	Impact of *leuconostoc pseudomesenteroides* on the growth performance of swiss albino mice administered with red powder n (bakery dye) **Balasubramanian.R , Shyam Sundar. N , Narayanan.K.R , Soranam.R**	47
48	Screening and production of bio polymer (phb) from bacteria **Venciya.A And Siluvai Kirubagari Aneeshia.C**	48
49	Anti-inflammatory and anti-pyretic activity of *Commelina benghalensis* **L.Isha ,J. Silva, C.Siluvai Kirubagari Aneeshia**	49
50	The plant growth stimulating activity of keratinase producing bacteria derived from poultry waste **A. Praveena, Abirami J , Harini V**	50
51	Bioactive compounds from sea grass extracts *Cymodocea rotundata* and *syringodium isoetifolium.* **Joys Selva Mary Albert**	51
52	Bioplastic from food wastes musa sapientumpeels and potato starch **Ragavi.V, K. Cholapandian**	52
53	Evaluation of anti inflammation activity of butanolic extract of *Prosopis juliflora* **A. Princy Sujitha And Joys Selva Mary Albert**	53
54	Study for developing a biochemical product for postharvest diseases in citrus fruits. **T. Devi Sree , K. Swetha, B. Bhavani**	54
55	Production of bio plastic from fruit peels **Ragavi.V , Ms. Joyce Hellen Sathya. D**	55
56	Green synthesis and characterization of silver nanoparticle from *nigella sativa* and its application against uti causing bacteria. **Ms.Manoritha G, Ms.Gayathri S, Dr.Ranjith Singh**	56
57	Phytochemical characteristics of citrus peel **Bhavani .B, Gayathri.R**	57
58	Microbial degradation of organic and inorganic wastes generated from a dry flower processing and exporting industry located in thoothukudi **C. Siluvai Kirubagari Aneeshia**	58
59	Estimation of phytochemical content and antioxant activity of butanolic extract of C*assia fistula* and A*cacia nilotica* **Priyadharshini.R And Joys Selva Mary Albert**	59

60	An approach to investigate the anti-inflammationactivity of *eichhorniacrassipes* **Shobia. A And Siluvai Kirubagari Aneeshia. C**	60
61	Production of bioplastic(poly-hydroxyalkanoates -pha) from B*acillus subtilis* using M*ahua longifolia* extract **Ms. Abirami S, Ms. Sindya T, K. Cholapandian**	61
62	Single-nucleotide polymorphism (SNP) is a regenerative a tool for clinical diagnosis **M.Manohar.,M.Mohan, P.Ganesh**	62
63	Antibiofilm activity of guava seed extract (psidiumguavaja) against e.coli **A.Afraa Fathima**	63
64	Green synthesis of cuo nanoparticles from mirabilis jalapa and in vitro evaluation of antibacterial, antiinflammatory and wound healing activity. **Charumathi.S, Naga Vasudha.R**	64
65	Phytochemical and pharmaceutical studies on rhizome of *drynaria quercifolia* (linn.) j. smith **Vaiduriya B , Kavitha D ,Sureshkumar M**	65
66	Comparative study on micronutrients in various leaf litters vermicomposts of *lampito mauritii* **Karpaga Sundara Preethy. R , Maruthi Kalaiselvi M And Manju R**	66
67	Efect of green synthesised silver nanopatrticles on multidrug resistant uropathogens isolated from uti patients. **Vigila Christy. R , G.Athinarayanan , R.Mariselvam , C. Padmalatha And A J A Ranjitsingh**	67
68	Remediation for oligospermia in males using the extract of traditional herbs with *aniasomnifera* and *emilasanchifolia* **Elizabeth Mathew K , G.Athinarayanan ,C.Padmalatha ,P.Dhasarathan, A J A Ranjitsingh**	68
69	The mushroom *Ganoderma lucidum* inspired silver nanoparticles and its antibacterial activity against catheter associated urinary tract pathogen *Escherichia coli* **Aswini S, P Deepika, M. Thenmozhi , P.Dhasarathan, A.J.A.Ranjitsingh**	69
70	Molecular characterization and virulence determination of *Salmonella species* isolted from clinical samples **Lakshmi T A.A Deborah ,P.Dhasarathan. , A J A Ranjitsingh**	70
71	Identification of nanoparticles in bagasse mixed soybean pod residue vermicompost by sem **R. Manju , M.Maruthi Kalaiselvi ., And R. Karpaga Sundara Preethy**	71
72	Co-culture of the green microalgae and yeast-like fungi: an efficient system for the production of microbial fuel cells. **J. Shalini , R. Varshini , K. Ramya**	72
73	Concept of nanobiomedicine dates back to fifth centaury agasthiars panchakavya nigandu **V.Nithya Kalyani**	73

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Prathyusha Engineering College is established by Prathyusha educational trust promoted by Prathyusha group of companies, who are into shipping, logistics, warehousing, power, aqua and construction, fertilizers, mining and real estate. The college is situated at Aranvoyalkuppam along Poonamalle – Thiruvallur high road. PEC, a Telugu minority institution is affiliated to Anna University, Chennai and approved by AICTE. PEC is accreditated by NBA & NAAC "A" Grade and stepping into a glorious 19th year of meaningful educational service. PEC offers undergraduate programme in B.E., (ECE, EEE, CSE, Civil and Mech.,) and B. Tech (Biotech & IT) and 4 postgraduate programme (including CSE, Communication systems, Biotechnology and Structural Engineering). PEC aesthetically designed campus is spread over 60 acres and has about 2,50,000Sq.ft, build-up area. Excellent infrastructure facilities, well maintained eco-friendly campus, digital class rooms, state of art laboratories, modern library, separate hostel for boys and girls and students' centric academic ambience are just a few of the many sterling features of that go into making PEC a front runner in technical education.

About the Workshop

SPSS is a widely used statistical program used for data analysis in social sciences, biological and health sciences. SPSS is a powerful suite of data analytics, reporting, and modeling software. This workshop will be useful for researchers and postgraduate students in different disciplines such as medicine, public health, life sciences, social sciences, allied health professions and other arts and science professionals. This workshop is designed to introduce the principles of biostatistics to researchers who are in need of statistical application and data analysis. This course is also aimed to introduce basic concepts of statistics, demonstrate some of the basic and advanced statistical methods used in biological sciences, health sciences, medical sciences, and sociological sciences research, to improve the participants' ability to understand and use appropriate statistical tests and analyze the data.

Objective:

- To provide the participants with the skills to use SPSS, a statistical software program, and Excel for processing and analyzing survey and experimental data.
- To introduce the basic functions and application of SPSS and Excel.
- To introduce participants to the basics of statistics by using Excel and SPSS Statistics, and learn how to perform descriptive statistics and graphics and basic inferential statistics for comparison of means and correlations, regression and multivariate analysis.

Day 1: 04March 2020 (Wednesday)	
Time	**Agenda**
10.00-10.30 am	Opening Ceremony
10.30 – 11.30 am	Basic Concepts and Application of Statistics in Research
11.45 – 01.00 pm	Excel functions, Graphical Presentation, Data Analysis using Excel – Hands-on Exercise
02.00 – 03.30 pm	Introduction to SPSS – Data Entry, Define variables & Labels, Recoding, Computation, Split files, Frequency Analysis, Descriptive Statistics
03.45 –05.00 pm	Testing Data Normality Assumption, Graphical Representation, Cross Tabulation & Chi-Square Test, Kappa Test, Mc'Nemars Test, Somers D Test, Binomial Test
Day 2: 05March 2020 (Thursday)	
09.00 – 10.00 am	Parametric methods: t-tests, One sample t-test, Two-sample Independent t-test, Paired t-test, Analysis of Variance
10.00 – 11.00 am	Two Way Analysis of Variance, Three-Way ANOVA, Repeated Measures of ANOVA, ANCOVA, MANOVA
11.15 – 01.00 pm	Correlation Analysis (Pearson, Spearman, Partial correlation, Kendall's tau b Correlation, Linear regression, Probit Analysis, Reliability Analysis (Cronbach's Alpha α)
02.00 –03.30 pm	Nonparametric methods: Mann-Whitney U , Wilcoxon Signed Rank, Kruskal-Wallis, Median, Friedman Analysis, Cochran's Q Test,
03.45–04.30 pm	Multiple Regression, Cluster, Factor Analysis
04.30 pm	Certificate Awarding

Who should attend:

We cordially invite Engineering in all streams, Arts and Science, medical students, Faculty and Research scholars from India and across the globe to participate and use statistical tools in project work.

BIOGRAPHY OF THE RESOURCE PERSON

Prof. Dr. K. Marimuthu has obtained his Ph.D. in (Zoology/ Environmental Biotechnology interdisciplinary) from Manonmaniam Sundaranar University, Tamilnadu, India. He is currently a Professor at the Department of Biotechnology AIMST University, Malaysia for the last 10 years. He teaches Aquaculture, Biostatistics, Research Methodology, Biology of Invertebrates and Vertebrates courses for BSc (Hons) Biotechnology.

He is specialized in Aquaculture, fish reproduction & breeding, fish immunology and aquatic toxicology related research. He has published more than 100 research publications in fisheries and aquaculture fields in various reputed and indexed journals.

He has participated in more than 35 local and international conferences, seminars, and workshops. He is an external examiner for six Indian Universities (Manonmaniam Sundaranar University, Annamalai University, Bharathiar University, Bharathidasan University, Madras University, Chennai, and Priest University, Thanjavur), Tamilnadu, India.

He has been using SPSS statistical software for the last 15 years and conducted several sessions of SPSS workshop and training for researchers and students in Malaysia, India Thailand, and Srilanka. He was also served as Deputy Vice-Chancellor, Academic and International Affairs (2016-2017), AIMST University, Malaysia.

PRATHYUSHA ENGINEERING COLLEGE

DEPARTMENT OF BIOTECHNOLOGY

ANIMAL TISSUE CULTURE WORKSHOP

The department of Biotechnology proudly organising a two day workshop on "Animal Tissue Culture" from 10.01.2020 to 11.01.2020 with Life Teck Research Centre.

Application of traditional and modern Bio- technology techniques for the development of value added products from Asian palm (*Borassusflabellifer*)

R. Mari Selvam[1], Sumithirajanarthanan, S. Srivijeindran and PaulrajMosae Selvakumar[2]

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Palmyra palm is a 100% utilizable plant variety widely found in Asian continents particularly to the south and south eastern Asia. Each and every part of the palm tree is valuable to the human community in many ways. It is cultivated in the areas which favor tropical weather and are well known for its fruit, sap, toddy and many other food items. In Tamilnadu and srilanka, it is proudly known as the tree with 800 uses. The people adored and worship this tree and called it as 'celestial tree'. Thus the palm tree yields tremendous benefits in health, economic and environmental impact in the lifestyle in people especially among the rural populations. *Borassusflabellifer*is an official tree of Tamil Nadu and it has a lot of nutritive and nutraceutical values that are well studied and reported. This research work covers the classical biotechnology practices used by palmyrah tappers community in tamilnadu and srilanka. Further, it covers up to date literature on the utilization of modern Bio technology in the development of value added products from palmyrah palm.

Keywords: Palmyra Palm, *Borassusflabellifer*, Bio Technolgy, Traditional Practices, Palmyraculture

In vitro Antibacterial Activity of Crude Extracts of some Medicinal Plants in Eritrea against Standard Bacterial Strains

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Medicinal plants play significant role in the treatment of various infectious diseases. *Silenemacrosolen* and *Solanumincanum*are both important medicinal plants used traditionally for treatment of infectious diseases in many places around Eritrea. The objective of the study was to evaluate the in vitro antibacterial activities of the aqueous and solvent crude extracts of leaf and stem of *S.macrosolen* and leaf and root of *S.incanum* against standard bacterial strains which can in turn provide a clue for the identification of active constituents responsible for the antibacterial activity. The antibacterial activity of the aqueous (cold and hot water) and solvent extracts (ethanol, methanol, and chloroform) were evaluated against *E.coli, S.aureus, and P.aeruginosa* using agar well diffusion method on Mueller-Hinton agar at different concentration with the presence of positive control (Chloramphenicol and Ciprofloxacin) and negative control (sterile distilled water and 5% Dimethyl Sulfoxide).The highest inhibition zone was observed for methanol extracted *S.macrosolen*stem and chloroform extracted *S.incanum*root against *S.aureus*at 400mg/ml with 23mm and 24.5mm respectively. Methanol and cold aqueous extracted *S.macrosolen*stem also showed the highest inhibition of 26mm, 23mm diameter, against *P.aeruginosa*and *E.coli* respectively. The MIC (Minimum Inhibitory Concentration) and MBC (Minimum Bacterial Concentration) of cold aqueous extract of *S.macrosolen* stem was found at 25mg/ml, and 50mg/ml respectively against both *E.coli* and *P.aeruginosa* while the MIC of chloroform extracted *S.incanum* root was found at 50mg/ml. So this study leads to further research in the way of isolation and identification of the active compounds from these plants using chromatographic and spectroscopic techniques for proper drug development, so as to standardize it in recommendable dosage form.

Keywords: Medicinal plants, *E.coli, S.aureus, and P.aeruginosa*

Effect of Different Types of MALDI matrices On Fingerprint Profiles of *Staphylococcus aureus*

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Matrix assisted laser desorption/ionization time of flight mass spectrometry (MALDI-TOF-MS) is currently being intensively studied for applications in the characterization of important human pathogens. The identification is based on the generation of characteristic mass spectrometric profiles of intact cells followed by matching the sample spectrum to a designated microbial database. The findings of most studies have suggested that MALDI-TOF-MS identifications are rapid and accurate. The technology is now beginning to appear in routine diagnostic laboratories in spite of the absence of a standard universal protocol. Experimental variables such as MALDI matrices, culture media, culture age, cell growth conditions and analysis on different MALDI instruments are known to influence the final quality of the mass spectral profile. Twenty strains of *S. aureus* were collected from the Health Protection Agency Centre for Infections, London and intact cell analysis was performed using MALDI-TOF-MS (Shimadzu). Strains were grown on Columbia blood agar and analysed after 24 hours of incubation. A small amount of growth was directly transferred from the media and spotted on to seven wells in a MALDI target plate. Each well was overlaid with a different matrix solution and mass spectrometric analysis performed. Result: Strains labelled 1-10 (MSSA) gave best results with the matrices CMBT, CHCA and HABA-B while strains 11- 20 (MRSA) yielded optimal results with the DHB matrix alone. Using the raw mass ion data for the optimum matrix, results were analysed using a clustering algorithm. The data, displayed as a dendrogram showed that at the 70 % similarity level, the strains split into two clusters that are in general agreement with their antibiotic profiles. Thus, all but one strain that was sensitive to methicillin clustered in one phenon while 3 methicillin sensitive strains clustered incorrectly with the antibiotic resistant isolates, in phenon. The potential of MALDI-TOF-MS to largely discriminate among strains of such an important human pathogen is significant and paves the way for much larger studies and direct application in diagnostic laboratories.

Keywords: MALDI, Methicillin sensitive, dendrogram

Challenging multidrug resistant bacterial isolates of urinary tract infection through a medicinal plant tridaxprocumbens bio- inspired silver nanopatrticles.

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The increasing drug resistance pattern in bacterial pathogens promotes the need to find out alternative strategies to ensure human health. In the imperative lookout for effective drug to combat with multidrug resistant bacteria silver nanoparticles are given priorities. Hence in the present approach silver nanoparticles were synthesized using the extract of the inflorescence of a medicinal plant and its antibacterial activity against multidrug resistant uropathogens was studied. For the synthesis of silver nanoparticles the inflorescence of a medicinal plant *Tridaxprocumbens* was subjected to micro wave irradiationtechnique.The characteristics of the synthesised nanoparticles were analysedby using UV- visible spectroscopy(UV-Vis) ,Dynamic light scattering device,(DSL) , Scanning electron microscope (SEM) ,Fourier-transform infrared (FTIR) spectroscopy and Zeta potential analyser .The synthesised silver nanoparticles were with unique optical morphology and semi spherical shape having irregular contourwith the size range 40-52.54nm .The bacterial isolates *Escheria coli*, *Klebseillapneumoniae*, *Pseudomonas aeruginosa* and Gram positive *Staphyloccocussaprophyticus* from urinary tract infected persons that showed resistance to more than 10 antibiotics were chosen for silver nanoparticles impact analysis. The synthesized AgNPs inhibited the growth of the drug resistant pathogenswith a zone of inhibition over 12 mm diameter. The exposure of bacteria to 50 **µl** of the extract exhibited a maximum inhibition potential. The MIC values ranged between 2.6ppm for *S.saprophyticus* and 53.6 ppm for *E.coli*. The results shows that the *T.procumbens*phytochemicals inspired silver nanoparticles can be explored further to develop good antibiotics.

Keywords: Silver nanoparticles, antibiotics, UTI, drug resistance, uropathogen,Tridax

Microbial Quality of Raw Milk, Associated Risk Factors and Antibiotic Susceptibility Patterns: On Selected Cattle Farms in Asmara, Eritrea

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Milk plays a major role in the human diet because of its rich nutritional content. Microbial quality of milk is therefore a major concern to consumers of milk and milk products. The aim of this study was to assess the microbial quality of raw milk, their antibiotic susceptibility pattern and associated risk factors. With this objective, a cross-sectional study was carried out from April 2019- June 2019 in Asmara, Eritrea.A total of 40 raw milk samples were collected from four different areas. All the samples were found to have high total viable bacterial count (TVBC) which ranged from 1.4×10^5 to 5.2×10^6cfu/ml and high total coliforms count which ranged from 1.0×10^4 to 2.0×10^5 cfu/ml. The important bacteria were identified with *Staphylococcus aureus* accounting for the highest prevalence (31.1%). The other isolates include coagulase negative staphylococci (18%), *Escherichia coli* (6.7%), *Klebsiellapneumoniae*(8.2%), *K.oxytoca*(3.3%), *K.ozaenae*(1.6%), *Klyveraspp*(4.9%), *Cittobacterdiversus*(1.6%), *C.freundi* (11.5%), *Enterobactercoloccia*(4.9%), *E.amigenus*(3.3%), *E.agglomerans*(3.3%) and *E.*sakaza*ki* (1.6%). *S.aureus* showed higher resistance towards penicillin (73.7%) followed by clindamycin (52.6%) and oxacillin (31.6%). *C. freundii*were 85.7% resistant to ampicillin and 51.7% resistant to tetracycline. The microbiological quality of most of the raw milk samples collected from different areas of Asmara were not satisfactory as indicated by their high bacterial loads and presence of coliforms. Therefore, necessary preventive, control and enlightenment measures should be structured so as to avoid disease epidemics in these communities. More hygienic and sanitary measures should be taken during milking process and handling of milk product.

Keywords: Milk products, Microbial quality, Resistance

Evaluation of phytochemicals and antibacterialactivity of the bioactive compounds from *Andrographisechioides*

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Over the past decade, herbal medicine has become a topic of global importance, making an impact on both world health and international trade. Medicinal plants continue to play a central role in the healthcare system of large proportions of the world's population. In the present study an attempt has been made to validate the traditional knowledge on *Andrographisechioides* using novel scientific investigations. *Andrographisechioides* belongs to the family Acanthaceae, is an annual prostrate herb with small elliptic lanceolate leaves is widely distributed in the tropical India. The plant is known as "Gopuramtangi" in Tamil and "False Water willow" in English. Plants are distributed and cultivated in plains, hillsides, coastlines roadsides, farms, and wastelands. It is very likely that phytochemicals with antimicrobial activity may find their way into arsenal of antimicrobial drugs prescribed by physicians. Major classes of antimicrobial compounds from plants include phenolic, Terpenoids, essential oils, alkaloids, lections, polypeptides, and polyacetylenes. Attention to the discovery of novel plant antimicrobials must be paid in a badly needed new era of chemotherapeutic treatment of infection by using plant-derived principles. Hence the present study was carried out to screen phytochemicals and antibacterial potential of the Indian medicinal plant *Andrographisechioides*. From the relevant literature survey of *Andrographisechioides*, it can consider as a highly recommendable medicinal plant and the most well known in traditional medicine practices and little information is available regarding works performed on different parts of the plant. Phytochemical screening is carried out to identify antibacterial activity using different types of human pathogens. Evaluation of antibacterial activity of different plant extracts in different concentration of *Andrographisechioides* by Agar well diffusion method. The zone of inhibition formed at the concentration of 150mg/ml of methanolic extract of the plant, *S.aureus* (20mm), while the least susceptible was observed in M.luteus (14mm). The result suggested that antibacterial activity of methanol extract of *A.echoides* having a synergic and additive effect of several compounds present in this plant.

Keywords: Bioactive compounds, Phytochemicals, Antibacterial activity

Differential expression of leptospiral outer membrane proteins in host adapting conditions

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The pathogen *Leptospira* expose to various stress conditions during infectious cycle and capable of regulating gene expression accordingly. Entry of *Leptospira* from moist environments into the host is likely to be accompanied by the induction of genes encoding virulence determinants and the concomitant repression of genes encoding products required for survival outside of the host. In this work we compared the composition of outer membrane proteins (OMPs) from the leptospiral strains grown in different condition like temperature, iron deprivation, osmolarity stress and different passages. Extracted OMPs were resolved for Western analysis, which shows 14 differentially expressed OMPs. They were further charaterized by MALDI-TOF MS/MS shows as hypothetical proteins of 30kDa, 70kDa and 130kDa. Furthermore,differentially expressed proteins were spotted in two-dimensional electrophoresis (2DE) gels using PDQuest software. In addition, the *in-silico* predictions of these expressed proteins show a role during the pathogenesis of leptospirosis. Therefore, upregulated leptospiral OMPs may be the potential candidate for the diagnosis and for vaccine formulations.

Keywords: *Leptospira*, leptospirosis Outer membrane proteins, pathogenesis, diagnosis, vaccines

Plants and humans relationship- An overview through nutritional genomics and Bioengineering approach.

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Plants have made available the essential sources of vitamins and minerals to human health. Vitamins A, B, C, D, E and K are fundamental for human health which is well obtained from different sources. Inadequate intake of the vitamins and minerals results in the deficiency and diseases. Several fruits and vegetables are rich in these vitamins and mineral. Glucosinolates found in cruciferous plants are proven as anticancer elements and carotenoids are often required for a healthy immune system. However, they are seasonal lack availability worldwide. Staple foods are eaten regularly in most of the meal times. They constitute a large portion of human diet and supply the required energy needs. Besides the availability of staple food crops, lack of essential vitamins and minerals results in "hidden hunger" worldwide. One half of the population especially the children and women from underprivileged countries suffers the effect. The recent advances in sequencing technologies, plant genomics have paved way for the availability of several genome sequences which supports the understanding of different genes and gene families responsible for the supply of these essential sources. Also, approaches like nutritional genomics has made us understand the role of food in health. The approach has improved the human health widely. Bioengineering technologies have equally contributed to the enhancement of these essential elements in staple crops. A process called biofortification has been tried to eradicate malnutrition around the world. Vitamin A has been enhanced in plants like rice and sweet potato through the process to tackle vitamin A deficiency. Similarly, iron, zinc is also being enhanced in staple crops to support human health.

Keywords: Biofortification, Nutritional genomics, Vitamins

Characterization of virus like particle (VLP) vaccines containing multiple conserved domains for cross protection against influenza virus

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Current influenza virus vaccines confer strain-specific protection based on neutralizing immunity against the globular head domain of hemagglutinin (HA) surface glycoproteins. Extreme antigenic variations in the HA head domain often makes the current vaccination strategy ineffective when antigenically different virus strains or pandemic viruses emerge. A strategy of developing universal vaccine candidates is to design and include conserved antigenic targets in the influenza vaccination. The HA subtypes are clustered into group 1 (H1, H2, H5, H6, H8, H9, H11, H12, H13, H16, H17, and H18) and group 2 (H3, H4, H7, H10, H14, and H15) based on structural similarity in the HA2 fusion-stalk domain of HA, which is relatively well conserved within the same group among the different influenza A viruses. Also, other conserved antigenic targets include the extracellular domain (M2e) of influenza A virus M2 ion channel protein and nucleoprotein (NP) T cell epitopes. In this study, we designed and made VLP based vaccine constructs composed of multiple conserved antigenic domains. The construct FP-M2e is composed of group 1 and 2 fusion HA2 domains, NP-T cell epitope, and M2e epitopes. The construct Stem-M2e is composed of group 1 and 2 fusion-stem domains and M2e epitopes. The gene constructs were expressed in a membrane-anchored form and presented on virus like particles (VLP) as evidenced by antigenic reactivity to M2e epitopes. Immunogenicity and efficacy of these new constructs containing multiple conserved domains were evaluated in comparison with VLP containing M2e epitopes only in a mouse model. The Multiple M2e VLP provide greater immune response and protection efficacy followed by FP-M2e and Stem-M2e.

Keywords: Influenza A virus, Conserved domains, Cross protective Vaccines

In-vitro anticancer activity of secondary metabolites produced by the bacteria V*irgibacillus sp.* Associated with the marine sponge *Callyspongia diffusa* against various human cancer cell lines.

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In the present research, metabolites produced by the marine bacteria *Virgibacillus sp.* Associated with the marine sponge *Callyspongiadiffusa* was evaluated for its potential anti cancer activity against various human cancer cell lines viz., MCF-7 (Breast carcinoma), A-549 (Lungcarcinoma), HeLa (Cervix carcinoma) and Caco-2 (Human colorectal adenocarcinoma) using MTT assay. The metabolite produced by the bacterium Virgibacillus sp. displayed potential cytotoxic activity against the cancer cell line A-549 (Lung carcinoma) and HeLa (Cervixcarcinoma). At concentration 1000 µg/ml the cytoxic activity was found to be 57.37% against A-549(Lung carcinoma) cell line and in the mean time it was 45.67 % against HeLa (Cervixcarcinoma) cell line. The CTC 50 value in inhibiting A-549 Lung cancer cell line was 350 µg/ml and it was < 1000µg/ml for HeLa (Cervix carcinoma) cell line. Moderate activity was found against MCF-7(Breast carcinoma) and Caco-2(Human colorectal adeno carcinoma) cell lines. At concentration 1000 µg/ml the metabolite of *Virgibacillus sp.* displayed 33.12 % of cytotoxic activity against MCF-7(Breast carcinoma) cell line and in the meanwhile displayed 31.27percentage of cytotoxic activity against Caco-2 (Human colorectal adeno carcinoma) cell line. The CTC 50 value was found < 1000µg/ml concentration for both of the cell lines. The antitumor activity was recorded in a dose dependent manner.

Keywords: Sponge associated bacteria, Secondary metabolites, Cytotoxicity, MTT assay.

Biological synthesis of hydroxyapatite using *Rhizopusoligosporus* MTCC 556 phytase

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Hydroxyapatite (Ca 10 (PO 4) 6 (OH) 2) (Hap) is an inorganic compound, now used as an effective alternative for bone implant as it is similar to human tissues. Conventional methods have been subjected for its synthesis such as Co-precipitation, solid state reaction, solgel, Hydro thermal and hydrolysis. But they have shortcomings especially with regard to obtaining, expensive starting material, controlled reaction conditions, time consuming process and toxic organic solvents. The present study tried to exhibit the possible role of *Rhizopusoligosporus* MTCC 556 phytase in the production of Hap. It may be reasonably expected that addition of phytase to phytic acid releases inorganic monophosphate that binds with the calcium ion to form a white precipitate of calcium phosphate which is Hap. This was further confirmed by FTIR, XRD, EDX and SEM. The biologically synthesized Hap composites showed cytotoxic activity against o*steosarcoma* cells and their biocompatibility nature were also confirmed. In vitro by studying their viability property against Vero cells.

Keywords: Hydroxyapetite, Phytase, Phytic acid, *Rhizopusoligosporus, Osteosarcoma* cells.

Preparation, characterization and antibacterial effect of Zno-Aloe Vera biopolymer and its application in paper coating

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ZnO is a promising compound for paper coating to give better printing property.Production of ZnO – starch nanocomposite material was done by the addition of starch in Zinc chloride ($ZnCl_2$) solution (65 wt%) at 80 °C. Then, ZnO-starch nanocomposite was synthesized when the pH of the solution was adjusted to 8.4 by NaOH solution (15 wt%) and also ZnOnanoparticles were synthesised without addition of starch simultaneously.Similarly, a biopolymer from Aloe vera was extracted by simple alcohol extraction method andit was subjected to ZnO-Aloe vera nano composite preparation. All three nanocomposite were characterized by SEM, EDAX, FTIR and XRD. Stability, and anitibacterial activity of all three ie ZnO, ZnO- starch, ZnO- Aloevera biopolymer ZnO nano composite were tested. ZnO-Aloevera biopolymer coated paper and ZnO-starch coated paper maintained greater stability while immersed in water compared to non-coated paper. After coating, smoothness and bright colour on the paper surface was observed to be the same not interfering with the writing or usage activities. Anti-bacterial activities of all the three nano composites were observed showing the zone of inhibition.

Keywords: ZnO nano composite, Bioploymernano composite, Aloe vera, Antibacterial effect

Pharmacological activities, GCMS analysis of bioactive metabolites isolated from marine Actinomycetes - “reservoir of antibiotics

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Marine sediment bacteria are the promising sources for biologically active metabolites and the use of bioactive compounds from the marine actinobacteria possess unique ands pecific chemical structures which forms pathway for the synthesis of new drugs that could be used to combat resistant pathogens. The use of antibiotics has been increased for the development of drug resistant microbes. Since, there is a search for novel development of antibiotic drugs, actinomycetes (reservoir of antibiotics) have been considered as richest sources of secondary metabolites. In the present study, the secondary metabolites of *Streptomyces* species exhibited various pharmacological activities such as antioxidant,antimicrobial activities, etc. A total of fifty four actinomycetes isolates using selective medium were obtained from Mangrove ecoregion of India’s eastern coast, Andhra Pradesh, India. The MRRS 05 isolate was identified as *Streptomyces sp*. And two stable, clear bands were observed based on the solvent system. The isolates producing active compounds were evaluated for rapid DOT BLOT-DPPH staining to check the antioxidant potential. The antioxidant activities was evaluated in which the IC 50 value of Superoxide (O 2) radical, Hydroxyl (OH) radical, ABTS radical cation, Phosphomolybdenum reduction were 125.28, 97.44, 15.62 and 31.64 µg/mL concentration respectively. The crude compound of MRRS 05 isolate exhibited significant antimicrobial activity by disc-diffusion method. The GCMS analysis of crude metabolite proved to contain active compounds such as 9-Octadecenoic acid (Z)-, methyl ester, Flavone, 2’,3,5,7-tetramethoxy-which was responsible for antioxidant, antimicrobial and anti-proliferative activities. The crude metabolite exhibited prominent anti-proliferative activity on HT-29 celllines with 65% cytotoxicity and HeLa cell lines with 68.59% cytotoxicity comparatively. Further, the purified compound eluted by column chromatography along with mode of action should be studied to prove the therapeutic value of the secondary metabolite.

Keywords: Actinomycetes, Antioxidant, ABTS radical cation, Dot-plot, Disc diffusion,HT-29 cell lines.

Antidiabetic property in leaf extracts

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Diabetes mellitus is one of the world's major diseases. Nowadays it is most common among everyone from the youngest to the eldest. The aim of the present study is to evaluate the effect of some medicinal plants like *Costusigneus, Gymnemasylvestre, Catharanthusroseus* by performing hytochemical analysis and then clinical testing it. The phytochemicals are to be prepared by ethanol leaf extract. Even though there are certain medicines for controlling diabetes, they are not easily available and are costlier. Our aim to discover a cost efficient and effective ayurvedic medicine for controlling and curing diabetes using leaf extracts, along with their beneficial properties with no side effects. These leaf extracts also have properties like anti-microbial, anti-inflammatory etc. Since the plants we are about to use are easily available, it may be a good source for many financially backward people.

Keywords: diabetes mellitus, anti-diabetic property, ethanol leaf extract, phytochemical analysis.

Biosurfactants – types, properties and applications: A review

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Surfactants are amphiphillic compounds consisting of both hydrophobic and hydrophilic moieties, which reduces the surface and interfacial tension between two immiscible liquids. Chemically synthesized surfactants used in various industries including food, pharmaceuticals, etc. are petroleum derived and have toxicological effects and non- biodegradable. To overcome these problems biosurfactants are preferred which are less toxic, biodegradable, and produced by various microorganisms such as bacteria, fungi and yeast. Biosurfactants proved its various applications as emulsifiers, anti-adhesive and foaming agents in laundry detergents, food and cosmetic industries. In agriculture, it increases the wettablility and even distribution of soil, promotes plant growth by protecting against plant pathogens. Biosurfactants enhances the water-oil emulsion for the maximum recovery of oil in the contaminated sites. Biosurfactants also have medical applications such as anti-microbial, anti-cancer and anti-viral activity. This review revealed the types, properties and applications of biosurfactants

Keywords: Biosurfactants, Bacteria, Yeast, Types, Applications, Bioemulsifier, Biodegradation

Enhanced removal of volatile organic carcinogens by genetically modified ornamentalpotted plant, expressing the mammalian cytochrome P450 2E1 gene.

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Volatile Organic Carcinogens such as formaldehyde and benzene are found in indoor air And many of these affect human health in significant levels. There is a need for a Sustainable technology for the removal of VOCs in indoor air. Plants represents a potential green solution for improving indoor air quality. The article reviews scientific studies of plant's ability to removeVOCs. Plants such as Pathos Ivy (*Epipremnumaurem),*Aloe vera*(aloe barbadensis*),Spider Plant (*Chlorophytumcomosum*), Gerber daisies(Gerbera jamesonii), Chrysanthemum, Bamboo plant etccan remove benzene and formaldehyde.The focus of the review is on the pathways of the VOCsremoval by various plants. Here, from this review it was identified that the detoxifying transgene mammalian cytochrome P450 2e1 can be expressed in an ornamental potted plant and that results in a genetically modified plant with sufficient detoxifying activity against benzene, chloroform and formaldehyde. So it is suggested that biofilters using transgenic plants could remove VOCsfrom indoor air from air at acceptable rates.

Keywords: Volatile Organic Carcinogens. Indoor air. Mammalian cytochrome P450 2e1gene.detoxifying transgene. Purification.

Acute and subacute oral toxicity studies of polydatin

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This study was designed to evaluate the acute and subacute toxicity of polydatin in albino rats.The acute toxicity was evaluated where the dose level of 1000mg / kg body weight.After oral administration of Polydatin in the animals were observed first 30 minutes then periodically during the first 24 hours the animal is being kept for special care for first 4 hours ,daily thereafter and daily special attention was paid to the animals separately for a total of 14 days.The rats general appearance behavior ,mortality ,injury or any signs of illness were periodically observed during the period .For sub acute toxicity ,the polydatin at three doses respectively was dissolved in distilled water .It was administered to animals at the dose levels of 100,200,400mg/kg . At the end of each study , Haematological investigation,Biochemical investigation were evaluated. Then Histopathological investigation of the vital organs was done. The results denotes that the oral administration of the polydatin did not produce any significant toxic effect in albino rats.

Keywords: Acute toxicity,Subacute toxicity Polydatin , Haematologicalparameters,Biochemical parameters,Histopathological investigation.

Isolation and characterization of Rhizosphere microbes for plastic degradation

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The study aims to isolate the plastic degrading microbes from the Rhizosphere region. The isolates will be screened by their culture morphology, biochemical properties and their efficiency in plastic degradation will be determined. Also the isolates will be studied for their potential in and filling lastic waste management. The micro-organisms which showed maximum as well as minimum degradation of polythene in the Rhizosphere region were identified. Initially two types of polythene were weighed and taken (10 microns and 40microns).They were kept for degradation for several interval of days (10, 20 and30).After this interval period the polythene was again weighed and the isolatewhich shows the maximum degradation after 30 days in the polythene (10microns and 40 microns) was identified.

Keywords: Rhizosphere, polythene, degradation.

Silica enriched seaweed biofertilizer to combat drought stress in *Vigna radiata*

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Drought is one of the major abiotic stress which affect crop growth and yield. This drought induced changes are mainly related to altered metabolic functions that is reduced synthesis of photosynthetic pigment. Silicon nanoparticles have distinctive physiological characteristics that allow them to enter plants and influence plant metabolic activities. For abiotic stress management in crop plants, engineered nanomaterials are applied in the form of nanosized fertilizers, pesticides, herbicides. The aim of our project is to formulate silica nanoparticle enriched seaweed biofertilizer and screen its ability to mitigate drought stress in green gram. In this work we have obtained silica gel from rice husk which has been powdered by using lyophilizer. And then seaweed biofertlizer was produced by using two different seaweeds such as *Sargassumtenerrimum* and *Kappaphyccusalvarezii.* Four different sets of green gram plant(T1,T2,T3 & control) will be grown on two sets of seed treatment (Biofertilizer seed treatment, water seed treatment).

Keywords: Nanoparticle, Biofertlizer, Abiotic stress.

Green synthesis of Caesium carbonate nanoparticle using *Coleus amboinicus*

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The Nanotechnology has become one of the emerging fields in various sectors. The nanoparticle synthesis has become a great area of interest for project purposes. The nanoparticle synthesis is nowadays carried out in various methods. Among which physical and chemical methods are most common techniques, but the biosynthesis (Green method) of nanoparticle using plant extract is a better option due to its eco-friendliness. The plant extract is used as a capping and stabilizing agent. In this paper, we report the synthesis of Caesium Carbonate (CsCo 3)nanoparticles using Coleus amboinicus leaf extract .The prepared nanoparticle was characterized by using X-Ray Diffraction (XRD), Scanning Electron Microscope (SEM), Transmission Electron Microscopy (TEM) and Fourier Transform Infrared Spectroscopy (FTIR).

Keywords: Nanoparticle, Chemical methods, Biosynthesis (Green method), Leaf extract, Stabilizing agent, Caesium Carbonate.

Invitro analysis of *Berberis aristata* to combat Paramoxiviridae infection

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Berberis aristata is associated with the family Berberidaceae which is well renowned for its role in various medical applications including treatment for diabetes and cancer. In order to explore its antiviral activity, the phytochemicals were extracted using acid dye method and it was validated based on the preliminary tests for alkaloids precisely. The GC-MS studies enabled in enumerating the molecules present in the extract responsible for obstructing the viral replication. Amidst 6 compounds present in the extract, 5 moieties exhibited drug likeliness property when passed through the Lipinski's drug filter. The antiviral titer of the phytochemical was performed based on the characteristic hemagglutination assay using the New castle disease viral vaccine as an antigen and the phytochemical extracted from the barks of *Berberis aristata* as the antiviral agent. These findings open a potential new avenue for the extracts of *Berberis aristata* to be a novel lead compound in striving against the deadly Paramoxyviridae infections respectively.

Keywords: Acid dye method, hemagglutination assay, therapeutic efficacy

Estimation of agar components to replace Zinc Pyrithione present in shampoos.

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Dandruff is a skin condition that affects the scalp. It causes flakiness, itchiness and sometimes rashes. A more severe form the condition which includes inflammation of the skin, is known as seborrheic dermatitis. The major cause of dandruff is due to genetic factors and environmental changes. The environmental changes which includes pollution predominantly air pollution may tend have adverse affects causing dandruff. The condition may get worsen at winter season. Earlier studies says *Malasseziaglobosa* , a fungi which is present in the scalp metabolizes triglycerides present in the sebum. During dandruff, the level of Malassezia increases from 1.5 to 2 times it's normal level. According to recent studies, bacteria mainly *Propionibacterium* and are more important to dandruff formation than that of fungus. There are many dandruff curing agents like antifungal creams and shampoos, but many of these creams and shampoos contain many chemicals which may help us to get rid of dandruff but may adversely affect the nature of scalp and may cause damage to hair and its growth. Zinc pyrithione is the major chemical compound used in all antifungal agents. Excessive use of these kind of shampoo shave resulted in dermatologic side effects including skin irritation. Pregnant women has not formally assigned by FDA. Coming into wet lab studies where fungus do not grow in agar medium. Agar contains mostly organic substances such as meat extract, peptone, NaCl2, etc... So our main idea is to replace the ingredients of antifungal agents most importantly zinc pyrithione with the components that are present in agar media. Further it includes the addition of the desired composition with oil which can be used by humans to cure dandruff.

Keywords: Dandruff, seborrheic dermatitis, antifungal creams

Isolation and characterization of marine bacteria for crude oil degradation

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The present study was undertaken to isolate and characterize crude oil degrading microbes from crude oil contaminated marine water samples collected from Ennoru, Tamil Nadu, India and gravimetric analysis of degradation in which, two isolates formed maximum clearing zone on Mineral salt Medium. Bacteria were the most dominant microbiota and were therefore characterised with several biochemical tests. Two bacterial isolates isolated were CDB1 and CDB2. Biochemical characterisation showed that both bacterial species responded positive to several tests such as Catalyse, Methyl red, Citrate utilisation and Nitrate reduction and negative to Urease test. Isolates were tested for potentials to degrade crude oil in mineral salt medium and the result revealed that crude oil was degraded at varying rates. Maximum crude oil degradation of 71.9% was achieved using CDB2 with 1% crude oil after 7 days. Such a bacterial species may be preventing natural decomposition process.

Keywords: Microbial degradation, crude oil, Mineral salt Medium, microbiota, gravimetry, decontamination

Green synthesis of magnesium oxide nanoparticle using *Plectranthusam boinicus* leaf extract

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Plectranthusam boinicus is an attractive, evergreen perennial plant mainly used as food and medicine; here it is effectively used for synthesis of magnesium oxide nanoparticles that are beneficial for antibacterial activity and natural fertilizing agent. MgO nanoparticles were successfully synthesized using magnesium sulphate, leaf extract and sodium hydroxide at room temperature. The magnesium oxide nanoparticles are obtained by calcinating the magnesium sulphate in the muffle furnace at 500◦C. Here the leaves acts as an reducing agent. This method is non-toxic due to the presence of various photochemical and biochemical compounds and they are eco-friendly. MgO nanoparticles exhibit very good antioxidant property. The particles obtained were characterized by different analytical techniques such as Ultra violet-visible radiation (UV-VIS), X-ray diffraction(XRD), Scanned Electron Microscopy (SEM) are used to identify the morphology of the biosynthesized nanoparticles, Transmission Electron Microscopy(TEM) and Fourier Transformed Infrared Spectroscopy (FTIR) is used for analysing the functional groups which is involved in the reaction.

Keywords: Biosynthesis, MgO, nanoparticles, precipitation method.

