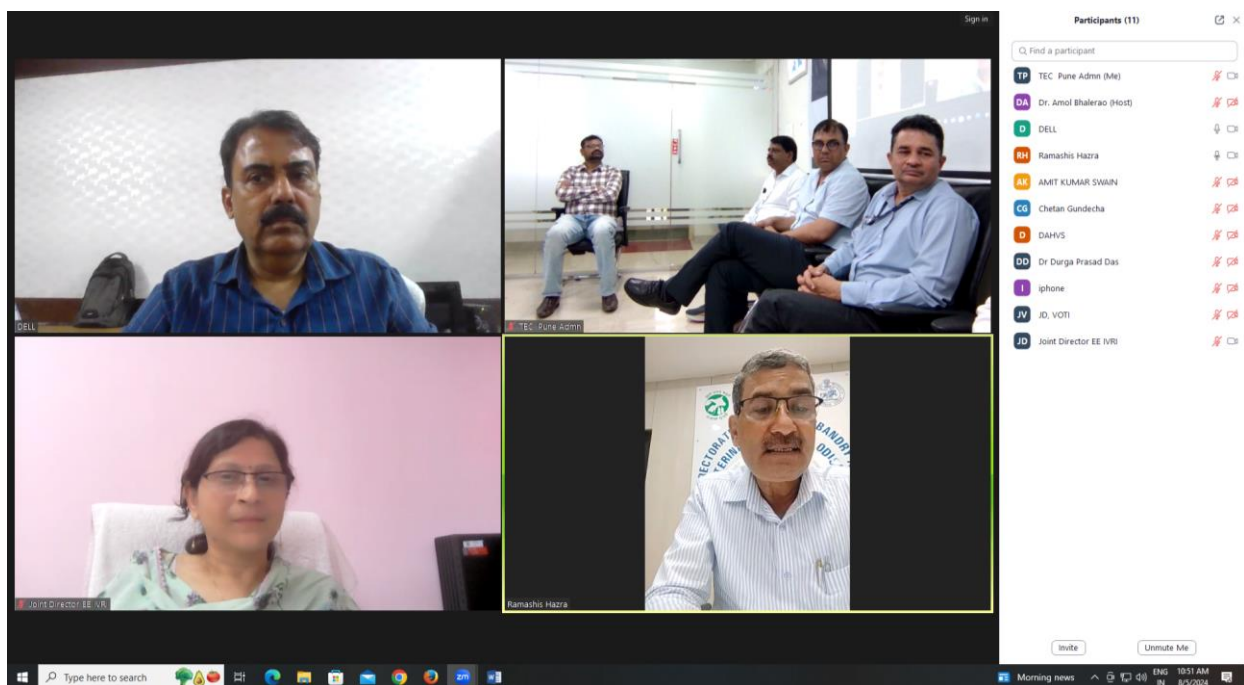


TEC IVRI Pune organised a 6-day training programme on *Good Manufacturing Practices in Veterinary Biologicals* from 4th to 9th August 2024 for Veterinary Officers of Odisha

A hands-on training programme on “*Good Manufacturing Practices (GMP) in Veterinary Biologicals*” was successfully organised by the Training and Education Center (TEC), ICAR-IVRI, in collaboration with Ventri Biologicals, VHPL and the Institute of Veterinary Biological Products (IVBP), Pune, from 4th to 9th August 2024. The training was sponsored by the Department of Animal Husbandry and Veterinary Science, Odisha state with the primary objective to enhance the participants' understanding of GMP in veterinary biologicals and quality production. The programme, which brought together experts, researchers and professionals from various institutions, offered a robust mix of theoretical knowledge, practical experience, and exposure to state-of-the-art facilities, thereby ensuring a comprehensive learning experience.

The inaugural session set the tone for the training, with Dr HP Aithal, Station In-charge, TEC Pune, welcoming the guests and participants. Dr Sanghratna Bahire, the Course Director, introduced the training objectives and the content of the course, emphasizing the critical role that GMP plays in ensuring the quality and safety of veterinary biologicals. Dr Rupasi Tiwari, JD (EE), IVRI Bareilly spoke online on the importance of adhering to GMP standards to maintain the integrity of biological products. Dr Rajeev Sharma, Deputy Director VOTI, who joined online, spoke about the objectives of sending the veterinary officers to GMP training and thanked TEC IVRI Pune for organizing the customized training. Shri Ramashis Hazra, Director, AH&VS, Odisha also joined online and spoke about the efforts being taken by the State Animal Husbandry Department in manufacturing different vaccines to control infectious diseases of livestock in Odisha and neighbouring states. The inaugural address was delivered by the Chief Guest, Dr Naveen Kumar, Director, National Institute of Virology, Pune, who underscored the significance of continuous learning and adaptation in the rapidly evolving field of veterinary science.



