

WOAH Reference Laboratory Reports Activities

2022

Activities in 2022

This report has been submitted : 27 avril 2023 12:57

Laboratory Information

| | |
|---|--|
| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Newcastle disease |
| Address of laboratory: | Federal State-Financed Institution "Federal Centre for Animal Health" (FGBI "ARRIAH") Yur'evets Vladimir 600901 RUSSIA |
| Tel.: | +7 (4922) 26-06-14 |
| E-mail address: | arriah@fsvps.gov.ru; irza@arriah.ru |
| Website: | www.arriah.ru |
| Name (including Title) of Head of Laboratory (Responsible Official): | Roman N. Rybin, Director of FGBI "ARRIAH" (National reference WOAH laboratory for HPAI, LPAI and ND) |
| Name (including Title and Position) of WOAH Reference Expert: | Viktor N. Irza, ARRIAH chief expert, doctor of science (vet) |
| 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 |
| ELISA | yes | 26980 | 0 |
| HI | yes | 9183 | 5029 |
| Direct diagnostic tests | | Nationally | Internationally |
| Virus isolation, eggs | yes | 300 | 0 |
| Real time RT-PCR | yes | 5898 | 18 |

| | | | |
|-----------------------|-----|-----|---|
| Nucleotide sequencing | yes | 120 | 0 |
|-----------------------|-----|-----|---|

TOR2: REFERENCE MATERIAL

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

No

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

Yes

| TYPE OF REAGENT AVAILABLE | RELATED DIAGNOSTIC TEST | PRODUCED/ PROVIDE | AMOUNT SUPPLIED NATIONALLY (ML, MG) | AMOUNT SUPPLIED INTERNATIONALLY (ML, MG) | NO. OF RECIPIENT WOA?H MEMBER COUNTRIES | COUNTRY OF RECIPIENTS |
|--|-------------------------|-------------------|-------------------------------------|--|---|----------------------------|
| Kit for detection of Newcastle disease virus antibodies in HI test | HI | produced | 1433 kits | 52 kits | 3 | Asia and Pacific Europe |
| Kit for detection of Newcastle disease virus antibodies in one dilution immunoassay test | ELISA | produced | 46 kits | 0 | 1 | Europe |

4. Did your laboratory produce vaccines?

Yes

5. Did your laboratory supply vaccines to WOA?H Members?

Yes

| VACCINE NAME | AMOUNT SUPPLIED NATIONALLY | AMOUNT SUPPLIED NATIONALLY (ML, MG) | NAME OF RECIPIENT WOA?H MEMBERS |
|--|----------------------------|-------------------------------------|---|
| ND La Sota Live dry vaccine | contract | contract | AFGHANISTAN AZERBAIJAN BANGLADESH BELARUS EGYPT JORDAN KAZAKHSTAN NEPAL RUSSIA TAJIKISTAN UZBEKISTAN |
| Mono and associated killed oil-based vaccines containing NDV antigen | contract | contract | BELARUS EGYPT KAZAKHSTAN NEPAL RUSSIA UZBEKISTAN |

TOR3: NEW PROCEDURES

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

Yes

| NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED | DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.) |
|--|---|
| Guidelines for determination of the primary structure of the genes F and HN of Newcastle Disease Virus isolates of VI genotype by RT-PCR and nucleotide sequencing | Guidelines for determination of the primary structure of the genes F and HN of Newcastle Disease Virus isolates of VI genotype by RT-PCR and nucleotide sequencing/NA Guseva, SN Kolosov, AV Andriyasov et al.// FGBI "ARRIAH". - Vladimir: 2022. - 29 p. |
| Guidelines for detection RNA of Avian Orthoavulovirus 1 isolates of | Guidelines for detection RNA of Avian Orthoavulovirus 1 isolates of VII genotype and its derivates by real-time RT-PCR/NA Guseva, SN |

VII genotype and its derivatives by real-time RT-PCR

Kolosov, AV Andriyasov et al.// FGBI "ARRIAH". - Vladimir: 2022. - 11 p.

7. Did your laboratory validate diagnostic methods according to WOAHS 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 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?

