

OIE Collaborating Centres Reports Activities

Activities in 2018

This report has been submitted : 2019-01-14 13:38:10

Title of collaborating centre:	Diagnosis and Control in Eastern Europe, Central Asia and Transcaucasia
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ToR: To provide services to the OIE, in particular within the region, in the designated specialty, in support of the implementation of OIE policies and, where required, seek for collaboration with OIE Reference Laboratories

ToR: To identify and maintain existing expertise, in particular within its region

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by the OIE

Disease control	
Title of activity	Scope
Diagnostic activities for infectious diseases in Russian Federation	Visits of the FGBI staff-members (85) to various Subjects of the RF for providing consultative assistance in animal disease diagnosis, for sampling, anti-epidemic measure planning and implementation
Diagnostic activities for infectious diseases of animals in foreign countries	Missions of the staff members (3) to foreign countries: Kazakhstan, Kyrgyzstan, and Mongolia for providing consultative assistance in animal diseases diagnosis, anti-epidemic measure planning and implementation
Zoonoses	
Title of activity	Scope
Monitoring activities for rabies	A total of 800 rabies tests of pathological materials from 11 RF Subjects were performed using IFT, ELISA and virus isolation
Monitoring activities for BSE	A total of 16,130 BSE tests of pathological materials from 80 RF Subjects were performed using ELISA
Avian diseases	
Title of activity	Scope
Monitoring activities for Newcastle disease	A total of 30,200 ND tests of pathological materials from 34 RF Subjects were carried out using PCR, sequencing, HI test and virus isolation
Monitoring activities for avian influenza	A total of 30,050 AI tests of pathological materials from 43 RF Subjects were carried out using ELISA, PCR, HI test and virus isolation
Monitoring activities for basic avian diseases	A total of 508 tests of pathological materials from the poultry farms of Tajikistan were performed for diagnosis of basic avian diseases using ELISA, PCR, HI test and sequencing
Aquatic animal diseases	
Title of activity	Scope

Diagnostic activities for spring viraemia of carp	A total of 400 tests of pathological materials from 13 RF Subjects were performed using ELISA, PCR and virus isolation
Diagnostic activities for infectious haematopoietic necrosis	A total of 300 tests of pathological materials from 8 RF Subjects were performed using ELISA, PCR and virus isolation
Diagnostic activities for viral haemorrhagic septicaemia	A total of 300 tests of pathological materials from 7 RF Subjects were performed using ELISA, PCR and virus isolation
Diagnostic activities for infectious pancreatic necrosis	A total of 300 tests of pathological materials from 7 RF Subjects were performed using ELISA, PCR and virus isolation
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Diagnostic activities for bluetongue	A total of 1500 tests of pathological materials from 4 RF Subjects were performed using ELISA, PCR and virus isolation
Diagnostic activities for classical swine fever	A total of 53,490 tests of pathological materials from 26 RF Subjects were performed using ELISA, PCR and virus isolation
Diagnostic activities for African swine fever	A total of 10,246 tests of pathological materials from 55 RF Subjects were performed using ELISA, PCR and virus isolation
Diagnostic activities for Schmallenberg disease	A total of 20 tests of pathological materials from 1 RF Subject were performed using ELISA, PCR and virus isolation
Diagnostic activities for lumpy skin disease	A total of 655 tests of pathological materials from 6 RF Subjects were performed using ELISA, PCR and virus isolation
Diagnostic activities for FMD in Russian Federation	A total of 150,699 tests of pathological materials from 81 RF Subjects were performed using ELISA, PCR and virus isolation
Diagnostic activities for FMD in foreign countries	A total of 229 tests of pathological materials from Mongolia and Pakistan were performed using ELISA, PCR, sequencing and virus isolation.
Diagnostic activities for Peste des petits ruminants	A total of 31,000 tests of pathological materials from 84 RF Subjects were performed using ELISA
Diagnostic activities for Sheep and goat pox	A total of 385 tests of pathological materials from 5 RF Subjects were performed using ELISA
Diagnostic activities for Contagious bovine pleuropneumonia	A total of 30,705 tests of pathological materials from 81 RF Subjects were performed using ELISA

