# NATIONAL WORKSHOP ON IMMUNOINFORMATICS FOR DRUG AND VACCINE DESIGN

AUGUST 24<sup>th</sup> AND 25<sup>th</sup>, 2018



# Department of Biotechnology Sri Venkateswara College of Engineering (Autonomous) Sriperumbudur Tk – 602 117



# SRI VENKATESWARA COLLEGE OF ENGINEERING

(AN AUTONOMOUS INSTITUTION) Post Bag. No. 1, Chennai- Bengaluru Highway, Pennalur, Sriperumbudur Taluk- 602117

National Workshop on "Immunoinformatics for Drug and Vaccine Design" 24<sup>th</sup> & 25<sup>th</sup> August, 2018 Organized by

Department of Biotechnology, Sri Venkateswara College of Engineering

#### Conveners

Prof. M. Sivanandham Secretary- SVEHT Professor of Biotechnology

Prof. E. Nakkeeran Professor & Head Department of Biotechnology

Organizing Secretary Mr. P.K.Praveen Kumar Assistant Professor

Coordinators Mrs. V. Sumitha Associate Professor Department of Biotechnology

Mr. J. Hariharan Assistant Professor Department of Biotechnology

Mr. D. Suresh kumar Assistant Professor Department of Biotechnology

Members Prof. R.B. Namyanan Dr.S.Prabhu Mrs. S. Pandi Prabha Mrs. P. Jaibiba Mr. N. Sathish Mr. S. Naga Vignesh Mrs. N. Kanagam Dr. A. Senthil Nagappan Dr. D. Nilavunesan

#### Dear Str / Madam,

Sub: National Workshop on "Immunoinformatics for Drug and Vaccine Design" on 24<sup>th</sup> & 25<sup>th</sup> August, 2018 - Reg.

Warm Greetings from the Department of Biotechnology, Sri Venkateswara College of Engineering, Pennalur, Sriperumbudur I. It gives us an immense pleasure to inform you that the Department of Biotechnology is organizing a National Workshop on "Immunoinformatics for Drug and Vaccine Design" from 24th & 25th August, 2018. Experts from various reputed institutions will share their experience to explore the current research in immunoinformatics for drug and vaccine design. Along with the experts talk, hands-on training on Epitope, Paratope prediction including Antibody Modeling, Energy minimization, Molecular Docking, Binding Score & site analysis for discovery of novel drugs or adjuvants in both drug and vaccine design will be conducted. Workshop also includes an exclusive training session on Immunoanalytical software developed in institution. In this regard, we look forward your participation to get training and knowledge in Immunoinformatics Research field. Herewith, we have enclosed the information brochure of the National Workshop for your kind reference. Hence I request you to kindly display the workshop brochure in your Department and college notice board. For further details please feel free to contact us or mail to idvd2018@svce.ac.in. We request you to kindly give wide publicity among your faculty members and students. We look forward for your positive response to make this workshop a grant success.

Thanking You, With Warm Regards,

PINS

Prof. E. Nakkeeran Prof and Head Department of Biotechnology

Enclosure: Information Brochure

TK. Bauen

Mr.P.K. Praveen Kumar Organizing Secretary Department of Biotechnology



(Autonomou) Petmilir: Sciperantoidae TK - 662 117 Tel 644 - 27152606 / 77163/83 Entre 587 Monie: -+11-3444405001 E-mail: idv2018/20v96.ac.in

#### ABOUT THE INSTITUTION

Sri Venkatewase Callege of Engineering (Antonorosa) (WCE), one of the premier technical institutions in Taminada, was established in 1985. The College is soluted on the Chenna-Bengshava National Highway (WH4) short 37 km such-west of Chennai. The college offers (0) UG programmes and (0) PG programmes. The National Bound of Accreditation accredited many of the slightly programmes and SUCE is in ISO 4001.0008 centified institution.

#### DEPARTMENT OF BIOTECHNOLOGY

Sn Vesksteivian College of Engineering sored the recent gowth in Modern Industrial Biotechnology. In order to report the growth in Biotechnology, SVCE stated the Department of Biotechnology in 2005 under fir guilance of our Chairman Dr.A.C.Methon, a well known Industrialist who understands the strength of Industrial Biotechnology. The department offers B Tech. and M'Tech Biotechnology programmes under Anna University, Chemial, apported by AIUTE. It is also reproved as a Research Center in Setechanlogy for 3d5 dry Research) and PhiD programmes by Anna University, Chemani The Department has well esobisted lateratory facilities namely Bioprocess and downstream processing. Instantiology, Instantistat Methoda of Analysis, Genetic Engineering, Animal house. Research Lab. Dioinformatics Lab and Computational Systems Bistechnology Lab.