Dr Rajeev Sharma, Deputy Director VOTI, Bhubaneswar; Dr Naveen Kumar, Director, NIV, Pune; Dr Rupasi Tiwari, JD (EE), IVRI Bareilly; and Shri Ramashis Hazra, Director, AH&VS, Odisha during the inaugural function of the training.



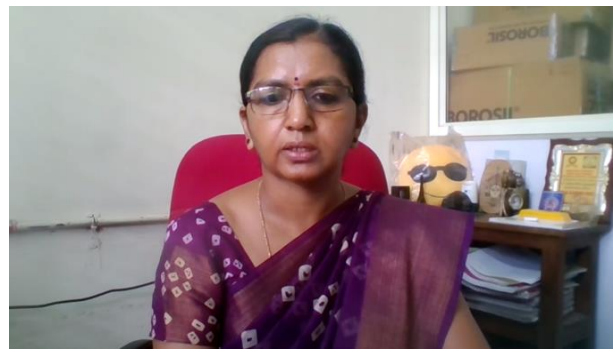
Group photograph of guests and trainees after the inaugural function

The training programme included expert lectures, which were carefully designed to cover various aspects of GMP in veterinary biologicals. Participants were introduced to the foundational principles of GMP through an online session led by Mr. Amit K Swain, Deputy General Manager at Indian Immunologicals Limited, Hyderabad. This session laid the groundwork for understanding the regulatory framework and quality control measures essential in the production of veterinary vaccines. Dr Sanghratna Bahire provided a detailed overview of the different types of veterinary vaccines, which was followed by an in-depth discussion on the requirements for establishing and maintaining production facilities, by Dr BM Chandranaik, Assistant Professor at the Institute of Animal Health & Veterinary Biologicals (IAHVB), Bangalore. Dr Amitha Gomes from the IAHVB Bangalore provided valuable insights into the basics of media preparation and its validation, a critical step in ensuring the effectiveness of biological products. These sessions were crucial in equipping participants with the knowledge needed to maintain quality and consistency in their work environments.

