

**Proceedings of the CAC meeting of the NAIP on “Toll-like receptors in farm animals – Evolutionary lineages and application in disease resistance” held on 26.02.2010 at the Dept. of Animal Biotechnology, Madras Veterinary College, Chennai – 7 along with the Workshop on ‘Animal and Fish diseases’**

Dr. H.K. Pradhan, CAC Chairman, NAIP-TLR & WHO consultant, New Delhi  
Dr. G. Butchaiah, Member, CAC, NAIP-TLR & Dean (Retd.), RAGACOVAS, Puducherry  
Dr. K. Thangaraj, Member, CAC, NAIP-TLR & Scientist, CCMB, Hyderabad  
Dr. A. Bandyopadhyay, National Co-ordinator (Component 4), NAIP, New Delhi  
Dr. V. Purusothaman, Direction of Research, TANUVAS, Chennai  
Dr. S. R. Srinivasan, Dean, Faculty of Basic Sciences, MVC, Chennai  
Dr. G. Dhinakar Raj, CPI, NAIP and Professor, Dept. of Animal Biotechnology, MVC, Chennai  
Dr. K. Kumanan, Professor and Head, Dept. of Animal Biotechnology, MVC, Chennai  
Dr. V. Ramaswamy, Professor and Head, Dept. of Veterinary Microbiology, MVC, Chennai  
Dr. R. S. Kataria, CCPI, NAIP, NBAGR, Karnal  
Dr. Y. P. S. Malick, CCPI, NAIP, IVRI, Mukteswar  
Dr. A. Raja, Associate Professor, Dept. of Animal Biotechnology, MVC, Chennai  
Dr. K. G. Tirumurugaan, Assistant Professor, Dept. of Animal Biotechnology, MVC, Chennai

The National Co-ordinator welcomed the gathering.

The Director of Research insisted on the importance of achieving the objectives of the project in time.

The CPI, ABT, TANUVAS and CCPI of NBAGR, Karnal and CCPI of IVRI, Mukteswar presented their progress of work in front of the participants of the Workshop including the NC, CAC members of NAIP-TLR and two other schemes. After lively discussions, the following salient points emerged for further improvements in the progress of the scheme

### **TANUVAS**

- ❖ Inclusion of all the TLR gene sequences of different species for performing multidimensional phylogenetic analysis
- ❖ Analysis of expression levels of the respective TLR mRNA following stimulation with specific ligands (along with downstream cytokines)
- ❖ Increase the sample size per breed
- ❖ The possibility of analysis of dendritic cells in skin of Toda or Murrah may be explored
- ❖ Inclusion of TLR mRNA analysis from Black Bengal breed of goats since this breed is considered as most disease resistant
- ❖ TLR mRNA analysis in the Murrah breed of animals available in the same environment as Toda

### **NBAGR**

- ❖ Link the SNP work with the work being performed by Dr.R.K.Vijh, NBAGR
- ❖ Include samples from Black Bengal goats from Dr. Abjit Mishra, IVRI
- ❖ Correlate haplotypes with cytokine levels and not only SNP
- ❖ To rule out the heterogeneity of the Barbari or Tellicherry stock, compare individual animals with same allelic status with each breed
- ❖ Perform Phylogenetic analysis with the sequence data generated
- ❖ Take up sequencing of the yak and Mithun TLR genes amplified by IVRI, Mukteswar and additional funds needs to be provided to NBAGR for this purpose

## IVRI

- ❖ Give more thrust to work related to disease resistance models
- ❖ Increase the number of animals used for sequencing different TLR genes
- ❖ Redesign primers for amplification of TLR6 and TLR8 gene of Yak
- ❖ Sequencing of TLR genes of Yak and Mithun may be given to NBAGR, Karnal
- ❖ For *in vitro* infection of PBMCs with PPRV, a virulent PPR virus may be used along with the vaccine virus
- ❖ The name of the person approved for attending the international seminar may be changed from Dr. R. K. Singh to Dr. Y. P. S. Malik, as the CCPI has now been changed to Dr. Y. P. S. Malik (*Dr. RKS is presently Director, National Research Centre on Equines, Hisar*)

  
CPI & Professor 26/2/2010  
ABT, MVC

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