

ICAR-NIVEDI

News Letter

Vol. 12 (2) Jul to Dec 2022

Director's Desk

Greetings to all!

ICAR-NIVEDI is serving the country by providing nationwide sampling plans for animal disease control programmes implemented by GoI, nationwide collaborative research programmes on emerging life threatening livestock diseases, investigation of livestock disease outbreaks, providing forecasting and forewarning information to state animal husbandry departments. The institute is vested with the responsibility of lead role in Nationwide PPR control programme for surveillance and monitoring of vaccination, and Classical Swine Fever control programme towards achieving disease free status by 2030. Lumpy Skin Disease of cattle has made havoc in Indian cattle population during last two years, which is being addressed by the institute by conducting national level surveillance with the help of different state animal husbandry departments to devise control strategies. During this period one patent on "Recombinant *Leptospira* outer membrane chimeric protein(s) based immunodiagnostics for leptospirosis" has been filed and copyright proposals on word art and logo of NaaViC, NEO, NEST, NOVICE, NEXUS, and trademark of NaaViC were applied. Efforts were made to commercialize the technologies of NIVEDI through Agrinnovate platform of ICAR. Institute has taken up new initiatives to collaborate with International agencies on bovine tuberculosis, KFD, and anthrax.

I congratulate the editorial team for the makeover of this newsletter.



Baldev Raj Gulati

ICAR-National Institute of Veterinary Epidemiology and Disease Informatics is constantly working towards providing services to its stakeholders in veterinary epidemiology, animal disease informatics and economics of livestock diseases.



Research Achievements

Emergence of ST37 *Klebsiella pneumoniae* identified by whole genome sequencing

Antimicrobial resistance (AMR) is a global public health concern and projected to cause 10 million deaths annually by the year 2050. To understand the AMR pathogen transmission dynamics in various host species, the whole genome sequencing (WGS) of AMR pathogens (n=1458) was generated at ICAR-NIVEDI. The WGS revealed emergence of high risk clone ST37 of *Klebsiella pneumoniae* isolated from fresh water fishes at retail outlets from Guwahati, Assam. Bioinformatics analysis of *Klebsiella pneumoniae* revealed a rare serotype O3b from a fish collected from Guwahati. In addition, whole genome analysis of bacterial isolates of cattle origin collected from Guwahati resulted in identification of methicillin resistant and vancomycin resistant isolates. Out of 126 coagulase negative Staphylococci (CoNS), five isolates were harbouring *mecA* genes making these isolates methicillin resistant CoNS whereas out of 49 *Enterococcus* spp. identified, three isolates were harbouring *vanC* gene making these isolates resistant to Vancomycin.

Death of indigenous bulls due to *Theileria orientalis*

Theileriosis in cattle and buffalo is a major problem responsible for high morbidity and mortality especially in crossbred cattle. In India, bovine tropical theileriosis is caused by the haemoprotozoan parasite, *Theileria annulata*. ICAR-NIVEDI team investigated an outbreak among indigenous bulls suspected for theileriosis in Hoskote, Bengaluru rural district. The reported clinical presentations were mild grade fever, difficulty in breathing, circling movement and sudden death of animals within 24 hours of onset of symptoms. The laboratory investigation followed by molecular confirmation by sequencing revealed the organism as *T. orientalis* Chitose B genotype. Even though *T.orientalis* is known to cause benign disease among bovines, the reported death among the indigenous bulls indicates the increase in virulence of this parasite in recent years.

Scientific Activities

Quinquennial Review Team meeting

The 3rd meeting of 5th Quinquennial Review Team (QRT) of ICAR-NIVEDI was held during 5-6th September 2022.



QRT Members of ICAR-NIVEDI
Dr B.B. Mallik, Former VC, WBAFSU, Chairman
Dr Lal Krishna, Former AHC & ADG (AH), ICAR, Member
Dr V.A. Srinivasan, Former Director, IIL, Hyderabad, Member
Dr A. Chakraborty, Former Director (Research), AAU, Member
Dr J.R. Rao, Former Head, Division of Parasitology, ICAR-IVRI, Member
Dr B.R. Shome, Director(A), ICAR-NIVEDI, Member
Dr P.P. Sengupta, Principal Scientist, ICAR-NIVEDI, Member Secretary

The important recommendations of the QRT are to develop NIVEDI as an institute of excellence in animal disease modelling and epidemiology, to establish linkages with national and international agencies, need to create separate divisions of surveillance, epidemiology, economics and informatics and capacity building of NIVEDI faculty in modern trends of epidemiology.

