



PRATHYUSHA ENGINEERING COLLEGE

CRITERIA 6

Governance, Leadership and Management

6.3.3

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

2019-2020

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
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BIOTECH	2019-2020	6-3-2020 to 7-3-2020	International conference on novel 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



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. Ramasamy Muthu 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 <i>Arbuscularmycorrhizal</i> 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 <i>Musa acuminata</i> Collasap
Group Photo		



Programme Schedule

Day – 2		
08.30 – 09.30	Oral/poster/Skype presentation Dr.ArunachalamRamalah Dept. Of ecology and evolutionary biology University of California, Irvine.	Insights into Cross-Species Evolution of Novel Human Coronavirus 2019 –nCoV and Defining Immune Determinants for Vaccine Development
09.30-10.30	Dr.SallajaElchuri 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

Prof. Dr. K. Marimuthu

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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, and fish 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 polyploidy initiated 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

Suresh Kumar Subblah

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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

Director, Immunogene Healthcare, Global Health city, Chennai

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 as sequence-specific 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 161HIW demonstrated the potential benefits of next generation 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 crossmatch and 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 the 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 differentiate 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 acuminata* Colla sap

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This is the first study to report the fabrication of biogenic silver nanoparticles incorporated antimicrobial fabric using *Musa acuminata* Colla sap. The silver nanoparticles were synthesized using *Musa acuminata* Colla sap 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 acuminata*, 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 single-positive-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 to SARS-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



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

Indian delegates :

Student delegate :

Accommodation

Onsite

Off-site

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

This will be confirmed on payment and availability.

Airport Pick-up:

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Not required

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Dr. M. Thenmozhi, Asst. Prof.,

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Ms.R.K.Kavitha Shri, Asst. Prof.,

EARLY BIRD REGISTRATION FEES:

Academician : INR 1000

PEC Delegates : INR 500

Students Delegates : INR 500

IMPORTANT DEADLINES:

Early Bird Registration: 25th Feb 2020

Registration Link (Copy and Paste):

<https://docs.google.com/forms/d/11Hmi1um9SjBm7PrYKbVQfaDZU94EBR91K70WyOy7zaQ/edit>

CONTACT US :

Email: spssworkshop45@gmail.com

Phone: 044-37673767

Poonamallee- Tiruvallur High Road
Chennai – 602025, Tamil Nadu.

Mobile Whatsapp:

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WORKSHOP ON APPLICATION OF STATISTICS USING EXCEL AND SPSS IN RESEARCH

Organized by



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Bioinfo Technical Club
Department of Biotechnology
Prathyusha Engineering College
Association with
AIMST University, Malaysia



4th – 5th March 2020

Venue

Computational Biology Lab,
PEC , Chennai-602025



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 Aranyavalkuppam along Poonamalle – Thiruvallur high road. PEC, a Telugu minority institution is affiliated to Anna University, Chennai and approved by AICTE. PEC is accredited 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
18.00-18.30 am	Opening Ceremony
18.30 - 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, Kappu 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.

<p>DAY 2</p> <p>SESSION IV Cell Viability (Tryphan Blue Assay) 09.00 AM - 10.00 AM</p> <p>BREAK 10.00 AM - 10.30 AM</p> <p>SESSION V Anti-Cancer Activity (MTT Assay) 10.30 AM - 12.00 PM</p> <p>LUNCH 12.00 PM - 01.00 PM</p> <p>SESSION VI Cryopreservation 01.00 PM - 02.00 PM</p> <p>BREAK 02.00 PM - 02.30 PM</p> <p>VALEDICTION 02.30 PM - 03.30 PM</p> <p>Valedictory Address Prof.Dr.R.JAYAVEL Crystal growth centre, Former Director - Centre for Research , Anna University, Chennai.</p>	<p>REGISTRATION</p> <p>REGISTRATION FEE - 1000 INR per head</p> <p>Opening of Registration - 21st December 2019 Closing of Registration - 07th January 2020</p> <p>EVENT DATES</p> <p>Day 1 - 10th January 2020 (Friday) Day 2- 11th January 2020 (Saturday)</p> <p>VENUE</p> <p>PRATHYUSHA ENGINEERING COLLEGE Aacharyal Nagar, Perambalur - Thiruvalur High Road, Thiruvalur, Tamil Nadu - 610625, INDIA.</p> <p>Visit www.prowessevent.com for registration through payment by Debit Card/ Credit Card/ Internet Banking.</p> <p>Candidates who cannot avail online payment, kindly contact +91- 8870000149</p> <p>Free accommodation for outside participants.</p> <p>Only limited entries (first come first serve)</p> <p>For any further details, kindly contact, +91-8870000149 lifeteckchenpas@gmail.com Web : www.prowessevent.com</p>	  <p>PRATHYUSHA ENGINEERING COLLEGE and LIFE TECK RESEARCH CENTRE proudly presents</p>  <p>PROWESS A TWO DAY NATIONAL LEVEL WORKSHOP ON ANIMAL TISSUE CULTURE</p> <p>DATE : 10th & 11th JANUARY 2020</p> <p>VENUE : PRATHYUSHA ENGINEERING COLLEGE</p> <p>www.prowessevent.com</p>
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PRATHYUSHA ENGINEERING COLLEGE

