World Organisation for Animal Health

Chakradhar Tosh - - INDIA

WOAH Reference Laboratory Reports Activities 2024

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LABORATORY INFORMATION

***Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:**	Avian influenza
***Address of laboratory:**	Anand Nagar
***Tel:**	09425624946
***E-mail address:**	Chakradhar.Tosh@icar.gov.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 WOAH Reference Expert:**	Dr. Chakradhar Tosh, Principal Scientist
***Which of the following defines your laboratory? Check all that apply:**	Governmental

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 WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
HI	Yes	10790	0
Direct diagnostic tests		Nationally	Internationally
RT-PCR	Yes	13788	0
Real time RT-PCR	Yes	32172	

			0
Virus Isolation	Yes	30640	0
Nucleotide sequencing and molecular pathotyping	Yes	21	0

TOR2: REFERENCE MATERIAL

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

No

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

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH Members?

No

TOR3: NEW PROCEDURES

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

No

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

No

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

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

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 (AI) viruses isolated including their origin, subtype and nucleotide sequences of highly pathogenic AI and low pathogenic AI 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 nucleotide sequence data of avian influenza viruses isolated were analyzed and the reports are submitted to Department of Animal Husbandry and Dairying, Ministry of Fisheries, 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:

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b) Dixit B, Murugkar HV, Nagarajan S, Tosh C, Kumar M, Pathak A, Panickan S, Shrivastav N, Mishra AK, Dixit M. (2024) Prevalence and risk factor for H9N2 avian influenza virus in poultry retail shops of Madhya Pradesh. Virusdisease. 35(2):321-328. doi: 10.1007/s13337-024-00865-y

b) International conferences:

3

- *Nagarajan S, Kumar M, Murugkar HV, Tosh C, Sanyal A. (2024) Interaction between H5 High and H9 low pathogenic avian influenza viruses in India. Presentd in International Symposium on Animal viruses, vaccine and immunity (AVVI-2024), Institute of Veterinary Science and Animal Husbandry, Siksha "O" Anusandhan Deemed University, Bhubaneswar, India, 9th to 11th February 2024, pp. 35-36*
- *Pankaj DK, Kumar M, Tosh C, Nagarajan S, Murugkar HV, Gaurav K, Bajaj S, Sanyal A. (2024) Evaluation of in-contact transmissibility of clade 2.3.4.4b H5N1 avian influenza virus in mammalian model. Presented in VIROCON-2024, International Conference on Emerging Viruses: Pandemic & Biosecurity Perspective, Organized by Defence Research & Development Establishment (DODE), Gwalior, India, 11th to 13th November 2024.*
- *Tosh C, Kumar M, Nagarajan S, Murugkar HV, Sanyal A. (2024) Wild bid surveillance: An early warning system for avian influenza control. Presented in VIROCON-2024, International Conference on Emerging Viruses: Pandemic & Biosecurity Perspective, Organized by Defence Research & Development Establishment (DODE), Gwalior, India, 11th to 13th November 2024.*

c) National conferences:

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- *Tosh C. (2024) Avian influenza - current status and strategies for its control and containment in India. Presented in ICMR One Health Webinar Series 2, Avian Influenza, a looming threat, 22nd February 2024 (Virtual)*
- *Nagarajan S, Kumar M, Murugkar HV, Tosh C, Sanyal A. (2024) Highly pathogenic avian influenza- Indian perspective. Presented in 5th Biennial pouty health conference and national symposium on "Poultry Health: Current challenges and future strategies" AAHP 2024. 23rd to 24th February 2024, Hyderabad, India (pp 49-51)*
- *Nagarajan S, Kumar M, Tosh C, Sanyal A. (2024). Expanding host horizon of clade 2.3.4.4b H5N1 highly pathogenic avian influenza virus and its implications for control. A symposium organized by NIAB aimed at bringing together researchers and industrial stakeholders to discuss strategies to combat economically important porcine and poultry viruses in India. BRIC-NIAB, Gachibowli, Hyderabad, Telengana, 3rd and 4th October 2024.*

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 WOAH 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-14285	Certificate TC-14285.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 WOAH?

No

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

Yes

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Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
OFFLU Global Technical Meeting	2024-07-01	FAO Headquarters in Rome, Italy	Consultation	Participated
Regional Workshop on Avian Disease Prevention and Control in Asia and the Pacific	2024-08-26	Seoul, Republic of Korea	Speaker	Activities update by laboratory experts - HPAI

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

No

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

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen during the past 2 years?

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOAH Ref. Labs/ organising WOAH Ref Lab
OFFLU PT program – Influenza A virus PCR	Participant	12	Organized by ACDP
Asia-Pacific Terrestrial PT program - Avian Diseases PCR	Participant	32	Organized by ACDP

26. Did your laboratory collaborate with other WOAH 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 WOAH Reference Laboratories for the same pathogen during the past 2 years?

No

No request received

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

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