The Department secsivel Research Guarts (1.2 Cocce) from various floading opencies such as SERB, ICMR, ACCE, CTS and also correctlynamic (22 lold) for organizing Short Term Training courses, workshops, finally development programmes from various fluiding againstic such as DBT, RCMR, CSIE and EDH National coordination for Bring and Vaccine Design" 24<sup>14</sup> & 25<sup>th</sup> August, 2018 REGISTRATION FORM

2. Designation

3. Are

4. Participant Category : Student/Faculty/Industry

5. Branch & Year

6 Note of the Institution with postal address:

7. E-mod ID: 8. Mobile number

9 Specialization

10. Registration fee

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Declaration Engree to abide by the rules and regulations of the workshop. Place:

Dute: Stgrakate:

(Copy of this form can be used for registration)

#### PROGRAMME OBJECTIVE

Immensionformatics is an important emerging field which acts as an intersection settleren experimental immunology and computational approaches. Immunology and computational approaches for uncome and door in the field of vaccine and doug development has belowing particularly over the basis devide as more and more intensis knowledge of diseases and the immune mechanisms unvolved are being uncovered.

Chienagauyu in an anangle of widespread infection disease with unpredictable seemerging disease ordenesis. Revene vaccinology approach has been used to charidate the optopic peptide ssociated with the Chienagaryu vani protein. This workshop is annet in describing recent applications of immunoinferenties on designing in *healton* vaccase lesson and drug feesign for Chienagaryu disease. Immunoinferenties on design includer the study and design of algorithms for mapping polential B- and T-cull optopos, which lessons he time and cost requires for Information in drug design includer the spectrate for Information in drug design includer the approach for Information in drug design includer the approaches of using new horbal drugs to identify load identification. Tead optimization, drug targets, target widdrise, etc.

The basic premite of the workshop is to provide less, cost effective and easily would be plant compounds as a promising drug or deag adjustum against the stancars collular and inanceral responses without any use effect. Hence, this matchalay is also asseed at importing theoretical knowledge and practical training in deag design, discovery and eaflery. Thus, this workdology will provide a platform for the students, facility and industrialist to share their knowledge and recent advancements in the flactuating field of knowledgerasis. National workshop on "Immunoioformatics for Drug and Vaccios Design" 24" & 25" August, 2018 Organized by United States Department of Biotechnology Seri Venksterman College of Engineering

CONVENERS Frof M. Sivatandhan Frof E. Nakkeeraa

ORGANIZING SECRETARY Nr. P.K. Proven Kama

> COORDINATORS Ms. V Sanitha Mr. J Eacharán Mr. D Saresh Kanar

Department of Historianalogy Sri Venkatermaria Collops of Engineering (Autonamous) Supermuthalam Th.: 662117 Tamil Noda, Lacks wrret.com.ac.in

# Propesed Institut Speakers from Industries &

1.Dr. Pario Abahan, Professor, CMC, Vellore 2. Prof.M.Sivananflam, Secretary, SVEHT, Cheman

Comuni 3 Dr LE Hana, Scenist T. NIRT, Caesan

4 Mr. O.Sofmanien, CED, Parkity Plana, Patchery COURSE CONTENT & SCHEDULE

The workshop consists of fecture sensions and hands on training sessions with relevance to Epitope, Paratope prediction including Antifoldy Modeling, Energy onionizations, Modernin Duoising Bioding Goors & conanalysis for discovery of avoid drags or solutions both ang and vaccine draign. Workshop also includes in exclusive framing session on humanication/stral software developed in our lost antifution.