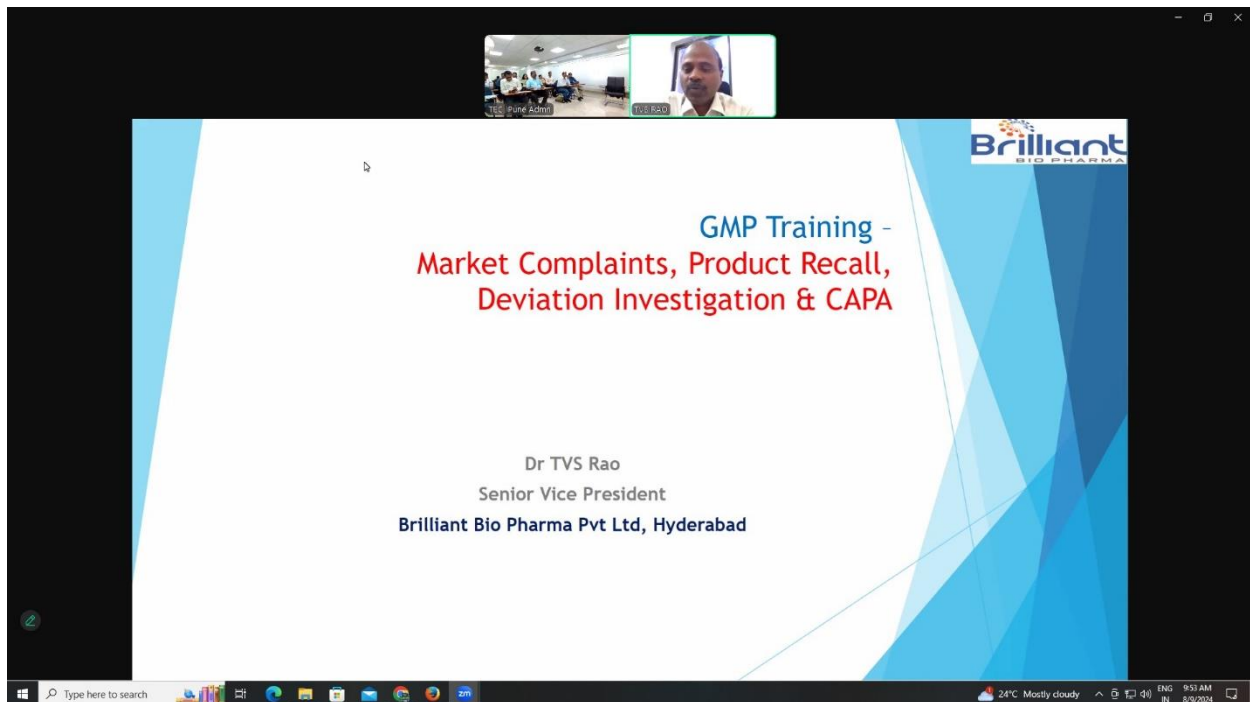


Dr Naveen Kumar, Director NIV delivering a lecture

Other expert lectures during the training included ‘cGMP issues for upstream and downstream processing’ by Dr Milind Khadilkar, Technical Director, Premium Serum Institute; ‘Bacterial vaccine production and validation (Online)’ by Dr VR Girish, Plant Head, IBRIZE Vaccine Centre, Riyadh, Saudi Arabia; ‘Viral vaccine manufacturing and validation, with special reference to PPR vaccine’ by Dr Durgadas Undegaonkar, ACAH, IVBP; ‘Vaccine production in cell-line: Lumpy Skin Disease vaccine production’ by Dr Naveen Kumar, Director NIV; ‘Tests for quality control of biologicals’ by Dr Sunil Rautmare, Retd. Addl. Commissioner of AH, IVBP; ‘Importance of documentation, record keeping, and data integrity (online)’ by Prof. Sharada R, Vet. College, Hebbel, Bengaluru; ‘Laboratory animals in vaccine testing: care and management’ by Dr CG Raut, Director, CIF, DY Patil University of Medical Science; ‘Packaging, labeling, dispatch, and marketing of final products’ by Dr Ranjitsingh Ghadge, AGM Production, Ventri Biologicals; ‘Deviations investigation, product complaints, product recall and CAPA (online)’ by Dr TVS Rao, Brilliant Biopharma Pvt. Ltd., Hyderabad; ‘Biosafety and biosecurity (online)’ by Dr HV Murugkar, Director, ICAR-NISHAD, Bhopal; ‘Obtaining patents and legal considerations in biological production’ by Mr. Chetan Gundecha, Founder and Principal, IP Consultant; ‘QC Lab accreditation (ISO/IEC 17025:2017)’ by Dr Kiran Bhilegaonkar, HD VPH, ICAR-IVRI, Izatnagar; and ‘GMP-cGMP and 21 CFR rules in veterinary biologicals’ by Dr Sanghratna Bahire, Scientist, TEC Pune.



Mr Amit K Swain, Deputy General Manager, IIL, Hyderabad; Dr Harshad Murugkar, Director, NISHAD, Bhopal; Dr VR Girish, Plant Head, IBRIZE Vaccine Centre, Riyadh, Saudi Arabia; and Prof. Sharada R, Veterinary College, Hebbel, Bengaluru giving online lectures.



Online lecture by Dr TVS Rao, Senior Vice President, Brilliant Bio Pharma, Hyderabad



Dr Milind Khadilkar, Technical Director, Premium Serum, Pune presenting a lecture to the participants of the training.



Mr Chetan Gundecha, IP consultant delivering a talk

In addition to the theoretical lectures, the training programme included several practical sessions and exposure visits, which were integral to reinforcing the concepts learned during the lectures. During the exposure visit to Premium Serum Pvt. Ltd., Narayangaon, Pune, the participants learnt about the techniques and manufacturing process for anti-snake venom production, anti-toxoids, and anti-rabies serum etc. Dr Omkar Khadilkar and Dr Nitin Salvi from Premium Serum and Dr SK Das, Principal Scientist from TEC Pune coordinated the visit.



Trainees at exposure visit to Premium Serum, Narayangaon, Pune



Orientation lecture by Dr Onkar Khadilkar at Premium Serum

During the visit to the National Centre for Cell Science (NCCS) in Pune, the participants were introduced to advanced practices in cell repository management. The visit was guided by Dr Punam Nagvenkar Scientist E, and Dr Bankar, Scientist at NCCS, who have provided insights into the latest techniques in cell culture and preservation. This visit offered participants a rare opportunity to observe and engage with cutting-edge technology in the field of cell science.



