

OIE Reference Laboratory Reports Activities

Activities in 2019

This report has been submitted : 2020-01-16 16:44:33

Name of disease (or topic) for which you are a designated OIE 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 18 67
Fax:	+7-4922 26 17 55
E-mail address:	mail@arriah.ru
Website:	www.arriah.ru
Name (including Title) of Head of Laboratory (Responsible Official):	M.N. Shtyrev, Interim Director of FGBI "ARRIAH" (National reference OIE laboratory for HPAI, LPAI and ND)
Name (including Title and Position) of OIE Reference Expert:	Viktor N. Irza, ARRIAH chief expert, doctor of science (vet)
Which of the following defines your laboratory? Check all that apply:	Governmental

ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards

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 OIE Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
ELISA, NP	Yes	30690	59
HI, several antigens	Yes	5454	0
Direct diagnostic tests		Nationally	Internationally
Virus isolation, eggs	Yes	250	1
Real time RT-PCR	Yes	6105	0
IVPI pathotyping	Yes	7	0
Nucleotide sequencing	Yes	14	4

ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards. To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
Kit for detection of avian influenza virus subtype H5 antibodies in HI test	HI	Produced	110 kits	0	1 Russia	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Kit for detection of avian influenza virus antibodies in one dilution immunoassay test	ELISA	Produced	2003 kits	0	1 Russia	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

4. Did your laboratory produce vaccines?

Yes

5. Did your laboratory supply vaccines to OIE Member Countries?

Yes

Vaccine name	Amount supplied nationally (ml, mg) (including for own use)	Amount supplied to other countries (ml, mg)	Name of recipient OIE Member Countries
Avian Influenza H9N2 + Newcastle Disease associated killed oil-based vaccine	contract	contract	EGYPT KAZAKHSTAN RUSSIA

ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

Yes

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

Name of the new test or diagnostic method or vaccine developed	Description and References (Publication, website, etc.)
Guidelines for the RNA detection of avian influenza virus subtype N2 by real time RT-PCR	Guidelines for the RNA detection of avian influenza virus subtype N2 by real time RT-PCR / P.B. Akshalova, A. V. Andriyasov, L.O. Scherbakova, S.N. Kolosov, V. Yu Sosipatorova, I.A. Chvala, D. B. Andreychuk // FGBI "ARRIAH". - Vladimir: 2019. - 13 p.
Guidelines for the RNA detection of avian influenza virus subtype N8 by real time RT-PCR	Guidelines for the RNA detection of avian influenza virus subtype N8 by real time RT-PCR / P.B. Akshalova, A. V. Andriyasov, L.O. Scherbakova, S.N. Kolosov, V. Yu Sosipatorova, I.A. Chvala, D. B. Andreychuk // FGBI "ARRIAH". - Vladimir: 2019. - 13 p.

ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
TAJIKISTAN	July	20	0
UZBEKISTAN	July	39	0

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

No

ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE 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 TAJKISTAN UZBEKISTAN

ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases

11. Did your Laboratory collect epizootiological 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 OIE on behalf of OIE Delegate from Russia.

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

Yes

If the answer is yes, please provide details of the data collected:
Epizootiological data had been sent to FSVPS and disseminated via publications, conferences, seminars and other informational resources.

13. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category)

a) Articles published in peer-reviewed journals: 6

1. Armoured exogenous internal control for real-time PCR diagnosis of avian influenza / Andreychuk D.B., Andriyasov A.V., Nikonova Z.B., Kozlov A.A., Suarez D.L., Chvala I.A. // *Avian Pathology* – 2019. – Vol. 48 (5), P. 492-498.
2. Serological monitoring for avian influenza in the Russian Federation in 2017-2018 / Volkova M.A., Chvala I.A., Yaroslavtseva P.S., Sosipatorova V.Y., Osipova O.S., Chvala I.A. // *Veterinary today*. – 2019. – N. 2(29) – P. 3-11.
3. Spread of low pathogenic avian influenza A/H9N2 in the world and Russian Federation. Challenges of disease eradication / Volkov M.S., Varkentin A.V., Irza V.N. // *Veterinary today*. – 2019. – N. 3 (30) – P. 51-56.
4. Epizootological monitoring of avian influenza on the territory of the Republic of Crimea / Gadzevich D.V., Danilchenko S.I., Erofeev S. G., Pasunkina M.A., Grinchenko A.B., Irza V.N., Volkov M.S., Varkentin A.V. // *Veterinary today*. – 2019. – N. 1 (28) – P. 34-38.
5. Analysis of the reasons for the spread of highly pathogenic avian influenza A/H5NX on the territory of the Russian Federation in 2016-2019. / Volkov M.S., Irza V.N., Varkentin A.V. // *Poultry and poultry products*. – 2019. – N. 3 –P. 16-19.
6. First detection of a G1-like H9N2 virus in Russia, 2018 / Sharshov, K; Kurskaya, O; Sobolev, I; Leonov, S; Kabilov, M; Alikina, T; Alekseev, A; Derko, A; Yushkov, Yu; Takehiko Saito; Yuko Uchida; Junki Mine; Irza, V; Shestopalov, A. // *Korean Journal of Veterinary Research* . 2019, Vol. 59 Issue 1, pp 37-42.

