

WOAH Reference Laboratory Reports Activities 2024

This report has been submitted: 31 janvier 2025 06:09

LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Highly and Low Pathogenic Avian influenza
*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 OIE 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)

Diagnostic Test	Indicated in WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
ELISA, NP	Yes	53750	88
HI, several antigens	Yes	44378	88
Direct diagnostic tests		Nationally	Internationally
Virus isolation, eggs	Yes	221	0



Real time RT-PCR	Yes	17600	20
Nucleotide sequencing	Yes	118	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? Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOAH Member Countries	Country of recipients
Kit for detection of avian influenza virus subtype H9 antibodies in HI test	н	Produced	901 kits	49 kits	3	BELARUS, KAZAKHSTAN, RUSSIA,
Kit for detection of avian influenza virus subtype H5 antibodies in HI test	ні	Produced	874 kits	54 kits	3	BELARUS, KAZAKHSTAN, RUSSIA,
Kit for detection of avian influenza virus subtype H5&H7 antibodies in HI test	ні	Produced	215 kits	22 kits	3	BELARUS, KAZAKHSTAN, RUSSIA,
Kit for detection of avian influenza virus antibodies in one dilution immunoassay test	ELISA	Produced	574 kits	1 kit	2	BELARUS, RUSSIA,

4. Did your laboratory produce vaccines?

Yes

5. Did your laboratory supply vaccines to WOAH Members?

Yes

Vaccine name	Amount supplied nationally (ml, mg)	Amount supplied nationally (ml, mg)	Name of recipient WOAH Members
Avian Influenza H9N2 + Newcastle Disease associated killed oil-based vaccine	contract	contract	BELARUS KAZAKHSTAN RUSSIA UZBEKISTAN
Avian Influenza H5N1 killed oil- based vaccine «AviFluVac»	contract	contract	BELARUS 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 amplification of Avian Influenza A virus by RT-PCR to determine nucleotide sequence with full-genome sequencing	Guidelines for amplification of Avian Influenza A virus by RT-PCR to determine nucleotide sequence for full-genome sequencing /AA Kozlov, NG Zinyakov, AV Andriyasov, et al FGBI "ARRIAH". Vladimir: 2024 34 p.
Guidelines for DNA nucleotide sequencing with genetic analyzer NANAFOR-05	Guidelines for DNA nucleotide sequencing with genetic analyzer NANAFOR-05/ NG Zinyakov, AD Grehneva, NA Guseva, et al FGBI "ARRIAH". Vladimir: 2024 22 p.

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?

Yes

Name of WOAH 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
UZBEKISTAN	2024-02-01	qPCR	3	0
BELARUS	2024-10-24	qPCR	7	0
KAZAKHSTAN	2024-02-29	qPCR	4	0
KAZAKHSTAN	2024-04-22	qPCR	3	0
KAZAKHSTAN	2024-11-03	qPCR	3	0
BELARUS	2024-07-01	HI	88	0
BELARUS	2024-07-01	ELISA	88	0

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?

Yes



Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAH Member Countries involved other than your country
Updated Programme of joint actions of CIS countries to prevent HPAI and Newcastle Disease	2018- 2025	Avian Influenza and Newcastle Disease Surveillance and Control	Institutions and laboratories subordinated to veterinary authorities of the countries	ARMENIA AZERBAIJAN BELARUS KAZAKHSTAN KYRGYZSTAN MOLDOVA RUSSIA TA JIKISTAN UZBEKISTAN
Characteristics of Far Eastern isolates of the H5N1 subtype avian influenza virus isolated in Russia and Japan in 2022- 2023	2023-2024	The study of genetic features of Far Eastern isolates of the H5N1 subtype avian influenza virus isolated in Russia and Japan in 2022-2023	Partners (Institutions) Institutions and laboratories subordinated to veterinary authorities of the countries WOAH Ref lab for AI, Faculty of Veterinary Medicine, Hokkaido University	JAPAN

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:

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 WOAH on behalf of WOAH 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:



1. Hew L.Y., Isoda N., Takaya F., Ogasawara K., Kobayashi D., Huynh L.T., Morita T., Harada R., Zinyakov N.G., Andreychuk D.B., Chvala I.A., Irza V.N., Watanabe Yu., Fujita H., Saito K., Hiono T., Sakoda Y. Continuous introduction of H5 high pathogenicity avian influenza viruses in Hokkaido, Japan; characterization of viruses isolated in winter 2022–2023 and early winter 2023-2024. Transboundary and Emerging Diseases, Volume 2024, Article ID 1199876. https://doi.org/10.1155/2024/1199876

2. Moroz N. V., Frolov S. V., Irza V. N., Scherbakova L. O., Kulakov V. Yu. Use of "ARRIAH-AviFluVac" vaccine in turkeys, geese and ducks. Veterinary Science Today. 2024; 13 (3): 248–254. https://doi.org/10.29326/2304-196X-2024-13-3-248-254

3. Marchenko, V.Y., Panova, A.S., Kolosova, N.P. et al. (+ Zhestkov P.D, Zinyakov N.G., Dmitriy B. Andreychuk D.B. & Chvala I.A. Characterization of H5N1 avian influenza virus isolated from bird in Russia with the E627K mutation in the PB2 protein. Sci Rep 14, 26490 (2024). https://doi.org/10.1038/s41598-024-78175-y

b) International conferences:

13

1. OFFLU Pre VCM Meeting, on-line, February 2, 2024;

2. 3rd Online (Zoom) Meeting for the WOAH avian disease network in East Asia, April 2, 2024;

3. International Seminar for Poultry specialists "Increasing Effectivety of Eggs Production", Guliston, Tajikistan, April 18, 2024. V.Irza: Biosecurity on Poultry Farms;