Yes

| NAME OF WOAHS MEMBER COUNTRY SEEKING ASSISTANCE | DATE | WHICH DIAGNOSTIC TEST USED | NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT | NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES |
|---|------------|----------------------------|--|--|
| BELARUS | 2022-04-07 | qPCR | 2 | 0 |
| BELARUS | 2022-04-14 | qPCR | 2 | 0 |
| BELARUS | 2022-04-29 | qPCR | 14 | 0 |
| BELARUS | 2022-05-24 | HI | 325 | 0 |
| BELARUS | 2022-06-21 | HI | 500 | 0 |
| BELARUS | 2022-08-04 | HI | 975 | 0 |
| BELARUS | 2022-09-23 | HI | 800 | 0 |
| BELARUS | 2022-10-31 | HI | 1075 | 0 |
| BELARUS | 2022-11-30 | HI | 1155 | 0 |
| BELARUS | 2022-12-06 | HI | 79 | 0 |
| KAZAKHSTAN | 2022-06-09 | HI | 40 | 0 |
| KAZAKHSTAN | 2022-11-07 | HI | 80 | 0 |

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?

Yes

| Title of the study | Duration | PURPOSE OF THE STUDY | PARTNERS (INSTITUTIONS) | WOAHS MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY |
|---|-----------|--|---|--|
| Updated Programme of joint actions of CIS countries to prevent HPAI | 2018-2025 | Avian Influenza and Newcastle Disease Surveillance and Control | Institutions and laboratories subordinated to veterinary authorities of | ARMENIA AZERBAIJAN BELARUS KAZAKHSTAN KYRGYZSTAN MOLDOVA |

| | | | | |
|-----------------------|--|--|---------------|-----------------------|
| and Newcastle Disease | | | the countries | TAJIKISTAN UZBEKISTAN |
|-----------------------|--|--|---------------|-----------------------|

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:

All collected data relevant to international disease control are posted on the site of FSVPS, www.fsvps.ru. The laboratory provides notifications and reporting to WOAHP on behalf of WOAHP Delegate from Russia

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:

Epidemiological data had been sent to FSVPS and disseminated via publications, conferences, seminars and other informational resources

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:

2

Kulagina MA, Volkova MA, Chvala IA, Osipova OS, Yaroslavl'tseva PS, Andreychuk DB, Chvala IA. Serological monitoring of avian influenza and Newcastle disease in the Russian Federation in 2020. *Veterinary Science Today*. 2022; 11 (2):142-48.

[https:// DOI: 10.29326/2304-196X-2022-11-2-142-148](https://doi.org/10.29326/2304-196X-2022-11-2-142-148)

2. Guseva NA, Kolosov SN, Andriyasov AV et al. Development of the method for detection RNA of Avian Orthoavulovirus 1 isolates of VII genotype and its derivatives by real-time RT-PCR. *Proceedings of the Federal Centre for Animal Health*. 2022; 18: 686-689. DOI: 10.29326/9785907612136_2022_18_700.

b) International conferences:

3

1. IX Kazakhstan International Poultry Forum, Nur Sultan, 21 July 2022. V.Irza: HPAI and ND Prevention and Control (oral presentation).
2. 44th meeting of the Intergovernmental Council for Cooperation in the Field of Veterinary Medicine (CIS). Tashkent, 22 October 2022. I.A. Chvala (oral presentations) :

- information on the epizootic situation in the CIS member States

- implementation of a set of joint measures of the CIS member states for the prevention and control of Avian Influenza and Newcastle Disease

3. 5th Uzbekistan International Poultry Forum, Tashkent, 22 November 2022. M.Volkov: HPAI and ND Prevention and Control (oral presentation).

c) National conferences:

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Off-line, online and hybrid conferences and workshops at the national level including webinar series for specialists of state veterinary services and poultry farms

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

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1. Forecast for Newcastle Disease in the Russian Federation for 2022 [Text]: scientific publication / M.S. Volkov, V.N. Irza, A.V. Varkentin, A.K. Karaulov, et al. // Forecasts of infectious animal disease occurrence in the Russian Federation for 2022. - Vladimir, 2022. - 30 p. <http://www.fsvps.ru/fsvps/iac>