Prevention of microbial spoilage of dairy products and to enhance the shelf life period

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The Dairy products are important for building healthy bones and for maintaining healthy body. The work deals with the " Identification of the bio- preservative responsible to increase the shelf life and to prevention of spoilage".The methodology includes the isolation of the desired microbe called *Brevibacillus brevis* and its inoculation to the milk with Lactobacillus acidophilus to observe a shelf life of 3 days and 5 days for the pasteurized milk respectively using the acidity and microbial load .The methodology extends for the preparation of plant extracts of *Moringa oleifera* Lam. and Piper betle and its addition in 2:1 ratio of 500 ul to raw and pasteurized milk to show a shelf life of 7 hours and 12 bours respectively without refrigeration. The phenolic compound study reveals that (R)-3 pyrrolidinol,5- (p- aminophenyl)-4- (p- tolyl) -2- thiazolamine, 2'6 '-Dihydroxy acetophenone and thirteen other compounds are responsible for the anti - microbial property of the plant extracts. The anti- oxidant property of the extracts are also been responsible to inhibit the fermentation in mik which relates the shelf life of the milk and other dairy. This paper elaborates the Microbial spoilage of milk and curd, Inhibitory activity of bio-preservatives and their mechanism of action of the spoilage microbes.

Keywords: Raw milk,Pasteurised milk,Curd, *Brevibacillus brevis*, *Lactobacillus Acidophilus.*

Efficacy of costusigneus, (insulin plant) extract on controlling alloxan induced diabetes in rabbit, *Lepus nigricollis*

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Diabetes mellitus is a complex and a multifarious group of disorders that disturbs the metabolism of carbohydrates, fat and protein. It results from shortage or lack of insulin secretion or reduced sensitivity of the tissue to insulin. Several drugs such as biguanides and sulfonylureas are presently available to reduce hyperglycemia in diabetes mellitus. Many traditional plants treatments for diabetes are also used. But most of the evidence fortheir beneficial effects is anecdotal. Medicinal plant *like Trigonellafoenumgraecum, Alliumsativum, Gymnemaslyvestre and Syzigiumcumini* have been studied for treatment of diabetes mellitus. In this paper we studied the effect of *Costusigneus* and its ability to control diabetes. Costusigneus is a member of the *Cucurbitaceae* family, which is natively grown in waste lands in Asia and Africa. The plant is a perennial herb that contains tuberous root and will often form a dense covering over other flora. The leaves of the medicinal plant Costusigneus. Of about ¼ kg was soaked in methanol for about 1 week. After that the leaf extract was filtered using sterile filter paper and was followed by filtration through whatman no 1 filter paper. Then the filtered extracts of this plant was condensed in rotary vaccum evaporator under reduced pressure at 37 inder to get the crude extract of this plant. The obtained range of the crude extract was about 4g. The acclimatized fine rabbit of *Lepus nigricollis* was divided into 4 groups, for the 4 groups the initial sugar level was tested. Out of this one group was maintained as control. The other group was injected in the thigh region with alloxan of different measures and their raise in blood sugar was tested using glucanometer. These rabbit groups were treated with the crude extract of *Costusigneus* (0.5mg/1ml dw) by oral administration and the blood sugar level was tested for the next consecutive days. The anti hyperglycemic effect of crude extract of *Costusigneus* showed interesting results by reducing the blood sugar level dramatically, and had a good activity on controlling blood sugar level.

Keywords: *Costusigneus,* Diabetes mellitus, hyperglycemic effect

Larvicidal activity using bio nano emulsion against *Ades aegypti* (Dengue vector)

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The mosquito species *Aedes aegypti* is the primary vector of dengue, chikungunya, and Zika infections worldwide. This insect is the vector of dengue, a tropical disease that has been considered a critical health problem in developing countries, such as Brazil. *Calotropis giganteum i*s a giant milk weed species belong to a family of Apocynaceae. The present study describes the development of a novel nanoemulsion with larvicidal activity against A. *aegypti* along with the required miscibility in the stagnant water. The extraction process was done by sequential extraction where the methanolic extraction got the high yield of 5.7%. The nano particle was synthesized using green synthesis method where the yield was 0.039g for silver nano particle and 0.028g for iron nano particle. Thus, it contributes significantly to alternative inte- grative practices of dengue control, as well as to develop nanoproducts for application in aqueous media.

Key words: Ades aegypti, larvicidal activity, nano emulsion , *Calotropis giganteum,* Dengue

Antibacterial, antioxident activity of bioactive compound isolated from pipper betel plant extracts

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Plants are having major role in human society since the civilization started. Medicinal plants were used to cure a number of aliments of human beings. Practitioners of Ayurveda and Unani system of medicine regularly employ an Indian medicinal plant as antibiotic agents. Numerous types of bioactive compounds have been isolated from plants sources. In searching for novel natural antioxidants, some plants have been extensively studied in the past few years for their antioxidant and radial scavenging components. Antioxidants have a dual role in prevention and care of cancer. A number of reports show a reduction in adverse effects of chemotherapy when given concurrently with antioxidants. The plant extracts of Pipper betel leaves were tested for the presence of Alkaloids, flavonoids, glycosides, tannins and Saponins using thin chromatography technique. The antioxidant property was determined by two methods. They are by 1) Fenton's reagent methods and 2) DPPH method. The antioxidant activity of plant extract was tested with Fentons reagent. It was about 0.486 and 0.375 for Pipperbetel respectively. The plant extract Pipper betel showed greater antimutagenic and antimicrobial activities tested against *S. aures, E. coli, Pseudomonas, P. vulgaris,Bacillilus subtilis, Staphylococcus aureus, E. coli, Pseudomonas, Proteus vulgaris* respectively.

Keywords: Alkaloids, glycosides, Saponins, Fenton's reagent, DPPH Antimutagenic and antimicrobial activities.

Isolation and screening of litre waste decomposting bacterial isolates from soil samples

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The litre waste decomposing bacterial isolates were isolated from soil samples collected at manure pit constructed at the agricultural fields of Prathyusha Engineering College, Thiruvallur. The bacterial isolates from soil samples were identified as decomposer using Microscopic, Biochemical and Screening tests. The total bacterial population was found to be 2x10^7cfu/gm. From the total population the bacterial species were found to be gram negative rod. The litre waste decomposing bacterial isolates enzyme specific activities were screened out using various substrates (carbon and nitrogen sources) at different pH and temperature. A comparative study about the enzyme activity of the two bacterial isolates from soil sample was carried out. Litre waste decomposing bacterial isolates is of biotechnological interest since it is used for the preparation of organic manure. The present investigation , confirmed decomposition of litre waste and production of organic manure to safe pollution free environment.

Keywords: Litre waste, Decomposer, soil microorganisms and organic manure.

Isolation of E-waste degrading bacteria from dumpyard soil and its characterization

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E-Waste or electronic waste is a discarded electrical or electronic devices .It is composed of heavy metals, which causes soil pollution if not properly decomposed, which in turn results in chronic diseases. Among various remediation, microbial remediation is the ecologically effective way. Our study was focused on isolating the bacterial organism from dump yard where tons of e-wastes were dumped. On serial diluting , pour plating, and streak plating the collected sample from the dump yard to obtain a pure culture,10 isolates were obtained and it was named as T1,T2,T3,T4,T5,T6,T7,T8,T9,T10 respectively. The degrading efficiency of the isolates were tested by seed culturing it with heavymetals like lead, mercury which are the major components of e-waste and lithium ion battery waste. direct and enrichment technique were followed. The Absorbance were found from solubilisation of the metals and battery wastes. The isolates were biochemically characterized.

Keywords: Microbial remediation, isolation, serial dilution, pour plate, streak plate, pureculture, characterization

Anti bacterial activity of betel leaf extract againstesbl producing *Enterobacteriaceae* isolated from agricultural land soil sample

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The excessive administration of antibiotics to cattle makes them resistive and their manure leads to dissemination of antibiotic resistive bacteria into the agricultural field. Further this resistivity passes to human through lateral gene transfer. These resistive bacteria produces Extended spectrum beta-lactamases(ESBL) enzyme which act against third generation antibiotics, and such bacteria are known as superbugs. The present study was involved in isolation and characterization of ESBL producing *Enterobacteriaceae* from agricultural and non agricultural land soil sample. And to check the bactericidal activity of betel leaf extract against ESBL producing *Enterobacteriaceae.*

Keywords: Resistivity, ESBL , *Enterobacteriaceae* , Bactericidal activity.

Protein-protein interaction study on notch1 receptor and its ligands involved in notch signalling pathway of breast cancer

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Notch pathway is answerable for cell multiplication, separation, and apoptosis. Elevated levels Of JAG1 and NOTCH1 were noted in a subset of tumors with poor anticipation pathologic high lights. Delta-like ligand 4 (DLL4) is a Notch ligand that is predominantly expressed in the end othelium of breast cancer and has an adverse prognostic effect. Many studies have reported on the protein complex of NOTCH1 and JAG1 but no studies have been reported on the mode of binding interaction and their stability. Thus, our study focus on protein-protein interaction ofNOTCH1 with JAG1 and DLL4, we attempted protein-protein docking to study the binding mode of NOTCH1 and structural behavior of protein complex. We used pdb sum tools to analyz polar and non-polar contact of protein complexes. Our analysis reveals that the few amino acids of NOTCH1 play a very crucial role in the formation of Hydrogen bonds (H bonds) with theJAG1 and DLL4 protein. On comparing binding affinity between two docked complexes, we identified the best protein-protein complex for further detailed study. The number of hydrogen-bonding contributes to the stability of the NOTCH1-JAG1 protein complex which prompts the down regulation of the tumor arrangement henceforth diminishing the odds of poor prognosis.

Keywords: Protein-Protein Interaction, Notch Signalling pathway, NOTCH1, JAG1,DLL4, Breast Cancer,

Antibacterial and antifungal activity of various plant extracts against skin infectious bacterial and fungal pathogens

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The plants as a whole or the parts of the plants has the effect in inhibiting the microbial growth and activity. The current study aims at analyzing the antibacterial and antifungal activity of various plant extracts against the selected bacterial and fungal strain. The methodology involves the determination of zone of inhibition of various extracts at different concentration by agar well diffusion method. For antifungal activity the results shows the zone of inhibition occurs at maximum concentration i.e., 100µl in Garlic extract, 75µl in Tulsi extract, 150µl in Ginger and Aloe vera extract, 200µl in Olive oil extract. For Antibacterial activity the results shows that the zone of inhibition occurs at maximum concentration i.e., 150µl in Garlic extract, 200µl in Ginger extract, 100µl in Tulsi and Aloe vera extract and 150µl in Olive oil extract. And also combinations of various plant extracts in different concentrations were analysed.

Keywords: Antibacterial activity, antifungal activity, Inhibition

In-silico study on missense SNPs in human HFE and HJV genes associated with hereditary hemochromatosis

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Hereditary hemochromatosis is a rare autosomal recessive disorder that causes inevitable consequences due to prolonged iron overload through altered hepcidin levels. The resultant excess iron is stored especially in organs such as liver, heart and pancreas, leading to life-threatening disease such as Cirrhosis and Congestive heart failure which is more commonly seen in men. Hemochromatosis is caused due to mutations in HFE and HJV genes whichcodes for HFE and Hemojuvelin proteins respectively. HFE protein (High FE2+) interactswith a receptor of ransferrin, TFRC, whose primary function is to regulate iron storage hormone hepcidin. Hemojuvelin has a vital role in maintaining proper iron levels in body by controlling an iron metabolism regulatory protein hepcidin. In our analysis, the functional missense SNPs of HFE and HJV human genes are screened by using multiple SNPs analysistools. All deleterious missense SNPs retrieved from dbSNP and Uniprot database are furtherevaluated through SIFT, POLYPHEN 2, MUpro, PhD-SNP, SNP& amp;GO and PROVEAN. Ultimately, out of many missense SNPs, few are confirmed as disease causing SNPs. Disease causing mutations are further examined to evaluate their impact on protein structure stability. Wild and mutant protein models are elucidated and superimposed by ITASSER, PyMoL and SPDBV. The 3D-protein models were further subjected to molecular dynamics simulations to study the structure conformational behaviour of wild and mutant. Our study will provide aclue in screening of mutation and impact on their protein function in for further research inHereditary Hemochromatosis.

Keywords: Hemochromatosis, SNP, Molecular modelling, molecular dynamics simulation

Comparative study on cuticular wax extraction from medicinal plants and its coating for increasing shelf life of fruits

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The present study is to improve the shelf life of tomato fruit (*Solanum lycopersicum*) storability by esting effect of edible coating with cuticular wax extracted from *Plectranthus amboinicus (Lour.)*and *Tectona grandis L*. The amount of cuticular wax extracted was found to be 0.189 g for *ectona grandis L*. and 0.224 g *for Plectranthus amboinicus* (Lour.) and the time of extraction was found to be 4 mins for both the leaves. In calorimetric analysis,the maximum absorbance obtained at 420 nm for Tectona grandis L. and 450 nm for *Plectranthus amboinicus (Lour.)* and the yield of cuticular layer was found to be higher in *Plectranthus amboinicus (Lour.)* than *Tectona grandis L*. The Qualitative phytochemical screening indicates the presence of carbohydrates, tannins, flavanoids, terpenoids, alkaloids, saponins and steroids in teak extract and carbohydrates, tannins, flavanoids, terpenoids, alkaloids, saponins in oregano extract. At adaxial surface, cuticular layer was greater in *Plectranthus amboinicus (Lour.)* whereas in Tectona grandis L. the cuticular layer was higher at abaxial surface. The retention factor *for Tectona grandis L. and Plectranthus amboinicus* (Lour.) was found to be 0.69 and 0.615 respectively.

Key words: Cuticular wax, Edible coating, *Tectona grandis L., Plectranthus amboinicus (Lour.)*

Insilico study on human delta sarcoglycan protein involved in limb-girdle muscular dystrophy

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Limb-girdle muscular dystrophy is a gathering of clutters which influence the intentionalmuscles around the hips and shoulders. The conditions are dynamic, prompting lost muscle quality and mass over various years. Beginning may happen in youth, immaturity, youthful adulthood, or considerably later. Guys and females are influenced in equivalent numbers. Most types of Limb-girdle muscular dystrophy are acquired in an autosomal passive way. Homozygous or compound heterozygous mutation in gene delta-sarcoglycan on chromosomes5q33 causes autosomal recessive limb- girdle muscular dystrophy. In our studies, we haveattempted to understand the structural characteristics of delta sarcoglycan. The primary,secondary and tertiary structure of delta sarcoglycan were analyzedby using many insilico tools such as protpram, predict protein,MeMe, jpred, sopma, consurf. Literature survey says that no models have been explored for this protein yet which insisted the immediate development forbetter understanding of delta sarcoglycan structure. Hence ab initio model of delta sarcoglycan was built using I-Tasser and as further analysis protein-protein interaction of this protein withDAG1 and mutant models was done using HADDOCK and PDBSum. Our study reveals that the structural properties and details binding mode of delta sarcoglycan. Our results provide a clue in function and structural behavior of delta sarcoglycan for Limb-Girdle Muscular Dystrophyresearch .

Keywords: Limb-girdle muscular dystrophy, DAG1, Delta scaroglycan.

SNP screening and molecular dynamics studies on human palmitoyl-protein thioesterase 1 (PPT1) protein associated with infantile neuronal ceroidlipofuscinosis

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The neuronal ceroid lipofuscinosis (NCL) are a group of rare heterogeneous neurodegenerative is orders with autosomal recessive Inheritance. The symptoms of NCL includes progressive ementia, progressive visual failure, seizures and often movement abnormalities. It affects an estimated 2 to4 out of every 100,000 children in USA. About 11 genes were found to be in association with NCL. CL1 is called an infantile neuronal ceroid lipofusionosis (INCL) whichwe have chosen to study in ur experiment.which occurs due to functional changes of the enzyme palmitoyl-protein hioesterase 1 (PPT1) due to mutation in the PPT1 gene. The mutation in the position like (R122W, L219Q, 08R, Y109D, and Q177E) in the PPT1 gene is seen to be associated with NCL in majority of the cases. Certain mutations in PPT1 related disorder are seen to increase the stability of the protein when the mutation occurs and thus resulting in the disease. Similar results can be noticed in our study. We performed SNP analysis for all then sSNPs of PPT1 protein and found Mutation G108R to be the potential disease causing mutant. Further molecular dynamics was performed simulation to compare the stability difference between the wild type protein structure and the mutant protein structure. The mutation G108Rresulted in the overall increase in the stability of the mutant protein. The superimposed structure shows the structural variation between the two proteins. The proposed study may be helpful in providing a clue for drug discovery and development in future personalized medicine for diseases that are caused by the PPT1 deficiency.

Key words: SNP, neuronal ceroid lipofuscinosis, palmitoyl-protein thioesterase, Molecular Simulation

Investigation on tissue repair effects, anti-tumor activity and anti-microbial activity of larval blood extract from *myrmeleon formicarius* (antlion larva).

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Insect blood extract is the body fluid which is present in most of the invertebrates which is the equivalent to blood in higher order animals. This study is focused on investigating the tissue repair effects and the antimicrobial properties of the insect blood extract collected from the larvae of *Myrmeleon formicarius* (antlion). Antlion is a species of insect predators which is predominantly found in arid and dry areas. They feed mainly onants, pollens & bugs. The recent study shows that the insect blood extract of antlion has tissue repair property of liver and kidney in diabetes induced mice model. Since the insect blood extract is found to express tissue regenerative property a complete analysis of the insect blood extract will be done by proteomic profiling. Our study is aimed to test the tissue regenerative property on Human Dermal Papilla Cell line(SV40). This will be followed by the Cytotoxic studies on Human Fibroblast cells.

Keywords: Insect blood extract, Human Dermal Papilla Cell line(SV40), *Myrmeleon formicarius*, Cytotoxic studies.

Structural, functional and biological interaction study on oral antimicrobial peptides as potential inhibitor of TMPC membrane protein from *treponemadenticola*

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Antimicrobial peptides are class of cationic peptides which provide innate immunity in the host and have broad spectrum activity against variety of microorganisms. AMPs are wide ranging class of host defense peptides which act during the early stages of microbial invasion. They aredefense molecules which are produced in salivary glands and duct cells. A complex mixture of over 45 antimicrobial proteins and peptides are identified in oral fluids; among all, 13 are up-regulated in periodontal disease. They are particularly predominant in the oral cavity which provides and environment to restrict the entry of microbes. AMPs have gained popularity due to the growing resistance of microbes to the classical antibiotics. However, AMPs appear to be promising molecules due to their low resistance and broad spectrum activity. Our study focuses on proteomic analysis of these peptides and analyse their biological interaction potential with microbes. Our research also focuses on structural elucidation of oral antimicrobial peptidesribonuclease-7(RNase 7), Histatin-3, protachykinin-1 and Cathelicidins (LL-37) to compare their structural functional properties and their interaction with membrane protein TmpC from *Treponemadenticol*a. Further molecular simulation was carried out to validate their structural stability and molecular docking studies were carried out on human salivary antimicrobial peptides and TmpC. The proposed research can give insights into peptide based drugs and help in solving the problems associated with antibiotic resistance.

Key words: Oral antimicrobial peptides, Proteomics study, molecular modeling, Molecularsimulation, Molecular docking

Invivo screening of *clitoria ternatea* leaves for immunomodulatory activity

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The present study was undertaken to investigate the immunomodulatory activity of *litoriaternatea* leaf extract.To evaluate the role of active acetone fraction of *C.ternatea* leaves ,detailed studies were carried out using a panel of invivoassays,which includes Anitbodytitre, Bloodcells, Differential counts ,B,T ,lymphocytes and DTH responses .The animals were treated in four groups. Group I served as control administered with sterile water, Group II received 100mg/kg body wt. of active acetone fraction of CT.Group III received 30mg/kg body wt.of Cyclophosphamide and Group IV is the Proimmune treated groups .Effects on humoral immune response were investigated in SRBCs-sensitized mice by measuring the Antibody titre ,which showed increased agglutination in all the groups in the III week ,considered as haemagglutination. The effects on haematological profile showed significant decrease in the RBC counts as well as WBC when compared with the control group. The reference drug Cyclophosphamide significantly decreased the differential counts.Futhur B and Total lymphocytes were counted and a lymphocyte binding with three or more erythrocytes was considered as rosette .Then the DTH response was noted which showed erythema with large blisters, small blisters, erythema with edema and erythema alone. All these caused immune stimulatory effect in animals. Thus *C. ternatea* leaf tract showed significant immunosupressive effects as evident from significant decrease in primary and secondary antibody titers ,erythema's seen in DTH response, and in differential counts. The immune modulatory effects of *C. ternatea* on humoral, cell mediated and immuneresponse could be attributed to decreased immune cell sensitization. The immunomodulatory activity might be attributed to the presence of Phytoconstitutents present in it compounds. The present study demonstrated and provided evidence for the traditional uses of Clitoriaternatea. Further studies might be required to determine detailed mechanisms and active phytochemicals responsible for immunomodulatory activity.

Keywords: immunomodulatory activity, immunosupressive effects ,erythema, haemagglutination.

Comparative study of bioelectricity generation by microbial degradation of organic wastes using microbial fuel cell

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Bioelectricity is one of the sustainable energy sources of future, which is alternative to the non-renewable fossil fuels such as coal for power generation. Bioelectricity can be generated in microbial fuel cell (MFC) from microbial degradation of organic wastes. In the present project, we investigate to generate bioelectricity from organic wastes such *as Citrus sinensis* peel slurry, *Oryzasativ*a waste water and to characterize the electrophilic bacteria responsible for the generation of bioelectricity. The maximum voltage of about 0.8V was generated from Citrus sinensis peel slurry in 16 days, whereas 0.642V was generated within a period of 6 days from Oryza sativa waste water. In series connection of microbial fuel cells, voltage of 2.850V was measured. Four electrophilic bacterial isolates were obtained from the anode of microbial fuel cell and biochemical characterization tests were performed.

Keywords: bioelectricity, microbial fuel cell, electrophilic bacteria.

Invitro and *insilico* analysis to identify novel lead compound from *musa sapientumpeels*against lung cancer

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Lung cancer among all types of cancer remains to occur the most by about 1.4 million cases per year. More than 80% of them are identified as Non-small cell lung cancer (NSCLC). Therefore this study was carried out with the intension of unveiling the potential of *Musa sapientum* by identifying the active compound present in it and determining its anticancerous activity by docking them against the lung cancer related proteins by using molecular docking techniques. The plant extract was subjected to phytochemical and GC-MS analysis, also its free radical scavenging activity was evaluated using ABTS (2, 2'-azinibis (3ethylbenzothiazoline 6 sulfonic acid)) method. Invitro analysis on anticancerous activity in lung cell line (a549) was done by MTT (3-[4, 5-dimethylthiazol-2-yl]-2, 5-diphenyl tetrazolium bromide) assay. The identified lung cancer protein EGFR (Epidermal Growth Factor Receptor), whose structure was retrieved from PDB was docked with active molecules by using Autodock software. Then the target structure was analyzed for possible binding sites and the generated candidate molecules were checked for their drug likeness and docked with target protein, ranked them according to their binding affinities. The binding energy value for tested lead molecule (Tri cyclo [5, 1, 0, 0(2, 4) oct 5-ene 5 proponoic acid] 3,3,8,8 tetramethyl) against drug target (EGFR) (PDB id 2ITO) showed that the unexploited banana peels could be exploited to harvest promising lead molecules against Non-Small Cell Lung Cancer.

Key words: Cancer, *Musa sapientum*, Antioxidant, *in vitro* studies, docking.

Antimicrobial, anti-adhesive and antibiofilm properties of different biosurfactant producing symbiotic *Lactobacillus Species* from probiotic sachets

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Symbiotics are combinations of probiotics and prebiotics and that are beneficially affect the host by improving the survival and implantation of live investigate the antimicrobial, anti-adhesive and antibiofilm properties of biosurfactant extracted from ten lactobacilli species from differentProbiotic sachets. Biosurfactants are amphiphilic compounds produced extracellularly by bacteria oncell surfaces or excreted extracellularly. They contain hydrophilic and hydrophobic moieties that reduce surface and interfacial tension between molecules at the surface and interface respectively. The produced biosurfactant showed the distinct antimicrobial and anti-adhesive activities againstseveral pathogenic strains and the ten isolates of lactobacilli were used to study the antibiofilm activities. The biosurfactant produced by all lactobacillus had an emulsification capacity was above50 %. Here the antimicrobial activity was carried out by Disc diffusion method. Whereas, it forms the zone of 9mm to17mm and *S. aureus* showed high values than that three pathogenic strains. The anti-adhesive activity of the different pathogenic strains to the biosurfactant is also observed and the biofilm activities of the pathogenic strains with individual sachets were been noted.

Keywords: Antimicrobial, Anti-adhesive, Antibiofilm, Symbiotic strains

Phytochemical and pharmaceutical studies on rhizome of *Drynaria quercifolia* (Linn.) J. Smith

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Drynaria quercifolia L. were collected from Kolli hills, Tamilnadu, India. The collected rhizome were cut into small pieces and ground by mixer grinder as powder form. The sample was packed by filter paper then filled in soxhlet apparatus and added with different solvents like ethanol, methanol and petroleum ether. This extract subjected to GC- MS analysis. The GC-MS analysis was confirmed that the 10 bioactive compounds were present in the D. quercifolia rhizome powder. Antibacterial potential of the rhizome extracts was carried out by agar well diffusion method. It was found that highest zone of inhibition against E. coli (20± 1.6 mm).The cytotoxic effect of rhizome powder against human breast cancer cell line MCF-7 and human hepatocellular carcinoma cell line HepG2 was studied In- vitro. In the MTT assay, the rhizome powder has a cytotoxic effect on HepG2 cell line in a concentration dependent manner. The cell viability of HepG2 was high at the concentration of 125µg/ml. It shows that D. quercifolia rhizome powder will act as an anti-lung cancer drug.

Keywords: D. quercifolia rhizome powder, Antibacterial potential, anti-lung cancer drug.

Relative efficacy of *Megathyrsus maximus* and *Cynodon dactylon* in milk production

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Dairy products,notably milk and butter,are traditionally impotant foods in our diet.Demand for these products,particularly milk,continues to rise,driven by changing consumption patterns and,secondly, population growth. India contributes 9.5% of the global cow's milk production.lnSouth India some farmers feed their cows with guinea grass(Megathyrsus maximus) and Bermuda grass(Cynodon dactylon)to get more amount of milk.So the major aim of this study is to comparatively analyze both the grasses to find out the leading novel components that involves to improve the milk production.The crude extract of grasses are extracted by using aqueous ethanol-aqueous chloroform as solvent in soxhlet extractor.The extracted compounds of the guinea grass and bermuda grass are analyzed by GC-MS.Drug likeliness property of the nine compounds obtained from GC-MS was analyzed based on Lipinski's rule of five. Among the nine compounds, three compounds followed the Lipinski's rule of five.The molecular docking technique is used to find out the binding affinity of the shortlisted three lead compounds to the selected receptor such as Oxytocin receptor of Humans and SGH receptor of Bovine.The docking results reveal that the flavone has the least binding energy as -6.6kcal/mol with SGH receptor and -5.0kcal/mol with oxytocin receptor.Since the flavone is present in both the grasses with remarkable binding affinity it could to be served as potential lead compound that helps to stimulate the Somatotropin and Oxytocin hormones that is responsible for the milk production which, in turn increases the quantity of milk produced.

Keywords: Milk production, *Megathyrsus maximus*, Cynodon dactylon, Phytochemicals, Oxytocinand Growth hormone receptor, Molecular docking.

Formulation of herbal mouth wash against oral pathogens

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Mouth wash is a liquid accessory to clean and maintain the health of our teeth for oral hygiene. Nowadays, we use commercial mouth wash which contains many chemical compounds like sodium lauryl sulfate, thymol, methyl salicylate, benzalkonium chloride, hydrogen peroxide, alcohol which are harmful to our buccal cavity. A herbal mouth wash was prepared using the extracts of *Syzygium aromaticum, Mentha longifolia, Zingiber officinale, Solanum nigrum, Glycyrrhiza glabra.* The antimicrobial test of the herbal ingredients used in preparing herbal mouth wash was checked against oral pathogens by well diffusion method. Antioxidant assay also performed followed by phytochemical analysis done for each and every herbal ingredients. In the *Syzygium aromaticum* all the phytochemical are present and in *Glycyrrhiza glabra* and *Solanum nigrum* less content of glycosides, in *Mentha longifolia* less content of steroids and in *Zingiber officinale* absence of terpenoids, flavonoids, phenol. On the confirmation by the above test, herbal mouth wash was formulated and checked the efficiency of antimicrobial activity. When compared for antimicrobial activity formulated herbal mouth wash and commercially available products have less antimicrobial activity.

Keywords:*Syzygium aromaticum, Mentha longifolia, Zingiber officinale, Solanum nigrum, Glycyrrhiza glabra,* Antioxidant, Antimicrobial, Herbal mouth wash, Oral pathogens.

Impact of *leuconostoc pseudomesenteroides* on the growth performance ofswiss albino mice administered with red powder n (bakery dye)

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Probiotic organisms play a major role in making the intestine a home for several beneficial organisms and a barrier for pathogens. In the present investigation one of the probiotic isolate *Leuconostoc pseudomesenteroides* was selected by their potentiality. And the red powder N is a food dye a dark red powder with weak typical flavor. It imparts bright and red colour to food stuffs. These additive provide to induce DNA damage in mammalian cells in vivo and in vitro in the aspects of health status. In this study the mice were divided into four groups with five animals in each group. Here a group one was a control. Group two was administered with *Leuconostoc pseudomesenteroides* (1×10 7 CFU/ml/day) in drinking water daily until 42 days. Group three were supplied with bakery dye red powder N at a dose of 400 mg/kg body weight along with normal diet. Group four were supplied with *Leuconostoc pseudomesenteroides* (1×10 cFU/ml/day) in drinking water and bakery dye red powder N dose of 400 mg/kg body weigh along with normal diet. The animals were observed daily for general health conditions such as body weight, feed conversion ratio, relative weight of organ colon, drinking water consumption and CNS activity of mice. Supplementation of probiotic *Leuconostoc pseudomes enteroides* in diet through drinking water showed an improvement in the live weight and FCR of mice.

Key words: Probiotic, Red powder N, Colon, DNA damage.

Screening and production of bio polymer (PHB) from bacteria

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Plastic materials originated from petrochemicals cause serious environmental problems due to their non-degradable nature. Accumulation of non-degradable plastic bags in the environment is one of the major causes of pollution now-a-days. The term 'biomaterials 'includes chemically unrelated products that are synthesized by microorganisms (or part of them)under different environmental conditions. One important family of biomaterials is bioplastics. Bioplastics are naturally occurring biodegradable polymers made from polyhydroxy alkanoates(PHA) of which poly 3-hydroxy butyric acid (PHB) is the most common. PHB serves as an energy storage molecule and accumulates intracellularly as storage granules in microbes. Due to similar mechanical properties, Polyhydroxy butyrate (PHB) has become alternative for petrochemical derived plastic. PHB is biodegradable, ecofriendly, biocompatible and microbial thermoplastic. PHB is highly produced from microorganisms under optimum conditions such asphysical conditions (pH, temperature, incubation times), Nutritional conditions (Carbon, Nitrogen sources and C/N ratio and Biochemical conditions. The advantage of PHB is, they are degraded naturally and completely to CO2 and H2O under natural environment by the enzymatic activities of microbes. In this work, an attempt was made to isolate potent PHB producing bacterial strains such as Bacillus sp , Pseudomonas sp and Vibrio sp from soil and water sample collected from Tuticorin, these isolates were confirmed by Colony morphology, microscopic and biochemical tests, Sudan black B was used for primary screening of isolates f orPHB production and then extraction of PHB from isolates was done by sodium hypochlorite –chloroform method. This work also included the comparison of the ability of PHB production between Bacillus sp , Pseudomonas spand Vibrio sp. PHB positive isolates were found to be quite efficient PHB producers, thus, exhibiting a potential for their utilization in commercial PHB (Bioplastic) production.

Keywords: Biomaterials, Polyhydroxy butyrate (PHB), Polyhydroxyalkanoates (PHAs),Biodegradable polymers, Bacillus, Pseudomonas and Vibrio sp, Bioplastics.Petrochemicals.

Anti-inflammatory and anti-pyretic activity of commelina benghalensis

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Plants have been used for centuries in every culture throughout the world as medicine formany diseases. Commelina benghalensis L. commonly known as Benghal flower, and kaanaanvaazhai in Tamilnadu, belongs to the family *Commelinaceae. Commelina benghalensis L*. is a perennial medicinal plant and is a moderate weed of agricultural field. It is an inhabitant to tropical Asia and Africa. The herb is used for otitis media which is the inflammation caused in the middle ear, suppurative sores, burns, conjunctivitis, and skin diseases (eczema, abscesses, acne, scabies and warts). The people in the Piranmalai, Tamilnadu used the leaves for the treatment of rabies and wounds. Also used in the treatment of various ailments like leprosy, sorethroat, opthalmia, burns, pain and inflammation and also as depressant, demulcent, emollient and laxative. The whole plant sample of *Commelina benghlensis L* were subjected to phytochemicalanalysis and antimicrobial activity which showed the best results. Presence of alkaloid, saponin ,flavanoids, sterols were observed. In the study the antimicrobial activity of plant extracts of methanol, ethanol and aqueous of *Commelina benghalensis L*. showed activity against *Staphylococcus aureus, klebseilla, Salmonella typhi and Candida albicans.* The anti pyretic and anti inflammatory activity of the plant showed excellent results

KEY WORDS: Antimicrobial activity, *Commelina benghalensis L.*, therapeutic activity, anti-pyretic, anti-inflammatory.

The plant growth stimulating activity of keratinase producing bacteria derived from poultry waste

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The fundamental objective of this work is to cease extensive accumulation of the poultry waste in poultry farms which might cause impairment in environmental wealth. It illustrates that the poultry waste can be used effectively as a plant growth inducing material rather than being dumped as waste. In the present study gram-positive, keratinase producing bacterial *Bacillus subtilis* and *Geobacillus stearothermophilus* were isolated from the poultry waste soil sample. Further the Insilico studies for emphasizing the role of keratinase along with Indole Acetic Acid in plant growth, was performed. The seed germination assay demonstrated that there was approximately 52% more germination in the Test soil plants compared to control. Soil analysis also indicated presence of higher amounts of nutrients. From the results obtained, it can be positively concluded that poultry waste is an effective and readily available, environmental-friendly plant growth promoting substance and hence can be used for improving growth of crops and plants in fields.

Key Words: Keratinase, Indole Acetic Acid, Plant Growth Promotion

Bioactive compounds from sea grass extracts *cymodocea rotundata* and *syringodium isoetifolium.*

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The present investigation was carried out to analyze the bioactive components from the sea grasses *Cymodocea rotundata* and *Syringodium isoetifolium* using Gas Chromatography –Mass Spectroscopy instrument for the presence of active constituents by qualitative method. The results showed the active ingredients were furanaldehyde, fatty acids, linolenic acid, benzoic acid, palmitic acid, benzoic acid and steroid in the methanolic extracts of *Cymodocea rotundata and Syringodium isoetifolium.* The compounds were identified and confirmed by compairing their mass spectrum with the original spectrum obtained from the inbuilt libraries namely WILEY and NIST.

Key words : gas chromatography, sea grasses, methanolic extract.

Bioplastic from food wastes *musa sapientumpeels* and potato starch

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Bio plastics using bio-based polymers (starch) can be used as a substitute for the normal conventional plastics. The conventional plastics provides functions that cannot be economically replaced by other materials. Conventional plastics are petroleum-based polymers. These kind of plastics leads to the requirement of more fossil fuels as well as produces more green house gases that totally leads to the pollution of the environment . Moreover some conventional plastics takes thousands of years to degrade some done get degraded even after that time . In order to minimize the use of conventional plastics , the bio plastics can be produced .This bio plastics production involves usage of food wastes as source .The food containing the bio molecules can be easily bio degraded, so that the bio plastics synthesized from the food wastes should also be bio degraded .According to BPI Biodegradable products institute , a biodegradable material is one that can be broken down by microbes at environmental conditions. When the bio plastics are used and thrown away, they can be utilized by microbes and degraded. These degraded material can also act as a bio manure and helps plants grow better .So this project deals with the synthetic method to produce bio plastics.

Keywords : food wastes , *Musa sapientum*, potato and starch

Evaluation of anti inflammation activity of butanolic extract of *prosopis juliflora*

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The air dried leaves and pods of *Prosopis juliflora,* commonly known as mesquite was extracted with butanol are examined for anti-inflammation activity. The butanolic extract of *Prosopis juliflora* leaves and pods were investigated for the evaluation of antiinflammation activity on carrageenan induced models, in albino rats. It is observed that the anti- inflammatory ability of the drug containing *Prosopis juliflora* extracts were significantly greater than that of the control (simple ointment). The drug containing leaves extract showed significant anti-inflammatory activity which was comparable to that of the Diclofenac sodium (standard) treated animals. The butanolic extract of leaves of *Prosopis juliflora* drug showed significant responses when compared with the pods. From the result, it has shown that the extracts have a strong anti-inflammatory activity and constitutes a potential source for the development of new treatments.

KEYWORDS:*Prosopis juliflora*, butanolic extract, carrageenan, Anti-inflammatory

Study for developing a biochemical product for postharvest diseases in citrus fruits.

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This project focuses on the study for developing a biochemical product from polyherbal plants for Post harvest diseases in citrus fruits , which is known as Citrus canker caused by the bacterium *Xanthomonas axonopodis* . Leaf samples from three different plants say *Abutilon indicum , Tribulus terrestris and Aegle marmelos* were collected. Then the leaves were shadedried and the extractsof these Leaves were obtained individually and phyto-chemical screening was carried out for these extracts. The extracts of these Leaves were then loaded onto a pre-coated TLC, viewed under UV and then the RF value was calculated. A diseased citrus fruit was taken and the diseased segment was removed using a sterile knife and surface sterilized . It was plated on a nutrient agar medium and kept for overnight incubation. The antibacterial activities of crude methanol extracts were assayed using disc diffusion method. The results were recorded by measuring the zones of growth inhibition surrounding the discs. The minimum inhibitory concentration of methanol extracts from the leaves at various concentrations were determined by dilution method at the absorbance of 560nm. Effect of methanol extracts from the leaves at various concentrations on inhibition of biofilm formation of pathogenic bacteria was performed and the absorbance was measured at 595nm and the results were tabulated. The observed results showed that the leaf extracts had antagonistic effect against *Xanthomonas axonopodis* in vitro. Synergic extracts effect In concentration of 20 microgram / millilitre had significant results in the control of foliar citrus canker lesions caused in *Xanthomonas axonopodis.* On the other hand , other studies need to be carried out to determine the best conditions for application to get the high efficiency of the bactericidal effect of the polyherbal extracts.

Keywords : Citrus canker , *Xanthomonas axonopodis*

Production of bio plastic from fruit peels

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The expansion of population growth has led to the accumulation of a large volume of non-degradable solid waste material. The major portion is petroleum plastic which is becoming a threat to environment as produces toxic substances, non-degradable and causing ill effects to the living organisms. Bio-plastic emerges as the solution for this pollution. The productions of bio-plastics from the renewable sources of agro-products are eco friendly in nature. Bio-plastics have more advantages over the plastic that are produced from the petroleum products in the form of environmental constructive. The cost of production is comparatively low as most of the bio-plastic are produced from the vegetable fats and oils, corn starch, straw, woodchips, waste peels of fruits and vegetables. The bio-plastics possess more degrading capacity which plays an important role in solid waste-management, supports 3R and reduces the environmental pollution. In our present investigation we have aimed to produce bioplastics from fruit peels namely pomegranate and orange. The bioplastic was prepared by boiling the fruit peels after treatment with salts and subjected to heating. The blend was molded to form bioplastic. The prepared bioplastics were to be analysed for its tensile strength and other physical properties.

Keywords: Pollution; bioplastic, cost effective; solid waste; fruit peels; analysis.

Green synthesis and characterization of silver nanoparticle from *nigella sativa* and its application against uti causing bacteria.

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Synthesis of silver nanoparticles using seeds of *Nigella sativa* as reducing agent was evaluated in this study. Silver nanoparticles were synthesized using the homogenized seed extract of *N.sativa* and 2mM of silver nitrate solution. Optimization of the silver nanoparticles was carried out by comparing the optical density values of silver nanoparticles with different volumes of N.sativa extract and silver nitrate solution. The silver nanoparticles were characterized by UV, XRD, FTIR and SEM. Antibacterial activity of nanoparticles was studied against Urinary Tract Infection (UTI) causing bacteria by disc diffusion method. The findings suggest that silver nanoparticles from seeds of N. sativa may be effectively used against UTI causing bacteria.

Keywords: Silver nanoparticles, *Nigella sativa*, reducing agent, antibacterial activity, urinary tract infection.

Phytochemical characteristics of citrus peel

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On Processing of citrus by-products potentially, represents a rich source of phenolic compounds and dietary fibre. Folin-Ciocalteu (FC) reagent assay was used to determine total phenolic content (TPC) and total flavonoid content (TFC) was estimated based on the aluminium chloride colorimetric method of citrus samples .DPPH radical scavenging activity of citrus samples was determined and the results were expressed as EC 50 value of DPPH assay in mg ML -1 .The extraction yield of fresh lemon peel was found to be 11.0% .TPC and TFC of citrus samples are 72.0 ± 0.67mg GAE g -1 FW and 50.01 mg QE g -1 FW .The antioxidant activity of plant extracts were determined by ferric reducing antioxidant power (FRAP) and the phenolic compound are known to comprise of an antioxidant activity. The presence of flavoniod serves as Anticarcinogenic agent. Potential activity of flavonoids in citrus peel cover inhibiting oncogenesis, proliferation, neovascularization, and metastasis and inducing apoptosis.The phenolic compounds are known to comprise of an antioxidant activity.

Keywords: Folin-Ciocalteu, antioxidant power, neovascularizations

Microbial degradation of organic and inorganic wastes generated from a dry flower processing and exporting industry located in thoothukudi

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The dry flower processing and exporting industry produces bouquets, and other fancy show-case items using dry flowers and other woody materials dyed with both organic and inorganic colouring agents. The inorganic and organic wastes generated during the manufacturing of such things cause major problem to the industrialists in connection with its disposal. The researcher tried to decompose these organic and inorganic wastes using selected biological systems such as fungi species, *Ganoderma lucidum, Pleurotussapidus and Pleurotus flabellatus* and also earthworms. For mushroom cultivation, the waste materials were mixed with saw dust and paddy straw in various ratios. Among thefour trials, the Trial I and Trial II showed good result. The spent material of mushroom was again treated with earthworms. For vermin composting the spent material of various mushroom trial beds were mixed with cow dung in 1:1 ratio.In another experiment, the dry flower industrial waste was directly treated with earthworms. For this experiment, two trials were tried (1:1 and 2:1) with cow dung. When compared with direct treatment, the spent material treated with vermin compost showed good result and it took a shorter period for composting. The findings of the present study open a new eco-friendly, cost-effective method for the decomposition of the dye incorporated dry flower industrial waste. By adopting this biological means a large quantum of waste materials can be disposed.