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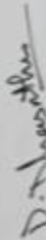
DR. P. DHASARATHAN

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and successfully completed the training in Animal Cell Culture held at Prathyusha Engineering
College, from 10th January 2020 to 11th January 2020.


Dr P Dhasarathan
Head, BT, PEC


Dr Seethalakshmi I
Director, LTRC


Dr Ramesh P.L.N
Principal, PEC



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PROWESS

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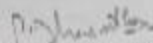
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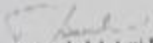
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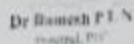
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Dr. Seethalakshmi I

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Dr. Ramesh P. N

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A TWO DAY NATIONAL LEVEL
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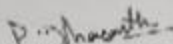
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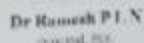
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Dean, BT, PEC


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A TWO DAY NATIONAL LEVEL
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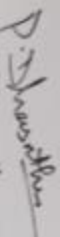
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Dr. Seethalakshmi I
Professor, H.E. PRC

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P. Dhasarathan
Dr P Dhasarathan

Head, P.T.C

S. Senthil
Dr. Seethalakshmi I

Director, P.T.C

Dr Ramesh P L N

Dean, P.T.C



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PRATHYUSHA ENGINEERING COLLEGE

Venue: Alkappam, Ponnambali, Tiruvallur High Road, Tiruvallur - 601103

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ANIMAL TISSUE CULTURE**

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College, from 10th January 2020 to 11th January 2020.

Dr P Dhasarathan

Head, BE, PEC

Dr Seethalakshmi I

Division, I DR

Dr Ramesh P I

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Autonomous Engineering, Postgraduate, Distance Education High Board, Tamil Nadu - 602015

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Dr P Dhasarathan

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S. Ramesh P I N
Dr Seethalakshmi I

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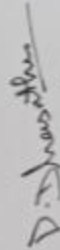
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Dr P Dhasarathan
Head, BE, PEC


Dr Seethalakshmi I
DEACAC, UERA

Dr Ramesh P. I. N
DEACAC, UERA

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Institution : _____
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Phone no : _____
Whatsapp / facebook : _____
E-mail id : _____

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 preference:

Veg	Non-Veg
-----	---------

5. Accommodation:

Onsite	Off-site
--------	----------

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

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6. Airport Pick-up:

Required	Not required
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Professor, Dept. of Biotechnology

Dr. P. Dhasarathan

HOD, Dept. of Biotechnology

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Dr. A. Praveena, Asst. Prof.

Dr. M. Thenmozhi, Asst. Prof.

Ms. D. Joyce Hellen Sathya, Asst. Prof.

Ms. R.K.Kavitha Shri, Asst. Prof.

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

CONTACT US :

Email: bticnbb2020@gmail.com

Phone: 044-37673767

Poonamallee- Tiruvallur High Road

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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 Aranvayalkuppam along Pootamalle – Thiruvallur high road. PEC, a Telugu minority institution is affiliated to Anna University, Chennai and approved by AICTE. PEC is accredited 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 latest 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.

ICNABHS-2020



**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 & 7th MARCH 2020



ESTD. 2001



Organised by

DEPARTMENT OF BIOTECHNOLOGY

**PRATHYUSHA
ENGINEERING COLLEGE**



"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 erythropoietin 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. Ranjlth Singh

Department of Biotechnology



ORGANISING COMMITTEE

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Sri.P.Raja Rao
Chairman
Prathyusha Engineering College.

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 field 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



Dr. G. Ramesh Kumar
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
evolutionary 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,
Mother Teresa university,
Kodaikanal.



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



Dr. A. J. A Ranjit Singh
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(ICNBHS-2020)**



6th & 7th March 2020

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Department of Biotechnology

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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

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4.	Conclusion
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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.