Exposure visit to NCCS Pune

Another significant aspect of the training was the facility tour and layout planning sessions conducted at Ventri Biologicals at Hinjewadi, Pune. Led by experts including Dr Santosh Deshpande, Dr Ranjitsingh Gadage, Dr Mukti Walse, Dr Maruti Ingawale and Ventri team, these sessions focused on the practical aspects of designing and managing a GMP-compliant facility. Participants observed demonstrations on effective sanitation practices, hygiene protocols, and the testing of raw materials used in vaccine production. These hands-on experiences were invaluable in illustrating the importance of meticulous planning and execution in maintaining a GMP-compliant environment. The tour also included sessions on water system validation and quality control methods, which are critical in ensuring the safety and efficacy of veterinary biologicals.



Exposure visit to Ventri Biologicals, Hinjewadi, Pune



Dr Ranjitsingh Gadage lecturing at Venri Biologicals

The visit to the BSL-3 facility at the National Institute of Virology (NIV) in Pashan, Pune, was another highlight of the training programme. Here, participants learned about the stringent biosafety and biosecurity measures required when working in high-containment laboratories. Dr Jaynti Mullick, Dr Dilip Patil and Dr Shing, NIV, guided the participants through the facility, providing detailed explanations of the protocols and procedures necessary to prevent contamination and ensure the safety of personnel. This visit was particularly enlightening for those involved in the production of vaccines, as it underscored the critical importance of maintaining a controlled environment during the manufacturing process.



Visit of trainees to NIV Pune

The trainees also visited different production units of State Biological Production Unit, i.e., Institute of Veterinary Biological Products (IVBP), Pune. In virology section, Dr Jyoti Pardeshi briefed about the production of different viral vaccines (livestock and poultry), and gave orientation to the layout and design of the GMP compliant facilities. During the visit to Quality Control facility, Dr Anil Phadtare and Dr Anil Deshpande explained different instrument facilities including wet lab, dry lab and BSL 3 applications and validation. Dr Yashodhara Nitnaware, gave detailed exposure to bacterial vaccine production and SOPs. Dr SM Shete spoke about the IVBP activities and GMP premises management.



Trainees at IVBP Pune

The valedictory session marked the culmination of the training programme. It was a moment of reflection and celebration as participants and organizers gathered to review the accomplishments of the past week. The session began with the welcome address by Dr HP Aithal, Station In-charge, TEC P, followed by a presentation of the training report by Dr Sanghratna Bahire. Participants shared their feedback, expressing their satisfaction with the comprehensive nature of the training and the depth of knowledge they had gained. The session also featured addresses from distinguished guests such as Dr MK Nayak, Additional Director, Department of Animal Husbandry & Veterinary Services, Odisha, Dr Rajeev Sharma, Deputy Director, Veterinary Officers Training Institute (VOTI), Bhubaneswar, Dr S Rautmare, Retd. Additional Commissioner of AH, Dr S Bedkyale, Joint Commissioner AH and In-charge IVBP Pune, and Dr CG Raut, DY Patil University of Medical Sciences, Pune reinforced the importance of applying the knowledge gained during the training to improve practices in their respective organizations.

Dr Santosh Deshpande, General Manager, Ventri Biologicals was the Chief Guest, who expressed his deep satisfaction with the successful completion of the GMP training programme, emphasizing its critical role in advancing the standards of veterinary biological manufacturing. He highlighted the programme's comprehensive approach, combining expert-led theoretical sessions with practical, hands-on experiences that provided participants with valuable insights into GMP implementation. Dr Deshpande commended the collaborative efforts of TEC Pune and the participating institutions, noting that the knowledge and skills gained during the training would significantly contribute to improving quality and safety in the production of veterinary biologicals. He urged participants to apply these lessons in their respective roles, ensuring that the high standards discussed during the programme are upheld and integrated into their daily practices.

The valedictory session concluded with formal vote of thanks by Dr Anil Deshpande, Deputy Commissioner, IVBP, Pune. He expressed gratitude to all the organizers, participants and experts who contributed to the success of the training programme. The programme officially ended with High-tea, providing an opportunity for participants to network and discuss potential collaborations.



Release of compendium during the valedictory function



A participant giving his feedback on training during the valedictory function



Dr Santosh Deshpande, Chief Guest, addressing the participants during the valedictory function.

In conclusion, the GMP training programme organized by TEC, ICAR-IVRI in collaboration with Ventri Biologicals and IVBP, Pune, was a resounding success. The programme not only met but exceeded the expectations of the organizers and participants alike, equipping all involved with the tools and knowledge needed to uphold the highest standards in veterinary biologicals production. The success of this programme underscores the importance of collaboration between institutions in fostering a culture of continuous learning and improvement in the field of veterinary science.
