

*Kerala University of Health Sciences*  
*Centre for Basic Science Research and Bioethics*



***Two day Seminar cum Workshop on Introduction to Molecular Biology Techniques, Bioinformatics tools and Animal ethics in Health Science Research***

*It is decided to conduct “Two day Seminar cum Workshop on Introduction to Molecular Biology Techniques, Bioinformatics tools and Animal ethics in Health Science Research”. This is a collaborative programme by Centre for basic science research and bioethics, Kerala University of Health Sciences, Thrissur and Centre for Advanced Studies in Animal Genetics and Breeding, College of Veterinary and Animal Sciences, Mannuthy. The workshop will be led by experts from Kerala University of Health Sciences, Thrissur and College of Veterinary and Animal Sciences, Mannuthy.*

***Objectives of the workshop***

- 1. To outlay the importance of molecular biology and bioinformatics aspects in health science research.*
- 2. To attain technical expertise in genetic and bioinformatics aspects.*
- 3. To familiarize the technological aspects of DNA/RNA isolation, amplification and detection; PCR and RT-PCR approach, next generation DNA sequencing and SNP detection and implications.*
- 4. To familiarise ethical implications in animal science research and regulatory aspects.*

***Workshop Details***

- *Nature of Programme: Two day Seminar cum Workshop.*  
*One day for theory session – 4 topics handled by 4 expert resource persons. [Estimated 90 minutes for each session]*  
*Second day for practical session – to be held at the Research laboratory, Centre for Advanced Studies in Animal Genetics and Breeding, College of Veterinary and Animal Sciences, Mannuthy, Thrissur.*
- *Date of workshop: 29-30<sup>th</sup> January 2020.*

- *Audience/ Participants: Faculty of Institutions affiliated to KUHS on first come first served basis.*
- *Preference will be given to the participants of the KUHS Certificate Programmes (“Advances in Basic Science Research and Bioethics (CABSB)” and “Advances in basic sciences – Diagnostics, Therapeutics and Rehabilitation Technology (CABS-DTRT)”).*
- *Maximum enrolment will be limited to **25** participants.*
- *Venue: 6<sup>th</sup> Floor, Seminar Hall, KUHS Main Building, Thrissur.*

### ***Registration Process***

*Those who are interested may kindly download the attached registration form, and forward the duly filled form to [research.basicsciences@kuhs.ac.in](mailto:research.basicsciences@kuhs.ac.in) before 26/01/2020, 5pm.*

### ***Note***

- *No TA/DA will be provided.*
- *Attendance certificates & Certificate of participation will be provided.*
- *It is compulsory for all participants to be present for both theory and practical sessions to get the certificate.*
- *No registration fee.*

***“We are hereby providing details of the programme below. Kindly check your topics of relevance. If interested you may apply for the same at the earliest”.***

***The cut of date to respond is 26-01-2020.***

## *Programme Schedule (Tentative)*

<i>Time</i>	<i>Session</i>	<i>Faculty/Resource Person</i>
<b>Day 1 (29-01-2020)</b>		
<b>Venue – Seminar Hall (6<sup>th</sup> Floor), Kerala University of Health Sciences, Thrissur.</b>		
9:00 am-9:30 am	Registration	
9:30 am-9:45 am	Inauguration : Dr. Mohanan Kunnummal (Hon'ble Vice Chancellor, Kerala University of Health Sciences)	
9:45 am-11:00 am	Clinico-molecular correlations, Common patterns of inheritance, Genetic counselling in life style diseases.	Dr. Vasudevan, Assistant Professor, Dept. of Pathology, Govt. Medical College, Thrissur.
11:00 am-11:15 am	Tea Break	
11:15 am-1:00 pm	Genome organization, Principles of DNA isolation and quantitation, Polymerase Chain Reaction & Primer Designing.	Dr. Aravindakshan T V Director Centre for Advanced Studies in Animal Genetics and Breeding, College of Veterinary and Animal Sciences, Mannuthy, Thrissur.
1:00 pm-2:00 pm	Lunch Break	
2:00 pm-3:30 pm	Single nucleotide polymorphism (SNPs)-Restriction Fragment Length Polymorphism and High Resolution Melt Curve Analysis.	Dr. G Radhika Assistant Professor Centre for Advanced Studies in Animal Genetics and Breeding, College of Veterinary and Animal Sciences, Mannuthy, Thrissur.
3:30 pm-3:45 pm	Tea Break	
3:45 pm-5:00 pm	Institutional Animal Ethics Committee.	Dr. Anilkumar K Professor, Dept. of Animal Genetics and Breeding, College of Veterinary and Animal Sciences, Mannuthy, Thrissur.
<b>Day 2 (30-1-2020)</b>		
<b>Venue - Research Laboratory, School of Applied Animal Production and Biotechnology, College of Veterinary and Animal Sciences, Mannuthy.</b>		
9:30 am-11:00 am	DNA isolation using genomic DNA isolation kit.	
11:00 am-11:15 am	Tea break	
11:15 am-1:00 pm	Primer Designing, Polymerase Chain Reaction & Agarose gel electrophoresis.	
1:00 pm-2:00 pm	Lunch break	
2:00 pm-2:30 pm	Restriction Fragment Length Polymorphism.	
2:30 pm-3:30 pm	High Resolution Melt Curve Analysis.	
3:30 pm-3:45 pm	Tea break	
3:45 pm-5:00 pm	DNA sequencing, Sequence analysis and Submission.	
5:00 pm-5:15 pm	Valedictory Function and Certificate Distribution.	

## *Speakers/ Resource persons*

### *Speakers*



***Dr. T V Aravindakshan***  
*Professor and Head,  
Director  
Centre for Advanced Studies in Animal Genetics and Breeding,  
College of Veterinary and Animal Sciences,  
Mannuthy, Thrissur.*



***Dr. G Radhika***  
*Assistant Professor,  
Centre for Advanced Studies in Animal Genetics and Breeding,  
College of Veterinary and Animal Sciences,  
Mannuthy, Thrissur.*



***Dr. Vasudevan***  
*Assistant Professor,  
Dept. of Pathology,  
Govt. Medical College, Thrissur.*



***Dr. Anilkumar K***  
*Professor,  
Dept. of Animal Genetics and Breeding,  
College of Veterinary and Animal Sciences,  
Mannuthy, Thrissur.*

***“For any further queries kindly mail to [research.basicsciences@kuhs.ac.in](mailto:research.basicsciences@kuhs.ac.in)”***  
***Ph: 9895579813.***  
***0487-2207621.***

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Bioinformatics tools and Animal ethics in Health Science Research*

*Registration form*

*1. Name of the participant: .....*

*2. Current Designation and Department: .....*

*.....*

*.....*

*3. Name of the Institution: .....*

*4. Email Id: .....*

*5. Phone Number: .....*

*Date: .....*

*Signature of the Applicant*

*Recommendation of the Principal*