

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 12 juin 2024 09:04

Laboratory Information

Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:	Avian influenza
Address of laboratory:	ICAR-National Institute of High Security Animal Diseases, Anand Nagar, Hathaikheda Road, Bhopal -462022 (M.P.), India
Tel.:	+91-755 275 92 04
E-mail address:	ctosh@hsadl.nic.in
Website:	https://nihsad.nic.in/
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Aniket Sanyal, Director
Name (including Title and Position) of WOAHO Reference Expert:	Dr. Chakradhar Tosh, Principal Scientist
Which of the following defines your laboratory? Check all that apply:	Autonomous body

TOR1: DIAGNOSTIC METHODS

1. Did your laboratory perform diagnostic tests for the specified disease/topic for purposes such as disease diagnosis, screening of animals for export, surveillance, etc.?
(Not for quality control, proficiency testing or staff training)

Yes

Diagnostic Test	Indicated in WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
HI		2704	0
AGID		5408	0
Direct diagnostic tests			
RT-PCR		5510	0
Real time RT-PCR		39858	0
Virus isolation		5517	0
Nucleotide sequencing and molecular pathotyping		19	0

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAHO?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOAHO Members?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAHO Members?

No

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

Yes

7. Did your laboratory validate diagnostic methods according to WOAHS Standards for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
Indirect ELISA kit for detection of avian influenza virus (AIV) antibodies in chickens	https://krishi.icar.gov.in/Technology/DetailReport.jsp?id=201538127945396

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOAHS Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOAHS Members?

No

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAHS Member?

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAHS Members other than the own?

No

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOAHS?

No

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

Information on avian influenza viruses isolated including their origin, subtype and nucleotide sequences of HPAI and LPAI viruses in India

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

The avian influenza genetic clade status were shared with Department of Animal Husbandry and Dairying, Government of India

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

1

Verma AK, Kumar M, Murugkar HV, Nagarajan S, Tosh C, Namdeo P, Singh R, Mishra S, Senthilkumar D, Singh VP, Sanyal A. (2023) Highly pathogenic avian influenza

(H5N1) infection in crows through ingestion of infected crow carcasses. *Microb Pathog* 183:106330. doi: 10.1016/j.micpath.2023.106330

b) International conferences:

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Dixit B, Murugkar HV, Nagarajan S, Kumar M and Tosh C. (2023) Prevalence and Risk factors of H9N2 Avian Influenza Virus in Poultry of Madhya Pradesh. Presented in World Veterinary Poultry Association (India) conference on "Recent advances in Avian Diseases and Management: A global Perspective" Organized by College of Veterinary Science and Animal Husbandry, NDVSU, Jabalpur, India, 24th to 25th February 2023.

Tosh C, Manoj Kumar, Nagarajan S, Murugkar HV, Sanyal A. (2023) Current Status and Advances in Combating H9N2 Low Pathogenic Avian Influenza. Presented in World Veterinary Poultry Association (India) conference on "Recent advances in Avian Diseases and Management: A global Perspective" Organized by College of Veterinary Science and Animal Husbandry, NDVSU, Jabalpur, India, 24th to 25th February 2023.

c) National conferences:

4

Tosh C. (2023) Surveillance for epidemics and emerging diseases with special emphasis on avian influenza. Presented in National Level workshop on "Animal Disease Surveillance – Connecting surveillance with People" under ASCAD, Bhubaneswar, Odisha, India, 13th February 2023.

Tosh C. (2023) HPAI Indian Scenario: current status and control strategies, Presented as Guest speaker in Association of Avian Health Professionals (AAHP) Poultry Health Webinar -5, Coordinated by ICAR-Directorate of Poultry Research, Hyderabad, India, 30th October 2023 (Zoom meeting).

Tosh, C. (2023) Avian influenza surveillance in India, Presented in Review Meeting of Department of Animal Husbandry and Dairying, MoFAH&D, Govt of India, New Delhi, 7th to 8th November 2023.

Manoj Kumar, Nagarajan S, Tosh C, Murugkar H V, Pankaj DK, Sanyal A. (2023) Evolution and spread of avian influenza: Indian perspective. Presented in: Veterinary Pathology Congress – 2023 and National Symposium on "Advances in Veterinary Pathology in Diagnosis and Control of Emerging Diseases of Livestock and Poultry" ICAR – Indian Veterinary Research Institute, Izatnagar, Bareilly, U.P., 20th to 22nd December 2023. pp 173-178

d) Other (Provide website address or link to appropriate information):

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAHA Members?

No

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO/IEC 17025: 2017	Certificate No. TC-8541	Certificate TC-8541_2022-24.pdf.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Real time RT-PCR	National Accreditation Board for Testing and Calibration Laboratories

20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes

The laboratory is a certified BSL3 biocontainment laboratory and has a robust biorisk management system to handle the pathogens

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAHA?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOAHA?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
WOAH Regional Workshop for Avian Disease Prevention and Control in Asia and the Pacific	2023-08-29	Qingdao, People's Republic of China	Speaker	Best practice for sampling and sample Transportation
Regional consultation on: Environmental Surveillance for Zoonotic Influenza in Asia 11/23 Bangkok, Thailand Consultation Participation	2023-11-14	Bangkok, Thailand	Consultation	Participation

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOAHP Reference Laboratories designated for the same pathogen or disease?

No

24. Do you network (collaborate or share information) with other WOAHP Reference Laboratories designated for the same pathogen?

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS/ ORGANISING WOAHP REF. LAB.
OFFLU PT program – Influenza A virus PCR	Participant	10	Organized by CSIRO ACDP
Asia-Pacific Terrestrial PT program - Avian Diseases PCR	Participant	33	Organized by CSIRO ACDP

26. Did your laboratory collaborate with other WOAHP Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

No

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAHP Reference Laboratories for the same pathogen?

No

TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOAHP?

No

29. Additional comments regarding your report:

We will be happy to provide diagnosis of avian influenza on samples referred from other WOAHP member countries