Keywords : Ganoderma lucidum, vermicomposting, dry flower processing and exporting industry

Estimation of phytochemical content and antioxant activity of butanolic extract of *cassia fistula* and *acacia nilotica*

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Ever since ancient times, in search for rescue for their disease, the people looked for drugs in nature. The medicinal plants used in traditional medicine still plays an important role in emerging and developing countries since; they are inexpensive, effective and have natural origin. Acacia nilotica and Cassia fistula has been used in traditional medicines. The aim of this study was to determine the phytochemical and free radical scavenging activity of butanolic leaves extract of *Acacia nilotica* and *cassia fistula.* The leaves extract of Cassia fistula contains a variety of phytochemical compounds such as Alkaloids, Amino acids, Terpenoids, Reducing sugar, Carbohydrates and meanwhile Acacia niloticacontains Alkaloids, Amino acids, Reducing sugar, Flavonoids, Carbohydrate and proteins.Results obtained in this study confirmed the antioxidant activity of Cassia fistula and *Acacia nilotica* leaves.

Keywords: *Acacia nilotica,Cassia fistula*, butanolic extract, Phytochemical, Antioxidant

An approach to investigate the anti-inflammation activity of *Eichhornia crassipes*

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Eichhornia crassipes, commonly known as water hyacinth is a free floating aquatic perennial herb belongs to the family "P*ontederiaceae*". It's a world most problematic weeds that found in the tropical and subtropical region, which causes serious environmental problems. The aim of this study was to evaluate the anti-inflammatory effect of *Eichhornia crassipes.* The methanolic extract of *Eichhornia crassipes* leaves, root and flower were investigated for the evaluation of their anti-inflammatory potential on carrageenan induced paw oedema in albino rats. It is observed that the anti-inflammatory ability of the drug containing *Eichhornia crassipes* extracts was significantly greater than that of the control (simple ointment). The drug containing flower extract showed significant anti-inflammatory activity which was comparable to that of the Diclofenac Sodium (standard) treated animals. The percentage of edema inhibition was much more with the flower extract drug treated group. The methanolic extract of flower *of Eichhornia crassipes* drug showed significant responses when compared with the leaves and root extract. From this result, it has shown that the extracts have very strong activity to prevent pains which provides strong scientific evidence to the use of this plant in the treatment of inflammation in animals.

Keywords: *Eichhornia crassipes*, Methanolic extract, Anti-inflammation, Carrageenan.

Production of bioplastic (poly-hydroxyalkanoates –pha) from *Bacillus subtilis* using *Mahua longifolia* extract

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In the present investigation, an unrefined natural substrate namely *Mahua longifolia* was utilized as a carbon source for the production of bacterial poly-hydroxyalkanoate (PHA) opolymer by *Bacillus subtilis*. The bacterial strain Bacillus subtilis was tested for PHA production on *Mahua* flower extract. Major component of the flower is sugars (reducing sugar 6.34%w/w) and aditionally it also contains proteins, vitamins, organic acids and essential oils. The acteriumutilized malic acid present in the substrate as a co-carbon source for the copolymer production. The flowers were used in the form of aqueous extract for PHA production in shake flasks containing sterile mineral medium. The biomass separated was found to be 0.938 g/l and PHA yield determined by sodium hypochlorite digestion method was found to be 0.516g/l. The obtained PHA polymer to be then characterized by gas chromatography and proton NMR.

Keywords: Poly-hydroxyalkanoate, Mahua flowers, *Bacillus subtilis*, sodium hypochlorite digestion, Gas chromatography, Proton NMR.

Single-nucleotide polymorphism (SNP) is a regenerative a tool for clinical diagnosis

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In current scenario a Single-Nucleotide Polymorphism (SNP) genotyping is a regularly used in the investigation and diagnosis of serious human disease. This type transformation from research application to clinical purpose is a mile stone of Molecular diagnosis in clinical Microbiology. The SNP give instructions to our bodies that allow developing and being maintained characters, but they are also unique to us as individuals. Our health conditions are determined by this individuality in combination with our environmental factors, also our molecular cards.A serious disease such as Sickle cell anemia and Huntington's disease, in human results from the interaction of the genome with environment. The molecular basis of such disorders it may evolve variations in many places within our molecular instructions, and this has lead to another level of difficulties. SNPs play a promising role in investigation of diagnosis of promising disease. A set of SNPs evenly spread across the human genome could be used to screen the two populations: typically populations with and without a disorder, and some SNPs would associate more with the disease group, thus implicating the SNP, or a DNA sequence close by, in the disease state. A novel technological effort followed and whole genome scans, with tens of thousands of SNPs, were made a reality with the advent of array-based technologies. This approach allowed where small numbers of SNPs, suspected to be involved in a disease, were screened in large populations.

Keywords: SNP, Human genome disorders, investigation and diagnosis

Antibiofilm activity of guava seed extract (Psidiumguavaja) against *E.coli*

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Biofilms are significant hazards in the food industry. The presence of *Escherichia col*i biofilms in Food industry is potentially causing food spoilage that will shorten the shelflife aswel as lead to .The spread of Disease through food. In previous study,the GSE(psidiumguavaja) howed higher antimicrobial Activity against Gram positive bacteria when compared to Gram negative acteria excepte for *V.parahaemolyticus*, *P.aeroginosa,and A.hydrophila*. The guava extracts possess compounds containing antibacterial properties that can potentially be useful to control foodborne pathogens and spoilage organisms. The antibacterial activity is not directly proportional its biofilm inhibition effect against the same bacterial strain. Therefore, on assumption, that the effiency of antibiofilm activity in guava seed is high and effective against *E.coli*.

Keywords: Antibiofilm ,Guavaseed extract ,biofilm, *E.coli.*

Green synthesis of CuO nanoparticles from mirabilis jalapa and in vitro evaluation of antibacterial, anti inflammatory and wound healing activity

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The present study aims the green synthesizes of copper oxide (CuO NPs) nanoparticles by using Mirabilis jalapa as leaf extract to analyse the biological properties by using invitro ethodologies. The efficiency of nanoparticles was analysed . These CuO NPs were synthesized biologically by mixing methanolic leaf extract of Mirabilis jalapa with copper sulphate entahydrate (CuSO4.5H2O) as precursor. The CuO NPs were confirmed by Double beam UV-visible spectroscopy in which high absorbance peak was obtained at 240nm, generally they exhibit high absorbance at 200-300 nm. The synthesized CuO NPs were characterized by Fourier-transform infrared spectroscopy (FT-IR) in which the functional groups present were identified and scanning electron microscopy (SEM)in which three dimensional images of nanoparticles were obtained . The properties of biologically synthesized nanoparticles were evaluated by in vitro methodologies such as, agar disc diffusion assay for anti-bacterial activity, inhibition of protein denaturation assay for anti-inflammatory activity and in vitro wound healing assay in vero cell lines to test wound healing activity.

Keywords: Copper oxide nanoparticles (CuO NPs), Mirabilis jalapa leaf extract, antibacterial activity, anti-inflammatory activity, wound healing activity.

Photochemical and pharmaceutical studies on rhizome of *Drynaria quercifolia* (linn.) j. smith

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Drynaria quercifolia L. were collected from Kolli hills, Tamilnadu, India. The collected rhizome were cut into small pieces and ground by mixer grinder as powder form. The sample was packed by filter paper then filled in soxhlet apparatus and added with different solvents like ethanol, methanol and petroleum ether. This extract subjected to GC-MS analysis. The GC-MS analysis was confirmed that the 10 bioactive compounds were present in the *D. quercifolia* rhizome powder. Antibacterial potential of the rhizome extracts was carried out by agar well diffusion method. It was found that highest zone of inhibition against E. coli (20± 1.6 mm).The cytotoxic effect of rhizome powder against human breast cancer cell line MCF-7 and human hepatocellular carcinoma cell line HepG2 was studied In-vitro. In the MTT assay, the rhizome powder has a cytotoxic effect on HepG2 cell line in a concentration dependent manner. The cell viability of HepG2 was high at the concentration of 125µg/ml. It shows that *D. quercifolia* rhizome powder will act as an anti-lung cancer drug.

Keywords: HepG2, cytotoxic effect, hepatocellular carcinoma

Comparative study on micronutrients in various leaf litters vermicomposts of *Lampito Mauritii*

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Vermicompost plays a major role in improving growth and yield of different crops. It is an appropriate alternative for the chemical fertilizers applied to the plants. Leaf litters are the waste which contains Macro and Micronutrients required for plant growth. Leaf litters of Magnifera indica (Mango leaf), Psidium guajava (Guava leaf), Tectona grandis (Teak leaf) , Industrial Waste waste cotton (Gossypium species). The design of the experiments were Cowdung (control) T0,Cowdung+ Mango leaf litter +Waste cotton +Lampito mauritii (1:1) T1,Cowdung+ Mango leaf litter +Waste cotton +Lampito mauritii (1:2) T2,Cowdung+ Guava leaf litter +Waste cotton +Lampito mauritii (1:1) T3,Cowdung+ Guava leaf litter +Waste cotton +Lampito mauritii (1:2) T4,Cowdung+Teak leaf litter +Waste cotton +Lampito mauritii (1:1) T5,Cowdung+Teak leaf litter +Waste cotton +Lampito mauritii (1:2) T6. Wastes were mixed in different ratio for production of Vermicompost. In the present investigation micromutrients Cu, Mn, Zn and Fe were analysed in various leaf litters of vermicomposts employing indigenous earthworm Lampito mauritii. The results of the present study revealed that the initial day substrates contain higher copper content whereas during the composting of the substrates by Lampito mauritii, the copper content was decreased . The initial day substrates cowdung contain higher micronutrients that was reduced in the vermicomposts. The micronutrients copper, Manganese, and Iron contents were maximum in cowdung mango leaf litter vermicomposts (1:1) as compared to other leaf litters vermicomposts. The Zinc content was higher in Cowdung Guava leaf litter vermicompost.The micronutrients are above the permissible limit leads to toxic to the plants. In the present investigation the micronutrients Cu,Mn, Zn, Fe were analysed in various leaf litter vermicomposts were below the permissible limits.

Keywords: Vermicompost, Lampito mauritii, Leaf litters

Effect of green synthesised silver nanopatrticles on multidrug resistant Uropathogens isolated from UTI patients.

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Silver nanoparticles were synthesized by using aqueous extracts of thewhole body of the Plant *Tridaxprocumben*s that were collected from Western Ghats region. Characterization of the silver nanoparticles was done by using UV visible spectrometer (UV-visible spectrometer), Particle size analyzer (PSA), Scanning electron microscope (SEM) and X-ray diffractometer (X-Rd).Silver nanoparticles with unique optical and spherical shape weretested against the bacterial isolates. In the present study Ag-NPswere formed in the size range 40-52.54nm .The following bacteria viz., *Escheria coli, Klebseillapneumoniae, Pseudomonas aeruginosa* and gram positive *Staphyloccocussaprophyticus* were isolated from UTI patient's urine sample that was found resistant to many drugs.The synthesized AgNPs were able to inhibit the growth of the uropathogens more effectively than the synthetic antibiotics. The MIC values also showed promising results. Except E.coli all the other isolates are highly sensitive to silver nanoparticles.

Key Words: Silver nanoparticles, antibiotics, UTI, drug resistance, uropathogen

Remediation for oligospermia in males using the extract of traditional herbs with *Aniasomnifera* and *Emilasanchifolia*

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Due to life style changes, climatic changes, occupational problems and Food, air and water pollutants, the present generation of human beings are affected much of the different health issues, sterile marriage is a matter of great concern. The infertility rate is increasing at an alarming rate. In the infertility marriage, the male factor is more responsible for sterility. To improve male semen quality traditional plant remedy were tried for 3 treatment duration of each 40 days. Aqueous extracts of two medicinal plants *Withaniasomnifera* and *Emilasanchifolia* were given to chronic cases of infertile males with oligospermia. The results obtained for the plant extract treated and untreated groups showed a remarkable difference in the semen parameters .In the plant drug treated males, the total sperm count, motility, pH, and non –deformed sperms are above the optimum levels prescribed for normal fertility .The present study clearly indicates that the mixture of plant extracts exerted a good improvement in semen characteristics.

Keywords: *Withaniasomnifera ; Emilasanchifolia*; infertility;semen quality;oligospermia.

The mushroom ganoderma lucidum inspired silver nanoparticles and its antibacterial activity against catheter associated urinary tract pathogen *Escherichia Coli*

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Catheter associated urinary tract infections (CAUTI) are one of the most common nosocomial infections which are acquired by the usage of medical devices called catheter in long-term hospitalized patients. The prevalence of CAUTI seems to be caused by combination of internal micro flora and externally introduced device. With proximity of urethra to the anus, Escherichia coli are the largest contributor or initiator of CAUTI. Most of the *E.coli* isolates are resistant to many drugs. Therefore, as an alternative silver nanoparticle causing Ganoderma lucidum extract was tested against CAUTI causing *E. coli* isolates. *G. lucidum* the richest source of natural antibiotics was used to take extract with ethanol using soxhlet apparatus. Antibacterial susceptibility of the optimized silver nanoparticle was estimated by agar well diffusion method . The results indicated that the synthesized silver nanoparticles using *G. lucidum* extract are very against CAUTI causing *E.coli.*

Keywords : Catheter, CAUTI, silver nanoparticles, antibacterial efficacy.

Molecular characterization and virulence determination of *Salmonella Species* isolated from clinical samples

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Molecular characterization refers to determining the species of the organism by the presence of specific genes which cause virulence in the host body. The present research work was carried out for the identification of Salmonella Serovars and to characterize them at the genetic level. Polymerase chain reaction (PCR) was one experiment used to identify the virulent genes (invA, tyv, *via*B, fliC, stn, fliA) responsible for the onset of Typhoid fever. Other techniques such as the SDS – PAGE, RAPD were used for profiling proteins and determining the genetic diversity among species respectively. The 16 blood samples collected were screened for Salmonella and were identified that three Serovars of *Salmonella* namely *Salmonella enterica* Serovar *Typhi*, *Salmonella enterica* Serovar *ParatyphiA and Salmonella enterica* Serovar *Typhimurium* using PCR based on the presence of *via*B (439 bp), fliC (750 bp), fliC – d (329 bp) in each sample respectively. Further, a monoplex PCR for stn gene confirmed that the organism was *ParatyhiA*A which did not have stn. A protein of the outer membrane encoded by the fliA gene is the FHA protein (29kDa) which was detected using SDS – PAGE. An in-depth analysis of the genetic diversity among the three Salmonella species was studied using RAPD technique. The antibiotic susceptibility testing was also done to determine its sensitivity and it was seen that Ciprofloxacin was the most sensitive antibiotic in our study.

Keywords: Molecular characterization, *Salmonella Serovars*, Typhoid, PCR

Identification of nanoparticles in bagasse mixed soybean pod residue vermicompost by SEM

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Nanotechnology is the study of manipulating matter on an atomic and molecular scale. It is the man-made nano-sized particles used for industrial medical and agricultural purposes. Vermicomposting is a potential technique for sustainable agriculture and for recycling of organic waste by the joint action of earthworms and microorganisms. The end product of vermicomposting is vermicompost that contains plant nutrients. Sugarcane industries produce large amount of waste in the form of bagasse and pressmud. Many researchers carried out the study on antimicrobial activity, nanopesticides etc. A very few work has been carried out in nano-fertilizer, the present result will act as a base line information for future study to throw much light on this aspect for finding the nanofertilizer. The nanoparticles present in vermicompost are identified using Scanning Electron Microscope (SEM- EDAX). In the present study cowdung vermicompost (T0) and bagasse is supplemented with agro industrial residue of soybean (cowdung + bagasse+ soybean vermicompost (T1) were compared and high nutrients were recorded in T 1. In the present study the micrograph of the SEM depicts that the nanoparticles identified in the final day Cowdung bagasse soybean pod vermicompost (T6) were Ca, K, C, O, Fe, Al, and Si. The Vermicompost can be used as an effective fertilizer.

Keywords: Nanotechnology, vermicomposting, nanofertilizer

Co-culture of the green microalgae and yeast-like fungi: an efficient system for the production of microbial fuel cells

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With the growing needs for alternative resources bioenergy has always been in the spotlight. Many microorganisms have been used for the production of bioenergy. Most of the green algae and fungi belonging to the phylum ascomycetes forms lichens through symbiotic relationships. Algae and fungi live together in a symbiotic relationship as lichens. The substrates provided for the growth of the community is broken down by the fungus. The necessary energy and nutrients for the fungal partner is provided by the algal partner and hence entering into symbiotic relationship which leads to the formation of lichens. The green Microalgae (Chlorella vulgaris) forms lichens with most of the fungi. So it is chosen to be co-cultured with the yeast-Like fungi (*Galactomyces candidium*). The yeast also acts as a bioflocculant limiting the difficulties in the harvesting of the microalgae. The two species is co-cultured. This is used as a source of bioenergy. The axenic culture comparatively gives lower yield than a co-culture. This leads to production of more biomass. Two chamber microbial fuel cell is used to measure the efficiency of bioenergy produced by the co-culture.

Keywords: lichens, symbiosis, microalgae, yeast-like fungi, co-culture, two chamber microbial fuel cell, Chlorella vulgaris, Galactomyces candidium.

Concept of nanobiomedicine dates back to fifth centau ry agasthiars panchakavya nigandu

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Nanobiomedicine is an emerging area of science but its origin dates back to fifth centaury as per ancient Tamil literature, contributed by Saint Agasthiar in his work “Panchakavya Nigandu” . Tamil literary work of fifth centaury explains the concept of Nanobiomedicine and its application in human health. In the Agasthias Panchakavya Nigandu, verse 724-755 the process of removing toxic molecules in mercury so as to convert it into a healthy medicine in the form of paste – paspham was well explained. The process of converting toxic mercury into herbo-mineral nano medicine was well known to the ancient Tamil tribes . Like mercury the process of preparing nano-sized herbo-minerals from silver, iron, zinc and other metals are explained in verse 755-756. These medicines were reported to cure many chronic ailments including leprosy and cancer. Today with all advancements in science the nanoparticles of metals are prepared but the ancient tamils lived some 1500 years ago practiced the art of preparing nano medicine and got success in treatment. So the ancient Tamil literary contributions are note noteworthy for their scientific treasure. Hence there is an urgent need for biotechnological intervention in ancient method of healthcare reported in Tamil literary work.

Keywords: Herbo-minerals, Silver, nanoparticles

Agasthiars panchakavya nigandu of 500 ad – a treasure house of recent biotechnological facts

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About 1500 year ago, the Tamil lexicon written by the Saint Agasthiar "Panchakavya Nigandu" speaks much about the recent scientific advancement in biotechnology. In this book of 1500 years old origin several information available on the dogma of modern biotechnological inventions and applications. Even before 1500 years Saint Agasthiar in his "Nigandu" has explained well about the nature and morphology of the embryo after zygote formation. Also how the genes of parents decides the fetal health was well explained in Nigandu. The growth of the baby in each month was well elaborated even before the advent of scanning devices. Even in 5 th centaury the nature of sperm and ova and the process of fertilization is well explained in Nigandu, Without a microscope the ancient Tamil traditional healers were able to explain the embryology of fertilization and the embryogenesis. In this *Agasthiars Nigandu*, plenty of information are available regarding Immunology, Stem Cell Treatment, Andrology, Food Technology and Biotechnology. The placenta of women was reported to be taken out ,dried and powdered and this powder was kept in capsules in ancient homes and tied in the hind arms of people. During illness this powder was reported to be mixed with milk and gave it as remedy. Using this placental derived powder curing measures were given for respiratory illness, leprosy and brain disorder (Verse 93). The scientific information explained in the ancient Tamil literature is well proved to-day through the advanced scientific study.

Keywords: Panchakavya Nigandu, *Agasthiars Nigandu*, Stem Cell Treatment

Biosynthesis of silver nanoparticles using velvet mite extracts and their biomedical applications

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The study deals with the preparation of eco-friendly silver nanoparticles using red velvetmites extract. Prepared Ag-NPs are brown in colour. Size, shape and surface morphology of mites extract mediated eco-friendly Ag-NPs were characterized. The silver nanoparticles are 38 nm and spherical in shape confirmed by UV/Vis spec, XRD, SEM, and TEM. The prepared nanoparticles are enhanced inhibitory activity against *Staphylococcus aureus.*

Keywords: Ag-NPs; red velvet mite; antimicrobial; paralysis.

In-vitro study and phytochemical analysis of vinca rosea leaves and root extracts

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The principle of this research work was to carry out the phytochemical analysis and invitro study of Vinca rosea L. (root and leaves) extracts. Phytochemicals were extracted from various parts of the plant using various solvent ethanol (ETOH), dimethyl sulfoxide (DMSO), ethyl acetate (ETAC). These phytochemicals included saponins, flavonoids, alkaloids, tannins, terpenoids, aromatic acids, phenolic compounds, xanthoproteins, triterpenoids, amino acids, bilopatinins, sugars, carbohydrates. Moreover, the antibacterial activity of the methanolic extract was determined using a variety of bacteria. Agar well diffusion method was used for antimicrobial activity, and the inhibition zone was analyzed. Evaluation of preliminary phytochemical screening of extracts shown the presence of carbohydrates, reducing sugars, proteins, amino acids, steroids, flavonoids, terpenoids, saponins, alkaloids, tannins, and philobutanins. root extracts indicated effective anti-bacterial activity against all bacteria tested when compared to leaf extracts. Ethanol extract of the root extract observed highest antibacterial activity against Staphylococcus aureus (15 mm), followed by Escherichia coli (13mm), Micrococcus luteus (11mm), Pseudomonas aeruginosa (9mm) and Salmonella abony (8mm) when compared to leaf extracts. The evaluation of Preliminary phytochemical screening of extracts indicated the presence of carbohydrates, reducing sugars, proteins, amino acids, steroids flavonoids, terpenoids, saponins, alkaloids, tannins, and phlobatannins. The plant has significant antibacterial activities. The powerful antibacterial activity of V. rosea indicate alkaloids, flavonoids and phenolic compounds.

Key words: phytochemicals, antibacterial, alkaloids, Vinca rosea L.

Phytochemical analysis and antibacterial activity of tuber and leaves extracts of *Gloriosa Superba*

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The purpose of this research work was to carry out the phytochemical analysis and invitro study of *Gloriosa superba L.* (Leaves) extracts. Priliminary phytochemicals were extracted from various parts of the plant using various solvent ethanol (ETOH), ethyl acetate (ETAC), dimethyl sulfoxide (DMSO). These phytochemicals included flavonoids, saponins, alkaloids, tannins, terpenoids, phenolic compounds, aromatic acids, xanthoproteins, triterpenoids, bilopatinins, amino acids, sugars, carbohydrates. Besides the antibacterial activity of the methanolic extract was determined using a variety of bacteria. Agar well diffusion method was used for antimicrobial activity, and the inhibition zone was analyzed. Evaluation of preliminary phytochemical screening of extracts shown the presence of carbohydrates, reducing sugars, proteins, amino acids, steroids, flavonoids, terpenoids, saponins, alkaloids, tannins, and philobutanins. Tuber extracts indicated effective anti-bacterial activity against all bacteria tested when compared to leaf extracts. Ethanol extract of the tuber observed highest antibacterial activity against *Staphylococcus aureus* (17 mm), followed by *Escherichia coli (*15mm), *Micrococcus luteus* (14mm*), Pseudomonas aeruginosa* (12mm) and *Salmonella abony* (10mm) when compared to leaf extracts. The evaluation of Preliminary phytochemical screening of extracts indicated the presence of carbohydrates, reducing sugars, proteins, amino acids, steroids flavonoids, terpenoids, saponins, alkaloids, tannins, and phlobatannins. The plant has significant antibacterial activities. The powerful antibacterial activity of G. superba indicate alkaloids phenolic compounds and flavonoids,.

Key words: phytochemicals, antibacterial, alkaloids, *G.superba L.*

Green synthesis and characterization of E*uphorbia heterophylla* (Leaf Extract)

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Euphorbia heterophylla is used as anti-gonorrhea and in the treatment of common ailment in traditional medicine. *E.heterophylla*leaves for the phytochemical components and silver-nanopartical synthesis and antimicrobial activities. Anti-Microbial analysis was carried out using agar well diffusion assay against eight pathogenic strains of gram positive, gram negative bacteria (*Neisseria gonorrhoea, Salmonella typhi, Pseudomonas aureginosa, Proteus vulgaris, Staphylococcus aureus, Escherichia coli, Strephtococuus pneumonia and Bacillus subtillia*) and four different fungi species (*Aspergillusniger, Aspergillus tamari, Candida albicans and Fusariumoxysporium*). phytochemical studies revealed the presence of tannins,anthraquninones, alkaloids,flavonoids and phenol in methonal and ethanol extract. The plants extract demonstrated antimicrobial activity against both the test bacteria and fungi in chloroform, acetone and methanol with highest activity followed by the acetone extract. The plant has been presented has been further isolation, identification and purification of these phytoconstituents.

Keywords: *Euphorbia heterophylla,* Antimicrobial activity, Phytochemical analysis, Silvernanopartical.

Green synthesis of silver nanoparticle using *Euphoria Hirta.L* it's potent of antibacterial activity

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Development of biologically inspired experimental processes for the synthesis of nanoparticles is evolving into an important branch of nanotechnology. Metallic nanoparticles are traditionally synthesized by wet chemical synthesis techniques where the chemicals used are quite often toxic and flammable. The present study deals with cost effective and environment friendly given synthesis through the leaf extract of *Euphorbia hirta L*, as reducing as well as capping agent. Nanoparticles were characterized using UV-VIS absorption spectroscopy and FTIR. Green synthesized silver nanoparticles showed the antibacterial against the *B.cereus* , *S.aureus* *E.coli, K.spneumoniae* and *P.aeruginosa*.And more effective against *B.cereus* , *S.aureus*.Thus this method can be used for rapid and ecofriendly biosynthesis of stable silver nanoparticles possessing antimicrobial activity suggesting their possible application in medical industry and food industry.

Keywords: Silver, *Euphorbia hirta*, Nanoparticles, Anti-bacterial.

Evaluation of phytotherapeutic potential of *Solanum xanthocarpum* extracts against *Curvularia lunata* phytopathogen

Hemamalini S, Subashini S and Praveena A

Department of Biotechnology, Prathyusha Engineering College

In the present investigation, the leaf spot disease of *Aloe vera* caused by a fungi *Curvularia lunata* is treated by using the aqueous and ethanol extracts of fruit, leaf and root samples of *Solanum xanthocarpum*. The fruit, leaf and root samples of *Solanum xanthocarpum*were collected from T.Kiliyur village, Ramanathapuram district, Tamil Nadu, India. The collected samples were shade dried for about 10-15 days and the aqueous and ethanol extract of the samples were prepared by means of soxhlet extraction method. The qualitative phytochemical studies were performed in order to determine the bioactive compounds present in the aqueous and ethanol extracts of *Solanum xanthocarpum*. Through the phytochemical analysis it was found that, the alkaloid contents which has the ability to act against microorganisms were present at high levels in the leaf ethanolic extract of *Solanum xanthocarpum*. The phytopathogen *Curvularia lunata*was isolated from the diseased *Aloe vera* plant infected with leaf spot disease. The morphology and the characteristics of the organisms were identified by comparing with the Indian Type Culture Collection (IARI). The antifungal activity of *Solanum xanthocarpum*extracts were performed against the selected phytopathogen. Among all the extracts, the leaf ethanolic extract of *Solanum xanthocarpum*shows better result against the phytopathogen*Curvularia lunata*.

Keywords: Leaf spot disease, *Curvularia lunata* ,*Aloe vera*,*Solanum xanthocarpum*, phytopathogen .

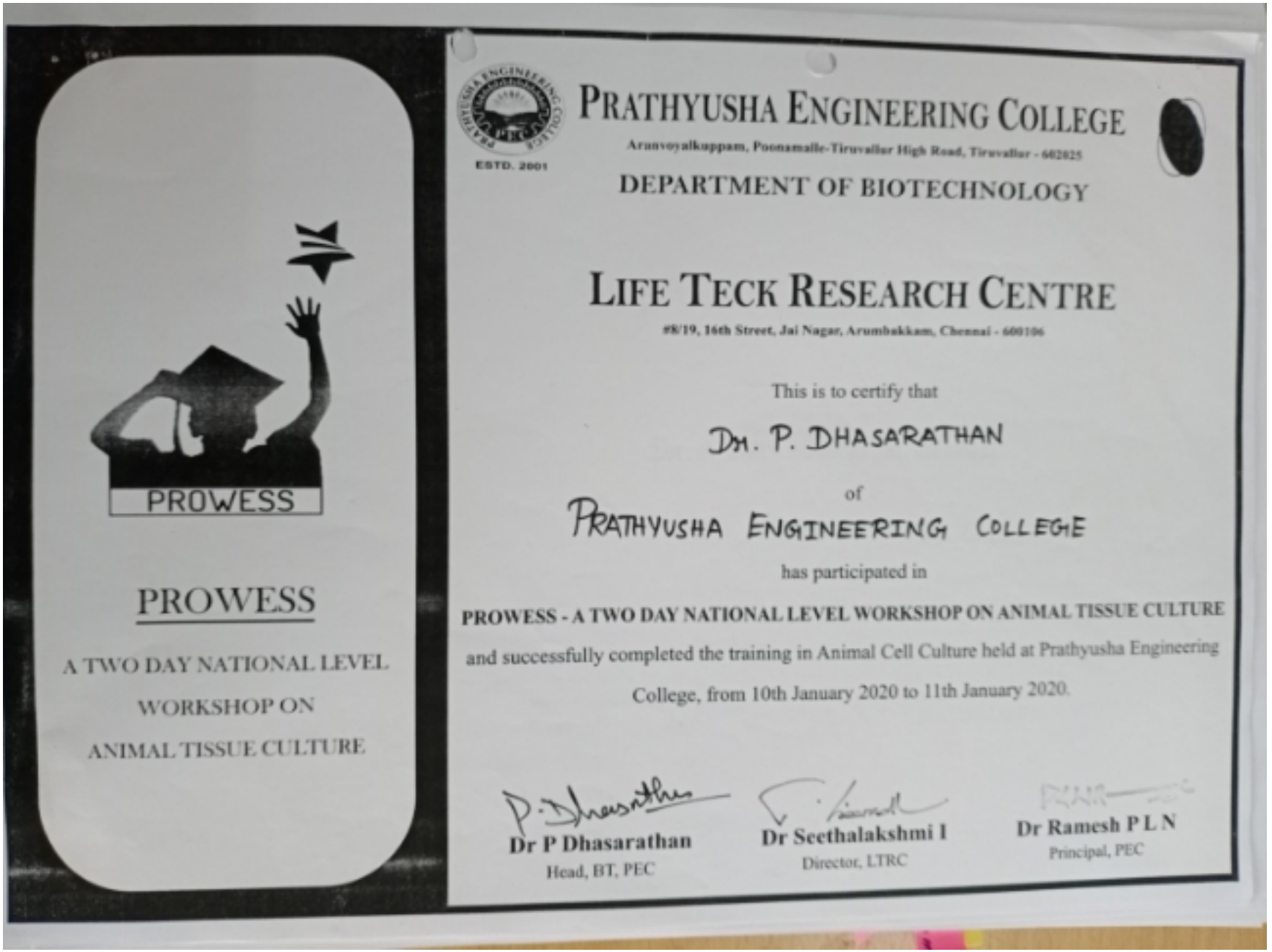
Complete Mitochondrial Genome Sequencing of *Oxycarenus laetus* (Hemiptera: Lygaeidae)

C. Shruthi Sureshan, Ruchi Tanavade, &S. K. M. Habeeb*

Entomoinformatics Lab, Department of Genetic Engineering, School of Bioengineering, Faculty Engineering and Technology, SRM Institute of Science and Technology, Kattankulathur Campus, Chennai – Tamilnadu – 603203
***Corresponding author**-habeebm@srmist.edu.in&habeeb_skm@yahoo.co.in

Whole mitochondrial genome of *Oxycarenus laetus* was isolated and sequenced, hence making it the first determined and fully annotated sequence from genus Oxycarenus from family Lygaeoidea. The length of the genome is 15672 base pairs. It is a AT rich mitogenome with content of 74.3% and contained 13 protein coding genes, 23 tRNAs and two ribosomal RNA genes and a control region. The gene order is identical with that of the ancestral insect except and position change inthe tRNA-H gene, which is now closer to the nad4 gene instead of nad5 gene. All PCGs started with canonical ATN codons, except cox1 which started with TTG as start codon. All tRNAs could fold into typical cloverleaf secondary structures, with the exception of *trnS1* (*AGN*), in which the dihydrouridine (DHU) arm was reduced to a simple loop. The control region included two poly-C motifs at the start and at the middle, a subregion of higher A+T region but no tandem repeats. Microsatellites were found near trnI gene region. The mitogenome of *O.laetus* could be helpfulin exploring the diversity and evolution of mitogenomes in Lygaeoidea.

Keywords: *Oxycarenus laetus*, Lygaeidae, Mitochondrial genome, Next Generation Sequencing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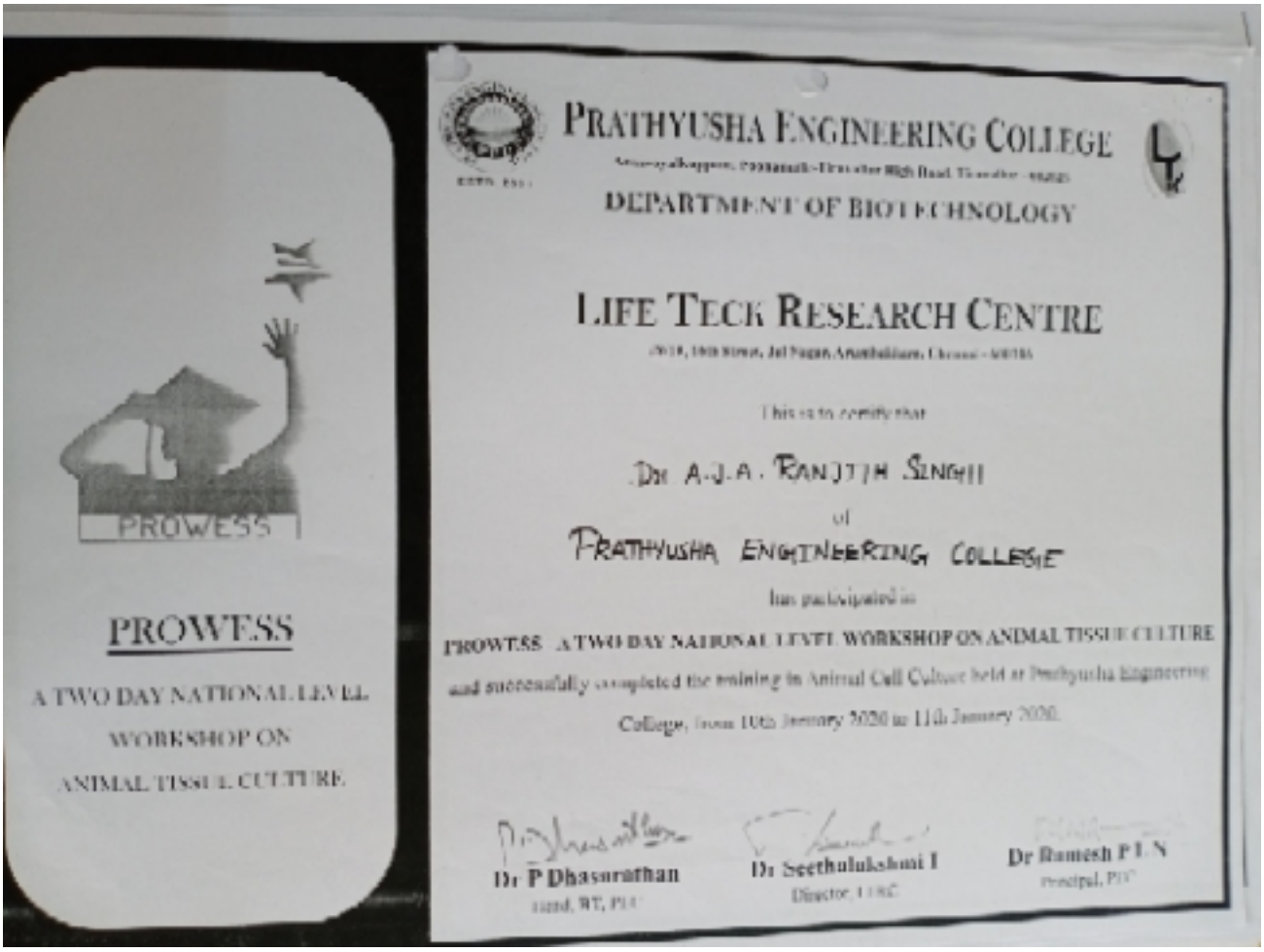
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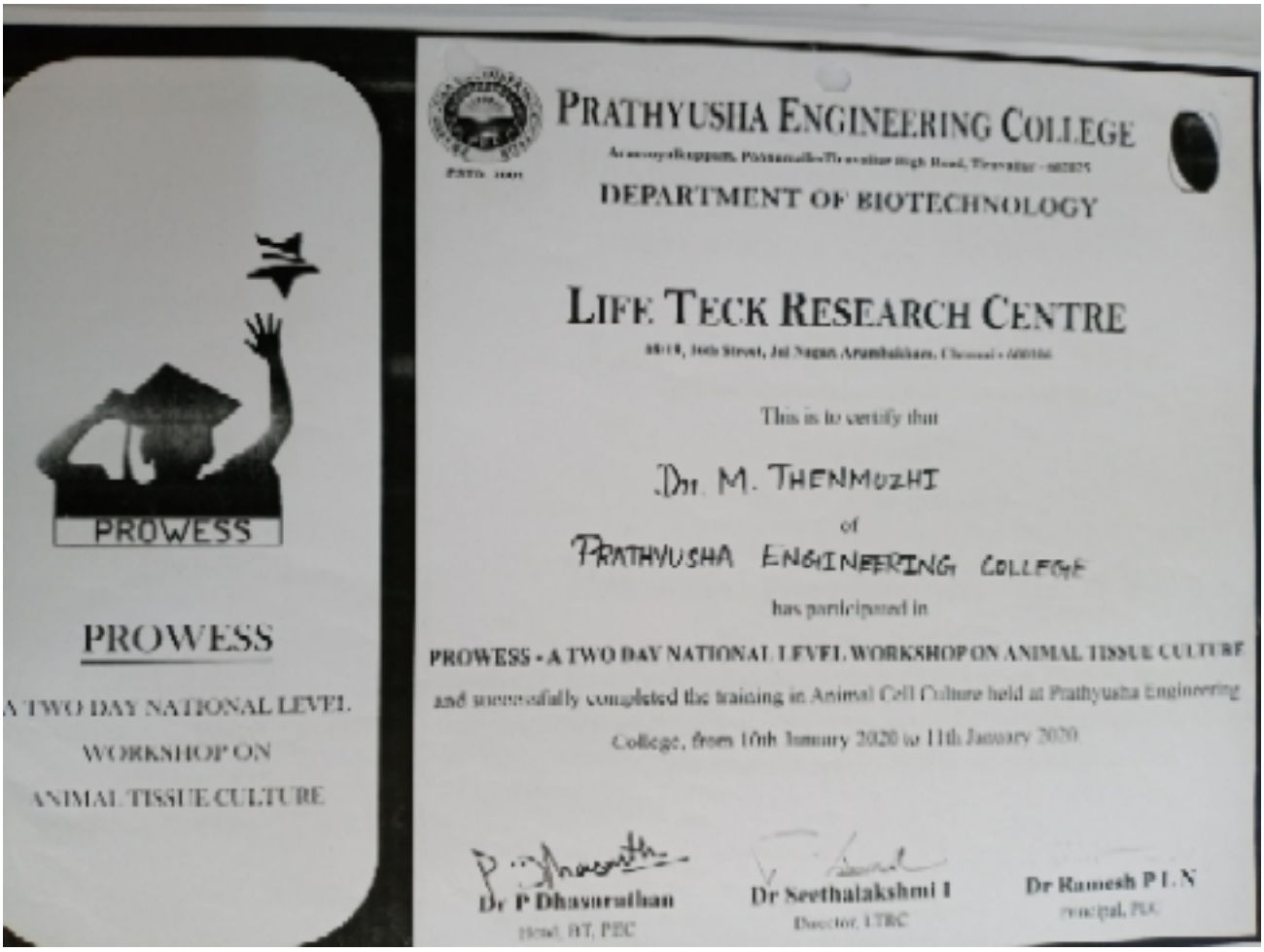
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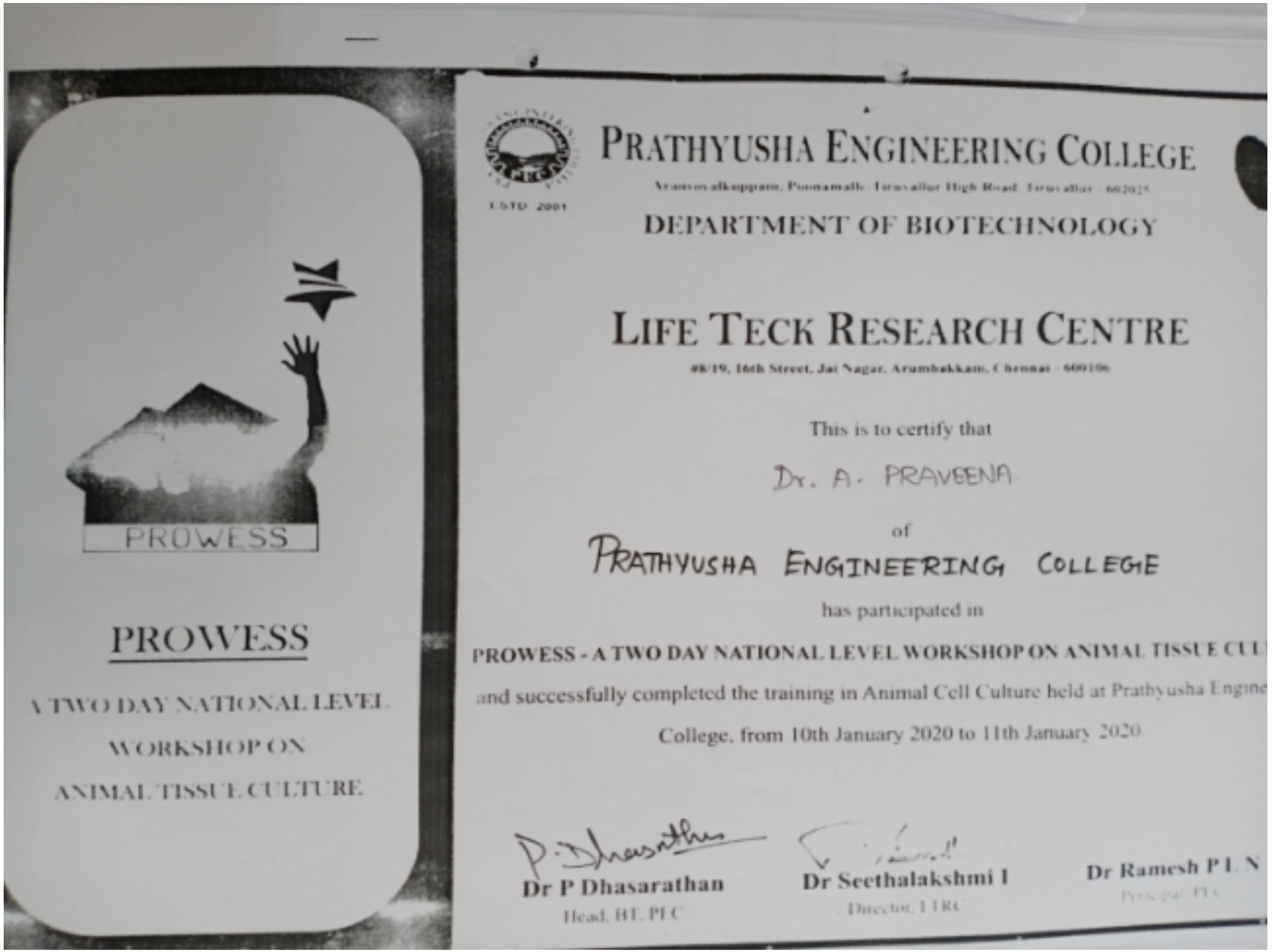