b) International conferences: 11

1. 25th Annual Meeting of the National Reference Laboratories for Avian Influenza and Newcastle Disease of European Union Member States, Padova, Italy, June 19-21, 2019. V. Irza. 2019 Update on Avian Influenza situation in the Russian Federation (oral presentation)
<https://www.izsvenezie.com/reference-laboratories/avian-influenza-newcastle-disease/workshops/>
2. XXI World Veterinary Poultry Association Congress (WVPAC 2019), Bangkok, Thailand, September 16-20, 2019 (6 poster presentations).
 1. Highly pathogenic avian influenza viruses that caused outbreaks of the disease in the Russian Federation in 2018 / Andriyasov A.V., Ovchinnikova E.V., Nikonova Z.B., Kozlov A.A., Zinyakov N.G., Scherbakova L.O., Sosipatorova V.Yu., Andreychuk D.B., Chvala I.A. WVPAC 2019 – P. 237.
 2. Genetic properties of the influenza virus A/duck/Altai/469/14 H5N1, Russia/Sosipatorova V.Yu., Zinyakov N.G., Andriyasov A.V., Altunin D.A., Chvala I.A., Perevozchikova N.A. WVPAC 2019– P. 236.
 3. Detection of avian influenza virus antibody among domestic avian species in Russia in 2018 / Yaroslavtseva P.S., Volkova M.A., Chvala I.A., Osipova O.S., Kulagina M.A., Chvala I.A., Andreychuk D.B. WVPAC 2019. – P. 234.
 4. Characterization of AIV H9 field viruses isolated in Russia during 2012-2018 for using in hemagglutination inhibition test kit / Chvala I.A., Osipova O.S., Volkova M.A., Mudrak N.S., Chvala I.A., Andreychuk D.B. WVPAC 2019. – P. 233-234.
 5. Avian influenza subtype H9 viruses, identified in the Russian Federation and the Republic of Tajikistan in 2018 / Zinyakov N.G., Osipova O.S., Andriyasov A.V., Sosipatorova V.Yu., Altunin D.A., Andreychuk D.B., Chvala I.A. WVPAC 2019. – P. 233.
 6. Probable causes of highly pathogenic avian influenza virus (H5NX clade 2.3.4.4. group B) spread in the Russian Federation in years 2016-2018 / Volkov M.S., Varkentin A.V., Irza V.N. WVPAC 2019). – P. 231.
3. IX International Veterinary Congress, Svetlogorsk, Russia, 17-20 April 2019.
 1. V. Irza. Highly Pathogenic Avian Influenza, a brief analysis of current situation (oral presentation).
 2. I. Chvala. Viral avian diseases in industrial poultry (oral presentation).
4. International scientific and practical conference of the Russian Federation and CIS countries poultry veterinarians "Current issues of diagnostics and prevention of infectious diseases of birds in industrial poultry farming", organized by ARRIAH, Suzdal, RF, February 14-15, 2019.
 1. V. Irza. Highly Pathogenic Avian Influenza, new threats (oral presentation).
 2. A. Varkentin. Low Pathogenic Avian Influenza, prevention and control (oral presentation).
 3. I. Chvala. Prospects of laboratory diagnosis. Avian influenza and Newcastle disease (oral presentation).
5. V. Irza. Update on HPAI epizootic situation. Workshop within International Exhibition VIV Russia 2019 "Meat and poultry industry Russia", Moscow, 28.05.2019 (oral presentation).
6. V. Irza. Highly Pathogenic Avian Influenza eradication in commercial poultry in Russian Federation. International Conference-workshop organized by Breeding company "Sverdlovskiy" (Lohmann breeders Rus), Sochi, 4-6 June 2019 (oral presentation).
7. M. Volkov. Epizootic situation on HPAI. Experiences of eradication of the disease in RF. Workshop "Development of poultry industry" within International Exhibition "Cereals-Mixed feed –Veterinary 2019", Moscow, 29.01.2019 (oral presentation).
8. V. Irza. Update on viral diseases epizootic situation in commercial poultry in Russia. International scientific and practical seminar "Genetics and poultry production" organized by Breeding company "Sverdlovskiy" (ISA Hendrix Genetics), Saint Petersburg, August 20-24. 2019 (oral presentation).
9. III All-Russian scientific and practical conference with international participation "Actual problems of diseases

common for humans and animals” Stavropol, 2019.

1. Zinyakov N.G. et al. Use of full genome sequencing in the study of newly isolated avian influenza viruses. Stavropol, 2019. – P. 158-159.