Research Advisory Committee meeting

The 14th Research Advisory Committee (RAC) meeting of ICAR-NIVEDI was held on 14th September 2022.



Members of 14th RAC
Dr Ashok Kumar, ADG(AH), ICAR
Dr S.C. Dubey, Former JD, HSADL, Bhopal
Dr Rajendra Singh, Former Head, Division of Pathology, ICAR-IVRI
Dr C. Madhan Mohan, Principal Scientist, ICAR-IVRI
Dr B.R. Shome, Director(A), ICAR-NIVEDI
Dr S.S. Patil, Principal Scientist, ICAR-NIVEDI

The committee appreciated the efforts of NIVEDI in surveillance and monitoring of important livestock diseases in the country. The important recommendations of the RAC are establishment of cloud computing facility, disease prioritization and inclusion of LSD and ASF in forecasting, to disseminate the disease forewarning results to the farmers in the form of advisories and active surveillance of important infectious diseases. The RAC emphasised that NIVEDI should play a key role in economic loss assessment and providing technical inputs for national policies for animal disease control.

Institute Research Committee meeting

The 16th Institute Research Committee (IRC) meeting of ICAR-NIVEDI was held on 4th July 2022 under the Chairmanship of Dr B.R. Shome, Director (A).



The committee reviewed the research progress of ongoing institute research projects in the area of animal disease informatics, animal disease epidemiology, one health, animal disease socioeconomics and capacity building. Further, four new research project proposals were discussed in the meeting.

Institute Technology Management Committee meetings

Institute Technology Management Committee meetings of ICAR-NIVEDI were organized on 28th July and 1st December 2022.

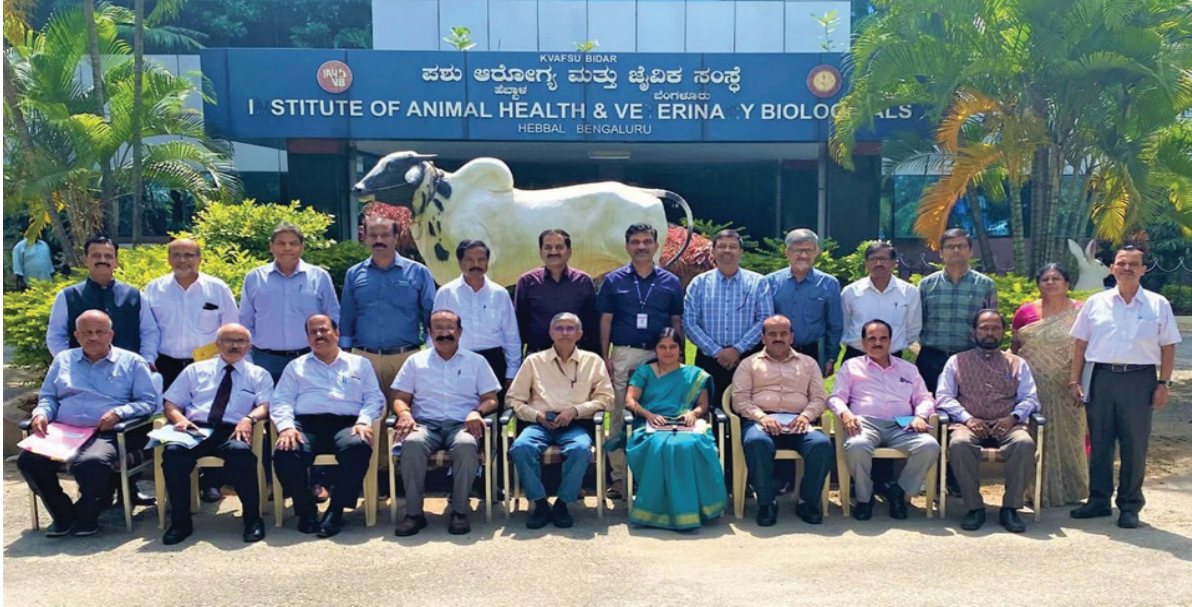


During the meeting on 28th July, a new patent proposal on “Recombinant *Leptospira* outer membrane chimeric protein(s)-based immuno-diagnostics for leptospirosis”, copyright proposals on word art and logo of NaaViC, NEO, NEST, NOVICE, NEXUS logos and trademark of NaaViC were approved. During the meeting on 1st December, the technologies, viz., ELISA based Surravey kit, Protein-G based indirect ELISA kit for bovine brucellosis, Indirect ELISA kit for sheep & goat brucellosis and IBR avidin biotin ELISA (AB-ELISA) kit were recommended for commercialization through Agrinnovate.

