

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 27 mai 2024 09:56

Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Highly and low pathogenic avian influenza
Address of laboratory:	Urievets
Tel.:	+7-4922 26 18 67
E-mail address:	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 WOA 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 WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
ELISA, NP		36190	0
HI, several antigens		5542	0
Direct diagnostic tests			
Virus isolation, eggs		226	0
Real time RT-PCR		6860	14
Nucleotide sequencing		345	0

TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOA-approved) and/or other diagnostic reagents to WOA 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 MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
Kit for detection of avian influenza virus subtype H9 antibodies in HI test	HI	Produced	994 kits	59	3	BELARUS, KAZAKHSTAN, RUSSIA,

Kit for detection of avian influenza virus subtype H5 antibodies in HI test	HI	Produced	1000 kits	120	3	BELARUS, KAZAKHSTAN, RUSSIA,
Kit for detection of avian influenza virus subtype H5&H7 antibodies in HI test	HI	Produced	364 kits	4	2	BELARUS, RUSSIA,
Kit for detection of avian influenza virus antibodies in one dilution immunoassay test	ELISA	Produced	60 kits	2	2	BELARUS, RUSSIA,

4. Did your laboratory produce vaccines?

Yes

5. Did your laboratory supply vaccines to WOAHO Members?

Yes

VACCINE NAME	AMOUNT SUPPLIED NATIONALLY	AMOUNT SUPPLIED NATIONALLY (ML, MG)	NAME OF RECIPIENT WOAHO MEMBERS
Avian Influenza H9N2 + Newcastle Disease associated killed oil-based vaccine	Contract	Contract	BELARUS KAZAKHSTAN RUSSIA UZBEKISTAN
Avian Influenza H5N1 + Newcastle Disease associated killed oil-based vaccine	Contract	Contract	EGYPT
Avian Influenza H5N1 killed oil-based vaccine «AviFluVac»	Contract	Contract	BELARUS KAZAKHSTAN 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 detection RNA of avian influenza virus of neuraminidase subtype N3 by real-time RT-PCR	Guidelines for detection RNA of avian influenza virus of neuraminidase subtype N3 by real-time RT-PCR/AV Andriyasov, EV Ovchinnikova, PD Zhestkov, et al.// FGBI "ARRIAH". - Vladimir: 2023. - 24 p.

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

NAME OF WOAHO 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	2023-07-25	qPCR	10	0
KAZAKHSTAN	2023-09-12	qPCR	4	0
BELARUS	2023-02-21	ELISA, HI	1200	0
BELARUS	2023-05-25	ELISA, HI	1200	0
BELARUS	2023-06-20	ELISA, HI	310	0
BELARUS	2023-07-25	ELISA, HI	1080	0

BELARUS	2023-10-23	ELISA, HI	1200	0
KAZAKHSTAN	2023-05-02	ELISA, HI	22	0
KAZAKHSTAN	2023-07-03	ELISA, HI	50	0
KAZAKHSTAN	2023-09-12	ELISA, HI	36	0

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

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOA 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
CRP D32034 Use of Stable Isotopes to Trace Bird Migrations and Molecular Nuclear Techniques to Investigate the Epidemiology and Ecology of the Highly Pathogenic Avian Influenza (Phase II), IAEA Research Contract No: 22555/RO	2017-2023	Collection of Feather Samples from Migratory Wild Waterfowl PCR-Positive to Avian Influenza Viruses to Identify Bird Species and to Determine Bird Migrations Using Stable Isotope Analysis	IAEA/FAO Vienna	AUSTRIA CANADA GERMANY IRAN KOREA (REP. OF) NIGERIA ROMANIA UNITED KINGDOM
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 TAJIKISTAN UZBEKISTAN

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

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 WOA on behalf of WOA 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:

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1. *Highly Pathogenic Avian Influenza A(H5N1) Virus-Induced Mass Death of Wild Birds, Caspian Sea, Russia, 2022*, I.Sobolev, A. Gadzhiev, K. Sharshov, ... +V.Irza, A.M. Shestopalov. October 2023. *Emerging Infectious Diseases* 29(12), P 2528-32; DOI: 10.3201/eid2912.230330
2. *Update on Highly Pathogenic Avian Influenza in the Russian Federation*, V.Irza, M. Volkov, A. Varkentin, A. Andriyasov "The Impact of Climate Change on Biological

Diversity and the Spread of Viral Infections of Animals in Eurasia // Conference materials of V International scientific conference // 5 – 7 of December 2023 // Novosibirsk, Russia, 38-40, <https://frcfm.ru/wp-content/uploads/2023/12/teziy-konferencii-fic-ftm.pdf>

3. *Global avian influenza situation (2019–2022). Host range expansion as evidence of high pathogenicity avian influenza virus evolution (Review) M. V. Zhiltsova, T. P. Akimova, A. V. Varkentin, M. N. Mitrofanova, A. V. Mazneva, V. P. Semakina, E. S. Vystavkina/ Veterinary Science Today. Scientific Journal. 2023; Vol. 12 No. 4, 293-303*

b) International conferences:

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1. OFFLU Pre VCM Meeting, on-line, January 30, 2023;
2. International scientific and practical conference of graduate students and young scientists "Young scientists in the science and practice of agriculture", Vitebsk, April 27-28, 2023;
3. "Ask the Expert" FAO International webinar on Avian Influenza for laboratories in Central Asia and Caucasus regions, ARRIAH, May 17, 2023;
4. 3rd International Scientific and Practical Conference, Exhibition "Belagro 23", Minsk, June 6, 2023;
5. 2-nd Workshop for the WOAHA Avian Diseases network in East Asia. WOAHA Regional Representative for Asia and the Pacific, Tokyo, 8 June 2023 (webinar). V. Irza: Update on HPAI in the Russian Federation (oral presentation). <https://rr-asia.oie.int/en/events/regional-workshop-for-avian-diseases-in-asia-and-the-pacific/>;
6. X Kazakhstan International Poultry Forum, Astana, June 27, 2023. V.Irza: HPAI and ND : Prevention and Control (oral presentation);
7. International Scientific and Practical Conference Dedicated to the 65th Anniversary of the Research Institute for Biological Safety Problems. Almaty, September 6-8, 2023. V.Irza: Avian Influenza. Current situation and preventive measures (oral presentation);
8. OFFLU pre VCM Meeting, on-line, 11 September 2023;
9. XVII International Scientific and Practical Conference "Baltvetforum-2023", Saint Petersburg, September 21-22, 2023. V.Irza: Avian Influenza. Situation in the Russian Federation, Diagnostics and Prevention (oral presentation);
10. 45th meeting of the Intergovernmental Council for Cooperation in the Field of Veterinary Medicine (CIS). Tashkent, 8-9 November 2023. 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;
11. 6th Russian-Chinese Symposium on Infectious Diseases, Smorodintsev Research Institute of Influenza, Saint Petersburg, November 7-8, 2023. V. Irza: Update on HPAI in the Russian Federation (oral presentation);
12. XI International Scientific and Practical Conference "Molecular Diagnostics", Moscow, November 14-16, 2023;
13. VI Uzbekistan International Poultry Forum, Tashkent, November 21, 2023. V. Irza: Current HPAI Panzootic. Prevention and Control (oral presentation) ;
14. 3rd Research Coordination Meeting on the Use of Stable Isotopes to Trace Bird Migrations and Molecular Nuclear Techniques to Investigate the Epidemiology and Ecology of the Highly Pathogenic Avian Influenza (Phase 2), FAO/IAEA CRP Project D32034, 4-5 December, 2023, V.Irza: ARRIAH activities report (webinar);
15. V 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, 5-6 December 2023. V.Irza: Update on HPAI in the Russian Federation (webinar).
16. International Scientific and Practical Conference Dedicated to the 65th Anniversary of the All-Russian Research Institute for Animal Health. Vladimir, December 6-8, 2023;

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 highly pathogenic avian influenza in the Russian Federation for 2023 [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 2023. - Vladimir, 2023.- 892 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 WOAHA Members?

Yes

a) Technical visit : 4

b) Seminars : 4

c) Hands-on training courses: 4

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
A	BELARUS	4
B	BELARUS	4

B	BELARUS	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	аттестат_ЛДЦ.pdf

19. Is your quality management system accredited?

Yes

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 AI 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 immunoassay test (ELISA)	Federal Service for Accreditation (fgis@fsa.gov.ru)
Detection avian influenza virus subtype H5 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.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 WOAHP?

No

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

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
Workshop for the OIE Avian Diseases network in East Asia (webinar)	2023-06-08	WOAH Regional Representative for Asia and the Pacific, Tokyo, Japan	speaker	V.Irza: Update on AI in the Russian Federation

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

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?

No

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?

Yes

TITLE OF THE PROJECT OR CONTRACT	SCOPE	NAME(S) OF RELEVANT WOAHP REFERENCE LABORATORIES
	Multiple shipments of HPAI and ND viruses isolates WOAH Reference Laboratory Reports Activities 2023	

Memorandum of understanding of material transfer (29.12.2018)	Multiple shipments of HPAI and ND viruses isolated from poultry farms at the level of initial and significant epidemiological events for comparative research studies	Instituto 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 virus 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
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 WOAHP Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the Test	WOAH Member Countries
Validation of diagnostic methodology	organizer FGBI ARRIAH. participants - interregional veterinary laboratories of the Russian Federation	24	Detection RNA of AI virus Detection virus antibodies (ELISA test)	RUSSIA,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

Collaboration with EURL, APHA, NIAH laboratories indicated in ToR 10 still remained suspended in 2023. ARRIAH could not participate in the inter-laboratory proficiency tests organized by WOAHP Reference Laboratories.