VENUE

Sti Vestatesvara College of Engineering (SVCE) Superarduatu Tc.- 602 117 Tamibaatu India

#### TRANSPORTATION

The participants can avail the SVCE toos facility to attend this programme. For note details, planse other www.note.ic.in,

#### ACCOMMODATION

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#### DATES TO REMEMBER

Last date for #- registration	3107.008
Interation of selection	01.08.2015
Last day for seguration with DD	07.05.2015

# National Workshop on "Immunoinformatics for drug and vaccine design"

# 24th and 25th August, 2018

# Department of Biotechnology

## Sri Venkateswara College of Engineering, Sriperumbudur.

Venue: Function Hall

### Program Schedule

	DATE: 24-08-18 (Day 1)				
TIME	EVENIS				
08.00 AM- 08.50 AM	Registration				
08.50 AM - 09.00 AM	Prayer Song				
09.00 AM - 09.05 AM	Welcome Address by Prof. E.Nakkeeran, Ph D Professor & Head, Department of Biotechnology Sri Venkateswara College of Engineering.				
09.05 AM - 09.10 AM	Patron's Address by Prof. S.Ganesh Vaidyanathan, Ph.D Principal Sri Venkateswara College of Engineering				
09.10 AM - 09.40 AM	Chief Parton's Address by Prof. M. Sivanandham, Ph. D Secretary & Visiting Professor of Biotechnology Sri Venkateswara Educational & Health Trust, Chennai				
09.40 AM - 09.43 AM	Introducing the Chief Guest				
09.43 AM - 09.45 AM	Inauguration and Release of Workshop Manual by the Chief Guest Dr. Priya Abraham Professor, Department of Virology Christian Medical College, Vellore				
09.45 AM - 10.40 AM	Inaugural address (Lecture Session – I) "Impact of viral vaccines on global health" by Dr. Priya Abraham, MD, Ph.D Professor, Department of Clinical Virology Christian Medical College, Vellore				

Immunoinformatics for Drug and Vaccine Design, 24th - 25th August 2018.

10.40 AM - 10.55 AM	Tea Br	eak
10.55 AM - 11.50 AM	(Lecture Ses Technical Lecture on "Immu by Prof. M. Sivanar Secretary & Visiting Prof Sri Venkateswara Educationa	noadjuvants for vaccines" ndham, Ph. D essor of Biotechnology
11.50 AM - 12.45 PM	Lunch I	oreak
	Training S	ession-L
12.45 PM - 02.00 PM	B-cell and T-cell epitope prediction of viral protein (Batch-A) Venue: Computational Systems Biotechnology Lab Mr. J. Haribaran Asst.Professor, Department of Biotechnology. SVCE, Sriperumbudur-602117	B-cell and T-cell epitope prediction of viral protein (Batch-B) Venue: Bioinformatics Lab Mr. P.K.Praveen Kumar Asst.Professor, Department of Biotechnology, SVCE, Sriperumbudur-602117
02.00 PM - 02.15 PM	Tea br	vak
02.15 PM - 03.15 PM	Training Se	ession-II
	Epitope Modelling, Mapping and Epitope receptor docking of viral protein (Patch Dock and FireDock) (Batch-A) Venue: Computational Systems Biotechnology Lab Mr. J.Hariharan Asst.Professor, Department of Biotechnology, SVCE, Sriperumbudur-602117	Epitope Modelling, Mapping and Epitope receptor docking of viral protein (Patch Dock and FireDock) (Batch-B) Venne: Bioinformatics Lab Mr. P.K.Praveen Kumar Asst.Professor. Department of Biotechnology, SVCE, Sriperumbudur-602117

ImmunoInformatics for Drug and Vaccine Design, 24th -25th August 2018.

	DATE: 25-08-18 (Day 2)				
TIME	EVENTS				
09,00 AM -10.00 AM	Training 5	Session-III			
	Preparation of ligand & receptor, Checking Lipinski's rule of drugs, Threading for Chikungunya disease (Batch-B) Venue: Computational Systems Biotechnology Lab Mr. D. Suresh Kumar Asst.Professor, Department of Biotechnology, SVCE, Sriperumbudur-602117	Preparation of ligand & receptor, Checking Lipinski's rule of drugs, Threading for Chikungunya disease (Batch-A) Venue: Bioinformatics Lab Mr. P.K. Praveen Kumar Asst. Professor, Department of Biotechnology, SVCE, Sriperumbudur-602117			
10.00 AM-10.15 AM	TEA BREAK				
10.15 AM-12.30 PM	Training Session -IV				
	Molecular docking (AutoDock), binding site & score analysis of natural compounds with viral protein (Batch-B) Venue: Computational Systems Biotechnology Lab Ms. V. Sumitha Asso.Professor. Department of Biotechnology, SVCE, Sriperumbudur-602117	Molecular docking (AutoDock) binding Site & score Analysis o natural compounds with viral protein (Batch-A) Venue: Bioinformatics Lab Mr. P.K Praveen Kumar Asst,Professor, Department of Biotechnology, SVCE,Sriperumbudur-602117			
12.30 PM – 01.00 PM	Lecture Session-III Technical Lecture on "Biotechnology based startup companies – future prospects" by Dr. Balu Ranganathan Technology - Director, Palms Connect LLC, Sandy, Utah, USA				
01.00 PM - 01.45 AM	LUY	SCH			

