WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted: 9 mars 2023 11:05

Laboratory Information

| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Avian influenza |
| Address of laboratory: | ICAR National Institute of High Security Animal Diseases Anand Nagar Bhopal 462022 (M.P.) INDIA |
| Tel.: | +91 755 2759204 |
| E-mail address: | ctosh@hsadl.nic.in |
| Website: | http://nihsad.nic.in |
| Name (including Title of Head of Laboratory (Responsible Official)): | Dr. V.P. Singh, Director (up to 22nd Sep 2022), Dr. A. Sanyal, Director (from 23rd Sep 2022) |
| 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: | 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

<table>
<thead>
<tr>
<th>Diagnostic Test</th>
<th>Indicated in WOAH Manual (Yes/No)</th>
<th>Total number of test performed last year</th>
<th>Nationally</th>
<th>Internationally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HI</td>
<td>YES</td>
<td>2549</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>AGID</td>
<td>YES</td>
<td>4992</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>RT-PCR</td>
<td>YES</td>
<td>9247</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>Real time RT-PCR</td>
<td>YES</td>
<td>36989</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Chakradhar Tosh - Avian influenza - INDIA

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Result</th>
<th>Count</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virus Isolation</td>
<td>YES</td>
<td>816</td>
<td>0</td>
</tr>
<tr>
<td>Nucleotide sequencing</td>
<td>YES</td>
<td>14</td>
<td>0</td>
</tr>
</tbody>
</table>

**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?
   Yes

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

<table>
<thead>
<tr>
<th>Name of the New Vaccine Developed</th>
<th>Description and References (Publication, Website, Etc.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inactivated low pathogenic avian influenza (H9N2) vaccine for chickens</td>
<td>Director, ICAR-National Institute of High Security Animal Diseases, Hathaikhed Road, Anand Nagar, Bhopal -462 022 (M.P.), India</td>
</tr>
</tbody>
</table>

**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

**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 information was analyzed and the reports 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:

05


b) International conferences:

03

a) A.K. Verma, Manoj Kumar, H.V. Murugkar, S. Nagarajan, C. Tosh, P. Namdeo, R. Singh, V.P. Singh (2022) Experimental infection and in-contact transmission of highly pathogenic avian influenza H5N1 virus in crows. International Veterinary Pathology Congress 2022, XXXIX Annual Conference of Indian Association of Veterinary Pathologists and XIII Annual Meeting of Indian College of Veterinary Pathologists and International Symposium on “Global Challenges in rapid diagnosis and management of animal and poultry diseases for improved health and productivity”, 17th to 20th November, 2022, pp285.
b) P. Boopathy, Manoj Kumar, H.V. Murugkar, S. Nagarajan, C. Tosh, D. Senthilkumar, S. Kalaiyarasu, S. Gautam, Sivasankar Panickan and


c) National conferences:

06


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

02


2) Transfer of H9N2 vaccine technology (https://nihsad.nic.in/)

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

<table>
<thead>
<tr>
<th>Quality management system adopted</th>
<th>Certificate scan (PDF, JPG, PNG format)</th>
</tr>
</thead>
</table>

WOAH Reference Laboratory Reports Activities 2022
19. Is your quality management system accredited?
Yes

<table>
<thead>
<tr>
<th>Test for which your laboratory is accredited</th>
<th>Accreditation body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real time RT-PCR</td>
<td>National Accreditation Board for Testing and Calibration Laboratories</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Title of event</th>
<th>Date (mm/yy)</th>
<th>Location</th>
<th>Role (speaker, presenting poster, short communications)</th>
<th>Title of the work presented</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFLU wild bird experts group zoom call</td>
<td>2022-01-12</td>
<td>OFFLU Network (Virtual mode)</td>
<td>Participation in discussion</td>
<td>Discussion</td>
</tr>
<tr>
<td>Managing large-scale highly pathogenic avian influenza (HPAI) outbreaks in wild birds</td>
<td>2022-02-10</td>
<td>OFFLU Network (Virtual mode)</td>
<td>Participation in discussion</td>
<td>Discussion</td>
</tr>
<tr>
<td>OFFLU Pre-VCM February 2022 data discussion</td>
<td>2022-01-28</td>
<td>OFFLU Network (Virtual mode)</td>
<td>Participation in discussion</td>
<td>Discussion</td>
</tr>
<tr>
<td>South Asia avian disease meeting</td>
<td>2022-07-05</td>
<td>WOAH RRAP (Virtual mode)</td>
<td>Speaker</td>
<td>Avian disease situation in India</td>
</tr>
<tr>
<td>WOAH Regional Avian Disease Expert Group Network Meeting for Asia and the Pacific</td>
<td>2022-10-31</td>
<td>Geelong, Australia</td>
<td>Speaker</td>
<td>Activities of Avian Influenza Reference Laboratory, India</td>
</tr>
<tr>
<td>FAO meeting on Better detection, better response: A regional consultation on avian influenza surveillance in Asia</td>
<td>2022-11-02</td>
<td>Geelong, Australia</td>
<td>Participation in discussion</td>
<td>Discussion</td>
</tr>
<tr>
<td>OFFLU call for avian influenza and wild bird situation update</td>
<td>2022-12-05</td>
<td>OFFLU Network (Virtual mode)</td>
<td>Speaker</td>
<td>Avian influenza situation in poultry and wild birds-India (Asia)</td>
</tr>
</tbody>
</table>

**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. Are you a member of a network of 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?
No

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?
Yes

<table>
<thead>
<tr>
<th>Purpose for inter-laboratory test comparisons</th>
<th>Role of your reference laboratory (organizer/participant)</th>
<th>No. participating laboratories</th>
<th>Region(s) of participating WOAH Member Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regional Proficiency Testing Program 2020b</td>
<td>Participant</td>
<td>Asia and Pacific</td>
<td></td>
</tr>
<tr>
<td>- repeat Avian PCR. CSIRO-ACDP, Australia</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TOR12: EXPERT CONSULTANTS**

28. Did your laboratory place expert consultants at the disposal of WOAH?
No

29. Additional comments regarding your report:
No