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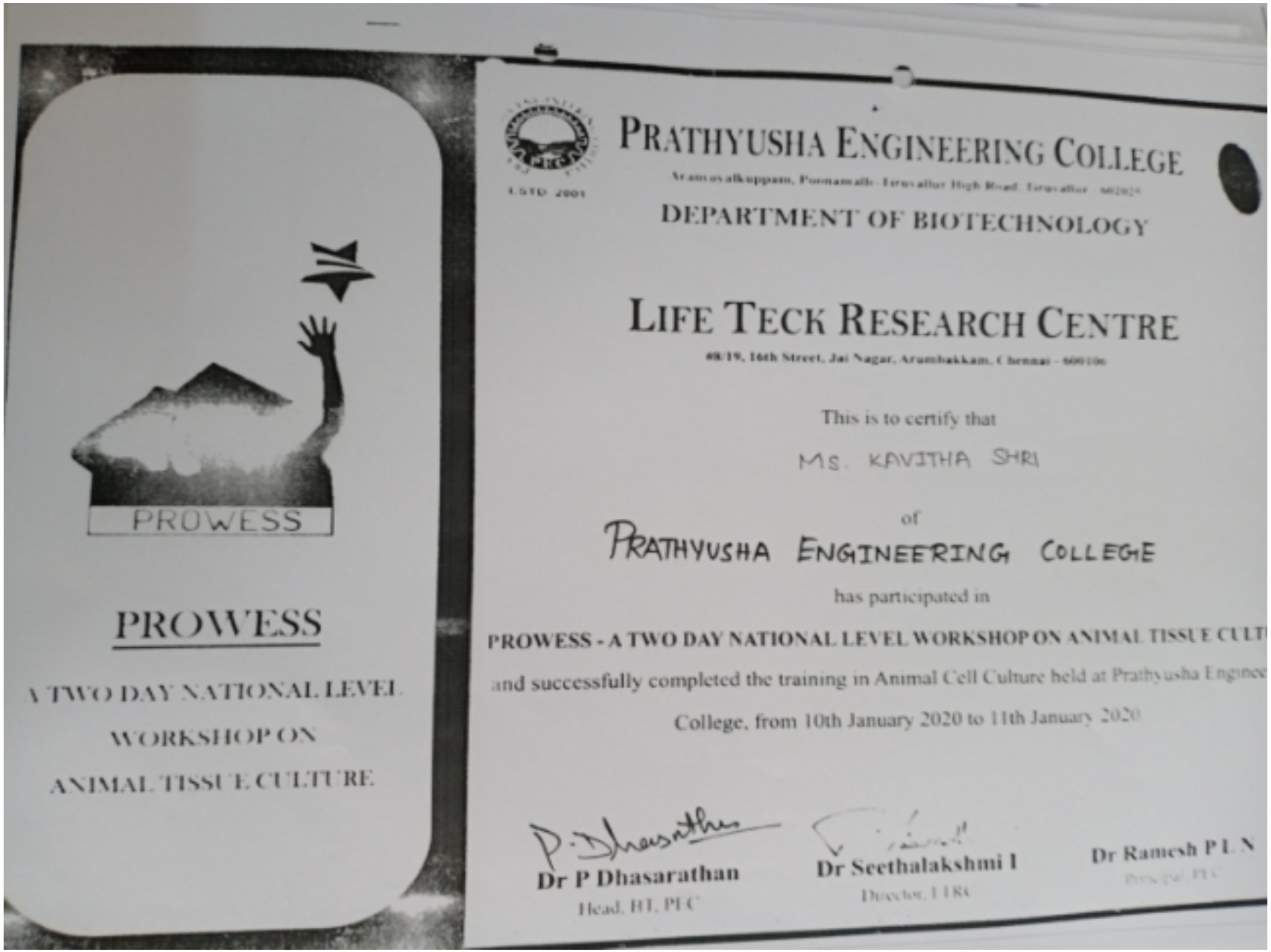
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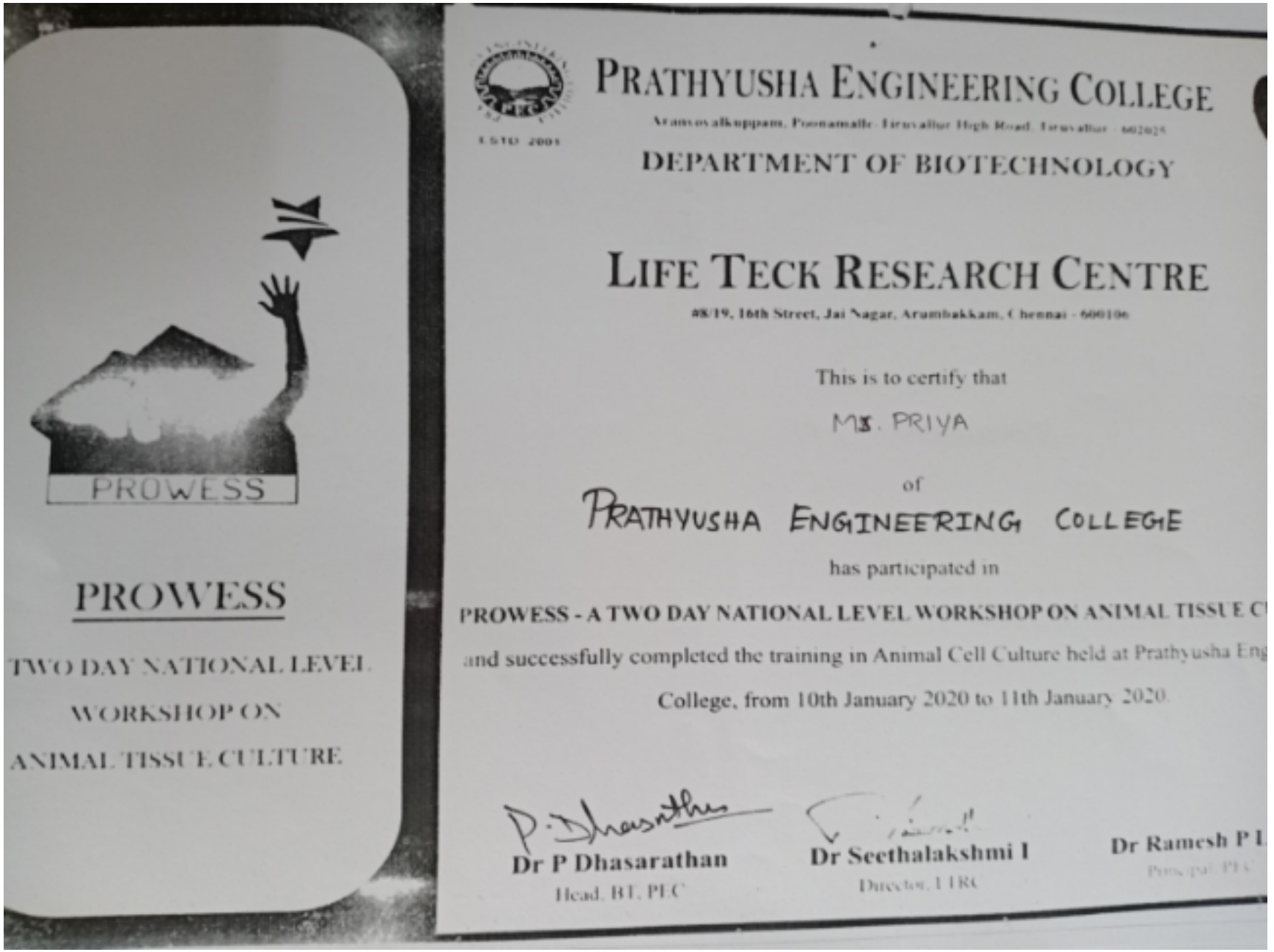
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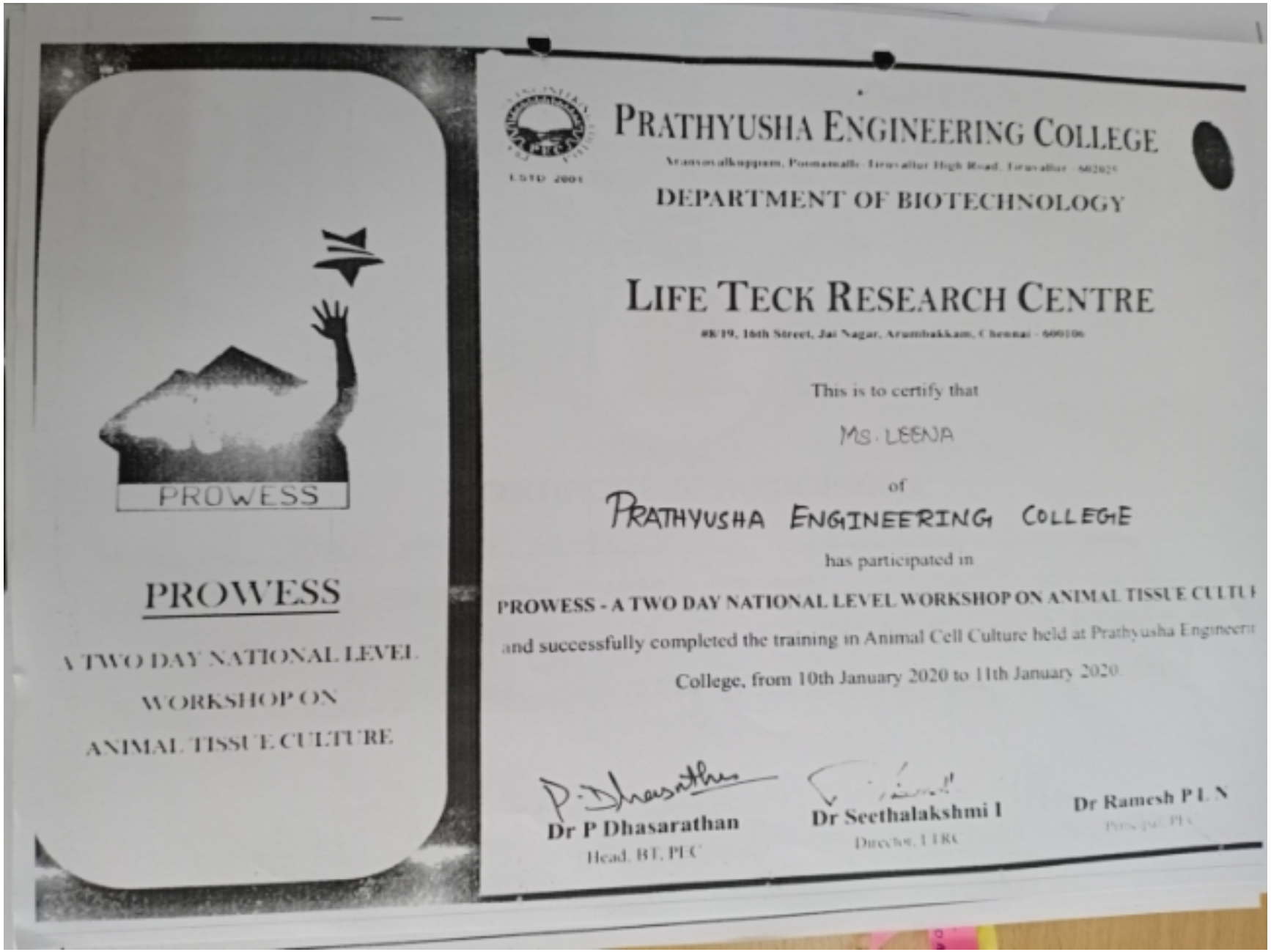
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Institution :

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Phone no :

Whatsapp / facebook :

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1

Registration fees(Accommodation NOT included) (includes three meals/ day, tea breaks, abstract book and conference kit)

Indian delegates: :

Student delegate: :

SAAC: :

ASIAN: :

Rest of the World :

Submitting an Abstract	YES	NO	POSTER	ORAL

Note : 1. Oral presentations are selected based on merit of submission).

2 Submission of abstract is not a pre-requisite for conference participation. :

3 Taking part in the young scientist (< 40 years of age) Award competition :	YES	NO

4 Dietary preferences:	Veg	Non-Veg

5 Accomodation	Onsite	Off-site

Note : Onsite tariff : Dormitory- INR 100/ day, Sharing – INR 200/day

This will be confirmed on payment and availability.

6 Airport Pick-up:	Required	Not required

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EARLY BIRD REGISTRATION FEES:

Indian Delegates	:	INR 1000
PEC Delegates	:	INR 500
Students Delegates	:	INR 500
SAAC Delegates	:	USD 150
Asian Delegates	:	USD 200
Rest of the World	:	USD 300

Late registration (Upto 25th Feb): 25% extra from the amount given above.

IMPORTANT DEADLINES:

Early Bird Registration: 25th Feb 2020
Abstract Submission
(Oral and Poster) : 25th Feb 2020
Full paper Submission
(Oral and Poster) : 28th Feb 2020

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AICTE Sponsored

International conference on Novel approach of Biotechnology and Bioengineering in health care system

Organized by

ESTD. 2001

Department of Biotechnology Prathyusha Engineering College

6th – 7th March 2020

About the College

Prathyusha Engineering College is established by Prathyusha educational trust promoted by Prathyusha group of companies, who are into shipping, logistics, warehousing, power, aqua and construction, fertilizers, mining and real estate. The college is situated at Aranvoyalkuppam along Poonamalle – Thiruvallur high road. PEC, a Telugu minority institution is affiliated to Anna University, Chennai and approved by AICTE. PEC is accreditated by NBA & NAAC "A" Grade and stepping into a glorious 19th year of meaningful educational service. PEC offers undergraduate programme in B.E., (ECE, EEE, CSE, Civil and Mech.,) and B. Tech (Biotech and IT) and 4 postgraduate programme (including CSE, Communication systems, Structural Engineering and Biotechnology). PEC aesthetically designed campus is spread over 60 acres and has about 2,50,000 sq.ft, build-up area. Excellent infrastructure facilities, well maintained eco-friendly campus, digital class rooms, state of art laboratories, modern library, separate hostel for boys and girls and students' centric academic ambience are just a few of the many sterling features of that go into making PEC a front runner in technical education.

About the Department

The department of Biotechnology was started in the academic year 2001-2002 and offers B. Tech (Biotechnology) programme. The department is accredited by NBA. The department has well-furnished state -of- art laboratories like Biochemistry lab, Genetic Engineering lab, Bioprocess lab and Chemical engineering lab. The department has 9 faculties of which 5 are Ph.Ds. and 1 is pursuing Ph.D. The department is a front runner in research and development activities and organizing seminars / conferences / symposia.

Objective:

The main objective of the conference is to bring people together from diverse disciplines to review progress and to exchange ideas in all aspects of biotechnology and bioengineering, with topics ranging from cancer genomics and immunology, medical biotechnology, pharmaceutical biotechnology, enzyme and protein engineering, bioinformatics and systems biology, biosensors and bioelectronics, nano-biotechnology to bioprocess engineering etc.

The conference is designed to cover all aspects of biotechnology so as to provide the Indian students to get an opportunity to learn many innovative thoughts from experts abroad. This will help all those who are interested in cutting edge research in biotechnology and bioengineering. This biotechnology meeting creates a platform for policymakers, scientists, representatives and decision makers in biotechnology to present their katest biotech research and learn about all the important developments in biotechnological research.

Day 1	
8.00 - 9.30 am	Registration
9.30 -10.45 am	Inaugural
11.00 -12.15 pm	Plenary Lecture 1:"Biotechnology and Regenerative medicine"
12.15 - 1.15 pm	Plenary Lecture 2: "Immuno biotechnology"
2.30 -5.00 pm	Paper Presentation And Poster Session - Parallel
Day 2	
9.30 -11.00 am	Plenary Lecture 3: "Bioengineering approach in Health care"
11.30 -1.00 pm	Plenary Lecture 4: "Trends in biotechnology for Health care"
2.00 - 3.00 pm	Valedictory

TOPICS OF THE CONFERENCE INCLUDE:

- ❖New approaches and concepts in biotechnology
- ❖Cancer Genomics and Immunotherapy
- ❖Medical Biotechnology
- ❖Pharmaceutical Biotechnology
- ❖Enzyme and Protein Engineering
- ❖Bioinformatics, Genomics and Systems Biology
- ❖Biosensors and Bioelectronics
- ❖Other relevant aspects

Who should attend:

We cordially invite Engineering, Biotech, Basic and clinical scientists, Physicians, Academicians, Public Health specialists, Pharmacists, Research Scholars, MD students from India and across the globe to present their work on "Regenerative Medicine, non – communicable and life style diseases".

Young scientist award:

Outstanding submission from young scientist, clinicians will be selected for oral presentation during the Young Scientist Award Session.

Scientific session for students:

Outstanding submission from the students will be selected for short oral presentation during special scientific session allocated for the students.

Onsite accommodation:

Single shared accommodation at PEC Hostel or at Chennai at reasonable tariff is available for conference delegates.

For information : Please contact bticnbb2020@gmail.com

MANUSCRIPT FORMAT:

Original and unpublished research papers only accepted for presentation.

Abstract: Not more than 150 words.

Font type :Times New Roman, Font size :12

Full paper: Not more than 5 pages.

Font type :Times New Roman, Heading size:14 and content font size :12

Template for full paper will be provided along the confirmation to the authors e-mail id.

INTERNATIONAL CONFERENCE ON NOVEL APPROACH OF BIOTECHNOLOGY AND BIOENGINEERING IN HEALTH CARE SYSTEM

(ICNBHS-2020)

Funded by

The All India Council for Technical Education

6th&7thMARCH 2020

ESTD. 2001

Organised by

DEPARTMENT OF BIOTECHNOLOGY

PRATHYUSHA

ENGINEERING COLLEGE

ICNABHS-2020

"I think the biggest innovation of 21st century will be at the intersection of biology and technology. A new era is beginning" - Steve jobs

BIOTECHNOLOGY A BOON IN HEALTHCARE REVOLUTION

Dear colleagues,

Greetings,

Prathyusha Engineering College, Chennai is one of the top ranking engineering colleges affiliated to Anna University. The department of biotechnology of this reputed institution has organized this International conference to provide a platform to discuss the biotechnological intervention in healthcare. Congratulations to the management and organizers.

Health is wealth. To provide a good health for all, biotechnology can be used as a valuable tool. It has revolutionized mankind since its existence. The contributions of biotechnology to develop effective diagnostics, prevention and treatment measures including production of novel drugs, recombinant vaccines, effective drug delivery system, new methods for therapeutics, nutritionally enriched genetically modified crops and efficient method of environmental care. It is no doubt that the intervention of biotechnology enhanced the quality of life, human health and expectancy of life. Molecular diagnostic tools including polymerase chain reaction (PCR), recombinant antigens and monoclonal antibodies are providing rapid and efficient diagnosis of health problems. Radio labelled biological therapeutics for imaging analysis, recombinant vaccines for viral and other problems including non- communicable diseases like cancer. Naked DNA vaccines, viral vector vaccines and plant derived vaccines are found to be more effective against a number of bacterial and viral disorders. Therapeutic proteins have a large influence on non-communicable disease responsible for over 60% of deaths in developing countries. Transgenic bacteria, yeast, plants and mammals have been used as a factory of recombinant therapeutic proteins like erythroprotein for anemia, Interferon alpha against leukemia. Viral infections and insulin against type 1_ diabetes mellitus, growth hormones, cytokine interventions, recombinant blood products, monoclonal antibodies, gene therapy products are few to mention about the role of biotechnology, in human healthcare. Molecular pharming agents, engineered tissue products, including xenografts, bone grafts, collagen and heart valves, stem cell therapy etc. have produced noticeable impact on human life improvement.

Recent advancements in biotechnological applications to reduce drug dosage and effective drug delivery system have saved several lives globally. Genetically modified crops to provide energy, nutrients, Vitamins, hormones, minerals and other human need based products like golden rice, nutrient enriched potato, maize, soya beans etc are doing tremendous service to protect the human and even to deliver from cognitive and hereditary problems. Utilizing microorganisms for human health are other novel areas. Biological products developed as biofuel, bioenzymes and other products for happy human living further adorns the importance of biotechnology in human health.

With all these concern, the Department of Biotechnology, Prathyusha Engineering College, Chennai has organized this International Conferences with the Financial Support of AICTE Govt of India. Many International participants from USA, UK, African continents, south East Asia, KSA, Malaysia and other places are contributing their finding in this conference. Experts with great global accreditation are sharing their knowledge in this conference.

Hope this conference will revolutionize the young minds to extend their research aptitude towards biotechnological intervention strategies in Human Health Care.

"The pace of progress in Biology creates a foundation that naturally gets picked up by the biotech and pharmaceutical industry to solve rich-world diseases. This is attractive science. It's science that people want to work on" – Bill Gates

Best wishes

Prof. A J A. Ranjith Singh

Department of Biotechnology

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Biotechnology is an emerging area in science and technology with great potential to change our lives. This is the field which utilizes organisms or biological systems to modify our environment and improve health care, food productivity, etc, the practice of biotechnological principles can be traced back to probably the beginning civilization. The use of microorganism in food industry has been known for centuries.

The modern updating in the recombinant technology has given birth to many useful products for human welfare. The various antibiotics, vaccines, hormones, human growth hormones, monoclonal antibodies, and engineered crops are few products of this dynamic field of science.

In the view of above said background, I am enraptured to know that the student fraternity and the faculty members of the Department of Biotechnology arranged the two days **AICTE sponsored International conference on "Novel approach of Biotechnology and Bioengineering in health care system**". I am extremely pleased to learn that this International level conference will bridge the minds of young technocrats and emerging scientists.

I convey my best wishes for the event to be a thunderous success.

Smt.P.Prathyusha
CEO
Prathyusha Engineering College.

I am overwhelmed that the Department of Biotechnology is organising an **AICTE sponsored International conference on "Novel approach of Biotechnology and Bioengineering in health care system**". This will be a wonderful opportunity for students to update themselves and to gain profound knowledge about clinical research and human health care.

Biotechnology is one such field with multiple disciplines of life sciences in it. It renders its outstretched arms in helping the society for improving their life style and life standards.

I believe that this conference will ignite many young research minds to explore, think and inspire them to create innovations to solve the existing and upraising health issues.

I hereby convey my heart-felt wishes to the Department of Biotechnology, for the program to be glorious and successful and wish them all goodness for their future endeavours.

Dr.P.L.N. Ramesh
Principal
Prathyusha Engineering College.

It gives me immense pleasure to know that the Department of Biotechnology, PEC is organizing the **International conference on "Novel approach of Biotechnology and Bioengineering in health care system**". I believe that this International level conference will serve as a stage to huddle the technical minds and quench the scientific needs of the society. In this era where technology is evolving, we need more of aspiring minds with great ideas to explore, invent and renovate the existing science so as to provide, innovative solutions which will serve the society. This conference will be one such platform where students from different disciplines of Life Science can join and share their revolutionary ideas and be inspired by hearing much such idea.

With great joy, and privilege, I congratulate the Department of Biotechnology for their indispensable contribution in organising this wonderful technical platform. I extend my support and wish them all success.

Dr. P. Dhasarathan
HOD, Dept. of Biotechnology
Prathyusha Engineering College.

Knowledge is the supreme goal, and sharing the knowledge with other to enlighten, educate and empower is our responsibility. I am glad that our, we are organising this **AICTE sponsored International conference on "Novel approach of Biotechnology and Bioengineering in health care system**". I extend my gratitude towards the management, our faculties, and the students for taking their sincere contribution in conducting this conference.

I believe that this conference will be an explosion of knowledge and sharing of novel ideas. As biotechnology is a felid which is evolving every day with new updates and innovations, we need to update ourselves to make better use of the existing science and technology. This conference will provide a platform for aspiring young researchers to interact with experienced scholars and to expand their knowledge. In this era where deadly diseases are increasing, we need the best use of the application of biotechnology to resolve, and fix the existing and upcoming problems.

I truly hope that the experienced and knowledge gained through this **International conference on "Novel approach of Biotechnology and Bioengineering in health care system**" will worth it all, and will inspire the recipient to innovate and revolutionize the society.

Inspirational talks from.....

Dr. K. Marimuthu
Professor, Dept of Biotechnology AIMST university, Malaysia.

Dr.A.K. Munirajan
Professor and Head Dept. of Genetics, Dr. ALM PG-IBMS University of Madras, Chennai.

Dr. S. Suresh Kumar
Professor, Dept. of Medical Microbiology & Parasitology, University Putra Malaysia, Malaysia

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Professor & Head, Dept of Bioinformatics, AUKCB, MIT Campus Chennai.

Dr.Ramasamy Muthu
Senior Consultant, Transplantation Immunology & Molecular Diagnostics, Global Health city, Chennai

Dr.Arunachalam Ramaiah
Dept. Of ecology and evoluationary biology University of California, Irvine.

Dr.R.R.Mosae Selvakumar
Assoc. Prof.
Asian University for women Chittagang Bangladesh.

Dr. R. Brawin Kumar
Researcher
Chinese Academy of Science Beijing, China.

Dr. Sailaja Elchuri
Associate Professor Department of Nanobiotechnology, SankaraNethralaya, Chennai.

Dr. Usha Raja Nanthini
Professor,
Dept. of Biotechnology, MotherTeresa university, Kodaikanal.

Dr. M. Deepanraj
AI- Robotics, Corporate Trainer. Visteon Technical Services Centre, Chennai.

Dr. A. J. A Ranjit Singh
Chancellor (Ceremonial)
Mosa University Zambia.

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Special Issue

PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON NOVEL APPROACH OF BIOTECHNOLOGY AND BIOENGINEERING IN HEALTH CARE SYSTEM

(ICNBHS-2020)

6th & 7th March 2020

Organized by

Department of Biotechnology

PRATHYUSHA ENGINEERING COLLEGE

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AICTE – New Delhi

Rising Research Journal Publication, INDIA

Report on 2-day workshop

“APPLICATION OF STATISTICS USING EXCEL AND SPSS IN RESEARCH”

Organized by BIOINFO TECHNICAL CLUB department of biotechnology Prathyusha Engineering College & associated with AIMST university, Malaysia

Date : 4-5th March 2020

Contents

Introduction

"*Without big data analytics, companies are blind and deaf wandering out on to the web like deer on a free runway*"

-Geoffrey Moore

SPSS is a widely used statistical program used for data analysis in social sciences, biological and health sciences. SPSS is a powerful suite of data analytics, reporting, and modeling software. In addition to that, this workshop aimed in enlightening the participants over application of the basic concepts of excel and SPSS. Such in-depth information on a beautiful topic as this was possibly conveyed clearly in the brief time by Prof. Dr. K. Marimuthu has obtained his Ph.D. in (Zoology/ Environmental Biotechnology interdisciplinary) from Manonmaniam Sundaranar University, Tamilnadu, India. He is currently a Professor at the Department of Biotechnology AIMST University, Malaysia for the last 10 years. He teaches Aquaculture, Biostatistics, Research Methodology, Biology of Invertebrates and Vertebrates courses for BSc (Hons) Biotechnology.

Basic concepts in excel

Among the computer programs which exist, Microsoft Excel is one of the most important because of the key role it plays in many sectors. It is the most used spreadsheet program in many business activities, classwork and even personal data organization. Excel was first released in the year 1985. Since then, it has played a vital role in performing formula based arithmetic and calculations, and other activities that may require mathematical calculations. Many businesses, personal institutional enterprises and students like myself learnt to embraced the use of Excel from this workshop because of its utility and the ability to serve as a visual basic for different applications including:

- biological sciences
- health sciences
- medical sciences
- And sociological sciences research.

Introduction and application of SPSS in research

SPSS is revolutionary software mainly used by research scientists which help them process critical data in simple steps. Working on data is a complex and time consuming process, but in this workshop we learnt how this software can easily handle and operate information with the help of some techniques. These techniques are used to analyze, transform, and produce a characteristic pattern between different data variables. In addition to it, the output can be obtained through graphical representation so that a user can easily understand the result. They included

- Parametric methods: t-tests, One sample t-test, Two-sample Independent t-test, Paired t-test, Analysis of Variance
- Two Way Analysis of Variance, Three-Way ANOVA, Repeated Measures of ANOVA, ANCOVA, MANOVA
- Correlation Analysis (Pearson, Spearman, Partial correlation, Kendall's tau b Correlation, Linear regression, Probit Analysis, Reliability Analysis (Cronbach's Alpha α)
- Nonparametric methods: Mann-Whitney U , Wilcoxon Signed Rank, Kruskal-Wallis, Median, Friedman Analysis, Cochran's Q Test
- Multiple Regression, Cluster, Factor Analysis

Conclusion

The workshop was a food for the brains of the enthusiastic minds. Such brain food if not from the words of experienced, successful, and authorized personalities such as Prof. Dr. K. Marimuthu, would be a needle in a haystack task .

In a nutshell, through the guest lecture a spark was being set and it is just a matter of time for this spark to blaze as a forest fire.

Acknowledgement

I thank the management for supporting the workshop by such an esteemed guest for our department . I thank our head of the department Dr. P Dhasarathan for being the spine of this event . I also render my special thanks to our professor Dr Ranjith Singh to have given us this opportunity to learn things beyond our syllabus. I would like to cherish my gratitude for the souls who were responsible for organizing such an event .

FDP 2019-2020

S. No.	Name of the Faculty	Participation
1	Dr. P. Dhasarathan	Ø FDP on Molecular Docking techniques on 10.06.2019 – 16.06.2019 at PEC
		Ø FDP on Recent advances in Pollution control and Mitigation on 17.06.2019 – 21.06.2019 at Vel Tech.
		Ø FDP – NPTEL course on Tissue engineering (8 weeks)
2	Prof. Ranjithsingh AJA	Ø FDP on Molecular Docking techniques on 10.06.2019 – 16.06.2019 at PEC
		Ø FDP on Recent advances in Pollution control and Mitigation on 17.06.2019 – 21.06.2019 at Vel Tech.
		Ø FDP – NPTEL course on Tissue engineering (8 weeks)
3	Mr. Cholapandian K	Ø FDP on Molecular Docking techniques on 10.06.2019 – 16.06.2019 at PEC
		Ø FDP on Recent advances in Pollution control and Mitigation on 17.06.2019 – 21.06.2019 at Vel Tech.
		Ø FDP – NPTEL course on Technologies for clean and Renewable energy production (8 weeks)
4	Dr. Praveena A	Ø FDP on Molecular Docking techniques on 10.06.2019 – 16.06.2019 at PEC
		Ø FDP on Recent advances in Pollution control and Mitigation on 17.06.2019 – 21.06.2019 at Vel Tech.
5	Dr. Thenmozhi M	Ø FDP on Molecular Docking techniques on 10.06.2019 – 16.06.2019 at PEC
		Ø FDP – NPTEL course on Nanotechnology in agricultural engineering (8 weeks)
		Ø FDP on Recent advances in Pollution control and Mitigation on 17.06.2019 – 21.06.2019 at Vel Tech.
6	Ms. Joyce Helen Sathya	Ø FDP on Molecular Docking techniques on 10.06.2019 – 16.06.2019 at PEC
		Ø FDP on Recent advances in Pollution control and Mitigation on 17.06.2019 – 21.06.2019 at Vel Tech.
		Ø FDP – NPTEL course on organic farming for sustainable agricultural production (8 weeks)
7	Dr. Mariselvam	Ø FDP on Molecular Docking techniques on 10.06.2019 – 16.06.2019 at PEC
8	Ms. Kavitha Shri	Ø FDP on Molecular Docking techniques on 10.06.2019 – 16.06.2019 at PEC
9	Mrs. Priya	Ø FDP on Molecular Docking techniques on 10.06.2019 – 16.06.2019 at PEC

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P. Dhasarathan
Dr. P. DHASARATHAN
Head, Dept. of Biotechnology

Mr. S. SELVARAJ
MD, Medox Biotech India Pvt., Ltd.

Dr. P. L. N. RAMESH
Principal

Vel Tech High Tech

Dr.Rangarajan Dr.Sakunthala Engineering College

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Dr.D.Yuvaraj
Convenor

In Association with BRSI

Dr. E. Kamalanaban
Principal

Roll No: NPTEL19BT33531210451

To
DHASARATHAN P
60A, GOMATHI NAGAR EXTN
POLLIVAKKAM
THIRUVALLUR
TAMIL NADU
602002
PH. NO :9843192763

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
(An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.)

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

DHASARATHAN P

for successfully completing the course

Tissue Engineering

with a consolidated score of 56 %

Online Assignments	14.54/25	Proctored Exam	41.67/75

Total number of candidates certified in this course: 183

Devendra Jalihal

Prof. Devendra Jalihal
Centre for Continuing Education, IITM

Aug-Oct 2019
(8 week course)

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Indian Institute of Technology Madras

swayam

Roll No: NPTEL19BT33531210451 To validate and check scores: https://nptel.ac.in/no

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Dr. P. DHASARATHAN
Head, Dept. of Biotechnology

Mr. S. SELVARAJ
MD, Medox Biotech India Pvt., Ltd.

Dr. P. L. N. RAMESH
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Roll No: NPTEL19BT33S32250197

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RANJITSINGH AJA
ELSADHI, 2 ND STREET, GANDHI NAGAR,
TIRUNELVELI
GANDHI NAGAR
TIRUNELVELI
TAMIL NADU
627008
PH-NO-9443451076

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

RANJITSINGH AJA

for successfully completing the course

Tissue Engineering

with a consolidated score of 46 %

Online Assignments	15/25	Proctored Exam	31.06/75

Total number of candidates certified in this course: 183

Devendra Jalihal

Prof. Devendra Jalihal
Chairman
Centre for Continuing Education, IITM

Aug-Oct 2019
(8 week course)

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

Indian Institute of Technology Madras

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Roll No: NPTEL19BT33S32250197 To validate and check scores: https://nptel.ac.in/noc

Roll No:NPTEL19CH26S11180620

To K CHOLAPANDIAN
NO-40, ASTALAKSHMI AVENUE, 3 RD CROSS
ST, SENNERKUPPAM,POONAMALLE,
CHENNAI-56
CHENNAI
TAMIL NADU
600056
PH. NO :9442780967

No. of weeks of NPTEL Courses	Equivalence of NPTEL course with regular FDP
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12	$1\frac{1}{2}$ FDP

Duration of NPTEL course: 8 Weeks

NPTEL-AICTE
Faculty Development Programme

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

K CHOLAPANDIAN

for successfully completing the course

Technologies for Clean and Renewable Energy Production

with a consolidated score of 65 %

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

(Jul-Sep 2019)

Prof. Dileep N. Malkhede
Advisor-I (Research, Institute & Faculty Developme
All India Council for Technical Education

Roll No: NPTEL19CH26S11180620

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The candidate has studied the above course through MOOCs mode, has submitted online assignments and passed proctored exams.
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P. Dhasarathan

Dr. P. DHASARATHAN
Head, Dept. of Biotechnology

Mr. S. SELVARAJ
MD, Medox Biotech India Pvt. Ltd.

Dr. P. L. N. RAMESH
Principal

Vel Tech High Tech

Dr Rangarajan Dr Sakunthala Engineering College

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This is to certify that Dr./~~Mr.~~/Ms. Prof. A.J.A. RANJITHSINGH of DEPT OF BIOTECHNOLOGY, PRATHYUSHA ENGINEERING COLLEGE has participated in Faculty Development Programme on "Recent Advances in Pollution Control and Mitigation Measures" organized by the Department of Biotechnology during 17th - 21st June 2019 at Vel Tech High Tech Dr. Rangarajan Dr. Sakunthala Engineering College, Avadi.

Dr.D.Yuvaraj

In Association with BRSI

Dr. E. Kamalanaban
Principal

Vel Tech High Tech

Dr Rangarajan Dr Sakunthala Engineering College

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Dr.D.Yuvaraj

In Association with BRSI

Dr. E. Kamalanaban
Principal

Vel Tech High Tech

Dr Rangarajan Dr Sakunthala Engineering College

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In Association with BRSI

Dr. E. Kamalanaban
Principal

Vel Tech High Tech

Dr.Rangarajan Dr.Sakunthala Engineering College

IGAUGE GOLD | NBA | NAAC A

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Dr.D.Yuvaraj
Convenor

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This is to certify that **Dr. M. THENMOZHI, Assistant Professor** of **PRATHYUSHA ENGINEERING COLLEGE** has participated in the Faculty Development Programme on "MOLECULAR DOCKING TECHNIQUES" organized by Department of Biotechnology and Medox Biotech India Pvt., Ltd., held during June 10, 2019 to June 16, 2019

Dr. P. DHASARATHAN
Head, Dept. of Biotechnology

Mr. S. SELVARAJ
MD, Medox Biotech India Pvt., Ltd.

Dr. P. L. N. RAMESH
Principal

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I-GAUGE GOLD

NAAC

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Dr.D.Yuvaraj
Convenor

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Dr. E. Kamalanaban
Principal

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Roll No: NPTEL19BT21531210395

To
DR. M. THENMOZHI
S4 JKM HOMES
JAMES 1ST STREET,
POONAMALLEE
CHENNAI
TAMIL NADU
600056
PH. NO:8939614539

Score	Type of Certificate
>=90	Elite+Gold
75-89	Elite+Silver
>=60	Elite
40-59	Successfully Completed
<40	No Certificate

No. of credits recommended by NPTEL:2
An additional 1 credit may be awarded if the University deems it fit, based on the actual student effort involved.

Elite

NPTEL Online Certification

(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

DR. M. THENMOZHI

for successfully completing the course

Nanotechnology in Agriculture

with a consolidated score of 63 %

Online Assignments	17.50/25	Proctored Exam	45/75

Total number of candidates certified in this course: 313

Prof. Rajesh M.Hegde
Chairman, Centre for Continuing Education
IIT Kanpur

Aug-Oct 2019
(8 week course)

Prof. Satyaki Roy
NPTEL Coordinator
IIT Kanpur

Indian Institute of Technology Kanpur

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Roll No: NPTEL19BT21531210395

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P. Dhasarathan

Dr. P. DHASARATHAN
Head, Dept. of Biotechnology

Mr. S. SELVARAJ
MD, Medox Biotech India Pvt., Ltd.

Dr. P. L. N. RAMESH
Principal

Roll No:NPTEL19AG04S11183699

To JOYCE HELLEN SATHYA D
NO-21, MURUGESAN SALAI, N.L.C OFFICER
NAGAR, VADALURE
CUDDALORE
TAMIL NADU
607303
PH. NO :9791196874

No. of weeks of NPTEL Courses	Equivalence of NPTEL course with regular FDP
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8	Full FDP of one week
12	$1\frac{1}{2}$ FDP

Duration of NPTEL course: 8 Weeks

NPTEL-AICTE
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(Funded by the Ministry of HRD, Govt. of India)

This certificate is awarded to

JOYCE HELLEN SATHYA D

for successfully completing the course

Organic Farming for Sustainable Agricultural Production

with a consolidated score of **61** %

Prof. Andrew Thangaraj
NPTEL Coordinator
IIT Madras

(Jul-Sep 2019)

Prof. Dileep N. Malkhede
Advisor-I (Research, Institute & Faculty Development)
All India Council for Technical Education

Roll No: NPTEL19AG04S11183699

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F.No: AICTE / RIFD / FDP through MOOCs / 2017-18

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Dr. P. DHASARATHAN
Head, Dept. of Biotechnology

Mr. S. SELVARAJ
MD, Medox Biotech India Pvt. Ltd.

Dr. P. L. N. RAMESH
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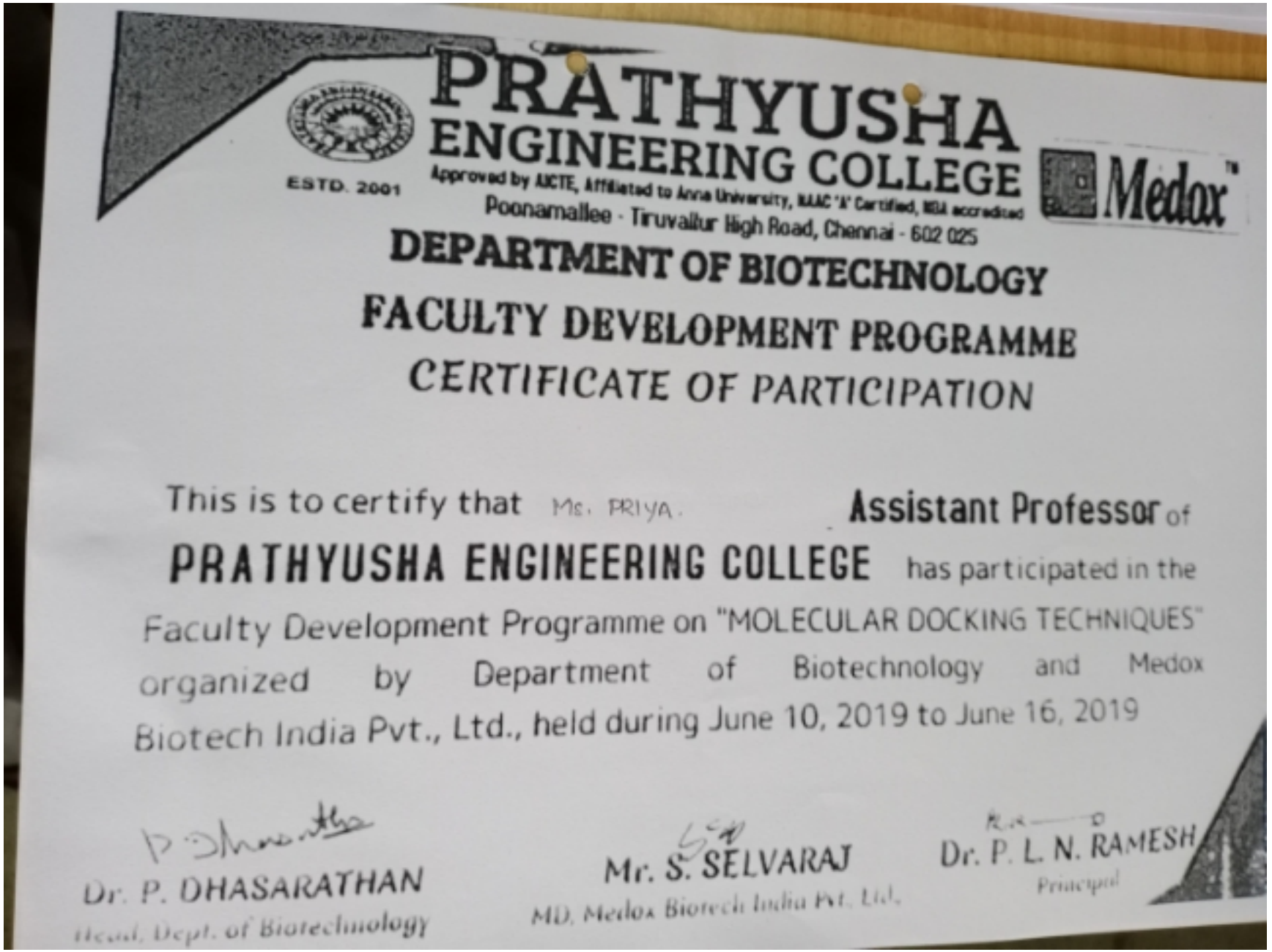
P. Dhasarathan

Dr. P. DHASARATHAN
Head, Dept. of Biotechnology

Mr. S. SELVARAJ
MD, Medox Biotech India Pvt. Ltd.