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 4

b) Seminars : 4

c) Hands-on training courses: 4

d) Internships (>1 month)

| Type of technical training provided (a, b, c or d) | Country of origin of the expert(s) provided with training | No. participants from the corresponding country |
|--|---|---|
| a | Belarus | 4 |
| b | Belarus | 4 |
| b | Kazakhstan | 4 |
| c | Belarus | 4 |

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

| Quality management system adopted | Certificate scan (PDF, JPG, PNG format) | |
|-----------------------------------|--|---------------|
| ISO 17025-2019 ISO 17043-2013 | accreditation certificate RA.RU.21AO46 (10.01.2017) https://pub.fsa.gov.ru/ral/view/1238/accredited-entity accreditation certificate RA.RU.430258 (16.03.2018) https://pub.fsa.gov.ru/ral/view/32230/accredited-entity | ISO 17025.jpg |

19. Is your quality management system accredited?

Yes

| | |
|--|--|
| | |
|--|--|

| Test for which your laboratory is accredited | Accreditation body |
|---|---|
| AI and ND virus isolation in chicken embryos | Federal Service for Accreditation (fgis@fsa.gov.ru) |
| Detection RNA of NDV and differentiation of virulent NDV isolates by real time RT-PCR | Federal Service for Accreditation (fgis@fsa.gov.ru) |
| Detection NDV antibodies in one dilution immunoassay test (ELISA) | Federal Service for Accreditation (fgis@fsa.gov.ru) |
| Identification of AI and ND viruses in HI test | Federal Service for Accreditation (fgis@fsa.gov.ru) |
| Detection NDV antibodies in HI test | Federal Service for Accreditation (fgis@fsa.gov.ru) |

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

Yes

The laboratory supports a biorisk management system when working with a pathogen corresponding to the BSL-3 biosafety level

TOR9: SCIENTIFIC MEETINGS

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

No

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

Yes

| Title of event | Date (mm/yy) | Location | Role (speaker, presenting poster, short communications) | Title of the work presented |
|--|--------------|---|---|--------------------------------|
| Workshop for the WOA Avian Diseases network in East Asia (webinar) | 2022-04-21 | WOAH Regional Representative for Asia and the Pacific, Tokyo, Japan | participant | no work presented regarding ND |

TOR10: NETWORK WITH WOA REFERENCE LABORATORIES

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

Yes

24. Are you a member of a network of WOA Reference Laboratories designated for the same pathogen?

Not applicable (Only WOA Reference Laboratory designated for the disease)

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

No

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

Yes

| TITLE OF THE PROJECT OR CONTRACT | SCOPE | NAME(S) OF RELEVANT WOA REFERENCE LABORATORIES |
|---|---|---|
| Memorandum of understanding of material transfer (29.12.2018) | Multiple shipments of HPAI and ND viruses isolates from poultry farms at the level of initial and significant epidemiological events for comparative research studies | Istituto Zooprofilattico Sperimentale delle Venezie (IZSVe) |

| | | |
|---|---|---------------------------------------|
| Memorandum of understanding of material transfer (19.09.2016) | Multiple shipments of HPAI and ND viruses isolates from poultry farms at the level of initial and significant epidemiological events for comparative research studies | Animal and Plant Health Agency (APHA) |
|---|---|---------------------------------------|

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

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

Yes

| Purpose for inter-laboratory test comparisons ¹ | Role of your reference laboratory (organizer/participant) | No. participating laboratories | Region(s) of participating WOAHA Member Countries |
|--|--|--------------------------------|---|
| Validation of diagnostic methodology: - Detection ND virus antibodies (ELISA test) | organizer FGBI ARRIAH. participating laboratories -Interregional veterinary laboratories of the Russian Federation | 24 | Europe |

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

Due to circumstances beyond our control cooperation with IZVSe and APHA laboratories indicated in ToR 10 has been suspended in 2022 at the initiative of these institutions, although agreements (p. 26) are in effect. For the same reasons, ARRIAH did not participate in inter-laboratory proficiency tests organized by WOAHA Reference Laboratories.