



International Training on "Advanced Rapid Diagnostic Techniques for Infectious Diseases" (Hybrid Mode)

Date: 7th -15th September, 2023

Organized

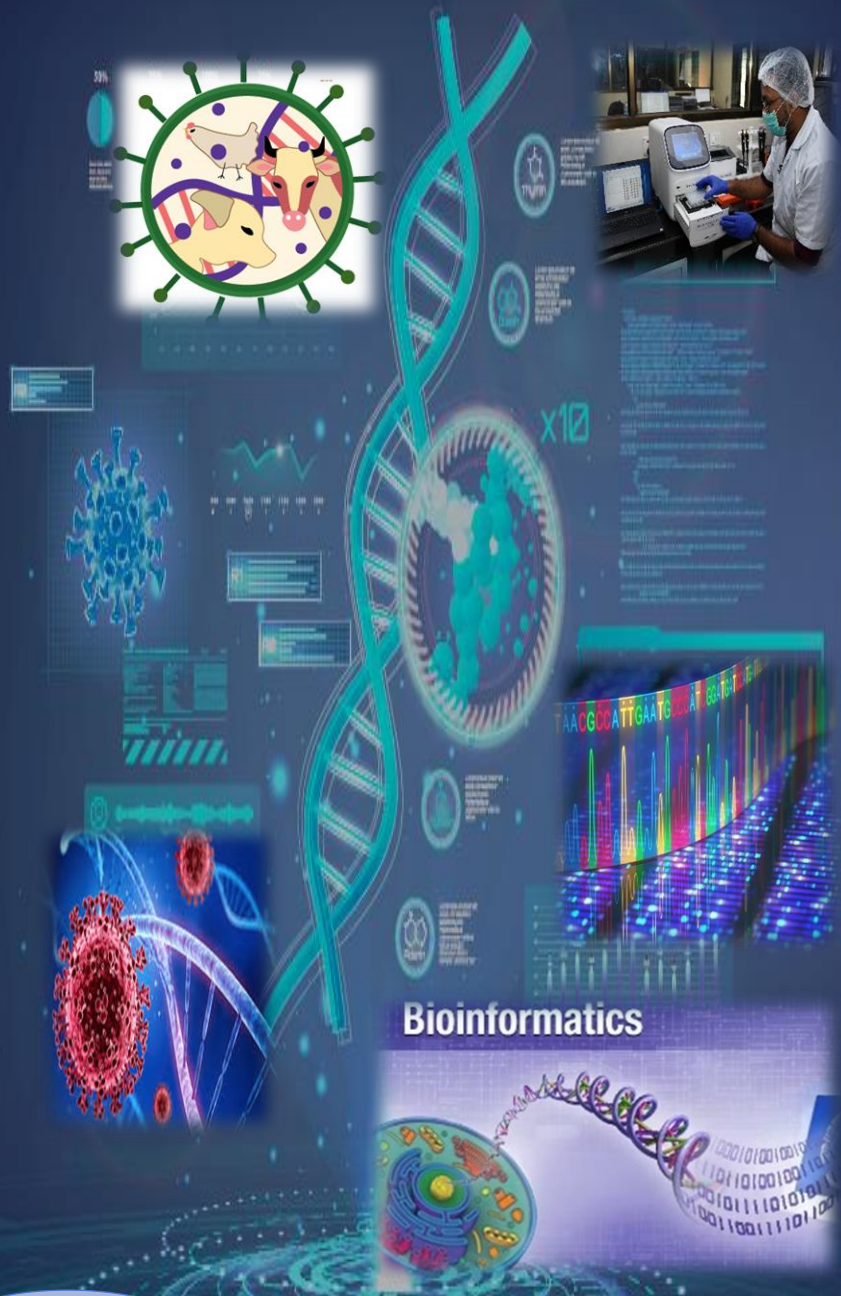
In collaboration with The University of Veterinary Medicine and Pharmacy in Kosice, Slovakia
Under

ICAR-NAHEP-CAAST, MAFSU Sub-project

CENTRE OF EXCELLENCE FOR ADVANCED RESEARCH ON ANIMAL FOOD SAFETY



Dr. Mangesh Bhide is serving as a Head of the Laboratory of Biomedical Microbiology and Immunology, UVLF in Kosice, University of Veterinary Medicine and Pharmacy in Kosice, Slovak Republic and Scientist at Institute of Neuroimmunology, Slovak academy of sciences, Slovakia. He is currently acting as Governor of International Centre for Genetic Engineering and Biotechnology for Slovakia. He is a member of various scientific organizations, councils and commissions and editorial board councils. He also served as the Principal Investigator for various national and international projects. His area of research interest comprises of Zoonoses, Infectious diseases and the development of therapeutics against neuro invasive pathogens based on nanotechnologies. He has publications registered in Creative Commons (CC) databases (103) with 2504 Citations and 23 Publications in non CC database. He has contributed to 8 Book chapters, 253 abstracts in conferences and delivered 12 Invited speeches as an expert faculty.