Dr. P. L. N. RAMESH
Principal



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Head, Dept. of Biotechnology

Mr. S. SELVARAJ
MD, Medox Biotech India Pvt. Ltd.

Dr. P. L. N. RAMESH
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P. DHASARATHAN

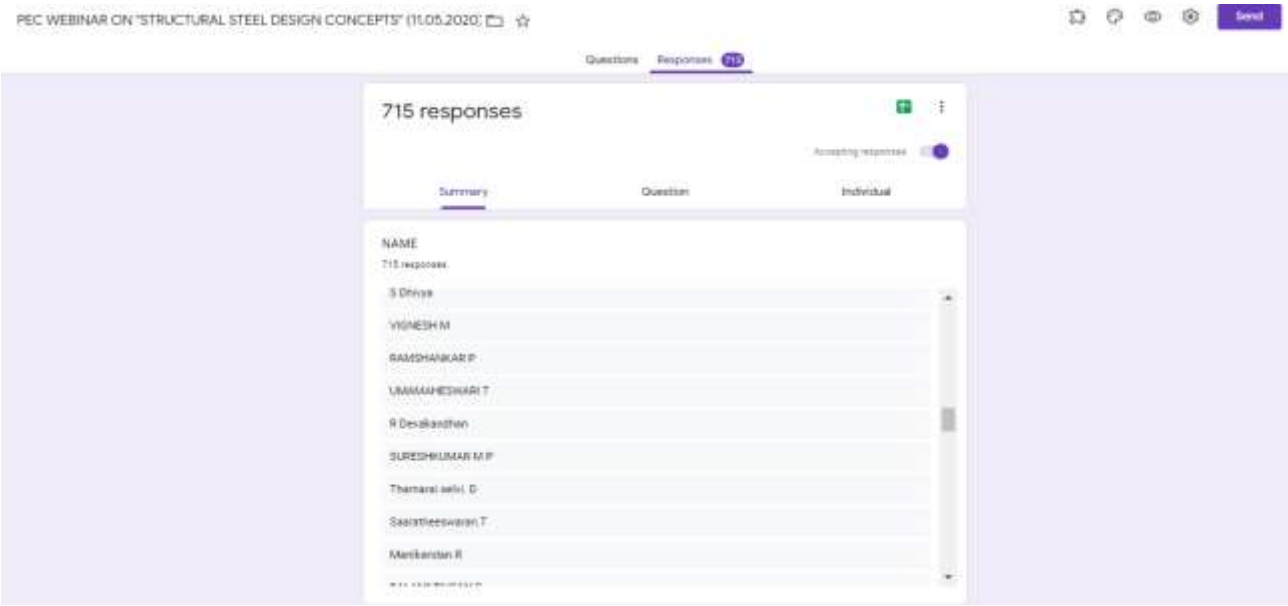
Mr. S. SELVARAJ

Dr. P. L. N. RAMESH
Principal

2019-2020

“STRUCTURAL STEEL DESIGN CONCEPTS"

PRATHYUSHA ENGINEERING COLLEGE - DEPARTMENT OF CIVIL ENGINEERING*
Topic: “STRUCTURAL STEEL DESIGN CONCEPTS"
Speaker: Er.A.KARTHIKEYAN
Structural & Geo Technical Consultant, Chennai
Date: May 11,2020
Time 3PM to 4PM (IST)
E- Certificate will be Issued
Registration Link: https://docs.google.com/.../1XD7.../edit



PRATHYUSHA ENGINEERING COLLEGE – DEPARTMENT OF CIVIL ENGINEERING WEBINAR

WEBINAR TOPIC - " STRUCTURAL STEEL DESIGN CONCEPTS" By Er.A.KARTHIKEYAN ON 11.05.2020 DURING 3 to 4 PM

* Required

NAME *

Your answer

MAIL ID *

Your answer

MOBILE NUMBER / What's App No *

Your answer

DESIGNATION *

- ◯ STUDENTS
- ◯ FACULTY
- ◯ RESEARCH SCHOLAR
- ◯ OTHERS

INSTITUTION/ ORGANIZATION *

Your answer

PLACE *

Your answer

Submit

webinar Event Feedback on 11.05.2020

Questions Responses 145

145 responses

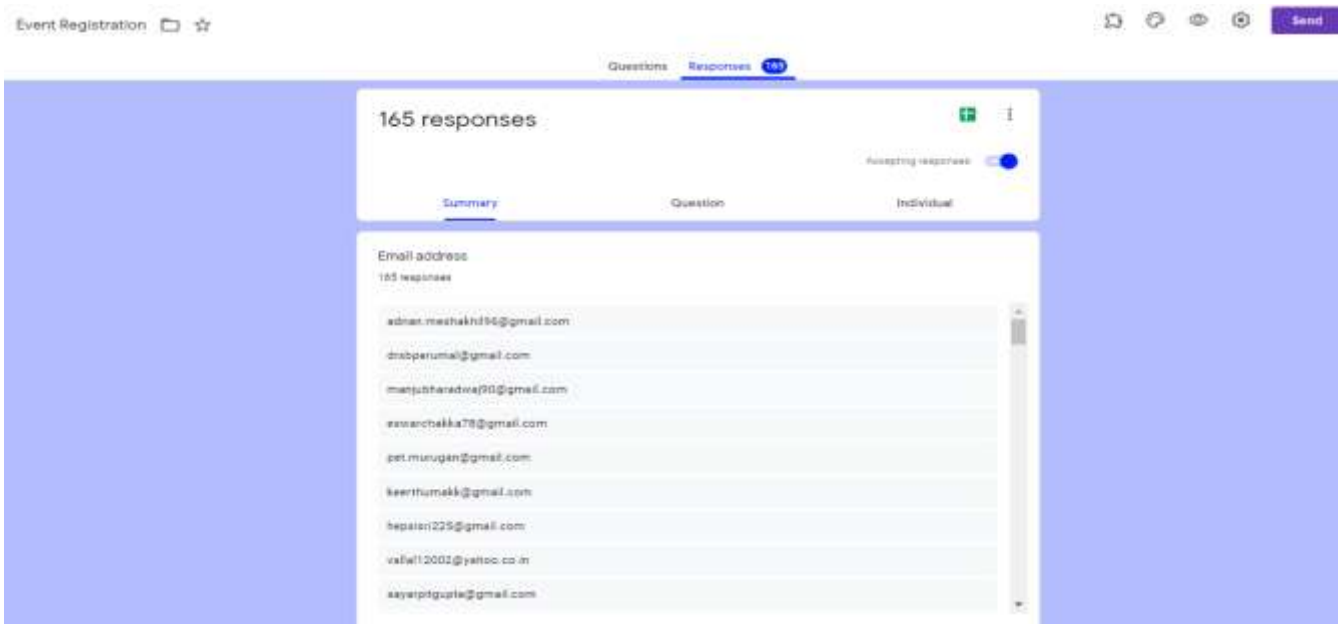
Summary Question Individual

Email address
145 responses

gokulakannans3@gmail.com
joshirama212@gmail.com
pmanikandanpmk@gmail.com
kavinmuthukumarasamy@gmail.com
prsanthoshsurya99@gmail.com
krrthesarajan3@gmail.com
Civiledsm@gmail.com
kowsalya27m@gmail.com
amanocivil47@gmail.com

PRODUCTION & HANDLING OF CONCRETE AT SITE

PRATHYUSHA ENGINEERING COLLEGE, the DEPARTMENT OF CIVIL ENGINEERING Organizes webinar for Staffs, Research Scholar and Students.
Topic- PRODUCTION & HANDLING OF CONCRETE AT SITE
Date-15.06.2020
Time-3.00PM
Speaker- S: P.SUDHARSAN, M.TECH.,
DALMIA CEMENT BHARAT LIMITED,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Questions
Responses 165
165 responses
Summary
Question
Individual
Email address
165 responses

PEC – Webinar On "Production and Handling of Concrete at Site" by Mr.P.Sudharsan–Technical Engineer,Dalmia Cement Bharat Ltd

Organised by Department of Civil Engineering, Prathyusha Engineering College
Aranvoyalkuppam, Poonamallee-Tiruvallur Road, Thiruvallur, Tamil Nadu 602025
Date: 15.06.2020
Time: 03.00 - 04.00 PM

* Required

Email address *

Your answer

Prefix *

- ◯ Dr.
- ◯ Mr.
- ◯ Mrs.
- ◯ Ms.

Name of the Participant *

Your answer

Name of the Institution/Organization *

Your answer

Mobile Number *

Your answer

Department *

Prathyusha Engineering College Feedback Form

Webinar on "PRODUCTION & HANDLING OF CONCRETE AT SITE" on 15.06.2020

* Required

Email address *

Your email

Email address *

Your answer

Name of the Participant(Use Capital Letter) *

Your answer

Designation(Job Title) *

- ◯ Student

PEC - CIVIL WEBINAR SERIES !!

PRATHYUSHA
ENGINEERING COLLEGE

Poonamallee-Thiruvallur High Road, Chennai-602025
http://www.prathyusha.edu.in Ph.: 044-37673767

CERTIFICATE OF PARTICIPATION

This is to certify that

Mr.S.KARUPPASAMY

Has participated in the
"PRODUCTION & HANDLING OF CONCRETE AT SITE"
on "June 15th 2020" by P.SUDHARSAN,
Technical Engineer,
Dalmia cement Bharat Limited,
Organized By
Department Of Civil Engineering

PLNR

Dr.P.L.N.RAMESH
PRINCIPAL

Faculty workshop on "Pedagogy and Active Learning" by INFOSYS

Date : 1st November 2019

Resource person : Mr. Roy Arnold, Infosys

Number of faculties participated : 45

The following faculty have to attend FDP Scheduled on 1st November, 2019 - Resource person from INFOSYS

Faculty members are:-
1. All the HOD's (Biotech, Civil, CSE, ECE, ECE, Mechanical and first year)
2. Dr.Padma Priya
3. Dr.Chitra
4. Dr.Mohammed Ali
5. Dr.Vanitha
6. Dr.Vimala
7. Dr.Sathyasekar
8. Mrs. Malathi
9. Dr. Jayaseelan
10.Mr.Gopinath Narayanan
11.Mr. Ragavendran
12.Mrs.Shobana
13.Ms.Madhumitha
14.Mr.Anand
15.Mr.Rajesh
16.Mr.Iniyan
17.Mr.Yuvaraj
18.Mr.Dilliraj
19.Mr.Arunprasath
20.Mrs.Vadivu
21.Mrs.Kannamma
22. Mr. Thamba Mashach
23.Mr.Thayagaraj
24.Mrs.Boomija
25.Mrs.Famitha
26.Mr.Mohan
27.Mrs.Liya
28.Dr.Praveena
29.Dr.Thenmozhi
30.Mr.Cholapandian
31.Mrs.Sangeetha
32.Ms.Sarala
33.Mr.Vinodkumar
34.Mrs.Anithalakshmi

35.Mrs.Gunasundari
36.Mrs.Sripriya
37.Ms.Sornalatha


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PRACTICE
INNOVATION
ACHIEVEMENT
LEARNING NEVER STOPS
TEAM MEMBERS


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TEAM 3
TEAM NAME: KING MAKERS
TEAM LOGO


SMART INDIA
HACKATHON '17

Faculty workshop on "Pedagogy and Active Learning" by INFOSYS

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11.Mr. Ragavendran
12.Mrs.Shobana
13.Ms.Madhumitha
14.Mr.Anand
15.Mr.Rajesh
16.Mr.Iniyan
17.Mr.Yuvaraj
18.Mr.Dilliraj
19.Mr.Arunprasath
20.Mrs.Vadivu
21.Mrs.Kannamma
22. Mr. Thamba Mashach
23.Mr.Thayagaraj
24.Mrs.Boomija
25.Mrs.Famitha
26.Mr.Mohan
27.Mrs.Liya
28.Dr.Praveena
29.Dr.Thenmozhi
30.Mr.Cholapandian
31.Mrs.Sangeetha
32.Ms.Sarala
33.Mr.Vinodkumar
34.Mrs.Anithalakshmi

35.Mrs.Gunasundari
36.Mrs.Sripriya
37.Ms.Sornalatha


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SMART INDIA
HACKATHON '17

PRATHYUSHA ENGINEERING COLLEGE

DEPARTMENT OF ECE

ANTENNA & EMBEDDED CLUB ORGANIZES

2 DAYS ONLINE FDP

IMPACT OF 5G TECHNOLOGY ON IOT

May 29, 30 FRI, SAT | 10.30 AM - 12.30 PM IST

Dr. SANJEEV GURUGOPINATH

M.Tech,P.hd (IISC,Bangalore),

Dr. SAIDHIRAJ AMURU

Principal Research Engineer, IIT Hyderabad.

REGISTRATION LINK

https://prathyusha.edu.in/events/OnlineFDP2-ece/

EVENT CO-ORDINATORS

ANTENNA CLUB MEMBERS

Mr. T. Hariesh Kumar - 90040 45193
Mr. N. Darwin - 86606 81341
Mr. T. Arunprasath - 95009 64717

EMBEDDED CLUB MEMBERS

Ms. G. Premalatha - 97910 65836
Mr. E. U. Iniyan - 94454 52171
Mr. E. Dilliraj - 95970 24684

PRATHYUSHA ENGNEERING COLLEGE

Department of ECE

FDP REPORT on "Impact of 5G techno;ogy on IoT"

29.05.2020 & 30.05.2020

During the 29th and 30th of May - 2020, a two-day FDP on "**IMPACT OF 5G TECHNOLOGY ON IoT**" took place. This FDP was organized as an on-line virtual event due to the Covid-19 pandemic. During these two days more than 70 people participated from various institution.

In today's era, the coexistence of human-centric and machine-type applications will lead to a large diversity of communication characteristics. Some of these applications can be supported by today's mobile broadband networks and their future evolution. However, some other applications will impose additional and very diverse requirements on mobile and wireless communication systems that the fifth generation (5G) will have to support various requirements such as stringent latency and reliability (healthcare, security, logistics, automotive applications and mission-critical control), a wide range of data rates with very high availability and reliability, Network scalability and flexibility (to support a large number of devices with very low complexity and requirements for very long battery lifetimes). Multiple access scheme is playing an important role in evolution of mobile networks. In 3G, CDMA was adopted but in 4G it is OFDMA. In line with this in 5G New Radio (NR), the New 5G Radio Access Technology is introduced to improve data rates, latency, coverage, capacity, and reliability. Thus, 5G technology is a center point of a triangle with three vertices consisting of Enhanced Mobile broadband, massive machine type communication and ultra-reliable machine type communication.

The first day started with a session related to the collaboration among infrastructure and vertical validation trials **5G Ambient backscatter communication** the session started at 10.00 a.m. the Guest speaker **Dr. Sanjeev Gurugopinath, PROFESSOR PES UNIVERSITY** delivered his speech. **Ambient backscatter** uses existing radio frequency signals, such as radio, television and mobile telephony, to transmit data without a battery or power grid connection. Each such device uses an antenna to pick up an existing signal and convert it into tens to hundreds of microwatts of electricity. It uses that power to modify and reflect the signal with encoded data. Antennas on other devices, in turn, detect that signal and can respond accordingly, discussed the latest activities related to the mapping of verticals application & services KPIs to

networking KPIs. Initial implementations can communicate over several feet of distance, even with transmission towers up to 10.5 kilometres (6.5 mi) away. Transmission rates were 1k bits per second between devices situated 0.45 metres (1 ft 6 in) apart inside and 0.75 metres (2 ft 6 in) apart outside, sufficient to handle text messages or other small data sets. Circuit sizes can be as small as 1 sq. mm. Later implementation uses Wi-Fi, FM radio and LoRa transmissions. The first day completed its activities discussing the latest status of three white papers, under preparation by the Technology Board, that analyze Edge Computing solutions, the impact of 5G to vertical industries and the use of 5G in indoor environments,

The second day started with a **session-1** related to the "**Synchronization errors in 5G**" the session started at 10.00 a.m. the Guest speaker **Dr. B.Senthil, CTO, Pranikya Technologies,** delivered his speech.

To realize the benefits of new TDD spectrum and the full potential of 5G, highly accurate time synchronization is needed almost everywhere in the network. To ensure protection against sync loss, operators must look beyond their current sole reliance on GPS. There's also a need for increased reliability in the timing source. While today's FDD-based LTE network can continue to operate for hours after sync loss with no degradation, in the future, loss of timing will have an immediate impact on RAN performance. Ericsson analysis of sampled North American operators showed that GPS loss of one hour or longer affected more than 15% of all sites nationwide over a 12-month period. Reliability of GNSS/GPS in urban canyons is also a major concern due to limited signal availability. This will become a bigger concern with expected urban densification and the deployment of small cells along city streets. With TDD-based spectrum eventually comprising up to 80% of total 5G network capacity, timing outages are destined to become significant performance and availability challenges, even for providers that were never affected by such events in the past.

Session-2 related to the "**Massive MIMO for 5G and beyond**" the session started at 10.00 a.m. the Guest speaker **Dr. SAIDHIRAJ AMURU, Principle Research Engineer, WiSig Network – Adjunct Asst.Professor, IITH,** delivered his speech.

The primary issue with the ongoing development of the wireless network is that it is dependent upon either increasing bandwidth (spectrum) or densifying the cells to achieve the required area throughput. These resources are rare and are reaching their saturation point within

a few years. Also, increasing bandwidth or densifying the cells increases the cost of the hardware and increases latency. The third factor, which can improve area throughput, that is, spectral efficiency, has remained mostly untouched and unchanged during this rapid development and growth of the wireless network. An efficient wireless access technology that can increase the wireless area throughput without increasing the bandwidth or densifying the cell is essential to achieve the ongoing demands faced by the wireless carriers.

Massive Multiple-Input Multiple-Output (MIMO) is the most enthralling wireless access technology to deliver the needs of 5G and beyond networks. Massive MIMO is an extension of MIMO technology, which involves using hundreds and even thousands of antennas attached to a base station to improve spectral efficiency and throughput. This technology is about bringing together antennas, radios, and spectrum together to enable higher capacity and speed for the incoming 5G. The capacity of massive MIMO to increase throughput and spectral efficiency has made it a crucial technology for emerging wireless standards. The key here is the considerable array gain that massive MIMO achieves with a large number of antennas. Massive MIMO is a key enabling technology for 5G and beyond networks, and as intelligent sensing system primarily rely on 5G and beyond networks to function, massive MIMO and intelligent sensing system are inextricably linked. The data collection from the large number of smart sensors using traditional multi-access schemes is very impractical as it leads to excessive latency, low data rate, and reduced reliability. Massive MIMO with huge multiplexing gain and beamforming capabilities can sense data from concurrent sensor transmission with much lower latency and provide sensors with higher data rates and reliable connectivity. Massive MIMO systems will perform a crucial role to allow information gathered through smart sensors to be transmitted in real-time to central monitoring locations for smart sensor applications such as an autonomous vehicle, remote healthcare, smart grids, smart antennas, smart highways, smart building, and smart environmental monitoring.

Thus, the two day FDP on **"IMPACT OF 5G TECHNOLOGY ON IoT"** ends up with beautiful learning. I thank the almighty, Management, HOD, Faculties, supporting Coordinator and everyone who contributes for their supports to make this event successful.

PRATHYUSHA ENGNEERING COLLEGE

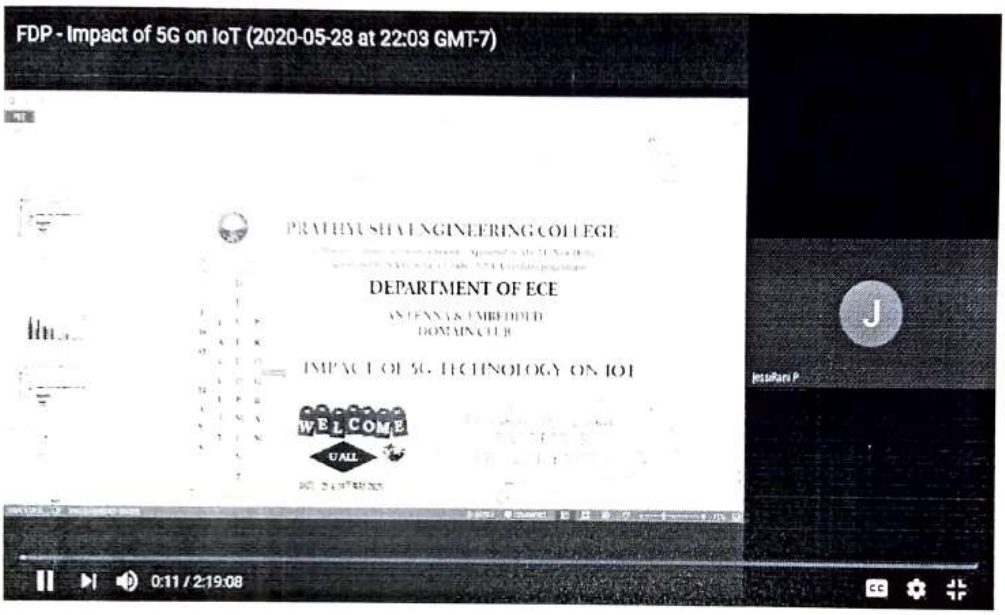
Department of ECE

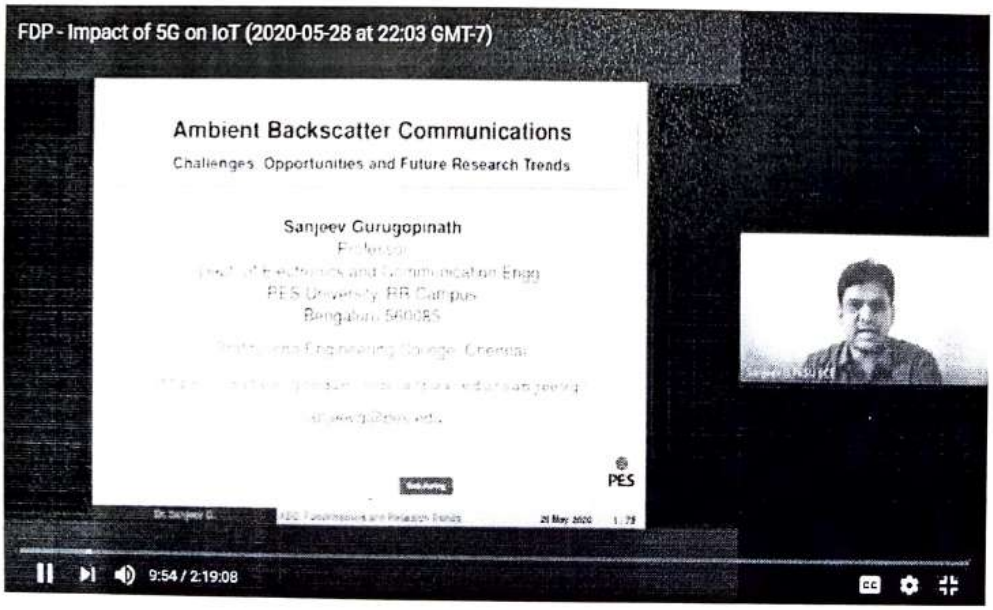
FDP REPORT on "Impact of 5G techno;ogy on IoT"

29.05.2020 & 30.05.2020

SNAPSHOT OF THE EVENT

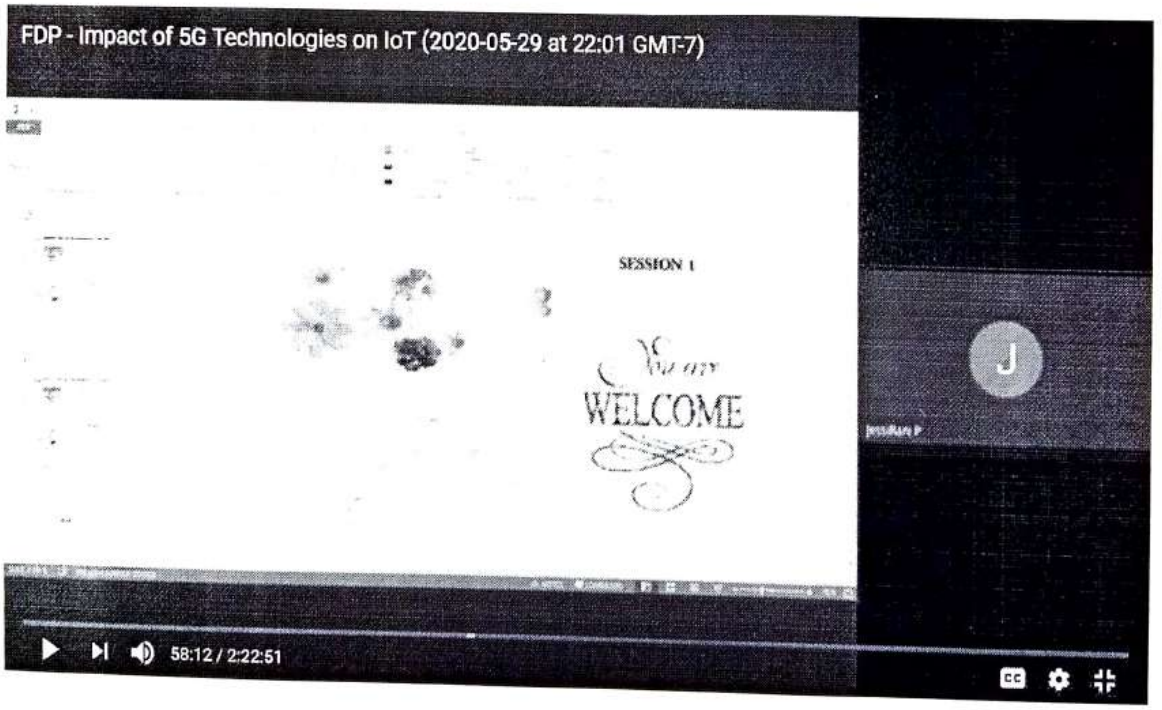
DAY : 1

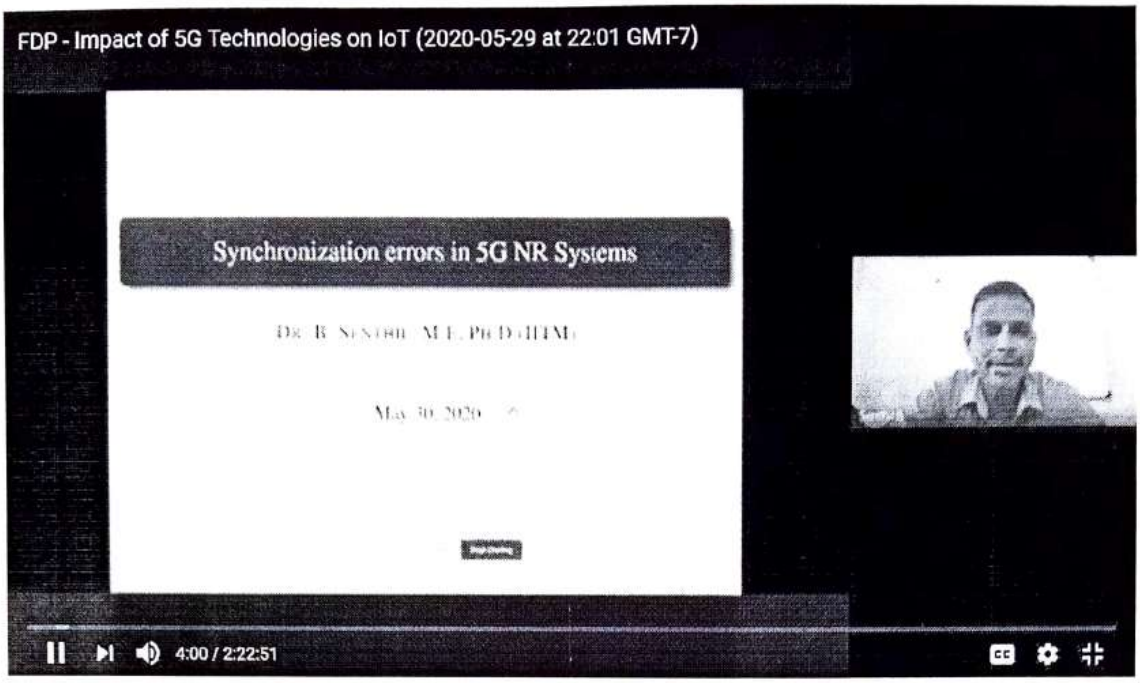




DAY : 2

SESSION : 1

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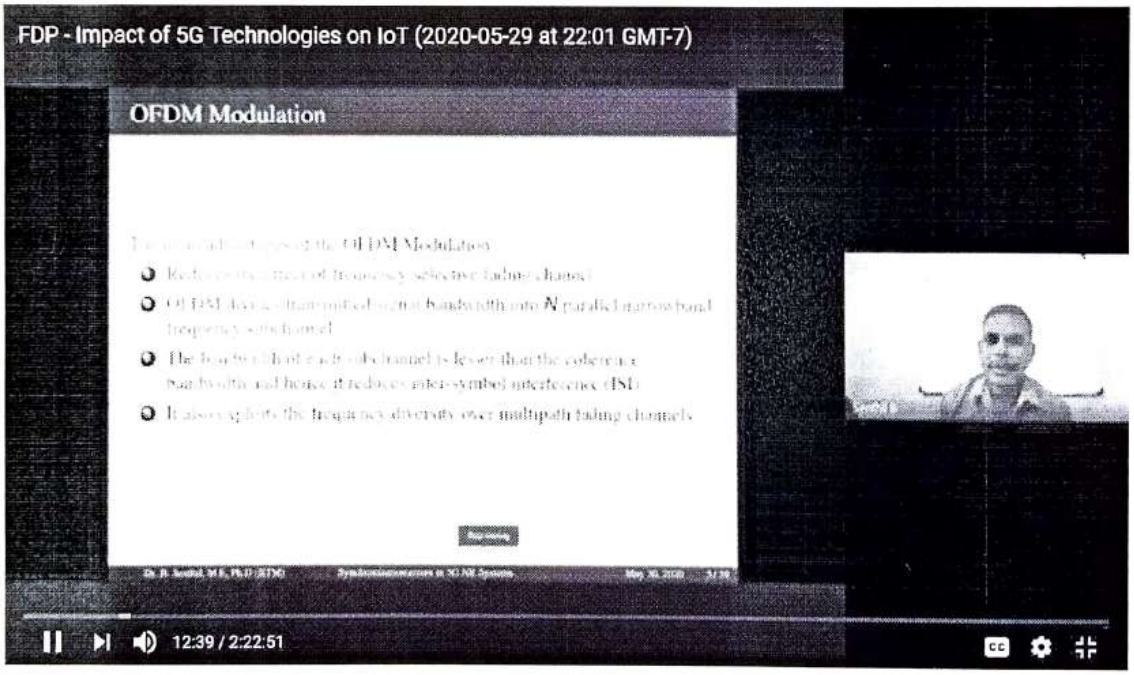
Synchronization errors in 5G NR Systems
4:00 / 2:22:51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OFDM Modulation
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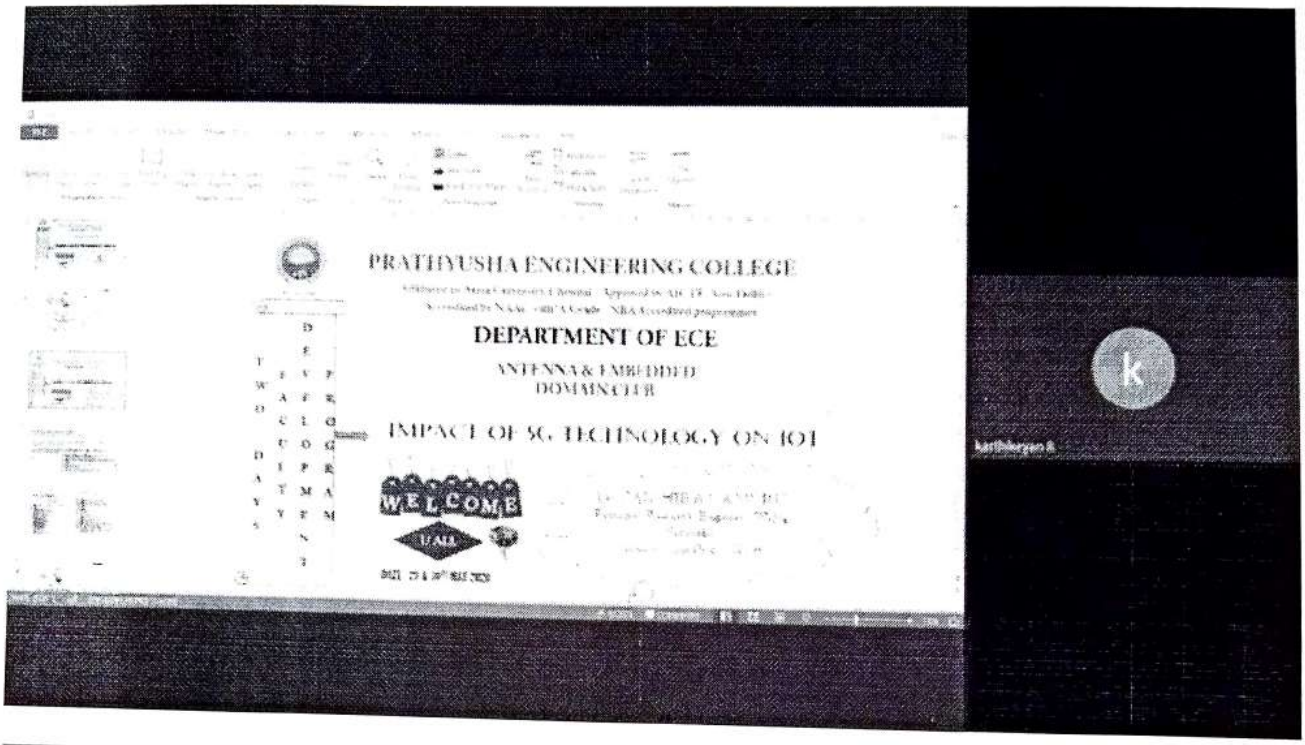
SESSION : 2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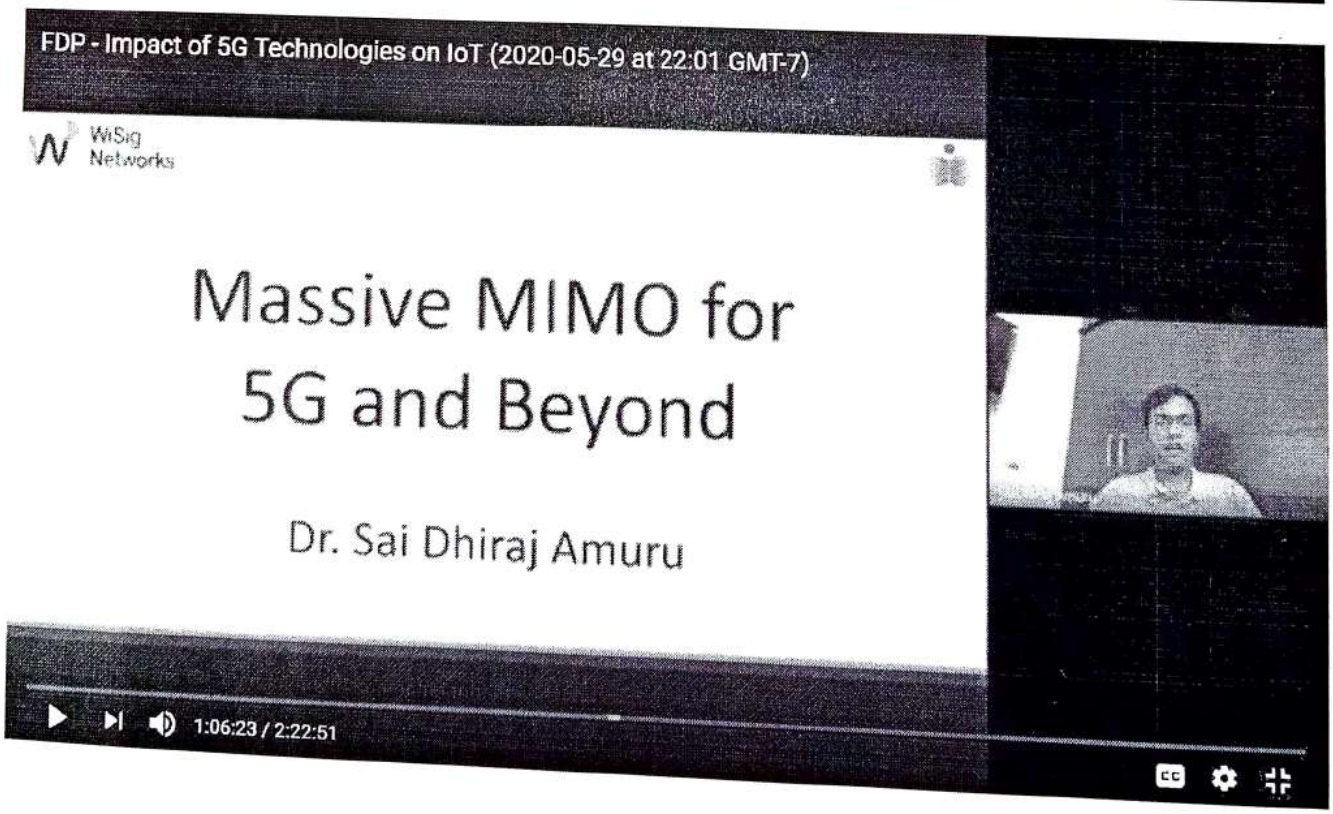
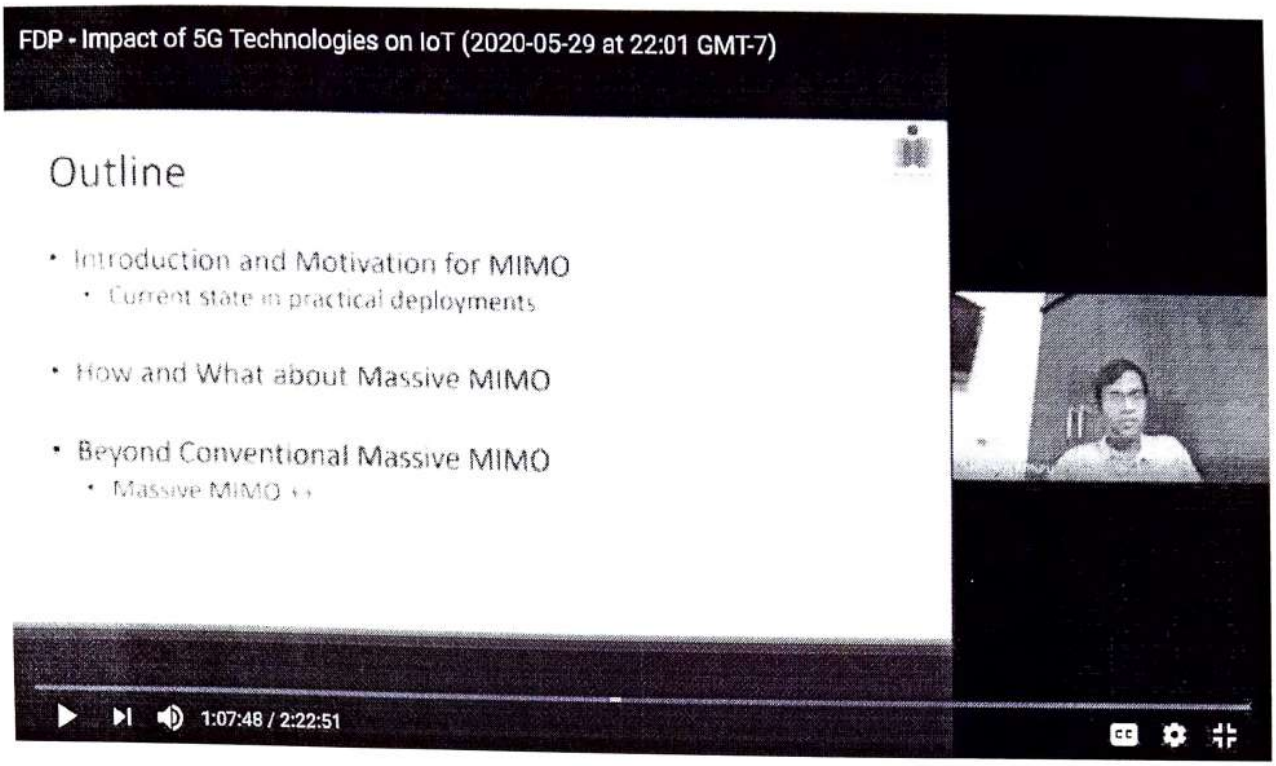
DOMAIN CLUB
IMPACT OF 5G TECHNOLOGY ON IOT
WELCOME
TWO DAYS
FACULTY DEVELOPMENT
PROGRAM