Research Achievements

Interface meeting with Joint Secretary (DAHD, GoI)

Scientists of the institute attended the interface meeting chaired by Shri Upamanyu Basu, Joint Secretary, DAHD, New Delhi, held at Institute of Animal Health and Veterinary Biologicals, Bengaluru on 17th August 2022. The implementation and monitoring of National Animal Disease Control Program (NADCP) for Foot and Mouth disease, brucellosis, PPR and CSF in India was discussed.



Interaction with Hon'ble Chief Minister of Karnataka & State Dept. of AH&VS

ICAR-NIVEDI Scientist participated in the meeting on Lumpy Skin Disease (LSD) control strategies for Karnataka state chaired by Hon'ble Chief Minister of Karnataka Shri Basavaraj Bommai held at Vidhana Soudha, Bengaluru on 14th October 2022. Dr GBM Reddy presented the status and control of LSD in Karnataka and also participated in phone in live programme on LSD chaired by Hon'ble Shri Prabhu Bamala Chauhan, Minister of State for Animal Husbandry, Government of Karnataka held on 11th October 2022. Dr B.R. Gulati, Director and Dr G.B.M. Reddy, Senior Scientist interacted on LSD status in Karnataka with Mrs S. Aswathi, IAS, Commissioner, AH&VS at ICAR-NIVEDI on 3rd December 2022.



NIVEDI participated in National Milk Day celebration

ICAR-NIVEDI participated and exhibited the research activities during the National Milk day celebration jointly organized by Karnataka Milk Federation, DAHD GoI, NDDB, and State Animal Husbandry Department on 26th November 2022. Hon'ble Minister of State for Animal Husbandry, Fisheries and Dairying Dr Sanjeev Kumar Balyan visited the NIVEDI stall and appreciated the contributions of NIVEDI in national livestock disease control programmes. Dr Baldev Raj Gulati, Director had interaction with Mrs. Varsha Joshi, Additional Secretary, DAHD, Government of India, about the implementation of NDLM for disease data analysis.



Workshop on Anthrax and Tuberculosis

ICAR-NIVEDI organized a workshop on Tuberculosis and Anthrax on 19th December 2022. In this workshop, Dr Vivek Kapur from Penn State University, USA, Dr M. Rajasekhar, Former Director, PDADMAS, Dr Pallab Chaudhuri, Joint Director, ICAR-IVRI and the Scientists of ICAR-NIVEDI participated. Dr Vivek Kapur elaborated the importance of tuberculosis and anthrax in India and highlighted the need for future research collaborations with NIVEDI for the control of bovine tuberculosis.



Important Events

35th Institute Foundation Day celebration

The 35th Institute foundation day was celebrated on 1st July 2022. On this occasion, the institute flag was hoisted by Dr B.R. Shome, Director (A) and plantation drive was initiated in the campus. Dr B.P. Suresh, MD, Tumakuru milk union delivered lecture on ‘Nandini: hallmark of Karnataka’. In addition, a health camp (eye check-up) was organized for the staff members of ICAR-NIVEDI. Further, sister B.K. Kala, Bramha Kumari Centre, Bengaluru delivered lecture on “Physical, mental and emotional stability” on this occasion.

Independence Day celebration

The 75th Independence day was celebrated in the institute by hoisting the National flag by Dr B.R. Shome, Director (A) on 15th August 2022. On this occasion, the Director addressed the staff members and highlighted the role of NIVEDI in prevention and control of animal diseases in the country.



Hindi Week celebration

ICAR-NIVEDI celebrated Hindi week during 14-20th September 2022 and on this occasion, various hindi literary events, viz., extempore, letter writing, quiz competition, translation and singing competition were organized for the NIVEDI staff members.



Vigilance Awareness Week

ICAR-NIVEDI celebrated Vigilance Awareness Week 2022 during 31st October to 6th November 2022. On this occasion, quiz competition, essay competition for the staff members and vigilance awareness and quiz programme for the students was organized at International Institute of Business Studies, Devanahalli, Bengaluru.



World Antimicrobial Awareness Week

The World Antimicrobial Awareness Week was celebrated in the institute during 18-24th November 2022. The theme for this year was ‘Preventing Antimicrobial Resistance Together’. On this occasion, NIVEDI staff members took the pledge on prudent use of antibiotics in animal and humans. In addition, awareness programme on antimicrobial resistance among the school children in Ananya public school, Doddabellekere was conducted. Farmers-Scientists interactive meeting was also organized at Narayanpura, Devanahalli, Bengaluru rural district with special focus on subclinical mastitis in dairy cows and its prevention.