2. Yaroslavtseva P.S. et al. Avian influenza epizootic situation in the territory of the Russian Federation in 2017-2018 Stavropol, 2019. – P. 158-159.

3. Osipova O.S. et al. Characterization of A/H9N2 influenza virus isolates as antigens for HI test kits. Stavropol, 2019. – P. 281-282.

10. Akshalova P.B. et al. Selection of oligonucleotide primers and optimization of real time RT-PCR for detection of N2 subtype of avian influenza virus. Theory and practice problems of modern veterinary science, collection of scientific papers, Almaty, 2019 – Vol. 65, P. 184-191.

11. Akshalova P.B. et al. Selection of oligonucleotide primers and optimization of real-time RT-PCR for detection of avian influenza virus RNA of N8 subtype. Achievements of young scientists – in veterinary practice: materials of the 5th international scientific conference, Vladimir, 2019. – P. 77-83.

c) National conferences: 11

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1. V. Irza. Current HPAI situation and control measures. Scientific-practical seminar organized by “Rosptitsoyuz”, Moscow, 28.02.2019.

2. V. Irza. Viral diseases of poultry. Prevention and control. Regional workshop for local veterinary services and poultry veterinarians. Belgorod, 26.03.2019.

3. V. Irza. Avian Influenza and Newcastle disease. Regional forum “Ptitseprom 2019” Belgorod, 28.03.2019.

4. V. Irza. Avian Influenza. A brief analysis of current situation. Regional workshop for local veterinary services and poultry veterinarians, Perm, 9.10. 2019.

5. M.Volkov. Avian Influenza in wild birds. Regional workshop for local veterinary services and poultry veterinarians. Vladimir, 11.04.2019.

6. M.Volkov. HPAI. Prevention and control measures. Scientific-practical seminar organized by “Rosptitsoyuz”, Moscow, 11.04.2019.

7. M.Volkov. Highly Pathogenic Avian Influenza. Surveillance and prevention. Regional workshop at FSVPS territorial office for local veterinary services and poultry veterinarians. Vladimir, 22.08.2019.

8. M. Volkov, A.Varkentin, V.Irza. Avian Influenza: Surveillance, prevention and control. Webinars for veterinary services and poultry veterinarians of Territories of Russia. ARRIAH, Vladimir, every quarter of the year 2019 (4 in total).

d) Other:

(Provide website address or link to appropriate information) 1

1. Forecast for highly pathogenic avian influenza in the Russian Federation for 2019 [Text]: scientific publication / M.S. Volkov, A.V. Varkentin, A.K. Karaulov, V.N. Irza et al. // Forecasts of infectious animal disease occurrence in the Russian Federation for 2019. - Vladimir, 2018.-P. 209-247. <http://www.fsvps.ru/fsvps/iac>

ToR 7: To provide scientific and technical training for personnel from OIE Member Countries

To recommend the prescribed and alternative tests or vaccines as OIE Standards

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

Yes

a) Technical visits: 0

b) Seminars: 0

c) Hands-on training courses: 0

d) Internships (>1 month): 1

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
d	Kazakhstan	1

ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

15. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
ISO 17025-2009	аттестат_ЛДЦ.pdf
ISO 17043-2013	Область итог.pdf

16. 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
Detection RNA of AI virus subtypes H5/H7 by real time RT-PCR	Federal Service for Accreditation
Detection avian influenza virus antibodies in one dilution immunoassay test (ELISA)	Federal Service for Accreditation
Detection avian influenza virus subtype H5 antibodies in HI test	Federal Service for Accreditation
Identification of AI and ND viruses in HI test	Federal Service for Accreditation

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

Yes

(See *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4*)

ToR 9: To organise and participate in scientific meetings on behalf of the OIE

18. Did your laboratory organise scientific meetings on behalf of the OIE?

No

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

No

ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results

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

Yes

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

Yes

Purpose of the proficiency tests: ¹	Role of your Reference Laboratory (organiser/participant)	No. participants	Participating OIE Ref. Labs/organising OIE Ref. Lab.
Validation of diagnostic methods	participant	36	AI-ND EURL IZSve, Padova, Italy
Validation of diagnostic methods	participant	>10	CSIRO Australian Animal Health Laboratory, April
Validation of diagnostic methods	participant	>10	CSIRO Australian Animal Health Laboratory, October

¹ validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

22. Did your laboratory collaborate with other OIE 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 OIE 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.	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)
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

ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

Yes

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: <http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing> see point 1.3

Purpose for inter-laboratory test comparisons ¹	No. participating laboratories	Region(s) of participating OIE Member Countries
Validation of diagnostic methodology; participant; organizer GD Deventer	77	<input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East
Validation of diagnostic methodology; organizer FGBI ARRIAH	32 Interregional veterinary laboratories of the Russian Federation	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

ToR 12: To place expert consultants at the disposal of the OIE

24. Did your laboratory place expert consultants at the disposal of the OIE?

No

25. Additional comments regarding your report: