

WOAH Reference Laboratory Reports Activities 2024

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOA 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 WOA reference 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	Yes	33407	88
HI	Yes	40871	88
Direct diagnostic tests			
Virus isolation, eggs	Yes	130	0

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Real time RT-PCR	Yes	8700	20
Nucleotide sequencing	Yes	152	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	2325 kits	45 kits	3	BELARUS, KAZAKHSTAN, RUSSIA,
Kit for detection of Newcastle disease virus antibodies in one dilution immunoassay test	ELISA	Produced	17 kits	1 kit	2	BELARUS, RUSSIA,

4. Did your laboratory produce vaccines?

Yes

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

Yes

Vaccine name	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	Name of recipient WOA?H Members
ND La Sota Live dry vaccine	contract	contract	BANGLADESH EGYPT KAZAKHSTAN RUSSIA
ND La Sota + IB H120 associated Live dry vaccine	contract	contract	BANGLADESH KAZAKHSTAN RUSSIA
ND-En live dry vaccine	contract	contract	KAZAKHSTAN
Mono and associated killed oil-based vaccines containing NDV antigen	contract	contract	AZERBAIJAN BELARUS KAZAKHSTAN RUSSIA UZBEKISTAN

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 WOA?H 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 WOAHP Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

Name of WOAHP 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	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
UZBEKISTAN	2024-02-01	qPCR	3	0
BELARUS	2024-07-01	HI ELISA	88	0

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

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAHP Members other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAHP 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 TAJIKISTAN UZBEKISTAN
Characteristics of newcastle disease virus isolates and avian paramyxovirus isolates of different serotypes	2023-2025	The study of genetic features and pathogenicity of newcastle disease virus isolates and avian paramyxovirus isolates of different serotypes	Department of Preventive Veterinary Medicine, Ministry of Education, College of Veterinary Medicine, Jilin University	CHINA (PEOPLE'S REP. OF)

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

No

TOR6: EPIZOOLOGICAL DATA

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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:

4

1. *The first report and biological characterization of Avian Orthoavulavirus 16 in wild migratory waterfowl and domestic poultry in China reveal a potential threat to birds* / Y. Sha, W. Yan, X. Liu, H. Chai, J. Chen, H. Li, M. Wang, S. Jiang, S. Wang, Y. Ren, H. Li, Y. Liu, T. Stoeger, A. Wajid, A. Dodovski, C. Gao, C. Mingala, D. Andreychuk, R. Yin // *Avian Pathology*. - 2024. - doi.org/10.1080/03079457.2024.2373366

2. *First detection and biological characterization of an avian metaavulavirus 8 isolated from a migratory swan goose in Qinghai Lake, Northwest China* / S. Wang, X. Liu, J. Chen W. Yan, H. Li, W. Chi, R. Luo, X. Lin, Y. Yin, C. Dong, H. Wang, B. Zheng, Y. Liu, T. Stoeger, A. Wajid, A. Dodovski, C. Gao, C.N. Mingala, D.B. Andreychuk, R. Yin // *Microbiology and Immunology*. - 2024. - 7 p. . - DOI: 10.1111/1348-0421.13175

3. Zybina T.N., Pyatkina A.A., Moroz N.V., Kulakov V.Yu., Shcherbakova L.O. Immunological properties of lentogenic ARRIAH ND-EN strain of Newcastle disease virus. «*Veterinary medicine*». DOI:10.30896/0042-4846.2024.27.4.39-44

4. N. V. Moroz, D. L. Dolgov, I. A. Komarov, V. J. Kulakov, M. A. Vershinina. Immunological properties of inactivated vaccines against Newcastle disease based on virus antigens VII and II genotypes. *International Journal of Veterinary Medicine*. DOI: 10.52419/issn2072-2419.2024.1.41

b) International conferences:

5

1. *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, 29 February 2024.*

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

3. *International scientific and practical conference of graduate students and young scientists "Young scientists in the science and practice of agriculture", Vitebsk, April 25-26, 2024;*

4. *XI Kazakhstan International Poultry Forum, Astana, June 27, 2024. N.Moroz: HPAI and ND : Prevention and Control (oral presentation);*

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5. 46th meeting of the Intergovernmental Council for Cooperation in the Field of Veterinary Medicine (CIS). Ashkhabad, October 24-25, 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

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 Newcastle Disease 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 WOA 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
A	UZBEKISTAN	1
B	UZBEKISTAN	1
C	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)	
	accreditation certificate RA.RU.21AO46 (10.01.2017)	

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ISO 17025-2009	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?

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

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. Do you network (collaborate or share information) with other WOA Reference Laboratories designated for the same pathogen?

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOA Reference Laboratories designated for the same pathogen during the past 2 years?

No

FGBI ARRIAH did not participate in proficiency tests with WOA Reference Laboratories during the past 2 years as collaboration with these labs-organizers is still suspended although MoUs are automatically prolonged

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	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)

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOA Reference Laboratories for the same pathogen during the past 2 years?

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 Russian Federation	24	Detection ND virus antibodies (HI test)	RUSSIA,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

Collaboration with EURL, APHA laboratories indicated in ToR 10 still remained suspended in 2024. ARRIAH could not participate in the inter-laboratory proficiency tests organized by WOA Reference Laboratories