VENUE

Department of Veterinary Public Health, Mumbai Veterinary College, Parel, Mumbai – 400 012.
Maharashtra Animal and Fishery Sciences University, Nagpur – 440 001, Maharashtra, India.

RATIONALE

The twenty-first century has witnessed a wave of severe infectious disease outbreaks, which had a devastating impact on lives and livelihoods around the globe. Animal infectious diseases pose a continuing threat to human and animal health, food safety, national economy and the environment. Animal disease diagnostics forms a connecting link between the cause and control of any disease and therefore plays a fundamental role in disease management and prevention. Hence, it is essential to make rapid diagnostic tests to control and prevent the spread of infectious diseases. Recent diagnostic techniques are a frontline area of science which plays critical role in the implementation of efficient control strategies against animal infectious and zoonotic diseases. Understanding animal infectious diseases dynamics using high-quality diagnostic methods are important to obtain reliable diagnostic results.

Efficient diagnosis tools, Next Generation Sequencing, Bioinformatics and data analysis softwares play a vital role in recent times for the accurate diagnosis of infectious diseases and it is essential for improving overall animal health and productivity. This training program will help the participants to acquaint the knowledge with recent advances and rapid diagnostic techniques in molecular biology, immunodiagnosics and its application in practical scenarios.

COURSE OBJECTIVES

1. To acquaint participants about application of novel rapid diagnostic tests for the prevention and control of infectious diseases.
2. To familiarize participants with PCR/ sequencing primer design tools, bioinformatics tools and databases for sequence alignment.
3. To enlighten the participants on immunoassay development and sample preparation for sequencing.
4. To acquaint the participants for understanding basics of Next Generation Sequencing and its data analysis.

WHO CAN APPLY?

Faculty of Veterinary Institutions, Scientists, Veterinary and Medical Practitioner, Veterinary technicians, Laboratory Personnel and PG/Ph.D. Students.

REGISTRATION FEE

For online participation of P.G./Ph.D. Students: Rs. 250/-

For other online participants: Rs. 500/-

For offline participation of only MAFSU Faculties: Rs 1000/-

(Registration includes: Workshop material, Participation in lectures and class exercise sessions, morning & evening tea, breakfast and lunch during the workshop)

All the participants need to bring laptop for this training.

Registration link: <https://forms.gle/nfvhdVetbUfpZzPK8>

BANK DETAILS:

Name: Pay & Account Officer MAFSU

Bank Name: State Bank of India

Branch Name: Parel

Account No: 39220817897

IFSC Code: SBIN0001884

The desired participants have to register on or before **5th September, 2023 up to 5:30 PM**. After successful completion of registration, joining link for online registered participants will be shared on their registered email address.

ACCOMMODATION

Accommodation will not be provided by the organizer. The participants have to make their own arrangement.



Dr. N.V. Patil
Vice-Chancellor
MAFSU, Nagpur

CHIEF PATRONS



Dr. R. C Agarwal
DDG (Education) & National Director
NAHEP, ICAR, New Delhi

PATRONS



Dr. Anuradha Agrawal
NC, NAHEP-CAAST
ICAR, New Delhi



Dr. S. V. Upadhye
DI & Dean, Faculty of Veterinary
Science, MAFSU, Nagpur



Dr. N.V. Kurkure
Director of Research
MAFSU, Nagpur



Dr. A. U. Bhikane
Director of Extension Education
MAFSU, Nagpur



Dr. P. G. Wasnik
Dean, Faculty of Dairy
Technology, MAFSU, Nagpur

COURSE DIRECTORS



Dr. S. U. Gulavane
Project Implementing Officer &
Associate Dean, MVC, Mumbai



Dr. Mangesh Bhide
Professor & Head of Department
Laboratory of Biomedical Microbiology &
Immunology, UVLF in Kosice, Slovakia



Dr. R. J. Zende
Principal Investigator
NAHEP-CAAST, MVC, Mumbai

Organising Secretaries

Dr. V. M. Vaidya
Co- Principal Investigator., MVC

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Co- Principal Investigator., MVC

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Co- Principal Investigator., MVC

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Ms. Ashwini V. Khandekar
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International Training on “Advanced Rapid Diagnostic Techniques for Infectious Diseases”