ToR : To propose or develop methods and procedures that facilitate harmonisation of international standards and guidelines applicable to the designated specialty

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the surveillance and control of animal diseases, food safety or animal welfare

Proposal title	Scope/Content	Applicable area
Control of infectious avian diseases	The diagnostica and vaccines were delivered to the Azerbaijan, Kazakhstan, Uzbekistan, Georgia, Bangladesh for early diagnosis and prevention of main infectious avian diseases	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input checked="" type="checkbox"/> Animal welfare
Control of sheep and goat pox and peste des petits ruminants, lumpy skin disease	The diagnostica and vaccines were delivered to Armenia, Georgia, Iraq, Afghanistan, Tajikistan, Kazakhstan and Kuwait	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input checked="" type="checkbox"/> Animal welfare
Control of porcine and bovine infectious diseases	Vaccines were delivered to the Republic of Belarus prevention of PRRS, porcine pasteurellosis, parvovirus disease in pigs, infectious bovine rhinotracheitis, parainfluenza-3 and bovine viral diarrhea	<input type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input checked="" type="checkbox"/> Animal welfare
FMD control	The diagnostica and vaccines were delivered to Armenia, Jordan, Iraq, Kazakhstan, Kirgizia, Kuwait, UAE, Pakistan, South Korea, Bangladesh, Saudi Arabia, Mongolia, Syrian Arab Republic for early diagnosis and prevention	<input type="checkbox"/> Surveillance and control of animal diseases <input type="checkbox"/> Food safety <input checked="" type="checkbox"/> Animal welfare

ToR: To establish and maintain a network with other OIE Collaborating Centres designated for the same specialty, and should the need arise, with Collaborating Centres in other disciplines

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

3. Did your Collaborating Centre maintain a network with other OIE Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Institute for Animal Health	Pirbright, Great Britain	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Disease control, training
S.N. Vysheslesky Institute of Experimental Veterinary Medicine	Minsk, Belarus	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Animal Disease control

Istituto Zooprofilattico Sperimentale della Venezia (IZSVe)	Padova, Italy	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Avian disease control
Centro de Vigilancia Sanitaria Veterinaria (VISAVET), Facultad Veterinaria HCV Planta sotano, Universidad Complutense de Madrid (USM)	Madrid, Spain	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Disease control (ASF)
Finish Food Safety Authority Evira	Finland	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Animal disease control
Institute for Veterinary Disease Control	Austria	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Animal disease diagnosis
Dutch Animal Health Service	Netherlands	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Avian disease (International proficiency testings)
Community Reference Laboratory (CRL) for Rabies	France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Zoonoses
Lanzhou Veterinary Research Institute (LVRI)	Lanzhou, China	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East	Animal disease control
Veterinary Specialized Institute "Kralevo"	Serbia	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Animal disease control
Scientific Veterinary Institute "Novi Sad"	Serbia	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Animal disease diagnosis

Veterinary Institute of Tajik Academy of Agricultural Sciences	Tadjikistan	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Animal disease control
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4. Did your Collaborating Centre maintain a network with other OIE Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
International Atomic Energy Agency (IAEA)	Austria	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Identification of geographical origin of milk samples
International Atomic Energy Agency (IAEA)	Austria	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Use of tissue samples from migratory wild waterfowl to detect avian influenza viruses and to determine stable isotope ratios in feathers
International Atomic Energy Agency (IAEA)	Austria	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Infrared spectroscopy as a rapid method to verify the authenticity of milk and vegetable oils

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

5. Did your Collaborating Centre place expert consultants at the disposal of the OIE?

No

ToR: To provide, within the designated specialty, scientific and technical training to personnel from OIE Member Countries

6. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by the OIE, to personnel from OIE Member Countries?