FDP - Impact of 5G Technologies on IoT (2020-05-29 at 22:01 GMT-7)
WiSig Networks
Massive MIMO for 5G and Beyond
Dr. Sai Dhiraj Amuru
1:06:23 / 2:22:51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Outline
• Introduction and Motivation for MIMO
• Current state in practical deployments
• How and What about Massive MIMO
• Beyond Conventional Massive MIMO
• Massive MIMO ++
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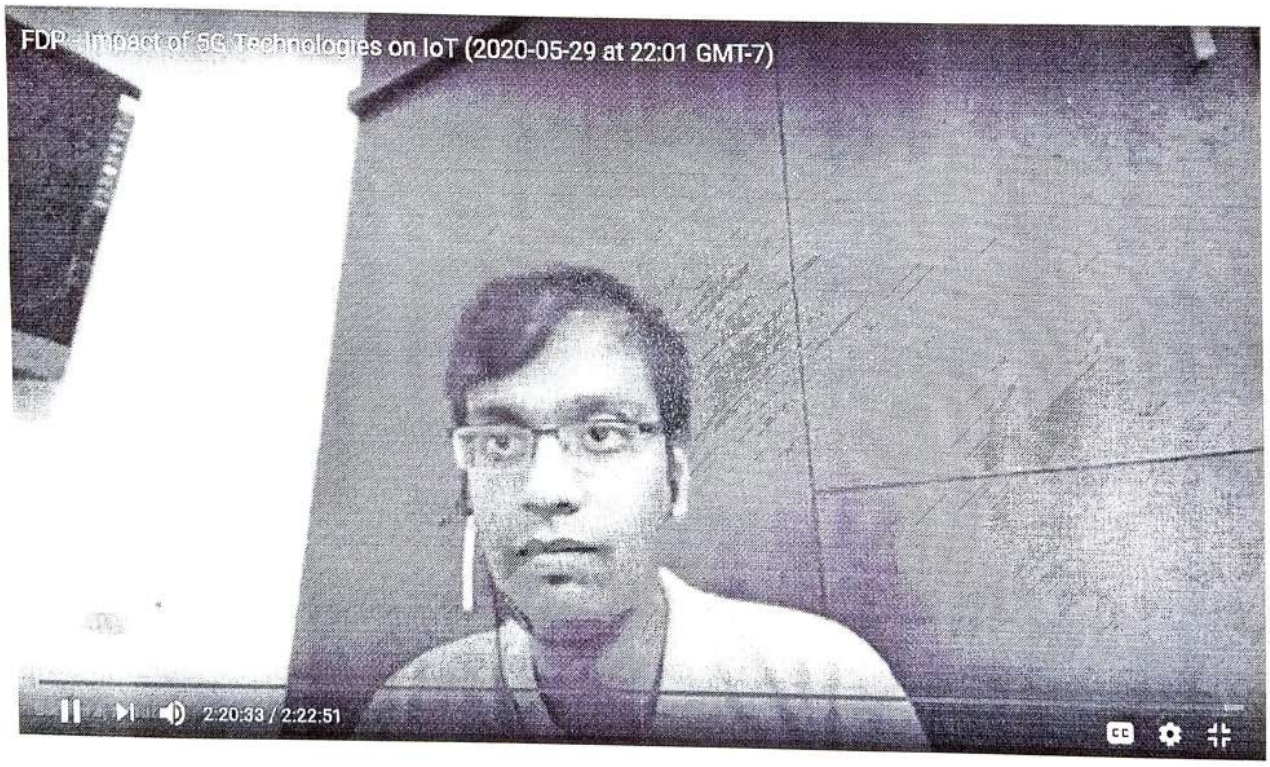
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PRATHYUSHA ENGNEERING COLLEGE

Department of ECE

FDP REPORT on "Impact of 5G techno;ogy on IoT"

29.05.2020 & 30.05.2020

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bokinala giriraju	Benisha xavier	arun kumar	arun prasath	Assistant Professor,ECE Vel Tech, Chennai
Dean Academics	bokinala giriraju	arun prasath	Assistant Profess	Benisha xavier
dommadi leepa	Dean Academics	Assistant Profess	Benisha xavier	bokinala giriraju
Vimala	dommadi leepa	Benisha xavier	Bwec Ece	Bwec Ece
Sanjeev G PESU	Sanjeev G PESU	Sanjeev G PESU	Sanjeev G PESU	Saravanakumar Uthirapathy
Saravanakumar L	Saravanakumar L	Saravanakumar L	Sanjeev G PESU	satish kanapala
SRAVANI GANDA	SRAVANI GANDA	SRAVANI GANDA	Saravanakumar L	SRAVANI GANDABATHULA
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Srilatha Kolati	Srilatha Kolati	Srilatha Kolati	SRAVANI GANDA	Srilatha Kolati
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Tatiana Chakravo	Tatiana Chakravo	Tatiana Chakravo	subramanyam sai	Tatiana Chakravorti
U. HARIHARAN H	U. HARIHARAN H	U. HARIHARAN H	T Akilan Akilan	U. HARIHARAN Hariharan
VANITHA LAKSH	VANITHA LAKSH	Vanitha L	Tatiana Chakravo	Vanitha Fredrick
Veena Devi E & C	Veena Devi E & C	Veena Devi E & C	U. HARIHARAN H	Veena Devi E & C - NMAMIT
Veerella Lavanya	Veerella Lavanya	Veerella Lavanya	Veena Devi E & C	Veerella Lavanya
VIDHYALAKSHM	VIDHYALAKSHM	VIDHYALAKSHM	Veerella Lavanya	VIDHYALAKSHMI V ASST. PROFESSOR III
विक्रम भय्या vikram	विक्रम भय्या vikram	विक्रम भय्या vikram	VIDHYALAKSHM	Vimala Shanmugam
Ram Kumar	Ram Kumar	PRISCILLA M	विक्रम भय्या vikram	विक्रम भय्या vikramkumar
ramesh pallamrec	ramesh pallamrec	Ram Kumar	Ram Kumar	rubesh kumar
Renita Pearlin	Renita Pearlin	Renita Pearlin	ramesh pallamrec	Sanjeev G PESU ECE

rubesh kumar
JAYANDHI G AP
karthikeyan R
Kondapalli abdul l
M Chithra
MENAKA B Ece
Mohammed Vase
Nani Samudrala
P Periyathambi p
PRISCILLA M
giri raj
Girish P
Hemanth kumar G
jaisu sweetu

rubesh kumar
MENAKA B Ece
Mohammed Vase
Nani Samudrala
P Periyathambi p
PRISCILLA M
Kalyani Gumma
karthikeyan R
Kondapalli abdul l
M Chithra
Girish P
Hemanth kumar G
jaisu sweetu
JAYANDHI G AP
Jeb Ri
Vimala
giri raj

rubesh kumar
MENAKA B Ece
Mohammed Vase
nanditha krishna
Nani Samudrala
P Periyathambi p
Kalyani Gumma
karthikeyan R
Kondapalli abdul l
M Chithra
Hemanth kumar G
Iniyan Ravi
jaisu sweetu
JAYANDHI G AP
Jeb Ri
dommadi leepa
Vimala
giri raj
Girish P
bokinala giriraju
Bwec Ece
Dean Academics

Renita Pearlin
rubesh kumar
Nani Samudrala
P Periyathambi p
Padma Ratna
PRISCILLA M
Prof. S. Hema Pri
Kondapalli abdul l
M Chithra
MENAKA B Ece
Mohammed Vase
Kalyani Gumma
karthikeyan R
Girish P
Hemanth kumar G
I.Rexiline Sheeba
Iniyan Ravi
jaisu sweetu
JAYANDHI G AP
Jeb Ri
Dilliraj E
dommadi leepa
Vimala

Sanjeev G PESU ECE
Saravana Kumar
PRISCILLA M
Prof. S. Hema Priyadarshini
Ram Kumar
ramesh pallamreddy
Renita Pearlin
nanditha krishna
Nani Samudrala
P Periyathambi p
Padma Ratna
Kalyani Gumma
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Mohammed Vaseef Shaik
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JAYANDHI G AP III - ECE
Jeb Ri
Hemanth kumar G
I.Rexiline Sheeba
Iniyan Ravi
Dean Academics NVPEMI
Dilliraj E
dommadi leepa
Vimala
Girish P

REGISTRATION FORM

ONE DAY SEMINAR
ON

"RECENT TRENDS IN RENEWABLE ENERGY AND GRID INTEGRATION"

4th JANUARY 2020

Name (in block letters): .....
Designation.....
Department:.....
Institution:.....
Address for communication: .....
.....
.....
.....
Ph. No : .....
E-Mail : .....
Mobile no: .....
DD No : .....

Place:
Date :

Signature of the Applicant

ORGANIZING COMMITTEE

CHIEF PATRONS

Shri.P.RAJA RAO
CHAIRMAN, BOARD OF GOVERNORS, PEC

Smt. P. PRATHYUSHA
CEO, PEC

Thiru .M. VASU
ADVISOR

PATRONS

Dr.P.L.N.RAMESH
PRINCIPAL, PEC

CONVENOR

Ms.M.PREETHA
HOD/EEE

COORDINATOR

Ms.S.SHOBANA, Assoc.Prof/EEE

ADDRESS FOR COMMUNICATION

Co-ordinator
Department of EEE
Prathyusha Engineering College
Aranvoyalkuppam, Thiruvallur-602 025
Ph: 044-37673767
Mobile: +91-9841261765
+91-9840768679
E-mail:hod.eee@prathyusha.edu.in.

ONE DAY SEMINAR ON

"RECENT TRENDS IN RENEWABLE ENERGY AND GRID INTEGRATION"

4th JANUARY 2020

In association with NIWE

Organised by
Department of Electrical and Electronics Engineering

ESTD. 2001

PRATHYUSHA ENGINEERING COLLEGE

Aranvoyalkuppam, Tiruvallur
Approved by AICTE & Affiliated to Anna university
Accredited by NBA
ISO 9001-2008 Certified Institution
Phone: 044-37673767

ABOUT THE INSTITUTION

Prathyusha Engineering College is one of the esteemed institutions in Tamil Nadu, bloomed in 2001. PEC is just 30km away from Chennai on Poonamallee-Tiruvallur Road at Aranvayalkuppam.The institution has been growing excellently from strength to strength in the last twenty years as a premier institute with quality education by highly dedicated, experienced and young energetic professionals as faculty members. The college offers 6 UG and 4 PG courses. The college has received more than Rs.2 crore as grant from various organizations like AICTE, SERB, DRDO, BRNS, CSIR, CVRDE and TNSCST Etc., for doing research activities.

ABOUT THE DEPARTMENT

The EEE Department has been blossoming in this great institution since 2001. The department has flourished day by day by its excellence in all its activities and thereby bringing laurels to the institution. The abundantly teaching fold and the state of art laboratory facilities are the value additions of this department which offers excellent academic ambience to the students.

ABOUT THE PROGRAM

The seminar aims at imparting knowledge on Renewable Energy systems like Solar and Wind along with Grid integration. NIWE was established with the aim of addressing the specific purpose of supporting time bound and mission oriented research and development programmes to achieve and maintain world class, reliable and cost effective technology in wind and solar power systems. The Unit continues to improve its knowledge and skills through continuous learning, to keep pace with the State-of-the-Art Technology and excel through innovative approaches. Through this seminar, the faculty members, research scholars, PG and UG students are enhancing their knowledge in the field of Renewable Energy System and in turn it will be supported to our society.

SEMINAR OUTLINE

- Solar Power Forecasting
- Solar Radiation , sensor and their calibration
- Wind Energy System
- Grid Integration

RESOURCE PERSONS

Sessions will be handled by eminent persons from National Institute of Wind Energy, Chennai

Venue: Seminar Hall, PEC
Time: 9:00 AM

IMPORTANT DATES

Last date for submission of the registration form: **26th December 2019.**

REGISTRATION FEE

1.Faculty members :Rs. 500
2. Research Scholars/PG students: Rs. 300
3.Students(UG)/Others :Rs. 200

REGISTRATION

Kindly send the registration form provided along with registration fee. Payment can be made through DD, drawn in favor of "**Prathyusha Engineering College – EEE**" payable at Thiruvallur.
Spot registration is also permitted.


ENGINEERING COLLEGE
PRATH USHA
ENGINEERI LLEGE
OF ELECTRICA RONICS ENGINEERING
NATIO
LE ENERGY


PRATHYUSHA
ENGINEERING COLLEGE

PRATHYUSHA ENGINEERING COLLEGE

ESTD. 2001

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

GREEN AND CLEAN ENERGY CLUB

ORGANIZING

INDUSTRIAL EXPERT INTERACTION

ON

INDUSTRIAL ENERGY AUDIT & MANAGEMENT

Dr.P.DHARMALINGAM

EXECUTIVE DIRECTOR

ENSAVE CONSULTANCY AND TRAINING Pvt. Ltd.

DATE:6.8.19

TIME:10:00 AM

VENUE: SEMINAR HALL

ESTD. 2001

PRATHYUSHA ENGINEERING COLLEGE

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

IEI REPORT

Guest Name	Dr.DHARMALINGAM
Company Name	Ensave Consultancy Pvt.Ltd
Date	6-08-2019
Time	10.00AM to 12.30PM
Department	EEE
No of faculty attended	10
Title	Energy Audit

Objectives:

The Energy Audit provides the vital information base for overall energy conservation program covering essentially energy utilization analysis and evaluation of energy conservation measures.

Company Profile:

Ensave Consultancy And Training Private Limited is a Private incorporated on 06 July 2015. It is classified as Non-govt company and is registered at Registrar of Companies, Chennai. Its authorized share capital is Rs. 100,000 and its paid up capital is Rs. 100,000. It is inolved in Business activities .Ensave Consultancy And Training Private Limited's Annual General Meeting (AGM) was last held on 30 September 2018 and as per records from Ministry of Corporate Affairs (MCA), its balance sheet was last filed on 31 March 2018. Directors of Ensave Consultancy And Training Private Limited are Dharmalingam Thamaraiselvi and Vishnuvarth Dharmalingam

Expert Talk on Industrial Energy Audit:

Industrial energy audits have exploded as the demand to lower increasingly expensive energy costs and move towards a sustainable future have made energy audits greatly important. Their importance is magnified since energy spending is a major expense to industrial companies (energy spending accounts for ~ 10% of the average manufacturer's expenses). This growing trend should only continue as energy costs continue to rise. While the overall concept is similar to a home or residential energy audit, industrial energy audits require a different skillset. Weatherproofing and insulating a house are the main focus of residential energy audits. For industrial applications, it is the HVAC, lighting, and production equipment that use the most energy, and hence are the primary focus of energy audits.

Faculties are thankful to the industry and college to make such a great experience in learning Energy Audit process.

EEE : WEBINAR

PRATHYUSHA
ENGINEERING COLLEGE

Poonamallee-Thiruvallur High Road, Chennai-602025
http://www.prathyusha.edu.in Ph.: 044-37673767

CERTIFICATE OF PRESENTATION

This is to certify that

Dr.C.Bharatiraja

---

of

SRM Institute Of Science And Technology

---

has presented the webinar on

"THE ART OF WRITING A SCIENTIFIC ARTICLE AND ITS' NUANCES IN HIGH IMPACT FACTOR JOURNALS"

organized by Department of Electrical and Electronics Engineering

on **25th May 2020.**

HOD

PRINCIPAL

PRATHYUSHA
ENGINEERING COLLEGE

ESTD. 2001

DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

NATIONAL SEMINAR
ON

"RECENT TRENDS IN RENEWABLE ENERGY
&
GRID INTEGRATION"

on
04-01-2020

PRATHYUSHA ENGINEERING COLLEGE

DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

Organises

Webinar

on

The Art of Writing a Scientific Article and its' Nuances in high impact factor journals

Dr.C.Bharatiraja.,

M.E, Ph. D., PDF (USA and ZA).

Associate professor,

Department of Electrical & Electronics Engineering,

SRM Institute of Science and Technology

May 25th 2020

4.00PM - 5.30PM

Register now

https://prathyusha.edu.in/events/webinar03-eee

E-Certificates will be provided

CONTACT US:

www.prathyusha.edu.in, 9843192763

1110 COUNSELLING CODE

TWO DAYS NATIONAL WORKSHOP ON
RECENT TRENDS IN AUTOMOBILE ENGINEERING ON 19 & 20 JULY 2019

COMMITTEE

Chief Patrons:
Mr. P. Raja Rao, Chairman, PEC
Mrs. P. Prathyusha, CEO, PEC
Mr. M. Vasu, Advisor, PEC

Patron:
Prof.Dr. P.L.N. Ramesh, Principal

Convener
Dr. P. Jayaraman,
Professor & Head,
Department of Mechanical Engineering

Coordinator
Dr. P. Mohamed Ali, Professor,
Department of Mechanical Engineering

REGISTRATION FORM

Name :
Gender : Male/Female
Designation :
Organization :
Address :
E-mail ID :
Mobile No :
Category : Student/faculty
Accommodation Required : Yes / No

Registration fee details

D.D. No :
Date :
Amount :
Bank :

Signature of the applicant

PRATHYUSHA ENGINEERING COLLEGE

Aranvoyal Kuppam,Poonamalle-Tiruvallur-Road Thiruvallur -602025

ESTD: 2001

Two Days
National Level Workshop
on
Recent Trends in
Automobile Engineering
19th & 20th July 2019

Organized by
Department of Mechanical Engineering

Two Days National Workshop on Recent Trends in Automobile Engineering ON 19 &20 JULY 2019

SCHEDULE

DAY 1	**19-07-2019**	**Morning Session**	**Inaguration**
DAY 1	**19-07-2019**	**Afternoon Session**	Mr. Meenakshi sundaram, Director, Gates Unitta India
DAY 2	**20-07-2019**	**Morning Session**	Mr. Nagappan Ashok Leyland
DAY 2	**20-07-2019**	**Afternoon Session**	Mr.Mariya Antony, General Manager, Renault and Nissan Ltd

PRATHYUSHA ENGINEERING COLLEGE

Department of Mechanical Engineering

Two Days National Level Workshop on Recent Trends in Automobile Engineering 19th and 20th July 2019

Attendance sheet

S.No	Name	College name	Mobile No	Signature
1	Dr. P. JAYARAMAR	PEC	9840397361	
2	Dr. V. Jayaseelan	PEC	9710693408	V. Jayaseelan
3	D. Meganathan	PEC	8144509554	D. Meganathan
4	B. SEENU	PEC	9500357386	B. Seenu
5	K. BALACHANDAR	PEC	9566357673	K. Balachandar
6	P. SARMATHKUMAR	PEC	9751565775	P. Sarmathkumar
7	R. VARTHICIS	PEC	8778854745	R. Karthi
8	R. RAGAVENDRAN	PEC	9943606753	R. Ragavendran
9	T. THIRUMALAI	PEC	9444440291	
10	PRABHU	PEC	9677288586	Prabhu
11	Logachandran	PEC	9043734624	Logachandran
12				
13				
14				

REPORT

A REPORT ON TWO DAYS NATIONAL LEVEL WORKSHOP ON RECENT TRENDS IN AUTOMOBILE ENGINEERING

Prathyusha Engineering College, Department of Mechanical Engineering has organized a two days national level workshop on "Recent trends in Automobile Engineering" from 19/07/2019 to 20/07/2019. The main objective of the workshop is to impart knowledge and exposure in recent trends in automobile engineering to the third year and final year students and faculty members from in and around College. The participants of the workshop have the great opportunity to listen and interact with eminent professor and industrial person from leading university and industries. 50 students and faculty from various colleges have participated in the workshop.

DAY 1: 19-07-2019 – Morning Session

The workshop started with an inaugural session at 10:00am with welcome address by Professor and Coordinator of the workshop Dr.P.Mohammed Ali. This national level workshop provides a platform for faculty and student to enrich their knowledge in automobile and provides vast scope for research in new and challenging areas in an automobile engineering. Workshop inaugural address was given by Head of the Mechanical Department Dr.P.Jayaraman. He emphasized on the importance of innovative engineers in the mechanical engineering field and advised on entrepreneurial opportunities by using creative techniques to use vehicles for agricultural purposes at low budget. He also recommended undergraduate students to participate in motorsport activities and design competitions, so that they gain practical knowledge and experience.

The first technical session began at 10.30am by Dr. Uma shankar, Professor, VIT University, "topic". He has explained lot about applications of Rapid prototyping in auto industry.

The inaugural session ended with vote of thanks to the inaugural chief-guest by Coordinator Dr. P.Mohammed Ali. And he esteemed gratitude to management for giving support to organize the workshop.

DAY 1: 19-07-2019 – Afternoon Session

The second speaker of the second session was Mr. Meenakshi sundaram, Director, Gates Unitta India. He gave clarity on implementation schedule of BS VI standard and challenges in introducing electric and autonomous vehicles in worldwide. He explained about the trends in

automotive industry and also gave an insight on changes in automotive sector due to electric and hybrid vehicles. Students are interacted and clarified their doubts with the speaker.

DAY 2: 19-07-2019 – Morning Session

The second day session started with the expert Mr. Nagappan Ashok Leyland, He briefly addressed the skills required for modern engineers and encouraged students to learn and develop new skills.

DAY 2: 19-07-2019 – Afternoon Session

Last session of the workshop started with Mr.Mariya Antony, General Manager, Renault and Nissan Ltd. He talks about car manufacturing, line balancing and technologies involved in manufacturing process. Finally we spoken about Integrated Process Management System and its advanced techniques, this makes participate to ask more clarification and questions based on the system.

Dr.P.Mohammed Ali, coordinator of this workshop invites Mr.N.Gopinath to proposed vote of thanks. He said his sincere gratitude to the speaker for accepting our invitation and his interesting speech. He said "successful conduct of such glorious events is possible only because of the team work of our faculty members. He also thanked all students and staff delegates who made the lecture workshop fruitful.

****

The second day session started with the talk by Prof. Dr. V. Subramanian CLRI Chennai on the prediction of nuclear magnetic resonance and electronic spectra of small molecules using density functional theory. This lecture was followed by a lecture by Prof. Baskaran , IIT, Chennai in novel organic transformations in low melting mixtures. In the afternoon session Prof. A.K. Mishra, Department of Chemistry, IIT Madras enlightened the audience with his talk on the basics of fluorescence – the principle and the interesting developments from his laboratory. The participants well utilized the networking time as provided during tea and lunch breaks to interact with speakers and seek their guidance on their process. This gathering was also an opportunity for the participants to specifically exchange experiences. In the valedictory function Prof. Dr. S. Natarajan IIS, Bangalore welcomed the dignitaries and the Prof. A.K. Mishra, Department of Chemistry, IIT Madras gave the valedictory address. All staff members and students attended the function student and staff delegated gave their feed back and expressed their delight are the success full conduct of the lecture workshop. The talks were all interesting and very informative and we would like to participate in more of such lecture workshops"

commended one participant from M.S.University, Thirunelveli. The workshop was well organised and the hospitality is highly appreciated" quoted Dr. K.Sarada, Faculty, A.P.C Mahalaxmi college, Tuticorin. The workshop concluded at 4.30 P.M on 27th feb2016 GNIT principal, Dr. S. Sreenatha Reddy explained the importance of student teams and student clubs to promote co-curricular activities for student development. He encouraged students to participate in workshops and training programs which would aid them to learn practically. CEO of ISNEE, Mr. Umesh Kumar The Chief guest of the workshop Dr. K. Supradeepan congratulated the Mechanical Department and Team Super Ignite from GNIT for winning in multiple national level go-karting events.

PHOTOS

PRATHYUSHA ENGINEERING COLLEGE

ESTD. 2001

Date : 06.12.2019

CIRCULAR

There will be a training session on Quantitative Aptitude by Mr. Hemchandar from M/s. **Six Phrase – The Finishing School [University of Cambridge Authorized Preparation Center]** for the faculties of Mathematics Department at Mega Lab on 07.12.2019 from 8.00a.m. to 4.00p.m. All the members of the Mathematics department are informed to attend without fail.

PRINCIPAL

Copy to:

HOD/First Year

All the faculties of Mathematics

07.12.2019

PRATHYUSHA ENGINEERING COLLEGE

QUANTITATIVE APTITUDE TRAINING

ATTENDANCE SHEET

The list of faculties attended Quantitative Aptitude Training at Mega lab on 07.12.19

1. Mr.K.Boobalan
2. Ms.S.Sangeetha -
3. Ms.A.Ezhilarasi -
4. Mr.R.Vinod Kumar
5. Ms.S.Sangeethaveni
6. Ms.S.Nithyajothi
7. Mr.K.Srinivasan -
8. Ms.G.Chitradevi

PRATHYUSHA ENGINEERING COLLEGE
Department of Mathematics

Report on Quantitative Aptitude Training

Venue : MEGA LAB

Anchor :

Mr.Hemchandar
Six Pharse- The Finishing School[University of Cambridge Authorized Preparation Center]

Date : 07/12/2019

Participant :

Mr.K.Boobalan
Ms.S.Sangeetha
Ms.A.Ezhilarasi
Mr.R.Vinod Kumar
Ms.S.Sangeethaveni
Ms,S.Nithyajothi
Ms.G.Chitradevi
Mr.K.Srinivasan

The session was started on 8.00 a.m sharply. The topics discussed in the morning session are

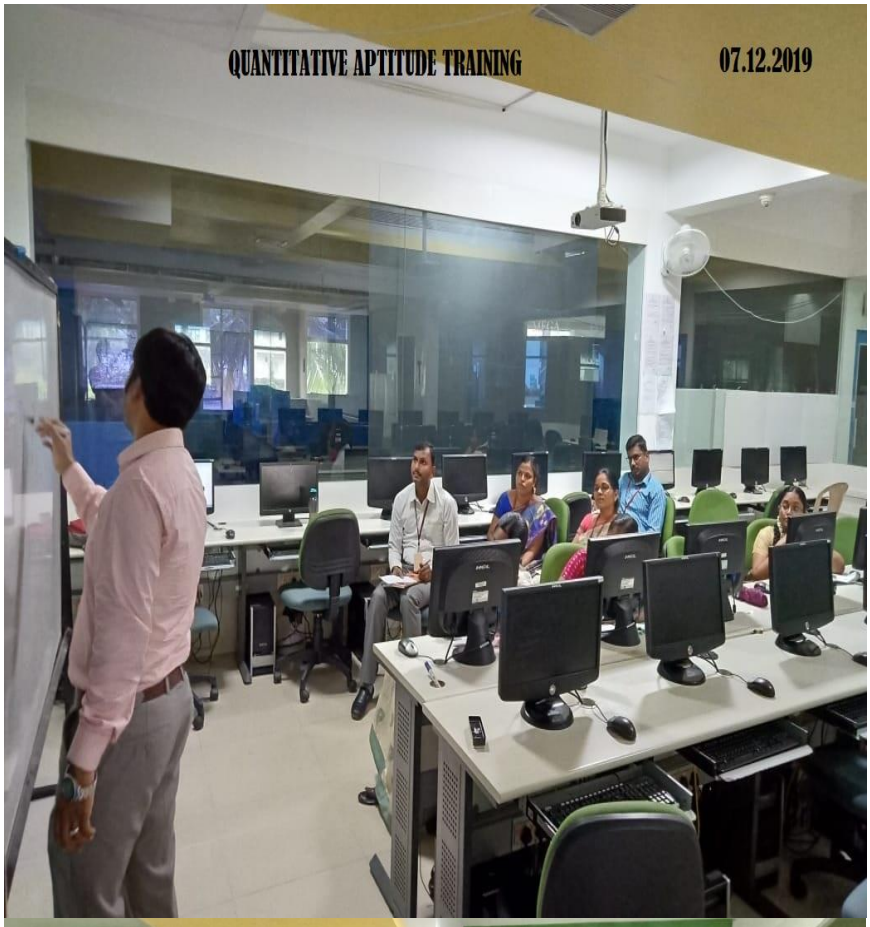
- Numbers
- Divisibility
- Finding Unit place and last two digits
- Time and work shortcuts for all these methods

In the Afternoon session

- Percentage
- Profit and Loss
- Averages
- Pipes and Cistern
- Ratio and proportion

- Mixture & Allegations topics were covered.

He gave some problems for practice during the sessions. Also he shared the website details for Aptitude and You tube channels for problems and shortcuts. Overall the training was very useful.



07.12.2019

QUANTITATIVE APTITUDE TRANING

QUANTITATIVE APTITUDE TRAINING

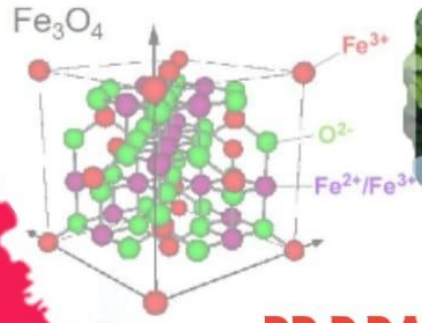
07.12.2019

PRATHYUSHA ENGINEERING COLLEGE

DEPARTMENT OF PHYSICS

WEBINAR

RECENT ADVANCES IN CRYSTAL TECHNOLOGY



DR.P.RAJESH M.SC.,PHD.

ASST.PROF/PHYSICS

SSN COLLEGE OF ENGINEERING

28.05.20

REGISTER:

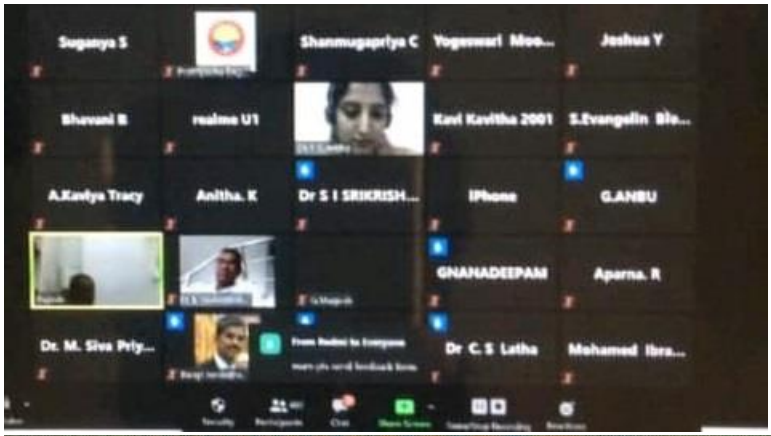
https://prathyusha.edu.in/event/webinar1-physics/

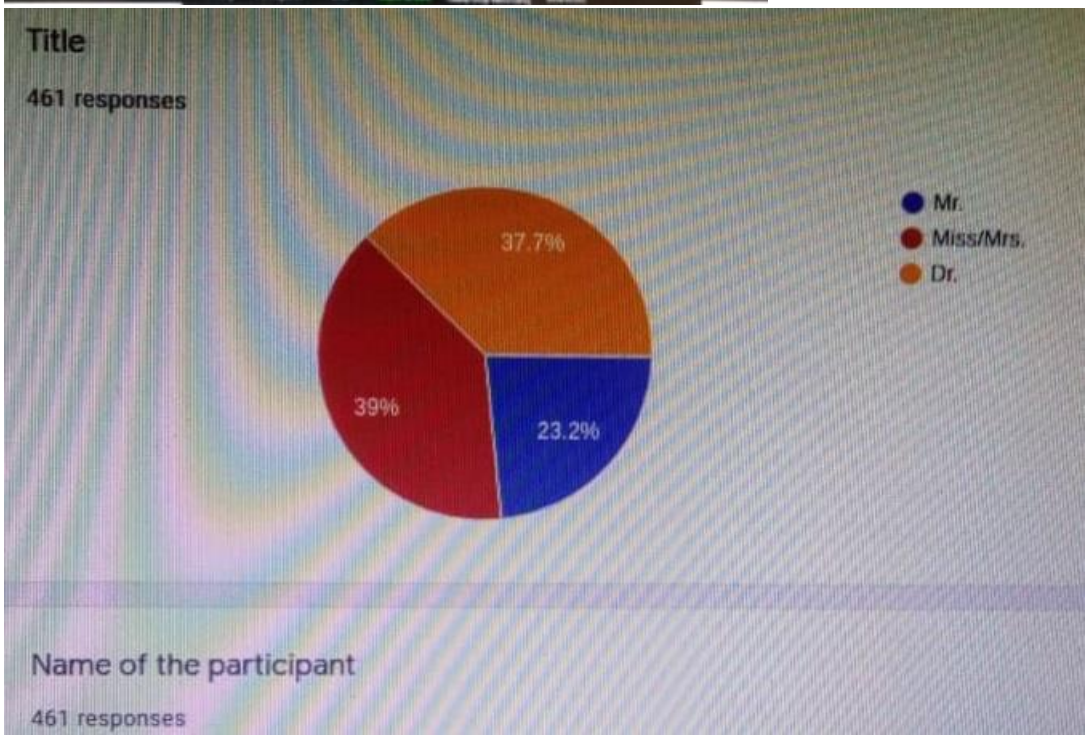
4.00 P.M to 5.00 P.M

CONTACT US:
www.prathyusha.edu.in,9843192763

1110
COUNSELLING CODE


Recent Advances in Crystal Growth Technology
Dr. P. RAJESH
Department of Physics
SSN College of Engineering
Prathyusha Engineering College, Poonamallee, Chennai.
GANBU


Suganya S
Shanmugapriya C
Yogeswari Moo...
Joshua Y
Bhavani B
realme U1
Kavi Kavitha 2001
S.Evangelin Ble...
A.Kavitya Tracy
Anitha. K
Dr S I SRIKRISH...
IPhone
G.ANBU
GNANADEEPAM
Aparna. R
Dr. M. Siva Priy...
Dr C.S Latha
Mohamed Ibra...

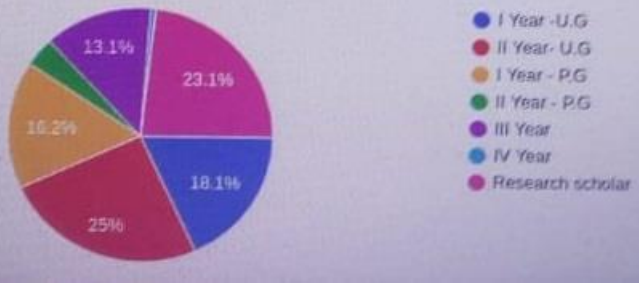

Title
461 responses
37.7%
39%
23.2%
Mr.
Miss/Mrs.
Dr.
Name of the participant
461 responses

Type of participant

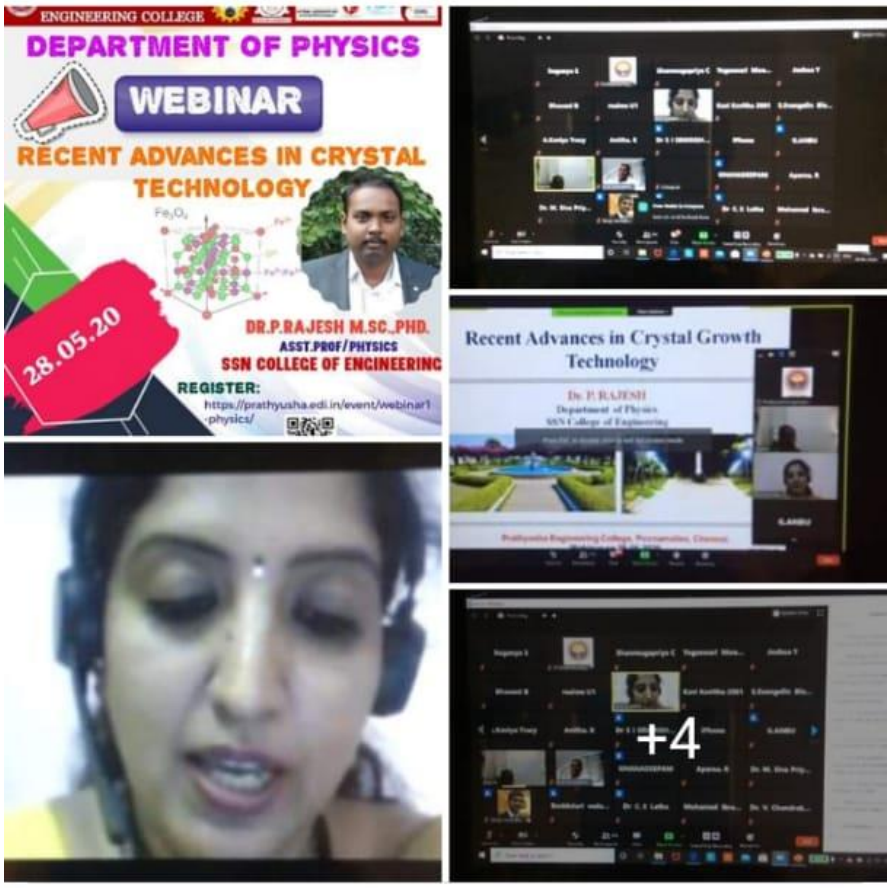
462 responses

If student mention your year of study

160 responses



on my research skills for having refined!