000000000000000000000000000000000000000	Lecture Session-IV
01.45 PM - 02.35 PM	Technical Lecture on "Emerging approaches for the prevention
	and treatment of HIV infection"
	by
	Dr. Luke Elizabeth Hanna
	Scientist 'E', HIV/ AIDS Laboratory,
	Department of Clinical Research,
	National Institute for Research in Tuberculosis, Chennai - 600 031
02.35 pm – 02.55 PM	Valedictory address and Certificate distribution for the
	participants
02.55 PM - 03.00 PM	Feedback from the participants about the workshop chaired
	by
	Prof. E. Nakkeeran
	Professor & Head
	Department of Biotechnology
	SVCE, Seiperumbudur-602117
03.00 PM - 03.05 PM	Vote of Thanks
	by
	Mr. P.K. Praveen Kumar
	Assistant Professor,
	Department of Biotechnology,
	SVCE, Sriperumbudur-602117
03.05 PM - 03.10 PM	NATIONAL ANTHEM

Immunoinformatics for Drug and Vaccine Design, 24th-25th August 2018.

#### IMPACT OF VIRAL VACCINES ON GLOBAL HEALTH

Professor. Priya Abraham MD, PhD Department of Clinical Virology Christian Medical College, Vellore

Viruses cause a large number of diseases among humans, some associated with high mortality and others that can be debilitating, causing significant morbidity. Several viruses infect infants and young children while others may infect individuals in their prime of life. Hence, implementation of preventive measures is of utmost importance. Amongst these preventive strategies, vaccination is perhaps the most significant measure that has succeeded in control and even eradicating some viral diseases. Small pox is an example of a dreaded disease that was declared globally eradicated in 1979. Poliomyelitis cases have been reduced by 99% in the last 40 years. Global coverage of vaccination against important viral diseases of childhood has been enhanced dramatically since the creation of WHO's Expanded Programme of Immanization in 1974 and of the Global Alliance for Vaccination and Immunization in 2000.

Majority of the virus vaccines used thus far are killed virus vaccines, attenuated virus vaccines and vaccines prepared from recombinant DNA technology, including virus like particles. Use of viral vectors, synthetic peptides, DNA vaccines and even edible vaccines may constitute future vaccines.

Despite the huge success of vaccines against viruses, there are several challenges. There is tremendous cost involved in developing and marketing vaccines resulting in inadequate access to vaccines in poorer countries. Some viruses are known to mutate rapidly which require a constant update on vaccine formulations. With newly emerging and re-emerging viral diseases and increase in air-travel, the spread of infection happens very rapidly. Despite these challenges, every country needs to prioritize their own national vaccination programmes, since the benefits clearly suggest that there is no better way in which national revenue can be spent.

Immunoinformatics for Drug and Vaccine Design, 24th -25th August 2018.

# INFORMATICS FOR DESIGNING IMMUNOADJUVANTS FOR VACCINES

Prof. M. Sivanandham

Secretary (SVEHT) & Visiting Professor,

Department of Biotechnology,

Sri Venkateswara College of Engineering,

Sriperumbudur - 602117

Preventive vaccines against many infectious diseases have shown a significant reduction in the incidence of these diseases, not only in human population but also in many farm and pet animals. Efficacy of these vaccines is defined by the presence of immunogenic antigens, antigen delivery carriers and molecules that help in the augmentation of the immunogenicity of these antigens. The antigen delivery carriers and immunogenicity augmenting molecules are collectively called as adjuvants. The conventional approach to vaccine development requires cultivation of the attenuated pathogenic microorganisms and identifying their immunogenic components using biochemical, immunological and microbiological methods. However, these methods have failed to provide a vaccine for many pathogens. At present, the possibility of using genomic information of pathogens allows us to study vaccine development in in silico, without the need for conventional vaccine design and establishment. This approach, termed 'Reverse Vaccinology', which reduces the time required for the identification of vaccine candidate antigens and provides new solutions for those vaccines which have been difficult to develop for pathogenic diseases. Immunoadjuvants are agents that are used for enhancing vaccines efficacy and therefore, could be considered specific immune stimulants. Immunoinformatics have been used to identify immunoadjuvants from designed chemicals and natural sources. Dendritic cells are considered as nature's immunoadjuvant in the host. My laboratory has been working on informatically designed CD40 ligand mimetic molecules that can activate dendritic cells to make them as efficacious adjuvants. Moreover, we have identified informatically pant molecules such as Boeravinones and Withanolides that can stimulate dendritic cells to be efficacious adjuvants. Studies involving the above molecules will be part this presentation.

