APPLICATION FORMAT

1. Full Name (Block letters):
2. Date of birth:
3. Designation:
4. Present employer with address:
5. Address for correspondence with Telephone / Mobile number, Fax number and Email:
6. Academic qualifications starting from graduate level:

Name of Degree	University	Year of Passing	Major Subject Offered

Signature of candidate

7. Certificate from employer:

The application of Dr./Mr/Ms.....is hereby recommended for attending the course entitled " Application of genomic tools in unravelling physiological processes" being organized by CAFT in Veterinary Physiology, Division of Physiology & Climatology, IVRI, Izatnagar from 29.01.2019 to 18.02.2019. It is further certified that the information furnished by him/her has been verified and found correct.

Signature of recommending/

sponsoring authority with seal

Application of genomic tools in unraveling physiological processes

Patron : Dr R.K. Singh

Director, CAFT : Dr G. Taru Sharma
Course Convener : Dr Mihir Sarkar

Co-Conveners : Dr. Gyanendra Singh
Dr. Vikash Chandra
Dr. Vikrant Singh Chouhan

CAFT Faculty : Dr Puneet Kumar
Dr. V.P. Maurya
Dr Sadhan Bag
Dr Hari A. Samad

Other faculty
Faculty of IVRI from allied disciplines
Distinguished Guest faculty

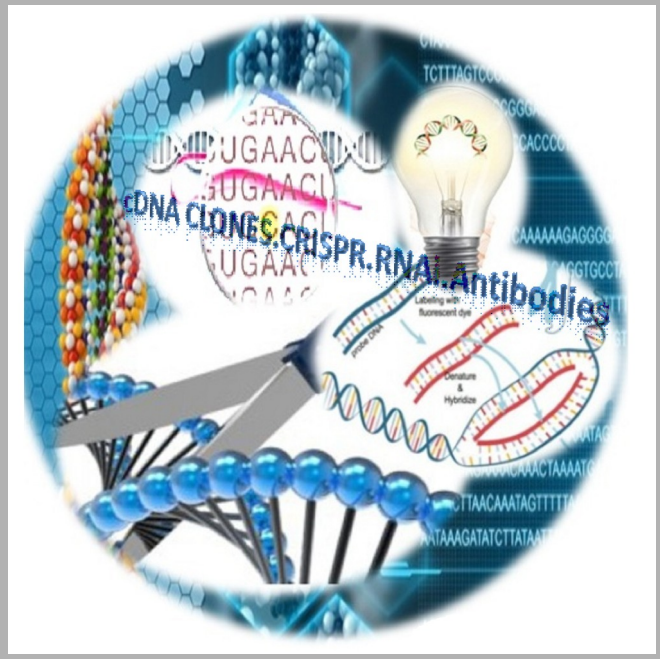
Contact Address:
Dr. G. Taru Sharma
Head cum Director, CAFT
CAFT in Veterinary Physiology
Division of Physiology & Climatology
Indian Veterinary Research Institute
Izatnagar- 243 122 (UP), India
Telefax: 0581-2301327 (O)
Email: *gts553@gmail.com*
Web.:www.caftphysiol.org/ or *www.ivri.nic.in*

ICAR Sponsored CAFT Short Course

ivri

Application of genomic tools in unraveling physiological processes

(January 29 - February 18, 2019)



CAFT in Veterinary Physiology
Division of Physiology and Climatology
ICAR– Indian Veterinary Research Institute Izatnagar-243 122 (UP)

Application of genomic tools in unraveling physiological processes

NTRODUCTION

Physiological genomics is an emerging field that brings together the disciplines of genomics and cell, organ and whole animal systems integrative physiology in an effort to attach function to the DNA sequences of complex living systems. Performance of an animal is a sum total of the function of its systems. All the body systems at organ, cell, sub cellular, and molecular levels, working in a rhythm, bring out a qualitative and quantitative expression collectively referred as "Animal Physiology". Thanks to the rapid progress in genomic research during the last two and half decades. Now, there are a lot of different genomic tools for accurate functional genome anal-ysis. It is imperative that if physiologists are going to utilize these tools, they must lead the way in merging high-throughput data sources and hypothesis-driven research into a cohesive picture of cell, tissue and whole organism function. It is needless to mention that education and training in such areas is a need of the day. This short course aims to review developments and applicability of such genomic tools developed through research for efficient physiological capacity building.