4. International Scientific and Practical Conference "Innovation and effective decisions in poultry production", Minsk, May 29, 2024. V. Irza: Current challenges for poultry. Avian Influenza (oral presentation) ;

5. XI Kazakhstan International Poultry Forum, Astana, June 25, 2024. N.Moroz: HPAI and ND : Prevention and Control (oral presentation); 6. OFFLU Global Technical Meeting, 2- 4 July, 2024, FAO Headquarters (on-line);

7. OFFLU zoom meeting to update avian and swine influenza data contributions to Sept 2024 WHO VCM, 18 September, 2024;

8. 31st Conference of the Regional Commission for Europe and 2nd GF-TADs Standing Group of Experts on HPAI, Samarkand, Uzbekistan, 30 Sept- 4 October 2024;

9. 46th meeting of the Intergovernmental Council for Cooperation in the Field of Veterinary Medicine (CIS). Ashkhabad, Turkmenistan, 22 October 2024. 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;

10. VII Uzbekistan International Poultry Forum, Tashkent, November 19, 2024. V. Irza: Current HPAI Panzootic. Prevention and Control (oral presentation);

11. Seminar for veterinary authorities of Eurasian Economic Union member-states on the topic "WOAH standards for Avian Influenza. Highly Pathogenic Avian Influenza – problems of control and prevention, trends of spread". 21 November 2024, Moscow. V. Irza: "WOAH standards for HPAI, control and prevention, trends of spread" (oral presentation);

12. VI International Workshop "The impact of climate changing on biological diversity and spreading of new viral infections in Eurasia", organized by Federal Research Centre FTM, Novosibirsk, 3-5 December 2024 (webinar);

13. OFFLU avian influenza teleconference 12 December, 2024.

c) National conferences:

50

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):



1

1. Forecast for highly pathogenic avian influenza in the Russian Federation for 2024 [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 2024. - Vladimir, 2024. 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 WOAH Members? Yes

a) Technical visit : 1

b) Seminars : 1

c) Hands-on training courses: 1

d) Internships (>1 month) 0

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
А	UZBEKISTAN	1
В	UZBEKISTAN	1
С	UZBEKISTAN	1

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	accreditation certificate RA.RU.21AO46 (10.01.2017) https://pub.fsa.gov.ru/ral/view/1238/accredited-entity	аттестат_ЛДЦ.pdf
ISO 9001-2015	accreditation certificate RA.RU.13HA95 (22.04.2024) https://pub.fsa.gov.ru/rss/certificate	24г Сертиф ИСО 9001 англ. яз _pdf.pdf
ISO 17043-2013	accreditation certificate RA.RU.430258 (16.03.2018) https://pub.fsa.gov.ru/ral/view/32230/accredited-entity	Область итог.pdf

19. Is your quality management system accredited?

` /		
v	Δ	С
11	C	-2

Test for which your laboratory is accredited	Accreditation body
AI virus isolation in chicken embryos	Federal Service for Accreditation (fgis@fsa.gov.ru)
Detection RNA of Al virus type A by real time RT - PCR	Federal Service for Accreditation (fgis@fsa.gov.ru)
Detection RNA of AI virus subtypes H5/H7/H9 by real time RT PCR	Federal Service for Accreditation (fgis@fsa.gov.ru)
Detection avian influenza virus antibodies in one dilution	Federal Service for Accreditation (fgis@fsa.gov.ru)



immunoassay test (ELISA)	
Detection avian influenza virus subtype H5 antibodies in HI test	Federal Service for Accreditation (fgis@fsa.gov.ru)
Detection avian influenza virus subtype H7 antibodies in HI test	Federal Service for Accreditation (fgis@fsa.gov.ru)
Detection avian influenza virus subtype H9 antibodies in HI test	Federal Service for Accreditation (fgis@fsa.gov.ru)
Identification of AI and ND viruses in HI test	Federal Service for Accreditation (fgis@fsa.gov.

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 WOAH?

No

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

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
3rd Online (Zoom) Meeting for the WOAH avian disease network in East Asia	2024-04-01	WOAH Regional Representative for Asia and the Pacific, Tokyo, Japan	participant	-

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

Yes

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?

No

FGBI ARRIAH did not participate in proficiency tests with WOAH Reference Laboratories during the past 2 years.

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant WOAH 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	Institutto 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)
Memorandum of understanding of material transfer (15.10.2021)	Multiple shipments of HPAI and ND viruses isolates from poultry farms at the level of initial and significant epidemiological events for comparative research studies	National institute for Animal Health, National Agriculture and Food Research Organization (NIAH/NARO), Japan
Characteristics of Far Eastern isolates of the H5N1 subtype avian influenza virus isolated in Russia and Japan in 2022-2023	The study of genetic features of Far Eastern isolates of the H5N1 subtype avian influenza virus isolated in Russia and Japan in 2022- 2023	WOAH Ref lab for AI, Faculty of Veterinary Medicine, Hokkaido University, Japan
Contributions to OFFLU	Providing genomic sequences of Avian Influenza Viruses H5/H7/H9 every 6 month for OIE/FAO/WHO Network for Avian Influenza	OFFLU Secretariat

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?

Yes				
Purpose for inter- laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
Validation of diagnostic methodology -Detection RNA of Al virus; Interlaboratory test comparisons.	organizer FGBI ARRIAH,participants - interregional veterinary laboratories of the Russian Federation	24	Detection RNA of AI virus; Detection virus antibodies (HI test)	RUSSIA,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

FGBI ARRIAH could not participate in the inter-laboratory proficiency tests organized by WOAH Reference Laboratories because collaboration with EURL, APHA, NIAH laboratories indicated in ToR 10 still remained suspended in 2024