

Intense Workshop on Advanced Techniques in Cell and Molecular Biology, Cell Culture, Immunology, Virology and Bioinformatics

Dear Students of Life Sciences,

Greetings!

King Institute of Preventive Medicine and Research, a renowned 140 years institute, is a place where century old buildings with unique architecture are located that actively engage in various activities related to preventive medicine. It has been hosting all kinds of biomedical research, vaccine production, diagnostic services, tissue culture activities, drug testing and analysis etc. It has a proven track record for innovation in healthcare and biomedical research, especially in controlling several bacterial and viral diseases. Several achievements have been made in the field of microbiology, virology, diagnostics and Immunology. In the past, it had played vital role in eradication of small pox and Polio from the country, and moving towards achieving “Excellence in Clinical Research” with the support and accreditations from Indian Council of Medical Research and Department of Health Research, Govt of India and World Health Organization (WHO) and Centre for Disease Control and Prevention, Atlanta, USA. This is a state Apex Referral centre for various viral and bacterial diseases.

We are planning to conduct an intense one month Workshop on “Advanced Techniques in Cell and Molecular Biology, Cell Culture, Immunology, Virology and Bioinformatics” at King Institute to advance the learning of techniques/methods/practices in the fields of bio and clinical research. The workshop module and curriculum are carefully and meticulously designed by qualified postdoctoral scientists and clinical experts working in the field of infectious diseases. Besides inspiring the students towards taking up research tasks, the workshop provides the needy core skill sets with updates to suit the current trends of research in these fields. We strongly felt that instead of conducting a short workshop, a workshop with intense practical sessions is necessary not only to enlighten the students on various modern methods but also equip themselves in subjects with practical exposure through learning in quality environment, the need of hour. We invite students and the colleges/institutions to avail this rare opportunity to explore the new arenas in biology research.

Eligibility : **Students of UG III Year completed, PG students and Registered PhD candidates in any of the Biological Sciences discipline; Bonafide certificate from Head of the Department of institution is needed**

Duration : **01/06/2016 to 30/06/2016; 10 a.m. to 5 p.m. (except Sunday)**

Fee : **Rs.10,000/- (Rs.Ten Thousands Only)**

A certificate will be issued by King Institute upon completion of the workshop.

With best wishes,

Director,

King Institute of Preventive Medicine and Research

Note: Students participating in the workshop will be given preference to do projects at King Institute.

Please contact for application and queries on Workshop details:

Mrs.Maheswari, King Institute @ intuitiveminds2015@gmail.com; Phone No. 9940539171

Course Content

Sl.No	Particulars
1.	Research Methodology
2.	Scientific Writing / Proposal Writing for Grants
Immuno-Diagnostics	
3.	Agglutination Tests
4.	HLA Typing - Tissue Compatibility for Transplantation
5.	ELISA – ANA
6.	Immuno-Fluorescence Assay
7.	Radial Immuno-Diffusion
Virology	
8.	Preparation and Propagation of Cell Lines
9.	Estimation of TCID ₅₀ of Virus by End Point of Dilution Assay
10.	Plaque Assay
11.	Haemagglutination Test
12.	Haemagglutination Inhibition Test
13.	Cell Cytotoxicity Assay
14.	MTT Assay
15.	Molecular Diagnosis of Pathogens - Conventional PCR & Real Time RT-PCR
Entomology & Animal Handling	
16.	Analysis of Vector Breeding Sources
17.	Dissection of Midgut & Salivary Gland from <i>Aedes aegypti</i>
18.	Biochemical Analysis of Insects (Estimation of Protein by Lowry's Method)
19.	Larval Bioassay
20.	Repellent Evaluation
21.	Importance of Medical Entomology
22.	Routes of Inoculation in Embryonated Hen's Egg
23.	Animal Experiments
Bio-Informatics	
24.	Biological Databases - Nucleotide Primary Sequence Database NCBI - Genbank
25.	Protein Primary Sequence Database - SwissProt/UniProt
26.	Viral Databases – Influenza Viral Resource (IVR)
27.	Viral Databases – GISAID
28.	BLAST
29.	BioEdit - Sequence Assembly, Multiple Alignment, Editing and Translation
30.	Advanced bioinformatics, Genomic & Prozone, Analysis, Evolutionary, Relation Predictants
31.	Multiple Sequence Alignments - Muscle (BioEdit) and ClustalW
32.	Translation tools
33.	Phylogenetic Analysis and Tree Building Methods Neighbour - Joining Method