

A REPORT ON THE WORKSHOP ON 'ERADICATION OF PESTE DES PETITS RUMINANTS VIRUS IN INDIA'
HELD AT COLLEGE OF VETERINARY SCIENCES,
SRI VENKATESWARA VETERINARY UNIVERSITY, RAJENDRANAGAR,
HYDERABAD ON 4TH MARCH 2013

A comprehensive one-day workshop on 'Eradication of Peste Des Petits Ruminants Virus (PPRV) in India' was organized by National Institute of Animal Biotechnology (NIAB) as a part of NIAB seminar series in collaboration with the Pirbright Institute, UK and College of Veterinary Sciences, Sri Venkateswara Veterinary University at Rajendranagar, Hyderabad on the 4th of March, 2013. The workshop focused on efficient ways to eradicate PPRV, similar yet faster than it took to eradicate Rinderpest virus (RPV). The program started with address by Prof. Sudhakar Reddy, Dean, College of Veterinary Sciences, Rajendra Nagar, Hyderabad followed by a brief presentation about NIAB by the director, Prof. Reddanna.

In the forenoon session, Dr. Satya Parida, Head of Vaccine Differentiation, Institute of Animal Health, Pirbright, UK presented his talk on '*What next after Rinderpest eradication? PPR marker vaccine and DIVA test using Reverse Genetics Technique*'. Following a brief introduction about the virus and the disease in susceptible hosts, he spoke about reverse genetics technique as the fast approach to generate marker vaccines and thus target eradication of the virus. Dr. G. Dhinakar Raj, Director, TRPVB and Professor, Madras Veterinary College, Chennai, presented his research study on '*Genetic resistance to PPRV – receptor expression Vs innate immune responses*'. His research suggested the expression patterns of SLAM receptor and TLR7 as factors contributing to virus replication in susceptible hosts. Dr. Parimal Roy, Professor and Head, TANUVAS, Chennai spoke about '*Field outbreaks of PPR*'. Dr. V. Balamurugan, Senior Scientist from PD_ADMAS, Bangalore, presented his talk on '*Epidemiology of PPR in India*' highlighting the importance of sensitive diagnostics and the need for a proper and channelized disease reporting systems.

During the afternoon session, Dr. R. P. Singh, Principal Scientist from IVRI, Bareilly gave '*an overview of PPR diagnostics and Vaccine developed by IVRI*'. IVRI has developed sandwich ELISA, competitive ELISA kits, PCR-ELISA techniques for diagnosis of PPRV and Sungri/96 as the vaccine strain. Though this vaccine strain is currently used across the nation, he insisted on developing DIVA vaccines. The final presentation was given by Dr. Krishna Jyothi Yadlapati, Assistant Director of VBRI, Hyderabad on '*Status of PPR in Andhra Pradesh*'. She spoke about pulse vaccination practised in Andhra Pradesh which has significantly brought down the incidences of PPRV outbreaks in this state. She suggested some smart ways to control the disease spread such as vaccinating the kids and lambs, vaccinating the flock during winter to improve the herd immunity and providing vaccination certificates to migrating flocks especially near the state borders.

The workshop concluded with a panel discussion moderated by Dr. Satya Parida. The following were discussed (i) age at which kids/lambs must be vaccinated - it was concluded that they must be vaccinated at 4 months when their maternal antibodies no longer exist (ii) the route of vaccination - currently only the subcutaneous route of vaccination is being practised (iii) control of disease spread and

monitoring need to be followed throughout India similar to the strict monitoring practised in Andhra Pradesh (iv) 100% vaccination coverage needs to be ensured and vaccine failures due to break in cold chain should be addressed - need for a thermostable vaccine (v) why PPRV infection sometimes causes subclinical infection in sheep and reverts to virulence upon passages in sheep; also why there is a difference in the host susceptibility to PPRV between two states for example goats are predominantly infected in Tamil Nadu while it is the sheep population which is mostly infected in Andhra Pradesh ? - research need to be done to understand the molecular basis of such viral pathogenesis and to study global gene expressions in sheep and goat (vi) the need for DIVA vaccines (vi) feasibility of subunit vaccines (vii) other hosts for PPRV such as wild animals and concerns about carrier status of infected animals (viii) any need for therapeutic interventions in infected animals using natural compounds that could serve as antivirals. Scientists from Industries, however, were sceptical about business profitability in such research areas and few other scientists suggested that if vaccination is successful then there will be no need for antiviral screening.

The day-long workshop was indeed comprehensive and covered several aspects of control and eradication of PPRV in India. The workshop was attended by scientists from NIAB, PPRV research specialists from India and UK, scientists and students from College of Veterinary Science, Hyderabad and Scientists from Veterinary Biological and Research Institute, Hyderabad and officials from the Directorate of Animal Husbandry, Andhra Pradesh government.



Speakers at the workshop on 'Eradication of Peste Des Petits Ruminants Virus in India'



Audience at the workshop



Panel discussion