6 Immunoinformatics for Drug and Vaccine Design, 24<sup>th</sup> -25<sup>th</sup> August 2018.

#### BIOTECHNOLOGY BASED START-UPS -

#### FUTURISTIC PERSPECTIVES

Dr. Balu Ranganathan and Dr. Sudha Kargi Palms Connect LLC Sandy, Utah USA

Biotechnology is a convergence of biological processes and chemical technology integrating chemistry, chemical engineering and biology. Branched off to other disciplines namely, bioprocess, biochemistry, cell biology, molecular biology, biochemistry and adding up to the latest - nanotechnology. Fresh talented minds circumvallated and mentored by academic expertise with seed funding paves a very long path for the commercialization of laboratory desk conceptualization to clinical patient bedside commercialization. A sustainable entrepreneurial innovative activity(s) leads to the success of the start-up with perennial cash flows as grants and contracts. Conceptualization and creation of translational platforms that have converged multidisciplinary expertise leading to diversified talented team members formation is one of the major successes of the biotech based start-ups involving financial economist, marketing strategist and technology developer. Expensive biotechnology instruments to be made accessible to the startups as a pooled centralised facility as located in Boston to provide a spring board with a launch pad facilitating the rapid growth of the early stage biotech companies. Palms Connect LLC located in Sandy. Utah is a classic example of an US located biotechnology based start-up company working on novel drug delivery systems for feminine oncological indications. Bottomline: Biotech based start-ups are in the cusp of global influence.

Immunoinformatics for Drug and Vaccine Design, 24th -25th August 2018.

### EMERGING APPROACHES FOR THE PREVENTION AND TREATMENT OF HIV INFECTION

Dr. Luke Elizabeth Hanna Scientist 'E', HIV/ AIDS Laboratory, Department of Clinical Research, National Institute for Research in Tuberculosis, Chennai – 600 031

Unprecedented efforts of the last 30 years have turned HIV infection from a terrifying lethal disease to a chronic manageable condition. Yet, we do not have a cure for the disease. Development of new drugs with improved safety and/or resistance profile is a priority. Informatics tools and software's have helped in facilitating the drug discovery process significantly. In parallel with antiretroviral therapy innovations, research and development efforts are expanding toward new therapeutic approaches for targeting persistent HIV reservoirs that may lead to prolonged drug-free remission of the infection and potentially to HIV cure. The discovery of an effective vaccine remains the ultimate goal of HIV research. However, several factors have contributed to slowing the international efforts to develop an effective HIV vaccine. The number of circulating viral strains is one of the most intractable obstacles to vaccine development. Another major obstacle is the lack of clear immune correlates of protection in humans. Advances in basic and clinical research as well as informatics technologies have helped in the development of new knowledge pertaining to the management and prevention of HIV infection. The lecture will highlight current progress and discuss potential avenues for future developments in this promising era of virus bioinformatics.

Immunoinformatics for Drug and Vaccine Design, 24th -25th August 2018.

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# PARTICIPANTS CERTIFICATE



DEPARTMENT OF BIOTSCHNOLOGY National workshop on "Immunoinformatics for Drug and Vaccine Dosign" 24<sup>th</sup> and 25<sup>th</sup> August' 2018 ATTENDANCE SHEET

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6	VAYUNANDANA RAO. G	RVR & JC College of Engineering	-fa	et	AN -	QI-
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# National Workshop on

## "Immunoinformatics for drug and vaccine design"

#### 24" & 25" August, 2018

#### Organized by Department of Biotechnology Sri Venkateswara College of Engineering (Autonomous)

#### PARTICIPANTS FEEDBACK

Rating-5(Highest) 1(Lowest)

S.No	Aspect of Programme	5	4	3	2	1
1.	Lecture Content	1				
2.	Knowledge on the topics	1				
3.	Thoroughness of coverage	1			1	
4.	Coverage of topics	1				T
5.	Logistics arrangements	1				
6.	Hands on training session	1				Τ
7.	Overall assessment of the Programme	1		1		