Dina Prasad
Congratulations mam 1
3w Like Reply

PRATHYUSHA ENGINEERING COLLEGE
RECENT ADVANTAGES IN CRYSTAL TECHNOLOGY
ATTENDANCE SHEET

Title	Name of the participant	Name of your Institution/Organisation	Residing place of parti	Type of participant	If student mention your year of study
Miss/Mrs.	R Chithra Devi	N K R Government Arts College for Women	Namakkal	Faculty	
Dr.	M. Vijayalakshmi	A.V.C. College (Auto.), Mannampandal, Mayiladuthu	43, A.T.P.Road, Mayilad	Faculty	
Dr.	N. Sangeetha	A.V.C.College (Autonomous)	Mannampandal, Mayilad	Faculty	
Dr.	Dr.K.Sureshkumar	Aalim Muhammed Salegh College of Engineering	Chennai	Faculty	
Dr.	B.Dhanalakshmi	Aarupadai Veedu Institute of Technology	Thirukazhukundram	Faculty	
Dr.	Dhanalakshmi B	Aarupadai Veedu Institute of Technology	Thirukkalukundram	Faculty	
Dr.	KAVYASHREE.D	ACHARYA INSTITUTE OF TECHNOLOGY BANGA	BANGALORE	Faculty	
Dr.	S Sundramoorthy	Agni College of Technology	Chennai	Faculty	
Mr.	SARAVANAN.N	ADHIPARASAKTHI COLLEGE OF ENGINEERING	Vandavasi	Faculty	
Mr.	HARI MURALI KRISHNA	ADITYA DEGREE COLLEGE FOR WOMEN, KAKI	KAKINADA	Faculty	
Miss/Mrs.	BOSHIYA A	Agurchand Manmull Jain college	Chennai	Student (Science major)	II Year- U.G
Dr.	Kirakala Kiran Kumar	AITS (Autonomous), Tirupatl.	Tirupati	Faculty	
Miss/Mrs.	Uma S	Anand institute of higher technology	Chrompet	Others	
Miss/Mrs.	K.SeshuLatha	Andhra Loyola College	Vijayawada	Faculty	
Miss/Mrs.	Gunjan Mahajan	Andhra Loyola College, Vijayawada	Vijayawada	Faculty	
Mr.	ARUNKUMAR N	Anjalai Ammal Mahalingam Engineering College	Thanjavur	Faculty	Research scholar
Miss/Mrs.	ATHULYA. P.M	Anna Adarsh College For Women	Kolathur, Chennai	Student (Science major)	II Year- U.G
Miss/Mrs.	Sarada Das	Anna Adarsh College for women	Chennai	Student (Science major)	I Year -U.G
Miss/Mrs.	SARADA DAS	Anna Adarsh College for women	Chennai	Student (Science major)	I Year -U.G
Miss/Mrs.	Nivetha. K	Anna Adarsh College For Women	Ayanavaram, Chennai	Student (Science major)	II Year- U.G
Miss/Mrs.	Megala.M	Anna adarsh college for women	Chennai	Student (Science major)	II Year- U.G
Miss/Mrs.	SATHYAPRIYA S A	ANNA ADARSH COLLEGE FOR WOMEN	CHENNAI	Student (Science major)	II Year- U.G
Miss/Mrs.	GAYATHRI.S	Anna Adarsh college for women	Chennai	Student (Science major)	III Year
Miss/Mrs.	Yashwanthy A	Anna Adarsh College For Women	Chennai	Student (Science major)	II Year- U.G
Dr.	G. Boopathi	Anna University	Chennai	Others	
Miss/Mrs.	S bhavani	Anna university	Chennai	Others	
Dr.	Dr. Mani Prahaspathy	Anna University - BIT Campus, Tiruchirappalli - 24	Tiruchirappalli - 24	Faculty	
Dr.	Sathyaseelan Balaraman	Anna University College of Engineering Arni	Vellore	Faculty	
Miss/Mrs.	G.Golding Sheeba	Annai Vailankanni College Of Engineering	Santhapuram	Faculty	
Dr.	Dr.A.Rohini	Annai violet arts and science college	Chennai	Faculty	
Dr.	Dr.A.Rohini	Annai violet arts and science college	Chennai	Faculty	
Dr.	K. Ramya	Annamacharya Institute of Technology and Science	Tirupati	Faculty	
Dr.	S. Bakkialakshmi	Annamalai university	Chidambaram	Faculty	
Dr.	B.SHANTHI	Annamalai University	Chidambaram	Faculty	
Miss/Mrs.	Miss. V. SUHIRTHA M. Sc., M. F	Anugraha Institute of Social Sciences, Dindigul	Dindigul	Faculty	
Miss/Mrs.	A.Poongodi	AP	Gobi	Faculty	
Miss/Mrs.	V.Jayanthi	Arcot Sri Mahalakshmi Women's College	Vellore	Faculty	
Miss/Mrs.	R. SITHARA BANU	ARIGNAR ANNA GOVERNMENT ARTS COLLEGE	DEPARTMENT OF PHY	Faculty	
Miss/Mrs.	G T UMAMAHESWARI	ARIGNAR ANNA GOVT ARTS COLLEGE ATTUR	Attur	Faculty	
Dr.	Vaithiyanathan	Arignar Anna Govt Arts College Villupuram	Villupuram	Faculty	
Dr.	SATHEESH KUMAR K S	ARIGNAR ANNA GOVT. ARTS COLLEGE, VILLUP	PONDICHERRY	Faculty	
Mr.	Arun Kumar s	Arjun college of engineering and technology	Theni	Student (Engineering)	
Miss/Mrs.	V.BUVANESWARI	ARUL ANANDAR COLLEGE (AUTONOMOUS), KA	DINDIGUL	Faculty	
Dr.	Dr.M.SUBHA	Arulmigu Palaniandavar college of Arts and Culture	Palani	Faculty	
Dr.	K.PAKIYARAJ	Arulmigu Palaniandavar College of Arts and Culture	Palani	Faculty	
Miss/Mrs.	C.DEEPA	Assistant professor	5/261, ponniamman koil	Faculty	Research scholar
Dr.	R. Naresh Muthu	Assistant Professor of Physics	JP College Road, Agara	Faculty	
Mr.	Priyadarshini.M	Avinashilingam Institute for Home Science and Higl	Coimbatore	Student (Science major)	I Year - P.G
Miss/Mrs.	AKSHAYA NATARAJAN	Avinashilingam institute of home science and highe	Tirupur	Others	I Year -U.G
Mr.	R.Kirubakaran	AYYA NADAR JANAKI AMMAL COLLEGE	SIVAKASI	Faculty	
Dr.	F. YOGAM	AYYA NADAR JANAKI AMMAL COLLEGE SIVAKA	SIVAKASI	Faculty	
Mr.	Jinesh V N	Bangalore University	Kengeri, Bangalore	Faculty	
Dr.	P. Divya	Bhaktavatsalam Memorial College for Women	Ambattur	Faculty	
Miss/Mrs.	Sakshi.S	Bhaktavatsalam Memorial College for Women	Thiruthani	Student (Science major)	II Year- U.G
Miss/Mrs.	Dhaarane T K S	Bhaktavatsalam memorial college for women	Chennai	Student (Science major)	II Year- U.G
Miss/Mrs.	Jainy	Bhaktavatsalam memorial college for women	Chennai	Student (Science major)	II Year - P.G
Dr.	S.Renuga	Bhaktavatsalam Memorial College for Women kora	Chennai	Faculty	
Miss/Mrs.	BHUVANESHWARI.K	Bhakthavatsalam memorial college for women	Redhills	Student (Science major)	I Year - P.G
Mr.	K.Seevakan	Bharath Institute of Higher Education & Research, (	Chennai	Faculty	
Dr.	N. Marimuthu	Bharath institute of higher education and research	Chennai	Faculty	
Dr.	Dr. P.S. Vasuhi	Bharathi Women's College (Autonomous),Chennai	Selaiyur, East Tambara	Faculty	
Miss/Mrs.	R.M.Indirani	Bharathi Women's College, Chennai - 108	Perungalathur	Faculty	
Miss/Mrs.	ANURADHA R	Bharathiar university	Panruti	Student (Research)	Research scholar
Dr.	K.G.Padmasine	Bharathiar University	Coimbatore	Faculty	Research scholar
Dr.	K.G.Padmasine	Bharathiar University	coimbatore	Faculty	
Miss/Mrs.	Anitha Thirumalaisamy	Bharathiar University	Udumalpet	Student (Research)	Research scholar
Miss/Mrs.	Student	Bharathidasan university constituent model arts and	K. Eraiyur	Student (Science major)	III Year
Miss/Mrs.	Kohila. T	Bharathidasan university constituent model arts and	K. Eraiyur	Student (Science major)	III Year
Miss/Mrs.	KALAISELVI G	Bharathidasan University constituent model arts an	Veppur, Perambalur.	Faculty	
Miss/Mrs.	KALAISELVI G	Bharathidasan University constituent model arts an	Perambalur.	Faculty	
Miss/Mrs.	KALAISELVI G	Bharathidasan University constituent model arts an	Perambalur.	Faculty	
Miss/Mrs.	JANARTHINI.M.S	Bharathiyar University	Coimbatore	Student (Science major)	I Year - P.G
Dr.	Mary Saroja A	Bharatiyar college of Engineering & Technology, Ka	Karaikal	Faculty	
Miss/Mrs.	Nishasri	Bhatavatsalam memorial college for women	Student	Student (Science major)	I Year - P.G
Dr.	S. GOMATHI	BMC	Chennai	Faculty	
Miss/Mrs.	V.Subbukutti	BMC	Chennai	Others	
Mr.	PRAMOD KUMAR K	BMS COLLEGE FOR WOMEN	Bangalore	Faculty	
Mr.	S BASKARAN	BWDA ARTS AND SCIENCE COLLEGE	THAZHUDALI	Faculty	
Dr.	D. LAKSHMANAN	C.ABDUL HAKEEM COLLEGE OF ENGINEERING	Vellore	Faculty	
Mr.	Mr.A.Ubaithulla Baig	C.Abdul Hakeem College of Engineering and Techr	Vellore	Faculty	
Dr.	Dr. S. Vadivel	C.Abdul Hakkem College of Engineering and Techr	Vellore	Faculty	
Dr.	Rakesh Kumar	Central University of Haryana	Mahendragarh	Faculty	
Mr.	Sathish S	Chennai Institute of Technology	Chennai	Faculty	
Miss/Mrs.	S. Geetha	Chevalier T. Thomas Elizabeth College for Women,	Chennai	Faculty	
Mr.	PRADEEP KUMAR G	CHRIST THE KING POLYTECHNIC COLLEGE	COIMBATORE	Faculty	
Dr.	M. Siva Priya	Christopher Arts and Science College (Women)	Tirunelveli	Faculty	
Miss/Mrs.	B.ANITHA	CK College of Engineering and Technology	Cuddalore	Faculty	Research scholar
Miss/Mrs.	P.Radhika	CMR TECHNICAL CAMPUS	Hyderabad	Faculty	Research scholar
Miss/Mrs.	P.Radhkia	CMR Technical campus	Kandlakoya	Faculty	Research scholar
Mr.	K N S SRI HARSHA	CMRIT	Hyderabad	Student (Engineering)	II Year- U.G
Mr.	Ian Karl C. Lacanlale	CNHS	Bulacan	Student (Science major)	
Dr.	P THILLAI ARASU	College of Natural and Computational Science, Wol	Ethiopia	Faculty	
Miss/Mrs.	W. JENIFER	CSI college of arts and science for women's	Madurai	Faculty	
Dr.	Dr. D. Sridevi	D G Vaishnav College Chennai	Chennai	Faculty	
Dr.	Dr.B.Sylaja	D G VAISHNAV COLLEGE, CHENNAI	ADAMBAKKAM	Faculty	
Miss/Mrs.	K. Gomathi	D.G. Vaishnav College, Chennai	Adambakkam	Faculty	
Mr.	P.SATHISHKUMAR	D.G.Vaishnav College, Chennai,TN	Chennai	Faculty	
Mr.	Sathish Kumar P	D.G.Vaishnav College, Chennai,TN	Chennai	Faculty	
Dr.	S.SANTHA LAKSHMI	D.K.M. COLLEGE FOR WOMEN	5/11, LO, PONNI AMMA	Faculty	

Mr.	SOMA SEKHAR	Dadi Institute of Engineering and Technology	Visakhapatnam	Faculty	
Dr.	Dr. P. NARAYANAN	Department of Physics Agurchand Manmull Jain Co	CHENNAI	Faculty	
Dr.	R. Siddheswaran	Department of Physics, Pachaiyappa's College, Ch	Chennai	Faculty	
Dr.	Dr.M.RAJALAKSHMI	Department of theoretical physics, university of Mac	Tambaram	Faculty	
Mr.	LT I.PRITHIVI RAJ	Dept of Physics, SIVET COLLEGE	Chennai	Faculty	Research scholar
Dr.	T.SUJATHA	Dept of Physics, SIVET COLLEGE	Chennai	Faculty	
Dr.	T.SUJATHA	Dept of Physics, SIVET COLLEGE	Chennai	Faculty	
Miss/Mrs.	POURKODEE D	DG VAISHNAV COLLEGE, CHENNAI	CHENNAI	Faculty	
Dr.	Sugumar Paramasivam	Dhaanish Ahmed College of Engineering	Chennai	Faculty	
Dr.	Sugumar Paramasivam	Dhaanish Ahmed College of Engineering	Chennai	Faculty	
Dr.	Dr. V. Chithambaram	Dhanalakshmi college of engineering	Ranippettai	Faculty	
Mr.	Jaikumar R	Dhirajlal Gandhi College of Technology	Salem	Faculty	
Mr.	VIJAYANATH S	Dhirajlal Gandhi College of Technology, Salem	Salem	Faculty	Research scholar
Dr.	D. Rajeswari	Dhirajlal Gandhi College of Technology, Salem	Salem	Faculty	
Mr.	VIJAYANATH S	Dhirajlal Gandhi College of Technology, Salem	Salem	Faculty	Research scholar
Miss/Mrs.	Bharathi Priyadharsini.R	DKM College for Women	Vellore	Student (Research)	Research scholar
Dr.	R. Ravibaskar	DMI - St. Eugene University, Lusaka, Zambia	Lusaka, Zambia	Faculty	
Dr.	Arockiasamy Ajay Praveenkuma	DMI St Eugene University, Zambia	Chibambo, Lusaka, Zan	Faculty	
Dr.	C Andal	Dr MGR Educational and research Institute	Chennai	Faculty	
Miss/Mrs.	PRIYADURAIRAJ	DR MGR EDUCATIONAL AND RESEARCH INSTIT	CHENNAI	Student (Engineering)	
Dr.	Dr.S.Chellammal Dr.mgr ERI	dr mgr educational and research institute	chennai	Faculty	
Dr.	C Andal	Dr MGR Educational and research Institute	Chennai	Faculty	
Dr.	Kavitha.U	Dr MGR university	Arakkonam	Student (Science major)	II Year- U.G
Mr.	ABU.S.V	DR. M.G.R. Research and Educational Institution	Kanyakumari	Student (Science major)	II Year- U.G
Miss/Mrs.	ARTHI. D	Dr. MGR educational and research institute	Cuddalore District	Student (Science major)	I Year - P.G
Miss/Mrs.	ARTHI. D	Dr. MGR Educational and Research Institute	Neyveli	Student (Science major)	I Year - P.G
Miss/Mrs.	Pavithra. S	Dr. MGR educational and research institute	Chennai	Student (Science major)	I Year - P.G
Dr.	SUBETHA. K	Dr. Mgr university	Chennai	Faculty	III Year
Miss/Mrs.	V.Pavithra	Dr.M.G.R Educational and Research Institute	Chennai	Student (Science major)	III Year
Miss/Mrs.	Divya dharshini .J	Dr.M.G.R educational and research institute	Chennai	Student (Science major)	III Year
Dr.	Dr.Viji Vinod	Dr.M.G.R Educational and Research Institute	chennai	Faculty	
Miss/Mrs.	SHYAMALA.E	Dr.m.g.r.Educational and Research Institute univers	Chennai	Student (Science major)	III Year
Miss/Mrs.	SHYAMALA.E	Dr.m.g.r.Educational and Research Institute univers	Chennai	Student (Science major)	III Year
Dr.	Dr.V.Bharathi Devi	Dr.M.G.R.University,Chennai	chennai	Faculty	
Mr.	DIVYA BHARATHI.K	Dr.mgr education and research institute	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	P.S.Deepa Lakshmi	Dr.MGR Educational And Research Institute	Anna Nagar West Ext. (	Faculty	
Mr.	Jayakumar.J	Dr.Mgr educational and research institute	Chennai	Student (Science major)	I Year - P.G
Dr.	Dr.K.J.Sharmila	Dr.MGR Educational and research institute	Ayapakkam	Faculty	
Miss/Mrs.	PAVINA.S	DR.MGR EDUCATIONAL AND RESEARCH INSTIT	Chennai	Others	II Year- U.G
Mr.	Jayakumar.J	Dr.Mgr educational and research institute	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	PAVINA.S	DR.MGR EDUCATIONAL AND RESEARCH INSTIT	Chennai	Others	II Year- U.G
Dr.	E.Kavitha	Dr.MGR Educational and research Institute	Chennai	Faculty	
Miss/Mrs.	KAYASHRINI S	Dr.MGR EDUCATIONAL and RESEARCH INSTITU	BscPhysics	Student (Science major)	II Year- U.G
Miss/Mrs.	G.jansi rani	Dr.mgr educational and research institute /student	Chennai	Student (Science major)	III Year
Miss/Mrs.	S.Arokya Abisha	Dr.MGR Educational and Research Institute Univer	Chennai	Student (Science major)	III Year
Mr.	Vinoth	Dr.mgr University	Chennai	Student (Science major)	II Year- U.G
Miss/Mrs.	T.V.Selvi priya	Dr.MGR University educational and research institu	Chennai	Others	III Year
Miss/Mrs.	T.V.Selvi priya	Dr.MGR University educational and research institu	Ambathur	Student (Science major)	III Year
Mr.	MANI M	Dr.NGP INSTITUTE OF TECHNOLOGY	COIMBATORE	Faculty	
Dr.	Dr. S. Chellammal drmgr ERI	Drmgr educational and research institute university	Chennai	Faculty	
Dr.	M.XAVIER SURESH	DSCET	CHENNAI	Faculty	
Miss/Mrs.	D.KIRUTHIKA	DSIRT	Siruvachur- perambalur	Student (Science major)	
Dr.	Dr.V.RENGANAYAKI	DWARAKA DOSS GOVERDHAN DOSS VAISHNA	CHENNAI	Faculty	
Dr.	Dr.N.Moorthy	E.G.S Pillay Engineering College (Autonomous), Na	Nagapattinam	Faculty	
Miss/Mrs.	Radha Jayalakshmi .V	E.M.G Yadava Women's College	Madurai	Faculty	
Miss/Mrs.	Radha Jayalakshmi.V	E.M.G Yadava Women's College	Madurai	Faculty	
Miss/Mrs.	BHAKYA K	EDAYATHANGUDY G S PILLAY ARTS AND SCIEI	NAGAPATTINAM	Faculty	
Mr.	S.MUTHUKRISHNAN	Er.Perumal Manimekalai College of Engineering	Hosur	Faculty	
Dr.	A THIRUGNANASUNDAR	Erode arts and science college	Gobichettipalayam, Ero	Faculty	
Miss/Mrs.	Aishwaryaadevi. P	Erode Arts and Science College	Namakkal	Student (Science major)	II Year - P.G
Dr.	DR.S.VIJAYALAKSHMI	Erode arts and science college	Erode	Faculty	
Dr.	M.BALACHANDRAMOHAN	ERODE ARTS AND SCIENCE COLLEGE (AUTON	ERODE	Faculty	
Dr.	Dr.M.BALACHANDRAMOHAN	ERODE ARTS AND SCIENCE COLLEGE (AUTON	ERODE	Faculty	
Dr.	P. Gowthaman	Erode arts and science college, Erode	Erode	Faculty	
Dr.	K. SELVARAJU	Erode Arts and Science College, Erode-9	Erode	Faculty	
Miss/Mrs.	P.Aishwaryaadevi	Erode arts and science college. Erode	Namakkal	Student (Science major)	II Year - P.G
Dr.	B. Uma	Ethiraj College for Women	9/76, Sakthivel Nagar, F	Faculty	
Miss/Mrs.	Gayathri G	Ethiraj College For Women	Chennai	Student (Science major)	II Year- U.G
Miss/Mrs.	Revathi S	Ethiraj college for women	Tiruvallur	Student (Science major)	II Year- U.G
Miss/Mrs.	B Kirubanithi	Ethiraj College for Women	Dharapuram	Student (Science major)	II Year- U.G
Miss/Mrs.	S.S.Akshaya	Ethiraj College for Women	Chennai, Tamil Nadu	Student (Science major)	II Year- U.G
Dr.	V. Chandrakala	Ethiraj College for Women	Chennai	Faculty	
Miss/Mrs.	G.Bella Jeevamani	Ethiraj College for Women	Chennai	Faculty	
Dr.	S.Leela	Ethiraj college for women,	Chennai	Faculty	
Dr.	Ganesh G	Excel Engineering College, Komarapalayam	Avadi, Chennai	Faculty	
Dr.	Dr.R.Niranjana Devi	Fatima college	Madurai	Faculty	
Dr.	R.Selvaraju	Feat Annamalai University Annamalai nagar	Chidambaram	Faculty	
Miss/Mrs.	E. Francy Irudaya Rani	Francis Xavier Engineering College	Tirunelveli	Faculty	
Dr.	K. JEYAPAPPA	Francis Xavier Engineering College	Tirunelveli	Faculty	
Dr.	G.Magesh	G.Magesh	Coimbatore	Faculty	
Mr.	Siddoju Rajesham	Geethanjali College of Engineering and Technology	Hyderabad	Faculty	
Mr.	Anbu.G	Git	Vellore	Faculty	
Dr.	Dr. Venkatesha Rama Hathwar	Goa University	Goa	Faculty	II Year - P.G
Miss/Mrs.	N.SUMATHI	Government arts college for women, Nilakottai	Periyakulam	Faculty	
Miss/Mrs.	N.SUMATHI	Government arts college for women, Nilakottai	Periyakulam	Faculty	
Dr.	S. Venkateshwari	Government Arts College udhagamandalam	Udhagamandalam	Faculty	I Year -U.G
Dr.	S.SRIKANTH	Government Arts College, Udumalpet	Coimbatore	Faculty	
Dr.	S.KAMATCHI	Government arts college,c.mutlur,chidambaram	Chidambaram	Faculty	
Dr.	Dr. P. SARITHA	Government College of engineering, Sengipatti, Tha	Thanjavur 613402	Faculty	
Dr.	Ajay Singh Dadwal	Government degree college, R. S. Pura, Jammu	Jammu	Faculty	
Dr.	N.KANDASAMY	GOVERNMENT POLYTECHNIC COLLEGE, VANA	SALEM	Faculty	
Dr.	CHETANKUMAR KANUBHAI C	Government Science College, Gandhinagar	Gandhinagar	Faculty	
Miss/Mrs.	SAJITHA N M	GOVT . COLLEGE MADAPPALLY ,VADAKARA ,67	NADUPARAMBIL (HOU	Faculty	
Dr.	K.KANNAKI	GOVT ARTS & SCIENCE COLLEGE FOR WOMEN	BARGUR	Faculty	
Miss/Mrs.	Anamika Bansal	Govt Girls Sen Sec School, Abohar, district Fazilka,	Abohar	Faculty	
Miss/Mrs.	Shruti vyas	Govt holkar science college indore	Khategaon	Student (Science major)	III Year
Miss/Mrs.	SAJITHA N M	GOVT. COLLEGE MADAPPALLY , VADAKARA	NADUPARAMBIL (HOU	Faculty	
Mr.	GAURAV	Govt. Shyam Sundar Agrawal College, Sihora, Jaba	Jabalpur	Faculty	
Miss/Mrs.	DHARANI M	GRT college of education	Tiruttani	Student (Science major)	
Mr.	KARTHICK S	GRT Institute of Engineering and Technology	Tiruttani	Faculty	
Mr.	B Mallesh	Guru Nanak Institute of Technology	Hyderabad	Faculty	
Mr.	Prahladsinh jadeja	H. & H.B. kotak institute of science	Rajkot	Student (Science major)	I Year - P.G
Mr.	Prahladsinh jadeja	H. & H.B. kotak institute of science	Rajkot	Student (Science major)	I Year - P.G
Mr.	Pandit Tushar Prashant	H. V. Desai College	Pune	Student (Research)	

Mr.	Prabaharan K	Hindustan college of engineering and technology	Coimbatore	Faculty	
Dr.	G Rajarajan	Hindustan Institute of Technology and Science	Kelambakkam	Faculty	
Dr.	D. PRAKASH	Hindusthan Institute of Technology	Coimbatore	Faculty	
Miss/Mrs.	Pallavi soni	Holkar science college (indore)	Biaora, district rajgarh, (	Student (Science major)	III Year
Miss/Mrs.	M. Abila Jeba Queen	Holy Cross College, Nagercoil	Nagercoil	Faculty	
Miss/Mrs.	A.Bharathi	Idhaya college for women	Mayiladuthurai	Faculty	
Miss/Mrs.	R.Menaka	Idhaya college for women	Kumbakonam	Faculty	Research scholar
Miss/Mrs.	Mrs. R. SASIREKABAI	IDHAYA COLLEGE FOR WOMEN, KUMBAKONAM	Kumbakonam	Faculty	
Dr.	P.Vijayakumar	IITM	Chennai	Others	
Miss/Mrs.	Divya. B	Immaculate college for women	Cuddalore	Student (Science major)	II Year- U.G
Miss/Mrs.	Nirosha. S	Immaculate college for women	Cuddalore	Student (Science major)	III Year
Mr.	Kalaivani.k	Immaculate college for women, cuddalore	Cuddalore	Student (Science major)	II Year- U.G
Dr.	E. Parasuraman	Indian Academy Degree College-Autonomous	Bangalore	Faculty	
Mr.	RAJESHKUMAR. R	Jai shriram engineering college	Tiruppur	Student (Engineering)	III Year
Dr.	Jitendra kumar	Jaipur Engineering College, Jaipur	Etawah, Uttar Pradesh	Faculty	
Dr.	Jitendra kumar	Jaipur Engineering College, Jaipur	Etawah, Uttar Pradesh	Faculty	
Miss/Mrs.	P. AISWARYA LAKSHMI	JAMAL MOHAMED COLLEGE(AUTONOMOUS), TI	THITUCHIRAPALLI, TA	Faculty	
Miss/Mrs.	G. PRAGADEESWARI	JAMAL MOHAMMAD COLLEGE	TRICHIRAPPALLI	Faculty	
Miss/Mrs.	B. PANDEESWARI	Jayaraj Annapackiam college for women	Theni	Faculty	
Miss/Mrs.	Ms.N.Vinothini	Jayaraj Annapackiam college for women (Autonom	Theni	Faculty	
Miss/Mrs.	Miss Sowbarnika R	Jayaraj annapackiyam college for women Autonom	Theni	Faculty	
Miss/Mrs.	Miss Sowbarnika R	Jayaraj annapackiyam college for women Autonom	Theni	Faculty	
Mr.	Teja Swaroop	Jb institute of engineering and technology	Miryalguda	Student (Engineering)	I Year -U.G
Mr.	Teja Swaroop	Jb institute of engineering and technology	Miryalguda	Student (Engineering)	I Year -U.G
Miss/Mrs.	Vinukonda sneha	Jbiet	Khammam	Student (Engineering)	I Year -U.G
Mr.	J.uday kiran Reddy	JBIET	Hyderabad	Student (Engineering)	I Year -U.G
Dr.	S.R. Thilagavathy	Jeppiaar Engineering College	Chennai	Faculty	
Dr.	I. MONICA CHANDRAMALAR	JEPPIAAR ENGINEERING COLLEGE	CHENNAI	Faculty	
Mr.	F.REGAN MARIA SUNDAR RAJ	Jeppiaar Engineering College	Chennai	Faculty	
Dr.	Vijayalekshmi.S	Jeppiaar Institute of Technology	Chennai	Faculty	
Dr.	Dr. V. AZEEZAA	JEPPIAAR SRR ENGINEERING COLLEGE	CHENNAI	Faculty	
Miss/Mrs.	BOBBALA JYOTHI	JNTUH	HYDERABAD	Student (Research)	
Dr.	SRINIVASAREDDY K	JNTUHCEH	HYDERABAD	Faculty	
Miss/Mrs.	Saba Anjum.S.A	Justice Basheer Ahmed Sayeed college for women	No 10 Sri Muthu Nagar	Student (Science major)	
Miss/Mrs.	M. A. Raabiyathul firdous	Justice Basheer Ahmed Sayeed college for women	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	Sangeetha.S	Justice basheer ahmed sayeed college for women	Ambattur,chennai	Student (Science major)	I Year - P.G
Dr.	V.DEVABHARATHI	K S R INSTITUTE FOR ENGINEERING AND TECH	ERODE	Faculty	
Dr.	S SARAVANAN	K. RAMAKRISHNAN COLLEGE OF TECHNOLOG\	Trichy	Faculty	Research scholar
Dr.	Mahanthesh M	K.L.E. Society's P.C. Jabin Science College,Hubbal	Hubballi	Faculty	
Miss/Mrs.	G.Suganya	K.Ramakrishnan College of Technology	Trichy	Faculty	
Miss/Mrs.	E.KAYALVIZHI NANGAI	K.RAMAKRISHNAN COLLEGE OF TECHNOLOGY	TRICHY	Faculty	Research scholar
Mr.	KALAIVANAN	K.Ramakrishnan college of technology	Trichy	Faculty	
Mr.	KALAIVANAN	K.Ramakrishnan college of technology	Trichy	Faculty	
Dr.	N.KARTHIKEYAN	K.S.K. COLLEGE OF ENGINEERING AND TECHN	THANJAVUR	Faculty	
Mr.	NANDAKUMAR G	K.S.R. COLLEGE OF ENGINEERING	NAMAKKAL, TAMILNAI	Student (Engineering)	II Year- U.G
Mr.	K.VIGNESHWARAN M.Sc.,B.Ed	Kalaimagal higher secondary school	Dindigul	Faculty	
Mr.	V. Manirathinam	Kalasalingam university	Dharmapuri	Student (Research)	Research scholar
Dr.	Sudhaa Sundaresan	Kanchi Shri Krishna College of Arts and Science, K	Kancheepuram	Faculty	
Miss/Mrs.	Anusree N Prakash	Kannur University	Kasaragod	Others	
Dr.	C. Amuthambigai	Karpagam Institute of Technology	Coimbatore	Faculty	
Dr.	S. NALINI JAYANTHI	KCG COLLEGE OF TECHNOLOGY	K K NAGAR	Faculty	
Miss/Mrs.	S. TAMIL SELVI	KCG College of Technology	Chennai	Faculty	
Mr.	M. VASANTHA KUMAR	king nandhivarman collage of arts and science	gingee	Student (Science major)	III Year
Mr.	V.NANDHAGOPAL	King Nandhivarman College of Arts & Science	Thellar	Faculty	Research scholar
Dr.	RAJESH KUMAR S	King Nandhivarman College of Arts and Science	Tindivanam	Faculty	
Dr.	P.S. KANNAN	Kings Engineering college Chennai	Adyar	Faculty	
Mr.	SARAVANAN.S	Kolaperumal Chetty Vaishnav Senior Secondary Sc	4/498, 5th cross street,	Faculty	
Mr.	PARTHIBARAJ V	KONGU ENGINEERING COLLEGE	PERUNDURAI, ERODE	Faculty	
Miss/Mrs.	K.V.GUNAVATHY	Kongu Engineering College	Anthiyur	Faculty	
Miss/Mrs.	K.V.GUNAVATHY	Kongu Engineering College	Anthiyur	Faculty	
Miss/Mrs.	T.Maheshwari	Kongu Engineering College	Erode	Faculty	
Miss/Mrs.	Rehna P	Kongunadu Arts and Science College	Coimbatore	Student (Science major)	II Year - P.G
Mr.	Thangabalu S	Kongunadu Arts and Science College	Coimbatore	Student (Research)	Research scholar
Mr.	Krishnaprasanth	Kongunadu Arts and Science College	Tiruppur	Student (Research)	Research scholar
Miss/Mrs.	KEERTHANA PM	KONGUNADU ARTS AND SCIENCE COLLEGE	MALAPPURAM	Student (Science major)	II Year - P.G
Miss/Mrs.	Rehna P	Kongunadu Arts and Science College	Coimbatore	Student (Science major)	
Mr.	A. ANTONY PRABHU	Kongunadu College of Engineering and Technology	Trichy	Faculty	
Miss/Mrs.	G. KALAIMAGAL	KONGUNADU COLLEGE OF ENGINEERING AND	Rasipuram	Faculty	
Mr.	D KARUNANITHY	KONGUNADU COLLEGE OF ENGINEERING AND	THOTTIAM	Faculty	
Dr.	Arya Viswam	KR's Sree Narayana College	Trivandrum	Faculty	
Mr.	KRISHNAPRASAD CS	KR'S SREENARAYANA COLLEGE	KERALA	Faculty	
Miss/Mrs.	KAVITHA P	KSR COLLEGE OF ARTS AND SCIENCE FOR WC	NAMAKKAL	Faculty	
Dr.	R G SETHURAMAN	KUMARAGURU COLLEGE OF TECHNOLOGY	COIMBATORE	Faculty	
Miss/Mrs.	R.KANNAN	KUMARAGURU COLLEGE OF TECHNOLOGY	COIMBATORE	Faculty	
Miss/Mrs.	E.SHOBHANA	Kumaraguru college of technology	Coimbatore	Faculty	
Dr.	DEVASHANKAR SRINIVASAN	L N GOVERNMENT COLLEGE,PONNERI	CHENNAI	Faculty	
Mr.	Anbarasan.k	L.N.Govt college	Uthukottai	Student (Science major)	I Year - P.G
Mr.	PRAKASH KUMAR.G	L.N.GOVT.COLLEGE	REDHILLS	Student (Science major)	I Year - P.G
Mr.	Joshua Y	L.N.Govt.College, Ponneri - 601204	Ponneri	Student (Science major)	II Year - P.G
Mr.	R.CHIDHAMBARAM	LOGANATHA NARAYANASAMY GOVERNMENT C	PONNERI	Faculty	
Dr.	KANDASAMY .A	LOGANATHA NARAYANASAMY GOVERNMENT C	CHENNAI	Faculty	
Mr.	SELVAKUMAR R	Loyola college	Oddanchatram	Student (Science major)	I Year -U.G
Miss/Mrs.	L . REETA CAROLIN	LOYOLA-ICAM COLLEGE OF ENGINEERING AND	KOLATHUR, CHENNA	Faculty	
Miss/Mrs.	VIDHYA J	M KUMARASAMY COLLEGE OF ENGINEERING, I	KARUR	Faculty	
Mr.	V.RAMACHANDRAN	M. A.M COLLAGE OF ENGINEERING	Batalagundu	Student (Engineering)	I Year -U.G
Miss/Mrs.	Thilagavathi S	M. Kumarasamy college of engineering, karur	Dindigul	Faculty	
Dr.	Ketan D Parikh	M. P. Shah Arts and Science College	Surenranagar	Faculty	
Mr.	Manivel R	M.Kumarasamy College of Engineering	Namakkal	Student (Engineering)	I Year -U.G
Dr.	Dr.M.KAVITHA	M.S.S.Wakf Board College	Madurai	Faculty	
Dr.	M.D.V.SRILALITHA	M.V.S.R. ENGINEERING COLLEGE,NADERGUL,H	HYDERABAD	Faculty	
Mr.	Renjith Mathew Roy	Madras Christian College	Ranni(Kerala)	Student (Science major)	III Year
Miss/Mrs.	Jaishree jegatheesan. J	Mahalakshmi womens college of arts and science	Chennai	Student (Science major)	I Year -U.G
Dr.	P RaviKumar	Mahatma Gandhi Government Arts College Mahe P	Puducherry	Faculty	
Mr.	Sandeep K V	Mahatma Gandhi Govt. Arts College, Mahe	Kerala	Faculty	
Dr.	K. Saravanakumar	Mahendra Institute of Technology	Namakkal	Faculty	
Dr.	S.SATHISHKUMAR	Mahendra Institute of Technology, Namakkal	Salem	Faculty	
Miss/Mrs.	P.BABY SHALINI	Mailam Engineering College	Villupuram	Faculty	
Mr.	KARTHIGAYAN I S	MAILAM ENGINEERING COLLEGE	PONDICHERRY	Faculty	
Dr.	V.J.PRIYADHARSHINI	MAILAM ENGINEERING COLLEGE- MAILAM	PUDUCHERRY	Faculty	
Miss/Mrs.	A. Meharajbegum	Mailam Engineering College, Mailam	Villupuram Dist	Faculty	
Miss/Mrs.	Meharajbegum A	Mailam Engineering College, Mailam	Villupuram District	Faculty	
Miss/Mrs.	DIVYA DEXLIN X D	Malankara Catholic College	Mulagumoodu, Kanyaku	Student (Research)	Research scholar
Miss/Mrs.	Deephlin Tarika J D	Malankara Catholic college Mariagiri	Marthandam	Student (Research)	Research scholar
Miss/Mrs.	SHINY C. L	MALANKARA CATHOLIC COLLEGE, MARIAGIRI	KUMARAPURAM	Others	Research scholar

Dr.	Dr P Joseph Samrat	Malla Reddy College of Engineering	Hyderabad	Faculty	
Miss/Mrs.	P.VARALAKSHMI	MAMCE	TRICHY	Faculty	
Miss/Mrs.	MS.P.VARALAKSHMI	MAMCE	TRICHY	Faculty	
Dr.	K.UMAMAKESHVARI	Manonmaniam Sundaranar University	Tirunelveli	Faculty	
Miss/Mrs.	A.REENA ARUL VANI	Marudhar kesari jain college for women	Vaniyambadi	Faculty	
Miss/Mrs.	DEVANSHEEBA CHANDRASIN	Matrumandir college , Rajkot	Rajkot	Student (Science major)	III Year
Dr.	R. VANI	Meenakahi College for Women, Chennai 24	Chennai	Faculty	
Miss/Mrs.	Aayisha S	Meenakshi College for women	Porur	Faculty	
Miss/Mrs.	Ghanavi A	Meenakshi college for women	Alwarpet	Student (Science major)	I Year - P.G
Dr.	N. Manju	Meenakshi College for Women	Chennai	Faculty	
Miss/Mrs.	Suba Chandrasekar	Meenakshi College for Women (Autonomous)	Block 3, 1L Ramaniyam	Faculty	
Miss/Mrs.	Niveditha S	Meenakshi College for Women, Kodambakkam, Ch	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	E.MANJULA	Meenakshi College for Women,(Autonomous),Chen	Chennai	Faculty	
Miss/Mrs.	E.MANJULA	Meenakshi College for Women,(Autonomous),Chen	Chennai	Faculty	
Miss/Mrs.	P. ANURADHA	MEENAKSHI COLLEGE OF ENGINEERING	PORUR, CHENNAI	Faculty	
Miss/Mrs.	J.THILAGESWARI	MEENAKSHI SUNDARARAJAN ENGINEERING C(	CHENNAI	Faculty	
Miss/Mrs.	Subathra A	Meenakshi Sundararajan engineering college	Chennai	Faculty	
Miss/Mrs.	I Arivazhagi	Mohamed sadhak college of arts and science	Vgp golden beech	Faculty	
Mr.	Marimuthu	Mohamed sadhak college of arts and science	Poondamalle	Faculty	
Mr.	MURUGANANDHAM V	MOHAMED SATHAK COLLEGE OF ARTS AND SC	CHENNAI	Faculty	
Dr.	R.P.Jebin	Muslim Arts college	Thukalay	Faculty	
Dr.	A.RATHIKA	Muslim Arts College, Thiruvithancode	Brahmapuram	Faculty	
Miss/Mrs.	Nandhini.S	Muthurangam government arts and science college	Arni	Student (Science major)	I Year - P.G
Dr.	P.SEENUVASAKUMARAN	Muthurangam Government Arts College (Aut), Vello	Vellore	Faculty	
Miss/Mrs.	Divyadarshini.P	Muthurangam Government Arts college (Aut),Vellor	Vellore	Student (Science major)	
Mr.	M. GUNASEKARAN	MUTHURANGAM GOVERNMENT ARTS COLLEGI	PG & RESEARCH DEP	Student (Research)	Research scholar
Miss/Mrs.	Miss. S. Shanthini	N. M. S. Sermathai Vasan College for women	7,Muthupandi compoun	Faculty	
Dr.	D.ARULDHAS	N.M.C.COLLEGE	MARTANDAM	Faculty	
Miss/Mrs.	KARTHIKA. C	N.M.S.SERMATHAI VASAN COLLEGE FOR WOM	Madurai	Faculty	
Mr.	E CHANDRA SHEKAR	Nalla Narasimha Reddy Educational Society group	Hyderabad	Faculty	
Miss/Mrs.	SANGAVI. G	NANDHA ENGINEERING COLLEGE	Erode	Student (Engineering)	II Year- U.G
Dr.	BIDHU S S	Nanjil catholic college of arts and science, Kaliykk	Thiruvananthapuram	Faculty	
Mr.	GINO D J	NANJIL CATHOLIC COLLEGE OF ARTS AND SCI	KALIYAKKAVILAI	Student (Research)	Research scholar
Dr.	A. Bharathi	Narasu's Sarathy Insistute of Technology	Dharmapuri	Faculty	
Mr.	R. Ramasamy	Narasu's Sarathy Institute of Technology,Salem	Uthangarai	Faculty	
Miss/Mrs.	SARANYA.S	narayana e-techno school coimbatore	Coimbatore	Others	
Miss/Mrs.	PARAMESWARI P	NATIONAL CHANGHUA UNIVERSITY OF EDUCA	CHENNAI	Student (Research)	Research scholar
Mr.	MAISURIYA MONIK NAVINBHA	Navyug science college, surat	Ushker-ramkund, post:n	Student (Science major)	III Year
Dr.	S SHALINI PACKIAM KAMALA	Nehru Institute of Engineering and Technology	Coimbatore	Faculty	
Dr.	S SHALINI PACKIAM KAMALA	Nehru Institute of Engineering and Technology	Coimbatore	Faculty	
Miss/Mrs.	Jemila M J	Nesamany memorial christian college marthandam	Kollencode	Student (Science major)	II Year- U.G
Mr.	David Willington	Nesamony memorial Christian College	Marthandam	Student (Research)	Research scholar
Mr.	David Willington	Nesamony memorial Christian College	Marthandam	Student (Research)	Research scholar
Miss/Mrs.	C. S. Juliet Brintha	Nesamony memorial Christian College	Marthandam	Student (Research)	Research scholar
Miss/Mrs.	ABILA DARLING D	Nesamony Memorial Christian College	Marthandam	Student (Research)	Research scholar
Miss/Mrs.	Agisha A	Nesamony Memorial Christian College Marthandam	Vellachiparai	Student (Science major)	II Year - P.G
Miss/Mrs.	ANEEBA.B	Nesamony memorial christian college marthandam	Nellimoottu Palavilai,Pa	Student (Research)	Research scholar
Mr.	ANTONY BENNET RAJ M	Nesamony Memorial Christian College, Marthandan	Azhagiyamandapam	Student (Research)	Research scholar
Miss/Mrs.	Anju.LS	Nesamony Memorial Christian College, Marthandan	Neyyattinkara	Student (Research)	Research scholar
Miss/Mrs.	C. S. Juliet Brintha	Nesamony memorial Christian College, Marthandan	Marthandam	Student (Research)	Research scholar
Miss/Mrs.	Adlin D Steffy	Nesamony memorial Christian College, Marthandan	Marthandam	Student (Science major)	II Year - P.G
Dr.	P.J.JEGAN BABU	NESAMONY MEMORIAL CHRISTIAN COLLEGE, M	MARTHANDAM	Faculty	
Miss/Mrs.	J. JEBALIN ROSE	Nesamony Memorial Christian College, Marthandan	Karungal, Kanyakumari	Student (Science major)	II Year- U.G
Dr.	L Padmaja	Nesamony Memorial Christian College, Marthandan	Mangarai	Faculty	
Miss/Mrs.	Ancy.k	Nesamony Memorial Christian College, Marthandan	Marthandam	Student (Research)	Research scholar
Dr.	S.E.Joema	Nesamony Memorial Christian College,Marthandam	Nagercoil	Faculty	
Mr.	Dolvin. V.s	Nesamony memorial Christian college. Marthandan	Madichel(post).kanyaku	Student (Science major)	II Year- U.G
Miss/Mrs.	M. Pravina	New Ideal college of Education	Trichy	Student (Science major)	
Miss/Mrs.	M. Pravina	New Ideal college of Education	Trichy	Others	
Miss/Mrs.	I Mani Prabha	NICHE	Karungal	Faculty	
Dr.	Dr.V.N. Meena Devi	NOORUL ISLAM CENTRE FOR HIGHER EDUCAT	KUMARACOIL	Faculty	
Dr.	R.S.VINOD KUMAR	NOORUL ISLAM CENTRE FOR HIGHER EDUCAT	NAGERCOIL	Faculty	
Dr.	N.Y. Sugirtha Suni	Noorul Islam Centre for Higher Education, Kumarac	Karungal	Faculty	
Miss/Mrs.	Sonal	P g degree collage	Sagar	Student (Science major)	II Year- U.G
Mr.	SWAMINATHAN.K	P.R.ENGINEERING COLLEGE,VALLAM, THANJA\	THANJAVUR	Faculty	
Dr.	B.BALAKRISHNAN	P.T.LEE Chengalvaraya Naicker College of Engg a	Kanchipuram	Faculty	
Dr.	S. Vadivel	Paavai Engineering College	Trichy	Faculty	
Miss/Mrs.	S.NITHIYA	PACHAIYAPPAS COLLEGE	Chennai	Student (Science major)	II Year - P.G
Dr.	D. PRASANNA	Pachaiyappa's college	Chennai	Faculty	
Miss/Mrs.	Renuka devee D	Pachaiyappas college	Chennai	Student (Research)	Research scholar
Miss/Mrs.	S. DEVI	PACHAIYAPPA'S COLLEGE , CHENNAI .	CHENNAI	Student (Science major)	II Year - P.G
Miss/Mrs.	S Nandhini	Pachaiyappa's College for Men, Chennai	Chennai	Student (Research)	Research scholar
Miss/Mrs.	M. Muthulakshmi	Pachamuthu college of arts and science for women	Dharmapuri	Faculty	
Dr.	S. SAKTHIVEL	PANIMALAR ENGINEERING COLLEGE	CHENNAI	Faculty	
Mr.	VIJAYAKUMAR B	Panimalar Engineering College	Chennai	Faculty	
Dr.	Dr. A. KISTAN	Panimalar Institute of technology	Chennai	Faculty	
Dr.	A. KISTAN	Panimalar Institute of technology	Chennai	Faculty	
Miss/Mrs.	R VIJAYA SHANTHI	PARVATHY'S ARTS AND SCIENCE COLLEGE	DINDIGUL	Faculty	
Miss/Mrs.	THARA FELCIYA J	Parvathy's Arts and Science College	Dindigul	Faculty	
Dr.	A.ANBARASI	Periyar Arts college, Cuddalore	Cuddalore	Faculty	
Dr.	DR. P SELVAKUMARI	PERIYAR GOVERNMENT ARTS COLLEGE CUDD	CHIDAMBARAM	Faculty	
Dr.	P. SELVAKUMARI	PERIYAR GOVERNMENT ARTS COLLEGE, CUDI	Chidambaram	Faculty	
Mr.	V.NATARAJAN	Periyar govt arts college	Cuddalore	Student (Research)	Research scholar
Mr.	R. Anbarasan	Periyar University, Salem	Salem	Student (Research)	Research scholar
Miss/Mrs.	GOWRI MANOHARI N	PG Department Of Physics, Vellalar College For W	ERODE	Faculty	
Dr.	G.DEEPA	PIONEER KUMARASWAMY COLLEGE	NAGERCOIL	Faculty	
Dr.	S.KALVIKKARASI	PODHIGAI COLLEGE OF ENGINEERING AND TE	VENGALAPURAM, TIR	Faculty	
Dr.	S.KALVIKKARASI	PODHIGAI COLLEGE OF ENGINEERING AND TE	VENGALAPURAM, TIR	Faculty	
Mr.	Debanjan Roy	Pondicherry University	Kolkata	Student (Science major)	II Year - P.G
Mr.	NAVAJYOTH K	PONDICHERRY UNIVERSITY	Kerala	Student (Science major)	II Year - P.G
Mr.	GAURI SHANKAR H	PONDICHERRY UNIVERSITY	KERALA	Student (Science major)	I Year - P.G
Dr.	D.NITHYAPRAKASH	PPG INSTITUTE OF TECHNOLOGY	COIMBATORE	Faculty	
Miss/Mrs.	A.Reethika	Prathyusha engineering collage	Arakkonam	Student (Engineering)	II Year- U.G
Dr.	Dr. R. Surekha	Prathyusha Engineering College	Chennai	Faculty	
Mr.	P.BALAJI	Prathyusha Engineering College	Chennai	Faculty	
Mr.	BOOBALAN K	Prathyusha Engineering College	Chennai	Faculty	
Miss/Mrs.	UMA. K	PRATHYUSHA ENGINEERING COLLEGE	AMBATTUR	Faculty	
Mr.	SAMADI SAI KIRAN	Prathyusha engineering college	Nellore,AP	Student (Engineering)	I Year -U.G
Mr.	V Prem Kumar	Prathyusha engineering college	Student	Student (Engineering)	I Year -U.G
Mr.	KESANI SOMASEKHAR	Prathyusha engineering college	Tiruvallur	Faculty	
Miss/Mrs.	V.varalakshmi	Prathyusha engineering college	Chennai	Student (Engineering)	I Year -U.G
Mr.	Mukesh.s	Prathyusha engineering college	Tiruttani@Thiruvallur	Student (Engineering)	I Year -U.G
Mr.	Ashwin Sharath	Prathyusha engineering college	Kanchipuram	Student (Engineering)	I Year -U.G
Miss/Mrs.	S. Prabha	Prathyusha engineering college	Porur	Faculty	