Yes

a) Technical visits: 54

b) Seminars: 211

c) Hands-on training courses: 135

d) Internships (>1 month): 3

Type of technical training provided (a, b, c or d)	Content	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
a) Seminars	4 seminars "Diagnosis, monitoring and prevention of highly dangerous diseases" were provided	RF	211
c) Hands-on training courses	5 hands-on training courses "Current epidemiology, diagnosis and prevention of CSF and ASF, rabies, FMD, lumpy skin disease" was provided	RF	135

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

7. Did your Collaborating Centre organise or participate in the organisation of scientific meetings on behalf of the OIE?

Yes

National/International	Title of event	Co-organiser	Date (mm/yy)	Location	No. Participants
International	The 86th OIE General Session	OIE	May, 2018	Paris, France	4
International	Sub-Regional Workshop on Zoonotic Diseases for Central Asia and the South Caucasus	OIE / WHO	November, 2018	Astana, Kazakhstan	2
International	Bilateral meeting with the OIE senior managers regarding research cooperation in diagnosis and control of lumpy skin disease, African swine fever and avian influenza	OIE	February, 2018	Paris, France	2

ToR: To collect, process, analyse, publish and disseminate data and information relevant to the designated specialty

8. Publication and dissemination of any information within the remit of the mandate given by the OIE that may be useful to Member Countries of the OIE