Date	Time	Topic
7/09/2023	10:00 am-10:30 am	Registration
	10:30 am-11:00 am	Inauguration
	11: 30 am – 11: 45 am	Tea break
	11:45 am-12: 00 pm	Pre-assessment
	12:00 pm – 1:00 pm	Introduction and outline of course
	1:00 pm - 2:00 pm	Lunch break
	2:00 pm – 5:00 pm	Primer design strategies for diagnostic purpose (end-point PCR assays)
8/09/ 2023	10:00 am -12:00 pm	Primer design strategies for real-time PCR
	12:00 am -1:00 pm	Quantitative reverse-transcription PCR
	1:00 pm – 2:00 pm	Lunch break
	2:00 pm – 5:00 pm	Hands-on primer design with Geneious pro software
9/09/2023	10:00 am -1:00 pm	Class exercise- I & Class exercise-II
	1:00 pm – 2:00 pm	Lunch break
	2:00 pm – 5:00 pm	Visit to Haffkine Institute, Mumbai
11/09/2023	10:00 am -1:00 pm	Immunoassay development & Antigen preparation
	1:00 pm – 2:00 pm	Lunch break
	2:00 pm – 4:00 pm	Focus on antigen and assay specificity –bacterial, viral, parasite, fungal lysates vs. recombinant proteins vs. epitope vs. mimotope based immunoassays
	4:00 pm – 5:00 pm	Visit to Department of Veterinary Microbiology, MVC- Demonstration on ELISA, FAT, RBPT and LFA
12/09/2023	10:00 am-1:00 pm	Stable antibodies and alternative molecules (nanobodies, cyclic peptides, aptamers) in immunodiagnostics and therapy
	1:00 pm – 2:00 pm	Lunch break
	2:00 pm – 3:00 pm	Good practices in sample preparation for sequencing
	3:00 pm – 5:00 pm	Sanger sequencing and troubleshooting
13/09/2023	10:00 am-1:00 pm	Bioinformatics – walk through databases Genbank, Uniprot, dbSNP, Array express
	1:00 pm – 2:00 pm	Lunch break
	2:00 pm – 4:00 pm	Hands on - sequence alignment, phylogeny and distance matrix analysis, Bankit – deposition of sequences in Genbank
	4:00 pm – 5:00 pm	Visit to NIIRH, Mumbai- Demonstration of Real Time PCR, COBAS 6800, DNA Sequencing, Immunofluorescence, Immunohistochemistry, Flowcytometry, BSL -3, Bioinformatics facilities
14/09/2023	10:00 am – 1:00 pm	NGS and data analysis (On-line only)
	1:00 pm – 2:00 pm	Lunch break
	2:00 pm – 5:00 pm	NGS and data analysis (On-line only)
15/09/2023	10: 00 am – 1:00 pm	Review of course and Post-assessment
	1:00 pm – 2:00 pm	Lunch break
	2:00 pm – 5:00 pm	Closing Remarks, Valedictory Function and Distribution of Certificates

Agenda for Inaugural Function on 7th September, 2023

Time	Program	Name of Dignitaries
10:00 AM – 10:05 AM	Welcome Address	Dr. V. M. Vaidya Co-PI, NAHEP-CAAST MAFSU MVC, Parel, Mumbai
10:05 AM – 10:10AM	About the Course	Dr. R. J. Zende Principal Investigator, NAHEP-CAAST- MAFSU, MVC, Parel, Mumbai
10:10 AM – 10:15AM	Address by Guest of Honour	Dr. S. U. Gulavane Associate Dean, and Project Implementing Officer, MVC, Parel, Mumbai
10:15 AM – 10:25AM	Address by Chief Guest	Dr. N. V. Kurkure Director of Research, MAFSU, Nagpur
10:25 AM – 10:30AM	Vote of Thanks	Dr. (Mrs). R. S. Gandge Co-PI, NAHEP-CAAST MAFSU MVC, Parel, Mumbai

Agenda for Valedictory Function on 15th September, 2023

Time	Program	Name of Dignitaries
3:00 PM– 3:05 PM	Welcome Address	Dr. V. M. Vaidya Co-PI, NAHEP-CAAST MAFSU MVC, Parel, Mumbai
3:05 PM – 3:10 PM	Felicitation of Guests	
3:10PM – 3:15 PM	Feedback by Participants	
3:15 PM - 3:20 PM	Address by Principal Investigator	Dr. R. J. Zende Principal Investigator, NAHEP-CAAST- MAFSU, MVC, Parel, Mumbai
3:20 PM – 3:25 PM	Address by Guest of Honour	Dr. S. U. Gulavane Associate Dean, and Project Implementing Officer, MVC, Parel, Mumbai
3:25 PM – 3:40 PM	Presidential Address	Dr. N. V. Patil Hon'ble Vice-Chancellor, MAFSU, Nagpur
3:40 PM – 3:55 PM	Certificate Distribution	
3:55 PM – 4:00 PM	Vote of Thanks	Dr. V.H. Shukla Co-PI, NAHEP-CAAST MAFSU MVC, Parel, Mumbai
Group Photograph Session		