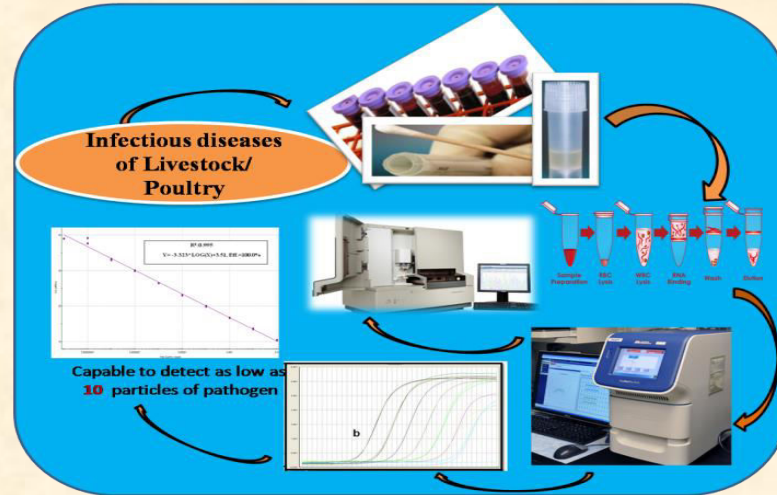


An Online 21 day Training Course on
“Recent techniques in nucleic acid based diagnostics and cell culture”

From 11th Jan to 31st Jan, 2021



Course Director: Dr. Sushila Maan
Course Co-ordinator: Dr. Kanisht Batra
Course Faculty: Dr. Minakshi,
Dr. Aman Kumar,
Dr. Pawan Kumar,
Dr. Joshi V. G.



Department of Animal Biotechnology
College of Veterinary Sciences

Lala Lajpat Rai University of Veterinary and Animal Sciences (LUVAS), Hisar, 125 004
Haryana

Duration: 11th Jan to 31st Jan, 2021

Course Fees: Indian participants are requested to pay a sum of Rs. 2000/- (Rs two thousand only) while for foreign participants US\$ 50 per week as registration fee. The registration fee shall be deposited in the given account details before 7th Jan, 2021.

Number of participants: The maximum number of participants shall not exceed 50. Selection of candidates is completely based on first come first serve basis.

Participants and eligibility: Participants are invited from ICAR Institutes/ SAU/Basic Science Institutes/ State Governments/Private Organizations from India or abroad. They can be UG/PG of Veterinary/biotechnology/life sciences having interest in the molecular diagnosis.

Account Details*:

Account name: Comptroller, LUVAS, HISAR
Account no : 0353104000076270
Bank Details : I.D.B.I. Bank, Hisar
I.F.S.C code : IBKL0000353

*** Please ensure for availability of seats before submission of registration fees. The fees once deposited is non-refundable.**

All correspondence may please be addressed to:

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Training Course on Recent techniques in nucleic acid based diagnostics and cell culture



Dr. Sushila Maan

Course Director cum Prof. & Head

The classical and conventional techniques employed to diagnose pathogens in livestock species are time-consuming, labour intensive and sometime give inconclusive results. Recent advances in the molecular biology and biotechnology has opened new avenues in disease diagnosis. These advanced molecular techniques of disease diagnosis have the potential to quickly, reliably and unequivocally diagnose known pathogens/conditions as well as have the potential for novel pathogen detection. The advanced techniques like Real time PCR has been adopted worldwide now a days for

detection of COVID-19 virus as well as can quantitate virus load in the clinical samples. These have proved their vital role in various biomedical applications such as diagnostics and therapeutics during COVID-19 pandemic. These tools are also useful in the area of forensic science, molecular medicine and to know the food adulteration. Therefore, present training course is designed to provide training on recent techniques in nucleic acid based diagnostics.



Dr. Kanisht Batra

Course Co-ordinator

The use of nucleic acid-based diagnostics in recent years has increased exponentially. These techniques have redefined the level of information available for animal disease control programmes. The use of DNA-based methods derives from the basis that each species of pathogen carries unique genetic material (DNA/RNA) that differentiates it from other organisms. The techniques offer high sensitivity and specificity. Pathogen identification based on a DNA sequence is more accurate, less subjective, and often much faster than traditional culture-based methods. Furthermore, the techniques of cell culture are basic tools to understand

the host pathogen interaction at cellular level. Also cell-culture process is an innovative and alternative production technique for vaccine manufacturing of important viral pathogens. In this training programme, we will provide information about various molecular diagnostic tools and cell culture techniques; describe the current state of the art in nucleic acid diagnostics. Finally, we will describe future trends and expected advances in the field.

Course contents:

- Extraction and purification of gDNA/RNA of pathogens from various clinical samples.
- RT-PCR based amplification of viral genes and cDNA synthesis.
- Real time PCR/multiplex technology.
- Molecular cloning of pathogenic genes.
- DNA sequencing.
- Next generation Sequencing.
- Diagnosis and therapeutic applications of peptides.
- Luminex xMap technology.
- Bioinformatic tools and molecular diagnosis.
- Maintenance of Different cell lines.
- Propagation of viruses in cell lines.
- Cryopreservation of cells.

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

- E-Certificate will be provided to the registered participants who will attend all the sessions and submit the feedback.



Organizer
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