8. Indicate the highlight(s) of the Programme

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afternoon services on 25th Any Lolp

9. Any specific aspect that needs particular attention and improvement? Please be frank

10. Contacts (Mobile No/ E.mail ID) 7867943014

11. Would you like to come back for another programme in this college?

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13. Specific comments, if any

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Signature of the Participant



#### National Workshop on

# "Immunoinformatics for drug and vaccine design"

24" & 25" August, 2018

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#### PARTICIPANTS FEEDBACK

Rating-5(Highest) 1(Lowest)

S.No	Aspect of Programme	5	4	3	2	1
1.	Lecture Content		V			
2.	Knowledge on the topics	v				
3.	Thoroughness of coverage		×			
4.	Coverage of topics	V				
5.	Logistics arrangements		V			Τ
6,	Hands on training session		~			
7.	Overall assessment of the Programme	~	*			

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9. Any specific aspect that needs particular attention and improvement? Please be frank

10. Contacts (Mobile No/ E.mail ID)

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11. Would you like to come back for another programme in this college?

Yes

13. Specific comments, if any

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Signature of the Participant

# SRI VENKATESWARA COLLGE OF ENGINEERING (AUTONOMOUS) DEPARTMENT OF BIOTECHNOLOGY

#### NATIONAL WORKSHOP ON "IMMUNOINFORMATICS FOR DRUG AND VACCINE DESIGN"

August 24th and 25th, 2018

#### WORKSHOP REPORT

India's burden of cancer is extraordinarily heavy for both the sexes. Cancer incidence in India is around 14.5 lakh cases in 2016 and is likely to reach nearly 17.3 lakh new cases in 2020, according to the projection of Indian Council of Medical Research (ICMR). The rise and prevalence of cancer led to use Immune cell based adjuvant immunotherapies, which are shown to be significant for some cancers.

The basic premise of the workshop is to transmit expected outcome as a less, cost effective and easily available plant compounds as a promising immunomodulation agent or drug or drug adjuvant against the various cellular and humoral responses without any side effect which could not be expected in modern allopathy drugs for society. The workshop highlights about up come of area of bioinformatics, which utilizes cheaper technologies for approaches on design of new herbal drugs, target validation, lead identification, lead optimization, energy minimization, binding site analysis, prediction of structure activity relationship of compounds. Immunoinformatics approaches on Epitope, Paratope prediction including Antibody Modeling and design of plant based Immunoadjuvants are also covered as part of training in this workshop. Further, this workshop also highlights the importance of detection of vaccine antigens and validation and evaluation of plant based Immunoadjuvants through HPLC.

Research in the field of vaccine development has bloemed, particularly over the last decade as more and more intrinsic knowledge of diseases and the immune mechanisms involved are being uncovered. Hence, this workshop is aimed at providing lectures in recent trends on Immunological methods for drug discovery and safety from eminent Professor cum Scientists like Dr.M.Sivanandham from SVEHT, Chennai and Dr.Luke Elizabeth Hanna from NIRT, Chennai. Also the workshop is targeted on delivering the knowledge on Pharmaceutical methods for drug discovery and safety from Industrialist, Mr.D.Subramanian, Chief Executive Director of Pondchy Pharmaceuticals, Puducherry. Mohammad Mobashir from Karolinska University, Sweden talk on Cancer systems biology and Prof.S.Vino, who is a pioneer of Immune Pharmacoinformatics will add strength to the delivery of updated information to the workshop. In addition to the popular lecture sessions, the workshop is aimed to provide hands-on experience in 4 different training sessions.

Thus, this workshop will provide a platform for the students, faculty and industrialists to share and improve their knowledge and recent advancements in the fascinating field of Immunotechnology, Immunoinformatics, Pharmaceutical Technology and Pharmacoinformatics.

P.K. Bowen

ORGANIZING SECRETARY/BIO

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HOD/BIO

Prof. E. NAKKEEHAN, Ki Toch, Ph.D. Professor & Head Department of Biotechnology Sri Venkateowara Collage of Engineering Interpretator The 6/2 117, January 1997

## **WORKSHOP PHOTOS**



Department of Biotechnology A Two day National Workshop on Innumination of Workshop on Drug and Vaccine Derign Inauguration by the Chief Guest Dr. Prive Abraham (Professor, Deek of Virology CMC, Vallere) Date: 24 Aug 2018 (08:50 AM) Venue: Function Hall