a) Articles published in peer-reviewed journals: 41

1. Abdrakhmanov S. K., Tyulegenov S. B., Korennoy F. I. et al. Spatiotemporal analysis of foot-and-mouth disease outbreaks in the Republic of Kazakhstan, 1955 // *Transbound. Emerg. Dis.* - 2018. - 15 March. - 11 p.
2. Amelin V.G., Bolshakov D.S, Andoralov A.M. Screening and determination of pesticides of different classes in natural water without sample preparation by ultra-high performance liquid chromatography-high resolution quadrupole time-of-flight mass spectrometry // *Journal of Analytical Chemistry.* - 2018. - V. 73, No. 3. - P. 214-223.
3. Baborenko Ye.P., Dolganova Ye.K., Gruzdev K.N. Testing of combined vaccines against Aujeszky's disease, porcine reproductive and respiratory syndrome and porcine parvovirus infection for their antigenicity: scientific publication // *Veterinary Science Today.* - 2018. - No.2. - P. 13-17.
4. Chvala I. A., Andriyosov A. V., Zinyakov N.G. et al. Outbreak of highly pathogenic avian influenza A/H5N1 clade 2.3.2.1. in the Altai region, Russia // 10th Intern. Symp. on Avian Influenza in Poultry and Wild Birds. - 2018. - P.101 .
5. Chvala I.A., Mischenko V.A., Lozovoy D.A., et al. Control of vaccination efficacy in poultry against avian influenza A/H5 using dry blood spot technique // *Veterinaria.* - 2018. - No. 2. -P. 24-27.
6. Chvala II. A., Sosipatorova V.Yu., Chvala Ir. A., Altunin D.A. Experimental infection of chickens, ducks and turkeys with influenza virus A/duck/Altai/469/14 H5N1 // 10th Intern. Symp. on Avian Influenza in Poultry and Wild Birds. - 2018. - C. 166.
7. Chvala II.A., Zinyakov N.G. Andriyosov, A.V., Shagurina E.V. Outbreaks of avian influenza in Russian Federation in in 2016-2017 // 10th Intern. Symp. on Avian Influenza in Poultry and Wild Birds. - Brighton, UK, 2018. - P29.
8. Doronin M.I., Timina A.M., Lozovoy D.A. et al. Method for FMD virus 146S component concentration determination with real-time reverse transcription-polymerase chain reaction in vaccine raw materials// *Veterinary Science Today.* - 2018. - No.2. - P. 26-30.
9. Funtikov A.A., Kremenchugskaya S.R., Mayorova T.K. et al. Studying immunobiological characteristics of FMDV type O isolates recovered in the South Korea // *Veterinary Science Today.* - 2018. - No. 1. - P. 49-54
10. Gulyonkin V.M., Karaulov A.K., Lozovoy D.A., Zakharov V.M. Expert risk assessment of FMD introduction to the Russian Federation from infected countries// *Veterinary Science Today.* - 2018. - No.2. - P. 36-41.
11. Kononov A. V. Current epidemiological situation and specific prevention of animal rabies in Russian Federation// BIT's 7th World Congress Infectious Diseases - 2018. - 2018. - P. 85.
12. Kononov A.V., Sprygina A.V., Kononova S.V. et al. Detection of lumpy skin disease virus genome in field samples collected from cattle in the Russian Federation // *Veterinary Science Today.* - 2018. - No. 1. - P. 29-32.
13. Konstantinov A.V., Starov S.K., Diev V.I. et al. Antigenic and protective properties of experimental associated virus vaccine against sheep pox and goat// *Veterinary Science Today.* - 2018. - No.2. - P. 42-46.
14. Lavrukina O.I. Problems of veterinary drug residue control in meat and meat products// *Veterinaria.* - 2018. - No. 5. - P. 9-15.
15. Lozovoy D.A. FMD epidemic situation and implementation of joint measures by the CIS countries to control FMD // *Veterinaria i Kormlenie,* 2018. No. 2.-P.63-66
16. Lozovoy D.A., Doronin M.I., Starikov V.A. et al., Validation real-time reverse transcription PCR for determination of FMDV 146S component in vaccine raw materials// *Veterinaria.* - 2018. - No.9. - P. 58-63.
17. Lozovoy D.A., Metlin A.Ye, Rakhmanov A.M. International cooperation of the CIS Veterinary Services [Intergovernmental Council Meeting, July 5 -7, 2018 in Dushanbe // *Veterinaria.* - 2018. - No 3. - P. 61-63.
18. Lozovoy D.A., Scherbakov A.V., Zakharov V.M., Fomina S.N. Phylogenetic specifications of Type O FMDV isolates recovered in the Russian Federation // *Veterinaria.* - 2018. - No. 5. - P. 3-8.
19. Mazlum A., Zinyakov N.G., Igolkin A.S., Vlasova N.N. Cloning of genes encoding transmembrane proteins and proteins responsible for African swine fever virus virulence // *Veterinary Science Today.* - 2018. - No. 2. - P. 3-12.
20. Metlin A.Ye. Preparation of scientific project "Set of joint measures by CIS countries to prevent and control rabies up to 2025" // Topical issues of veterinary medicine: International scientific conference devoted to 90th anniversary of Professor V.A. Kirshin. - Kazan, 2018. - P. 237-238.
21. Mischenko A. V., Karaulov A. K. Surveillance and control of FMD and other major epizootic transboundary diseases. Russia Federation // *Europ. Commiss. Control FMD. TransCaucasus Regional Workshop on FMD Control and PCR Progress, Georgia, 11 Febr. 2018.* - Georgia, 2018. - 24 p.
22. Oganesyanyan A.S., Shibayev M.A., Baskakova N.Ye. et al African swine fever epidemic in 2007-2017. Part 1. Common trends for ASF in the Russian Federation and in Eurasia // *Veterinary Science Today.* - 2018. - No.2. - P. 18-25.
23. Oganesyanyan A.S., Varkentin A.V., Baskakova N.Ye., Karaulov A.K. Qualitative risk assessment of avian influenza