Miss/Mrs.	Bhavani B	Prathyusha Engineering College	Chennai	Student (Engineering)	I Year -U.G
Mr.	G PIRAKATHISWARAN	PRATHYUSHA ENGINEERING COLLEGE	CHENNAI	Faculty	
Miss/Mrs.	Priyadharshini Magendiran	Prathyusha engineering college	Thiruvallur	Student (Engineering)	II Year- U.G
Mr.	Muralikrishnan.j	prathyusha engineering college	Tiruvallur	Faculty	I Year -U.G
Miss/Mrs.	N.Shifu jahan	Prathyusha Engineering college	Avadi,Chennai	Faculty	
Miss/Mrs.	Madhneni himaja	Prathyusha engineering college	Podulakur	Student (Engineering)	I Year -U.G
Mr.	Ganapathi.S	Prathyusha engineering college	Thiruvalangadu	Student (Engineering)	I Year -U.G
Mr.	SRINIVASAN S	Prathyusha engineering college	Chennai	Faculty	
Miss/Mrs.	Susmitha vemula	Prathyusha engineering college	Nellore	Student (Engineering)	I Year -U.G
Dr.	V.Kavimani	Prathyusha Engineering college	Chennai	Faculty	
Mr.	Rajaraju Seepana	Prathyusha Engineering College	Chennai, Ambattur.	Student (Engineering)	I Year -U.G
Mr.	Vigneshwaran	Prathyusha engineering college	Chennai	Student (Engineering)	I Year -U.G
Miss/Mrs.	Felishia Rubashi	Prathyusha engineering college	Tiruvannamalai	Student (Engineering)	I Year -U.G
Mr.	Rajaraju Seepana	Prathyusha Engineering College	Chennai, Ambattur.	Student (Engineering)	I Year -U.G
Miss/Mrs.	V. Sathiya Sundari	Prathyusha engineering college	Sriperumbudur	Student (Engineering)	I Year -U.G
Miss/Mrs.	S.Evangelin Blessy	Prathyusha engineering college	Chennai	Student (Engineering)	I Year -U.G
Miss/Mrs.	Bhargavi	Prathyusha engineering college	Thiruvallur	Student (Engineering)	I Year -U.G
Mr.	Rajaraju Seepana	Prathyusha Engineering College	Chennai, Ambattur.	Student (Engineering)	I Year -U.G
Miss/Mrs.	UMA MAHESHWARI S	Prathyusha Engineering College	Thiruvallur	Student (Engineering)	II Year- U.G
Miss/Mrs.	M.SWARNALAKSHMI	PRATHYUSHA ENGINEERING COLLEGE	CHENNAI	Student (Engineering)	II Year- U.G
Miss/Mrs.	Nandhini.s	Prathyusha engineering college	Thiruvannamalai	Student (Engineering)	I Year -U.G
Dr.	S.Aravindhan	Presidency College	Chennai	Faculty	
Mr.	MURUGAN T	Presidency college ,chennai	Cheyyur	Student (Research)	Research scholar
Miss/Mrs.	Inbavalli.I	Presidency College, Chennai	Chennai	Student (Research)	Research scholar
Dr.	T.Alagesan	Presidency College, Chennai-5	Chromepet, Chennai-44	Faculty	
Dr.	Dr. Shruti K. Patle	Priyadarshini J L College of Engineering	Nagpur	Faculty	
Dr.	Dr. Shruti K. Patle	Priyadarshini J L College of Engineering	Nagpur	Faculty	
Dr.	D.PRABHA	PSG College of Arts and Science	Coimbatore	Faculty	
Mr.	VANAMOORTHY M	PSG Institute of Advanced Studies	COIMBATORE	Student (Research)	Research scholar
Mr.	Shiva Subramani	PSGIAS	Coimbatore	Student (Research)	Research scholar
Dr.	B.PUNITHAVENI	PSGR KRISHNAMMAL COLLEGE FOR WOMEN	COIMBATORE	Faculty	
Miss/Mrs.	S.Sowmya	PSGR Krishnammal college for women	coimbatore	Faculty	
Dr.	A.Mano Priya	PSGR KRISHNAMMAL COLLEGE FOR WOMEN	Erode	Faculty	
Miss/Mrs.	Manonmani.J	Qmgcw	Qmgcw	Others	II Year- U.G
Dr.	C S. Latha	Quaid÷E Millath Govt. College for Women, Chennai	Mandaveli	Faculty	
Dr.	LATHA C. S.	QuaidE Millath Govt. College for Women, Anna sal	Mandaveli	Faculty	
Miss/Mrs.	E. RAJALAKSHMI	Quaid-E-Millath Government College for Women	Chennai	Faculty	
Miss/Mrs.	S. Manjula	Quaid-E-Millath Government College for women	Chennai	Student (Science major)	III Year
Miss/Mrs.	NITHIYA.D	QUAID-E-MILLATH government college for women	Chennai	Student (Science major)	II Year- U.G
Dr.	Dr.P.Geetha	Quaid-e-millath govt college for women chennai-2	Chennai	Faculty	
Miss/Mrs.	A. HEMALATHA	Quaid-E-Millath Govt. College for WOMEN	ADAMBAKKAM	Faculty	Research scholar
Dr.	M.Chandra kumari	Quaid-e-millath Govt.College for women,Chennai	Adambakkam,chennai.	Faculty	
Mr.	PRAKASH RANJAN DEEN	R. D. S. COLLEGE, SALMARI, KATIHAR, BIHAR (I	PURNIA (BIHAR)	Faculty	
Dr.	Eunice Jerusha	R. M. D. ENGINEERING COLLEGE, Kavaraipettai	Chennai	Faculty	
Dr.	Dr R Priya	R.M.D. Engineering College	Chennai	Faculty	
Dr.	K. AMUDHA	R.M.D. Engineering College	Chennai	Faculty	
Mr.	Jagadesan.A	R.M.K Engineering College	Chennai	Faculty	Research scholar
Dr.	P.S.Latha Mageshwari	R.M.K Engineering College	Chennai -23	Faculty	
Dr.	Dr.G.DEVI	R.M.K.College of Engineering and Technology	Chennai	Faculty	
Mr.	Jayakumar P	Rajalakshmi engineering college	Chennai	Student (Engineering)	IV Year
Dr.	Vasudevan P	Rajalakshmi Engineering College	Chennai	Faculty	
Dr.	Dr. M. RAJA	Rajapalayam Rajus College	Rajapalayam	Faculty	
Dr.	Dr.K.B.Renukadevi	Rajiv Gandhi college of engineering and technology	Pondicherry	Faculty	
Dr.	Dr.K.B.Renukadevi	Rajiv Gandhi college of engineering and technology	Pondicherry	Faculty	
Mr.	Dillibabu	Ramakrishna mission vivekananda College	Minjur	Student (Science major)	III Year
Mr.	ABHISHEK ROY	Regional Institute Of Education (NCERT), Bhubane	West Bengal	Student (Science major)	III Year
Mr.	VENKATESH GANGAREDDY C	RJ college	Mumbai	Student (Science major)	II Year - P.G
Dr.	Gopinath S	RKM Vivekananda College (Autonomous), Chennai	Anna Nagar West exten	Faculty	
Dr.	SU NARMATHA	RMK COLLEGE OF ENGINEERING AND TECHNO	CHENNAI	Faculty	
Mr.	T SUNDARESWARAN	RMK COLLEGE OF ENGINEERING AND TECHNO	Chennai	Faculty	
Mr.	T SUNDARESWARAN	RMK COLLEGE OF ENGINEERING AND TECHNO	Chennai	Faculty	
Miss/Mrs.	N.JAYANTHI	Rmk college of engineering and technology	Chennai	Faculty	
Mr.	PARTHA SARATHI PADHY	ROLAND INSTITUTE OF TECHNOLOGY ODISHA	GANJAM ODISHA	Faculty	
Mr.	RAJA R	S A ENGINEERING COLLEGE	CHENNAI	Faculty	
Dr.	Manoj KumarGupta	S D College Barnala, Punjab	Sangrur, Punjab	Faculty	
Dr.	S. I SRIKRISHNA RAMYA	S. I. V. E. T College	GOWRIVAKKAM Chenr	Faculty	
Dr.	S. I. SRIKRISHNA RAMYA	S. I. V. E. T College	Chennai	Faculty	
Dr.	CHITRA ALAGARSAMY	S. I. V. E. T. COLLEGE	Velachery, Chennai	Faculty	
Mr.	N. THANGARAJ	S. T. Hindu college, Nagercoil	Ramanathapuram	Student (Research)	Research scholar
Miss/Mrs.	Ms.varshaa.H	S.A.ENGINEERING COLLEGE	chennai	Student (Engineering)	I Year -U.G
Miss/Mrs.	Varshaa.H	S.A.ENGINEERING COLLEGE	chennai	Student (Engineering)	I Year -U.G
Miss/Mrs.	V.O SANGEETHA	S.A.ENGINEERING COLLEGE	Chennai	Faculty	
Mr.	R.GANESAN	S.A.Engineering college (Autonomous)	Chennai	Faculty	
Mr.	R.GANESAN	S.A.ENGINEERING COLLEGE (AUTONOMOUS)	CHENNAI	Faculty	
Miss/Mrs.	APARNA.R	S.D.N.B.VAISHNAV COLLEGE FOR WOMEN	PLOT NO. 34, F-2, FIRS	Student (Science major)	II Year- U.G
Miss/Mrs.	VARSHA AJ	SA engineering college	Nagercoil, kanyakumari	Student (Engineering)	I Year -U.G
Miss/Mrs.	VARSHA AJ	SA engineering college	Nagercoil, kanyakumari	Student (Engineering)	I Year -U.G
Mr.	N. MADHAVAN	Sacred Heart College (Autonomous), Tirupattur	Tirupattur	Faculty	
Dr.	Mathew George	Sacred Heart College, Kochi	Kochi	Faculty	
Mr.	A.Sivakumar	Sacred Heart College, Tirupattur	Tirupattur	Student (Research)	Research scholar
Dr.	M. Mohamed Roshan	Sadakathullah Appa College	Tirunelveli	Faculty	
Dr.	J. Joy Jeba Vijila	Sarah Tucker College (Autonomous), Tirunelveli - 7	Tirunelveli - 7	Faculty	
Dr.	Aswathy V. V.	Saraswathi College of Arts & Science	Thiruvananthapuram, K	Faculty	
Mr.	KUNJAL PATEL	Sardar Patel University	Vallabh Vidyanagar	Student (Research)	Research scholar
Miss/Mrs.	S. Pavithra	SASTRA deemed university	Thanjavur	Student (Science major)	I Year - P.G
Miss/Mrs.	Lavanya V	Sathyabama institute of science and technology	Chennai	Student (Science major)	II Year - P.G
Dr.	Dr.N.Kanagathara	Saveetha School of Engineering, SIMATS	Chennai	Faculty	
Mr.	SE. ALLEN MOSES	School of Arts and science, VINAKYA MISSION'S F	Arakkonam	Faculty	Research scholar
Miss/Mrs.	S.K.Jasmin vijitha	Scott Christian college	Nagercoil	Student (Research)	Research scholar
Dr.	V.RAGAVENDRAN	SCSVMV UNIVERSITY	KANCHIPURAM	Faculty	
Dr.	R.INDIRA	SDNB Vaishnav College	Chennai	Faculty	
Dr.	R. Josephine usha	Sdnb vaishnav college for women	Ashok nagar, chennai	Faculty	
Dr.	T. Anuradha	Sdnb vaishnav College for women	Chennai	Faculty	
Miss/Mrs.	Lavanya S	SDNB Vaishnav College For Women ,Chrompet ,CI	Villupuram	Student (Science major)	II Year- U.G
Miss/Mrs.	A.Rajeswari	SDNB Vaishnav college for Women Chromepet	Chennai	Faculty	
Miss/Mrs.	A.Rajeswari	SDNB Vaishnav college for Women Chromepet	Chennai	Faculty	
Dr.	A.G. ANITHA	Seethalakshmi Ramaswami College	Trichy	Faculty	
Dr.	Dr.K. SEETHALAKSHMI	SEETHALAKSHMI RAMASWAMI COLLEGE, TIRU	Tiruchirapalli	Faculty	
Miss/Mrs.	HARINI S	Seethalakshmi ramaswamy college	1/163-c5 kaniyalampatti	Student (Science major)	I Year -U.G
Dr.	M.Sudha	Sengunthar College Of Engineering	Tiruchengode	Faculty	
Mr.	Apoorv Tripathi	Shivaji college,University of Delhi	New Delhi	Others	III Year
Miss/Mrs.	S. R. GOMATHY	SHREE CHANDRAPRABHU JAIN COLLEGE, MIN.	Chennai	Faculty	
Miss/Mrs.	Patel Ayesha MohmedSaeed	Sir P T SARVAJANIC college of science,Surat	Bharuch	Student (Science major)	III Year
Mr.	Mr. A. THIRUNAVUKKARASU	SIVET COLLEGE	CHENNAI	Faculty	

Dr.	MADHANRAJ R	SKCE Vellore	Vellore	Faculty	
Dr.	K S BALAJI	Sourashtra College	Madurai	Faculty	
Dr.	Dr. R. MOHAN	SREE SEVUGAN ANNAMALAI COLLEGE	DEVAKOTTAI	Faculty	
Mr.	MAHESHWAR REDDY METTU	Sreenidhi Institute of Science and Technology	Hyderabad	Faculty	
Miss/Mrs.	VIMALA.V	SRI AKILANDESHWARI WOMEN'S COLLEGE WA	TINDIVANAM,VILLUPU	Student (Science major)	II Year- U.G
Miss/Mrs.	AISWARYA LAKSHMI K	Sri Akilandeshwari Women's College,Wandiwash.	Tindivanam	Student (Science major)	II Year- U.G
Dr.	M.Anbuvannan	Sri akilandeswari womens college	Vandavasi	Faculty	
Miss/Mrs.	Nasreen.B	Sri Akilandeswari Women's College -Wandiwash	Tindivanam-Villupuram	Student (Science major)	II Year- U.G
Miss/Mrs.	Nasreen.B	Sri Akilandeswari Women's College -Wandiwash	Tindivanam-Villupuram	Student (Science major)	II Year- U.G
Miss/Mrs.	K. Ambika Parameswari	Sri G.V.G. Visalakshi College for Women (Autonom	In house	Student (Science major)	II Year- U.G
Miss/Mrs.	Jananipriya karuppusamy	Sri GVG Visalakshi college for Women	5/1168, pappankulam, p	Student (Science major)	II Year- U.G
Miss/Mrs.	S.Mohanapriya	Sri gvg visalakshi college for women, udumalpet	Jallipatti	Student (Science major)	II Year- U.G
Mr.	ARUN PAUL C	SRI KRISHNA COLLEGE OF ENGINEERNG AND `	COIMBATORE	Faculty	
Dr.	SHANMUGAPRIYA. C	Sri Paramakalyani college, Alwarkurichi, Tenkasi di	Tenkasi	Faculty	
Miss/Mrs.	K. Prema Latha	Sri Paramakalyani College, Alwarkurichi-627412	Agasthiarpatti, Ambasai	Faculty	
Miss/Mrs.	K. Prema Latha	Sri Paramakalyani College, Alwarkurichi-627412	Agasthiarpatti, Ambasai	Faculty	
Mr.	Sathish	Sri Ramakrishna Institute of Technology	Coimbatore	Faculty	
Mr.	LOGESWARAN. B	SRI RAMAKRISHNA MISSION VIDYALAYA COLLE	TIRUPPUR	Student (Science major)	I Year - P.G
Dr.	P. Sundara Venkatesh	Sri S. Ramasamy Naidu Memorial College	Sattur	Faculty	
Miss/Mrs.	B. Anusha	Sri Sairam Institute of Technology	Chennai	Faculty	
Dr.	Viswanathan Elumalai	Sri Sankara Arts and Science College, Enathur, Kai	Kancheepuram	Faculty	
Mr.	Reshma Ramesh	SRI saradha college for women Perambalur	Vayalapadi	Student (Science major)	II Year- U.G
Mr.	VENKATESAN.R	SRI VENKATESWARA COLLEGE OF ENGINEERI	Chennai	Student (Engineering)	II Year- U.G
Dr.	G PHANEENDRA REDDY	Sri Venkateswara Vedic University	Tirupati	Faculty	
Miss/Mrs.	J. SUBHA	SRI VENKATESWARAA COLLEGE OF TECHNOL	CHENNAI	Faculty	
Mr.	Mohamed Ibraheem	Sri Vinayaga College of Arts and Science	Ulundurpet	Faculty	
Mr.	R.MUTHUKUMAR	SRIMAD ANDAVAN ARTS AND SCIENCE COLLE	KULITHALAI	Student (Research)	Research scholar
Mr.	VIGNESH R	Srimad Andavan Arts And Science College (Autono	Trichy	Faculty	
Miss/Mrs.	V. SIVAGAMI	SRIMAD ANDAVAN ARTS AND SCIENCE COLLE	TRICHY	Faculty	Research scholar
Mr.	M G SHANKAR	Srimad Andavan Arts and Science College Trichy 0	Thirubuvanam Thanjavu	Faculty	
Mr.	M G SHANKAR	Srimad Andavan Arts and Science College Trichy 0	Kumbakonam	Faculty	
Miss/Mrs.	S. Ilakkiyaselvi	Srimad Andavan Arts and Science College, Trichy-5	Trichy	Faculty	Research scholar
Mr.	Ravisankar V	SRM Institute of science and technology	Chennai	Student (Research)	Research scholar
Miss/Mrs.	Anitha. K	SRM Institute of science and technology	Chennai	Student (Research)	Research scholar
Mr.	R. Nagaraj	SRM INSTITUTE OF SCIENCE AND TECHNOLOG	Chennai	Student (Research)	Research scholar
Mr.	BASKAR D	SRM VALLIAMMAI ENGINEEING COLLEGE	KATTANKULATHUR	Others	
Dr.	Dr.K. THIRUPPATHI	SRM VALLIAMMAI ENGINEERING COLLGE	CHENNAI	Faculty	
Miss/Mrs.	R.GNANADEEPAM	SRM-IST, RAMAPURAM.	CHENNAI	Student (Research)	Research scholar
Dr.	G. Shanmugam	SSM Institute of Engg. & Tech.	Dindigul	Faculty	
Miss/Mrs.	M. Rajapriya	Ssn College of Engineering Kalavakkam	Chennai	Student (Research)	Research scholar
Miss/Mrs.	M. Rajapriya	Ssn College of Engineering kalavakkam	Chennai	Student (Research)	Research scholar
Mr.	Manikandan M	SSN College of Engineering Kalavakkam, Chennai-	Chennai	Student (Research)	Research scholar
Dr.	M. D. GOWRI	St. Antony's Higher Secondary School, Chennai	Tiruvallur	Faculty	
Dr.	S. Suresh	St. Joseph's college of engineering	Chennai	Faculty	
Dr.	Dr. S. Rama	St. Joseph's College of Engineering, Chennai-119	W 503, Akshaya Januar	Faculty	
Mr.	SHENBAGARAJAN P	St. JOSEPH'S INSTITUTE OF TECHNOLOGY, CHI	CHENNAI	Faculty	
Mr.	SUJIL K	St. Mother Theresa Engineering College	Thoothukudi	Student (Engineering)	II Year- U.G
Miss/Mrs.	Minu Pius	St. Teresas College	Kochi, Kerala	Faculty	
Miss/Mrs.	Mary Vinaya	St. Teresa's College (Autonomous), Ernakulam	Ernakulam, Kerala	Faculty	
Dr.	Mariyam Thomas	St. Teresa's College Ernakulam	Kochi	Faculty	
Mr.	JOBY SEBASTIAN	St. Thomas' College (Autonomous), Thrissur	Kerala	Faculty	
Mr.	SHUBHAM JAYSWAL	St. Xavier's College ahemdabad	Ahemdabad	Student (Science major)	I Year -U.G
Mr.	Sarbajit Dutta	St. Xavier's College, Kolkata	Kolkata	Student (Science major)	III Year
Miss/Mrs.	SUMATHI P	St.Antony's College of Arts and Sciences for Wome	Dindigul	Faculty	
Miss/Mrs.	SUNITHA.T	ST.JOHN'S COLLEGE OF ARTS AND SCIENCE V	AMMANDIVILAI	Faculty	Research scholar
Dr.	Dr.Jijoy P Mathew	St.Thomas College Kozhenchery	Pathanamthitta	Faculty	
Miss/Mrs.	G Gandhimathi	St.Xavier's college of arts and science	Tirunelveli	Student (Science major)	II Year- U.G
Mr.	Vaibhav Trivedi	St.Xavier's College, Ahmedabad	Ahmedabad	Student (Research)	II Year- U.G
Miss/Mrs.	Priyanga Rathinam	Stella Maris	Puducherry	Student (Science major)	I Year - P.G
Miss/Mrs.	Priyanga Rathinam	Stella Maris	Puducherry	Student (Science major)	I Year - P.G
Miss/Mrs.	D. Anceila	Stella Maris College	Vivekanandar nagar, ch	Faculty	
Dr.	D. SUKANYA	Stella Maris College	Chennai	Faculty	
Miss/Mrs.	R. Vincent femilaa	Stella Maris College	Chennai	Faculty	
Miss/Mrs.	MARIANN VINCENT	STELLA MARIS COLLEGE	CHENNAI	Student (Science major)	I Year - P.G
Miss/Mrs.	DIVYADHARSHINI S	STELLA MARIS COLLEGE	CHENNAI	Student (Science major)	I Year - P.G
Miss/Mrs.	S.sankeerthana	Stella maris college	Chennai	Student (Science major)	I Year - P.G
Mr.	NISHA S	STELLA MARIS COLLEGE	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	Sharon.S	Stella Maris College	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	D. Anceila	Stella Maris College	kodungaiyur, chennai.	Faculty	
Miss/Mrs.	GREETA SHELCIA D	STELLA MARIS COLLEGE	PUDUCHERRY	Student (Science major)	III Year
Miss/Mrs.	Annie Vinsla J V	Stella Maris College	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	Anni rose.A	Stella Maris college	Chennai	Student (Science major)	I Year - P.G
Dr.	D. SUKANYA	STELLA MARIS COLLEGE	CHENNAI	Faculty	
Dr.	C S Ramya	Stella Maris College	Chennai	Faculty	
Miss/Mrs.	Suvedha A	Stella Maris college	Puducherry	Student (Science major)	I Year - P.G
Miss/Mrs.	Valentina sneha G	Stella Maris college	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	Evanjalin kaviya G	Stella Maris college	Chennai	Student (Science major)	I Year -U.G
Miss/Mrs.	S.UMAMAHESWARI	STELLA MARIS COLLEGE	CHENNAI	Student (Science major)	I Year -U.G
Miss/Mrs.	Sumilha M	Stella maris college	Thiruvannamalai	Student (Science major)	I Year - P.G
Miss/Mrs.	Sharon	Stella Maris College	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	N.Mahalakshmi	Stella Maris College (Autonomous)Chennai	Saidapet, Chennai-15	Faculty	
Miss/Mrs.	N.Mahalakshmi	Stella Maris College (Autonomous)Chennai	Saidapet Chennai	Faculty	
Miss/Mrs.	W. Anzil Sedna	Stella maris college chennai	Kanyakumari	Student (Science major)	III Year
Miss/Mrs.	W. ANZIL SEDNA	Stella maris college chennai	Kanyakumari	Student (Science major)	III Year
Dr.	NIKETHA KONIKKARA	Stella Maris College, Chennai	Chennai	Faculty	
Dr.	SHINY FEBENA A	STELLA MARIS COLLEGE, CHENNAI 86.	Vellore	Faculty	
Miss/Mrs.	Dino Ashmi R.V.	Stella Maris College, Chennai.	Kaniyakumari	Student (Science major)	I Year -U.G
Miss/Mrs.	A.kaviya Tracy	Stella Maris College,chennai	Panruti	Student (Science major)	I Year - P.G
Dr.	ANUSHYA. G	Stella Mary's College of Engineering, Aruthenganvil	Marthandam	Faculty	
Miss/Mrs.	Daariniyaa	Sultana abdullah rowther arts college	Tiruvarur	Faculty	
Mr.	Rajasekar E	Sun Arts and Science College	Tiruvannamalai	Faculty	Research scholar
Dr.	I. Davis Jacob	SVCET, VIRUDHUNAGAR	Ambasamudram	Faculty	
Dr.	S. Saravanan	Swarnandhra College of Engineering and Technolo	Narsapur (A.P.)	Faculty	
Miss/Mrs.	Jeba disona	Syed Ammal arts and science college	Ramanathapuram	Student (Science major)	III Year
Mr.	VAIRA MUTHU.T	T.D.M.N.S COLLEGE,T.KALIKULAM	Alagappapuram	Student (Science major)	III Year
Miss/Mrs.	ANITHA S	T.J.S ENGINEERING COLLEGE, PERUVOYAL.	KOLATHUR, CHENNAI	Faculty	
Miss/Mrs.	BRIGHTY. A	TDMNS college	Vallioor	Student (Science major)	II Year - P.G
Miss/Mrs.	M.Uma Devi	TDMNS COLLEGE OF ARTS AND SCIENCE	Tirunelveli	Student (Science major)	II Year - P.G
Miss/Mrs.	Mahalakshmi M	TDMNS College T.Kallikulam	Radhapuram	Student (Science major)	II Year - P.G
Dr.	Dr. A.Glory Punitha	TDMNS College. T. Kallikulam	Tirunelveli	Faculty	
Miss/Mrs.	USHA Rani.NANNURI	TEEGALA KRISHNA REDDY ENGINEERING COLI	Hyderabad	Faculty	Research scholar
Miss/Mrs.	Usha Rani.Nannuri	Teegala Krishna Reddy Engineering College	Hyderabad	Faculty	Research scholar
Dr.	S.MANIMARAN	Thanthai hans roever college	Perambalur	Faculty	Research scholar
Dr.	S.MANIMARAN	Thanthai hans roever college	Perambalur	Faculty	

Dr.	DR.S.MANIMARAN	Thanthai hans roever college	Perambalur	Faculty	
Miss/Mrs.	S.ANGAYARKANNI	The MADURA COLLEGE	Madurai	Faculty	
Mr.	V MEENAKSHI SUNDARAM	The Madura College(Autonomous)	Madurai	Faculty	
Mr.	AJMAL KHAN N	THE NEW COLLEGE	CHENNAI	Faculty	
Dr.	J PRINCE JOSHUA	The New College	Chennai	Faculty	
Miss/Mrs.	Nalini K P	The New College	Chennai	Student (Research)	Research scholar
Dr.	M. Nizam mohideen	The New College, Chennai - 14	Porur, Chennai- 116	Faculty	
Miss/Mrs.	K P Nalini	The New College, Royapettah	Chennai	Student (Research)	Research scholar
Dr.	Sivasankari.B	The standard fireworks Rajaratnam college for wom	SIVAKASI	Faculty	
Miss/Mrs.	Adithya	Theivanai ammal college for women	Pondicherry	Student (Science major)	II Year- U.G
Miss/Mrs.	Adithya	Theivanai ammal college for women	Pondicherry	Student (Science major)	II Year- U.G
Miss/Mrs.	M.DHIVYA	THEIVANAI AMMAL COLLEGE FOR WOMEN	VILLUPURAM	Student (Science major)	II Year- U.G
Miss/Mrs.	Sivasri S	theivanai ammal college for women	Villupuram	Student (Science major)	II Year- U.G
Miss/Mrs.	J.sivasankari	Theivanai ammal college for women	Villupuram	Student (Science major)	I Year - P.G
Miss/Mrs.	K. Abinaya	Theivanai Ammal college for women	Villupuram	Student (Science major)	II Year- U.G
Miss/Mrs.	K.Dhivyalakshmi	Theivanai Ammal College for Women	Villupuram	Student (Science major)	II Year - P.G
Mr.	L. Kiruthika	Theivanai ammal college for women (ATTONAMUS	Villupuram	Student (Science major)	I Year - P.G
Dr.	Dr.A.Muthuraja	Theivanai Ammal College For Women (Autonomou	Villupuram	Faculty	
Miss/Mrs.	V.Nivetha	Theivanai Ammal College for Women (Autonomous	Villupuram	Student (Science major)	II Year- U.G
Miss/Mrs.	V.Nivetha	Theivanai Ammal College for Women (Autonomous	Villupuram	Student (Science major)	II Year- U.G
Dr.	Dr. A. Muniyappan	Theivanai Ammal College for Women (Autonomous	Puducherry	Faculty	
Miss/Mrs.	Ms.B.Mangaiyarkarasi	Theivanai Ammal college for women (Autonomous)	Tindivanam	Faculty	
Miss/Mrs.	M.Sharmila	Theivanai Ammal college for women (autonomous),	Villupuram	Student (Science major)	I Year -U.G
Miss/Mrs.	M.Sharmila	Theivanai Ammal college for women (autonomous),	Villupuram	Student (Science major)	I Year -U.G
Miss/Mrs.	Gurupriya.K	Theivanai ammal college for women (autonomous),	Villupuram	Student (Science major)	II Year - P.G
Miss/Mrs.	Miss .s.lavaniyaa	Theivanai ammal college for women villpuram	Panruti	Others	II Year- U.G
Miss/Mrs.	S.Sharmeela	Theivanai Ammal College of women ,Autonomous ,	Villupuram	Student (Science major)	III Year
Miss/Mrs.	Prathiksha P	Theivanaiammal college for women	Vilupuram	Student (Science major)	II Year- U.G
Mr.	P.K.Vishalatchi	Thevanai Ammal College For Women (Autonomous	Villupuram	Student (Science major)	II Year- U.G
Miss/Mrs.	Srinidhi Lakshmi narayanan	Thevanai ammal college for women (autonomous),\	Villupuram	Student (Science major)	I Year -U.G
Miss/Mrs.	S. Anitha	Thevanai ammal college for women villupuram	Villupuram	Student (Science major)	II Year- U.G
Dr.	V.RAJNI SWAMY	THIAGARAJAR COLLEGE	MADURAI	Faculty	
Dr.	Mani Chandran Thirumoolam	Thiagarajar college of engineering	Madurai	Faculty	
Mr.	M. Ananda kumar	Thiagarajar College of Engineering, Madurai	Madurai	Student (Research)	Research scholar
Mr.	M.Ananda kumar	Thiagarajar College of Engineering, Madurai	Madurai	Student (Research)	Research scholar
Dr.	V.RAJNI SWAMY	THIAGARAJAR COLLEGE, MADURAI	MADURAI	Faculty	
Miss/Mrs.	SRIMITHRA L R	THIAGARAJAR COLLEGE, MADURAI	DINDIGUL	Student (Science major)	II Year- U.G
Dr.	Dr. D. SARAVANAKKUMAR	THIAGARAJAR COLLEGE, MADURAI 09	MADURAI	Faculty	
Mr.	Balaji k	Thiruthangal nadar clg, chennai.	Chennai	Student (Science major)	II Year- U.G
Mr.	Naresh kumar R	Thiruthangal nadar clg, chennai.	Chennai	Student (Science major)	II Year- U.G
Dr.	Dr. R. Vijayalakshmi	Thiruthangal Nadar College	Chennai	Faculty	
Dr.	Dr. R. Vijayalakshmi	Thiruthangal Nadar College	Chennai	Faculty	
Dr.	P. SANJAY	Thiruthangal Nadar College	Chennai	Faculty	
Dr.	P. DURAISAMY	Thiruvalluvar Govt Arts College, Rasipuram.	Rasipuram	Faculty	
Dr.	T. Lurthu Pushparaj	Tirunelveli Dakshina Mara Nadar Sangam College	Tirunelveli	Faculty	
Mr.	Vasudevan.S	TNPL public school, kagithapuram, karur	Karur	Faculty	
Mr.	Suresh K	Town higher secondary school kumbakonam	Thirubuvanam thanjavu	Faculty	
Miss/Mrs.	R. Sakunthaladevi	Trinity College for Women, Namakkal.	Namakkal	Faculty	
Dr.	Balaji J	Un8versity College of Engineering Panruti	Cuddalore	Faculty	
Miss/Mrs.	Cecily maria sneha	University college of engineering panruti	Panruti	Student (Research)	Research scholar
Miss/Mrs.	Cecily maria sneha	University college of engineering panruti	Panruti	Student (Research)	Research scholar
Mr.	P.RAM NIVAS MIRTHA	University College of Engineering, Panruti	Ramanathapuram	Student (Research)	Research scholar
Miss/Mrs.	Smitha M	University College, Thiruvananthapuram	Vakkom	Student (Research)	Research scholar
Miss/Mrs.	Rajalakshmi K	University of Madras	Thiruvannamalai, Tamil	Student (Science major)	I Year - P.G
Mr.	DHARAN D	University of Madras	Vellore	Student (Science major)	I Year - P.G
Miss/Mrs.	Jayashire R	University of Madras	Chennai	Student (Science major)	I Year - P.G
Miss/Mrs.	LAVANYA M	UNIVERSITY OF MADRAS	CHENNAI	Student (Science major)	I Year - P.G
Miss/Mrs.	PARAMJOT KAUR	UNIVERSITY OF MADRAS	CHENNAI	Others	I Year - P.G
Mr.	Mukesh Kanna M	University of Madras	Chennai	Student (Science major)	I Year - P.G
Dr.	P.Uma Devi	V.H.N.S.N college	184, Soundi street, Alla	Faculty	
Miss/Mrs.	Shruti Umeshbhai Rana	V.P. & R.P.T.P. Science college	Khambhat, Anand, Guja	Student (Science major)	II Year- U.G
Mr.	G.MURUGAN	V.Ramakrishna polytechnic college chennai 19	7/5 venkatespuram colc	Faculty	
Mr.	G.MURUGAN	V.Ramakrishna polytechnic college chennai19	7/5 venkatespuram colc	Faculty	
Miss/Mrs.	R. Hemalatha	V.V.Vanniaperumal College for Women, Virudhuna	Virudhunagar	Faculty	
Miss/Mrs.	JYOTI MAYARAM GUPTA	Vartak College	Palghar maharastra	Student (Engineering)	II Year - P.G
Dr.	R. Venkataramanan	Varuvan Vadivelan Institute of Technology	Dharmapuri	Faculty	
Dr.	Anilkumar Bohra	Veermata Jijabai Technological Institute	Mumbai	Faculty	
Dr.	Padmashri Sachin Patil	Veermata Jijabai Technological Institute, Mumbai	Mumbai	Faculty	
Dr.	Mugdha V Jagdale	Veermata JijabaiTechnological Institute, Mumbai	Mumbai	Faculty	
Dr.	K. ALAMELU MANGAI	VEL TECH HIGH TECH Dr. RANGARAJAN Dr. SAI	CHENNAI	Faculty	
Dr.	K. TAMIZH SELVI	Vel Tech High Tech Dr. Rangarajan Dr. Sakunthala	Chennai	Faculty	
Miss/Mrs.	MONIKA.S	Vel Tech Multi Tech	Avadi	Student (Engineering)	I Year -U.G
Dr.	Dr. G. Murugesan	Vel Tech Rangarajan Dr. Sagunthala R and D Instit	Chennai	Faculty	
Dr.	Dr. J.Gajendiran	Vel Tech Rangarajan Dr.Sagunthala R&D Institute (	Chennai	Faculty	
Dr.	N.THANGARAJ	VELALAR COLLEGE OF ENGINEERING AND TEC	Erode	Faculty	
Dr.	DEEPA JANANAKUMAR	VELALAR COLLEGE OF ENGINEERING AND TEC	Erode	Others	
Mr.	V. Prasanna Venkatesh	Velammal College Of Engineering and Technology	Madurai	Faculty	
Mr.	ARUN DINESH A	Velammal institute of technology chennai	Chennai	Faculty	
Mr.	Vinodh	Velammal Vidyalaya	Chennai	Faculty	
Miss/Mrs.	Sudhasuresh	Velammal vidyalaya Paruthipattu	Ambattur, chennai	Faculty	
Miss/Mrs.	K VIJAYALAKSHMI	Velammal Vidyalaya, Paruthipattu	Paruthipattu	Faculty	
Miss/Mrs.	K.SUJATHA	VELLALAR COLLEGE FOR WOMEN	ERODE	Faculty	
Miss/Mrs.	Thuvathiga	Vellalar college for women	Erode	Student (Science major)	III Year
Dr.	M. Yogeswari	Vellalar College for Women	Erode	Faculty	
Dr.	S. Gnanam	Vels Institute of Science, Technology & Advanced S	Chennai	Faculty	
Dr.	JEYASEKARAN R	VHNSN COLLEGE	Virudhunagar	Faculty	
Dr.	Kumar Kumarappan	Vidhyaa Giri College of Arts and Science	Karaikudi	Faculty	
Miss/Mrs.	B.Padmadevi	Vidhyasagar Women's College	Kancheepuram	Faculty	
Dr.	M. Anand Pandarinath	VIDYA JYOTHI INSTITUTE of TECHNOLOGY	Hyderabad	Faculty	
Dr.	I LAKSHMI PRASANNA	VIGNANA BHARATHI INSTITUTE OF TECHNOLIG	HYDERABAD	Faculty	
Dr.	I LAKSHMI PRASANNA	VIGNANA BHARATHI INSTITUTE OF TECHNOLO	HYDERABAD	Faculty	
Miss/Mrs.	Pavithrathangaraj	Vivekananda college of arts and sciences for wome	Namakkal	Student (Science major)	III Year
Miss/Mrs.	K.DURGA DEVI.	Vivekanandha College Of Arts And Sciences For W	Salem.	Student (Science major)	III Year
Miss/Mrs.	DHIVYASHREE.B.S	VIVEKANANDHA COLLEGE OF ARTS AND SCIEN	NAMAKKAL	Student (Science major)	III Year
Mr.	S.MURUGESAN	VIVEKANANDHA COLLEGE OF ARTS AND SCIEN	KARUR	Faculty	
Miss/Mrs.	DHIVYASHREE.B.S	VIVEKANANDHA COLLEGE OF ARTSVAND SCIE	NAMAKKAL	Student (Science major)	III Year
Mr.	Madhan	Voohrees College	Vellore	Student (Science major)	I Year -U.G
Mr.	Silas Ebenezer V	Voorhees College Vellore	Vellore	Student (Science major)	III Year
Mr.	Silas Ebenezer V	Voorhees College Vellore	Vellore	Student (Science major)	III Year
Mr.	Silas Ebenezer V	Voorhees College Vellore	Vellore	Student (Science major)	III Year
Dr.	Dr. C. S. JACOB PRASANNA S	VOORHEES COLLEGE, VELLORE	Vellore	Faculty	
Dr.	Dr . Sampandam Elangovan	Wollega University	Ethiopia	Faculty	
Dr.	J. Sharmi Kumar	Women's Christian College, Chennai	Chennai	Faculty	
Miss/Mrs.	D.JAYARESHMI	Womens Christian College	Nagercoil	Faculty	

Miss/Mrs.	D.JAYARESHMI	Womens Christian College	Nagercoil	Faculty	
Dr.	Dr.T.S.Renuga Devi	Women's Christian College,Chennai	Kumaran nagar,kolathu	Faculty	
Dr.	Edward Anand.E	EGS Pillay Engineering College	Nagapattinam	Faculty	
Mr.	BALAJI K	Thiruthangal nadar college	chennai	Faculty	
Mr.	G. Ravi	Oxford college of Engineering			
Miss/Mrs.	R.Ragesha				
Miss/Mrs.	J. Saranya	D.K.M College for Women	Vellore		Research scholar
Dr.	RM.Nachiappan	Government college of Engineering	Thanjavur	Faculty	

PRATHYUSHA ENGINEERING COLLEGE
Department of Science & Humanities
Report on Physics Webinar- 2020

To enhance the knowledge and for sharing the technological innovation in the field of Crystal science, Department of Physics, S & H of Prathyusha Engineering college conducted the webinar on “Recent advances in crystal Technology” on 28-05-2020. In this session 410 participants in and around the India participated online for sharing their knowledge. A week before the webinar, online registration form was collected from the participants and planned to occupy all the participants in Zoom meet. Around 600 participants were interested and registered for the webinar.

The resource person was Dr. Rajesh, Assistant professor of Physics, SSN college of Engineering. The session started with prayer (Tamil Thaai Vazthu) and expert was welcomed by Dr. Surekha, Associate professor of Physics & HOD, S & H. She also welcomed all the participants; from various different parts of country. The participants were Faculties of Physics, P.G students, research scholars and Engineering students. The session duration was one hour in evening from 4:00 P.M to 5:00 P.M and it was conducted online in Zoom meet. The expert talk about different areas of his research and techniques of crystal technology. In the end of the session many doubts and questions were raised by the participants, which were clarified by the expert. Then the feedback link were posted to all the participants and they were registered for certificates and the certificates of the webinar were sent through their registered mail id after the session. Finally the session ended with National anthem.

6.3.3 Average number of professional development /administrative training programs organized by the institution for teaching and non teaching staff during the last five years

Dept	Year	Dates (From-To) (dd-mm-yyyy)	Title Of The Professional Development Program Organised For Teaching Staff	Title Of The Administrative Training Program Organised For Non-Teaching Staff	No. Of Participants
ACADEMIC YEAR 2020-2021					
CIVIL	2020-2021	15.06.2020	PRODUCTION & HANDLING OF CONCRETE AT SITE	-	100
CSE	2020-2021	07/09/2020 to 11/09/2020	AICTE Training And Learning (ATAL) Academy Online FDP on "Data Sciences"	-	149
ECE	2020-2021	03.08.2020	Enterprise Networking	-	13
EEE	2020-2021	01.06.2020-04.06.2020	Online FDP on " E Learning"	-	124