ELIGIBILITY

Participants having master's degree in animal physiology, animal nutrition, animal reproduction, animal genetics and breeding, animal biotechnology, animal biochemistry, veterinary pharmacology, veterinary medicine, immunology, LPM and allied discipline of animal and veterinary sciences; working not below the rank of Assistant Professor and equivalent in the concerned subject under State Agricultural University / I.C.A.R. Institutes are eligible for this course.

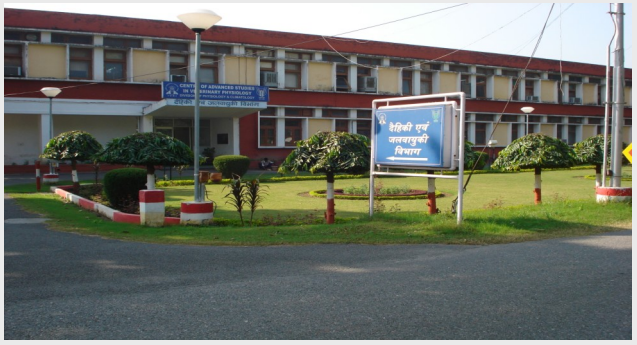
CAFT IN VETERINARY PHYSIOLOGY

Division of Physiology, Pharmacology & Biochemistry was formally established in 1970. Later on Division of Pharmacology & Toxicology as well as Biochemistry was separated and the existing Division was renamed as Division of Physiology and Climatology. On the basis of achievements in Animal Physiology research and teaching, ICAR granted the status of Centre of Advanced Studies in Veterinary Physiology **to** this division in 1995.

The centre is having the responsibility of teaching and research with a mandate of training scientists and teachers of Universities and Research Institutes. The Centre of Advanced Studies (CAS) was renamed as Centre of Advanced Faculty Training (CAFT) by the Council in the year 2010.

INSTITUTE

The **ICAR-Indian Veterinary Research Institute** is one of the premier research institutions of South East Asia, dedicated to livestock research and development in India. The Institute was established in the year 1889 and has rendered services as National Institute for more than 128 years to the country. In 1983, IVRI was accorded the status of Deemed to be University by UGC for the award of



M.V.Sc. and Ph.D. degrees. It is situated 8 Km north of Bareilly city, at Izatnagar, a satellite town of Bareilly. IVRI is just 1 Km from Izatnagar railway station. The weather of Bareilly during the month of January remains cool with average minimum temperature of 5-6 °C and average maximum temperature of 20 °C.

COURSE CONTENT

Accurate molecular mRNA quantification through qPCR, Next Generation Sequencing technology, Serial analysis of Gene expression, Transcriptome analysis through RNA-Seq, Fluorescent In-situ Hybridization technique, Microarray technology, Potential applications of RNAi in elucidating the signaling pathways, Prospects and progress of *CRISPR-Cas9 gene editing system*, Gene regulation through Epigenomics, Emerging concept of metagenomics.

SEMINAR

Participants are expected to deliver a short seminar highlighting their activities in the parent organization.

CERTIFICATE

A certificate will be awarded to the participants on the successful completion of the course.

FINANCIAL ASSISTANCE

No course fee will be charged for joining the course. The participants will be paid TA as per entitled class restricted to 2nd AC and DA for the journey period, provided they produce a certificate from the parent organization to the effect that they are not being paid TA and DA for this course. The participants will have to produce documentary evidence of travelling in the entitled class. Local hospitality including free boarding and lodging will be arranged in the institute guest house. Local participants will be provided with minimum hospitality of lunch, tea etc.

APPLICATIONS

Candidates may log on to www.iasri.res.in/cbp, apply online and send duly forwarded application to the Director, CAFT on or before **January 10, 2019** through E-mail or by post to Director, CAFT. *Selection will be made on first come first serve basis.*