Farmers-scientists interaction meet

As a part of the *Kisan Diwas* celebration in the institute, Farmers-scientists interaction meeting was organized at Siddalaghatta, Bengaluru rural district on 23rd December 2022. In this meeting, awareness about the animal health management, mastitis control, clean milk production and importance of vaccination was created. Around forty farmers participated in this event.



Human Resource Development

Dr G.Govindaraj, Principal Scientist participated in the workshop on Simulation interface for livestock systems held at ILRI, Tanzania during 17-20th October 2022. The workshop aimed to improve the application of simulation interface for livestock systems to inform policy, planning and investment prioritization.



Mr K. Vijayaraj, Steno Gr. III participated in the capacity building programme for Central Joint Staff Council members of ICAR institutes & Head Quarters organized at ICAR-NAARM, Hyderabad during 15-19th November 2022.



Dr V. Balamurugan and Dr G.Govindaraj, Principal Scientists participated in the 5th PPR Global Research and Expertise Network (PPR-GREN) meeting organized by FAO&WOAH held at Montpellier, France during 7-9th December 2022. Dr Balamurugan presented an invited talk on PPR control efforts in Indian Perspective and Dr G. Govindaraj presented a research paper on Socio-economic impact of PPR vaccination in sheep and goats in Madhya Pradesh state, India: A cross-sectional study.



Awards and Recognitions

- Dr S.S. Patil, Principal Scientist received Best Scientist Award in Veterinary Research for outstanding contribution in the field of Veterinary Microbiology, in 7th International Conference on Opportunities and Challenges in Agriculture, Environmental & Biosciences for Global Development held at St Joseph Vaz Spiritual Renewal Center Cruz Milagres, Goa during 29-31st October 2022.
- Dr P. Krishnamoorthy, Senior Scientist received Best Laboratory Animal Pathologists award 2022 and Dr G.B.M. Reddy, Senior Scientist received Best Farm Animal Pathologists award 2022 conferred by Indian Association of Veterinary Pathologists in the International Veterinary Pathology Congress 2022 held at College of Veterinary Science, Hyderabad during 16-20th November 2022.



Joining and Promotions

1. Dr Baldev Raj Gulati joined as Director, ICAR NIVEDI on 14th November 2022.
2. Dr N. Shivasharanappa, Senior Scientist (Pay Level 12) was promoted to Senior Scientist (Pay Level 13A) with effect from 15th December 2021.
3. Dr Md. Mudassar Chanda, Senior Scientist (Pay Level 12) was promoted to Senior Scientist (Pay Level 13A) with effect from 10th February 2022.
4. Dr G.B.M. Reddy, Senior Scientist (Pay Level 12) was promoted to Senior Scientist (Pay Level 13A) with effect from 20th April 2022.
5. Dr M. Nagalingam, Senior Scientist (Pay Level 12) was promoted to Senior Scientist (Pay Level 13A) with effect from 21st April 2022.
6. Mr B. Hanumantharaju, Skilled Supporting Staff was promoted to the post of Lower Division Clerk with effect from 16th July 2022.
7. Mr H.S. Umesh, Skilled Supporting Staff was promoted to the post of Lower Division Clerk with effect from 27th October 2022.

Distinguished visitors

1. Sis. Brahma Kumari Kala, Brahma Kumaris Centre, Yelahanka, Bengaluru visited on 1st July 2022.
2. Shri G.P. Sharma, Joint Secretary (Finance), ICAR, New Delhi visited on 3rd September 2022.
3. Dr B. B. Mallick, Former Vice-Chancellor, WBVFSU, Kolkata, Dr Lal Krishna, Former ADG(AH), ICAR, New Delhi, Dr V. A. Srinivasan, Former Director, Indian Immunologicals, Hyderabad, Dr A. Chakraborty, Former Director (Research), AAU, Khanapara, Assam, and Dr J. R. Rao, Former Head, Division of Parasitology, ICAR-IVRI, Izatnagar visited during 5-6th September 2022.
4. Dr Ashok Kumar, ADG (AH), ICAR, Krishi Bhavan, New Delhi, Dr S. C. Dubey, Former JD, HSADL, Bhopal, Dr Rajendra Singh, Former Head, Division of Pathology, and Dr C. Madan Mohan, Principal Scientist, Division of Veterinary Biotechnology, IVRI, Izatnagar visited on 14th September 2022.
5. Dr Vivek Kapur, Penn State University, USA, Dr M. Rajasekhar, Former Director, PDADMAS, Bengaluru and Dr Pallab Chaudhuri, Joint Director, ICAR-IVRI, Bengaluru visited on 19th December 2022.

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