- virus transmission through incubation eggs // *Veterinary Science Today*. - 2018. - No. 1. - P. 11-18.
24. Paroshin A.V., Voskresensky S.B., Metlin A.Ye., Gruzdev K.N. Intake rate of oral vaccine baits against rabies of wild carnivores // *Veterinaria i Kormlenie*. - 2018. - No.1. - P. 18-20.
25. Pershin A.S., Remyga S.G., Shevchenko I.V., et al. Effect of passive immunization on clinical signs and postmortem lesions in pigs, infected with ASFV Martins-Crimea 01/16 isolate // *Veterinaria*. - 2018. - No. 1. - P. 25-31.
26. Pestova Y., Byadovskaya O., Kononov A., Sprygin A. A real time high-resolution melting PCR assay for detection and differentiation among sheep pox virus, goat pox virus, field and vaccine strains of lumpy skin disease virus // *Mol. and Cellular Probes*. - 2018. - Vol. 41. - P. 57-60.
27. Pestova Ya.Ye., Kostrova Ye.Ye, et al. Development of real-time PCR to detect lumpy skin disease virus field isolates in bovine samples // *Agricultural Biology*. - 2018. - V. 53, No. 2. - P. 422-429.
28. Pokhvalny S.A., Kukushkina M.S., Kulakov V.Yu. et al. Comparison of reactogenicity and immunogenicity of live vaccines against infectious laryngotracheitis : scientific publication // *Veterinary Science Today*. - 2018. - No. 1. - P. 19-25.
29. Preventive vaccination of animals against FMD in the Russian Federation Administrative Subjects: realities and prospects/D.A. Lozovoy, A.M. Rakhmanov // *Proceedings of the Kazan State Academy of Veterinary Medicine named after N.E. Bauman - Kazan, 2018. V. 233 (I).*-P.92-97
30. Rusaleyev V.S. Antibiotic resistance of actinobacillus pleuropneumoniae in swine: problems and solutions// *Veterinary Science Today*. - 2018. - No.3. - P.26-29.
31. Ryabikina O.A., Diev V.I., Byadovskaya O.P. et al. Test-system based on indirect "sandwich" ELISA to detect lumpy skin disease virus antigen// *Veterinary Science Today*. - 2018. - No.3. - P. 52-57.
32. Sharypova D.V., Zhukov I. Yu., Mazloum A. et al. Poludanum`s influence on reproductive and respiratory syndrome, transmissible gastroenteritis and African swine fever viruses in primary and continuous cell cultures// *Veterinary Science Today*. - 2018. - No. 1. - P. 37-41.
33. Shevchenko M.A., Guseva M.N., Lozovoy D.A., et al. Influence of changes in amino acid composition of blood protein hydrolysate on the productivity of BHK-21/2-17 cell lineage and amount of FMDV immunogenic components // *Veterinary Science Today*. - 2018. - No. 1. - P. 55-59.
34. Shevtsov A.A., Petrova O. N., Remyga S.G. et al. Analysis of laboratory tests for several viral swine diseases in Russia in 2011-2017 // *Veterinary Science Today*. - 2018. - No. 1. - P. 42-48.
35. Shulpin M. I., Chupin S. A., Evdokimov P., Metlin A.E. Genetic analysis of the rabies outbreak on the Baical // 29th Intern. Conf. on Rabies in the Americas (RITA): Book of Abstr., Buenos Aires, Argentina. - Buenos Aires, Argentina, 2018. - P. 121.
36. Skitovich G.S., Shadrova N.B., Pruntova O.V., Serova K.V. Real-time PCR optimization for *Listeria monocytogenes* genome detection// *Veterinary Science Today*. - 2018. - No.3. - P. 63-68.
37. Sosipatorova V.Yu., Altunin D.A., Chvala I.A. et al. Results of experimental infection of turkeys with A/duck/Altai/469/14 H5N1 strain of avian influenza virus// *Veterinary Science Today*. - 2018. - No.3. - P. 46-51.
38. Sosipatorova V.Yu., Volkova M.A., Chvala I.A., Mudrak N.S. Production of polyclonal antibodies against AIV ribonucleoprotein and their application in immunohistochemistry// *Science and innovations in XXI century agroindustry: Proceedings of All-Russian research to practice conference of young scientists devoted to the academy's 145th anniversary/ Kazan SAVS*. - Kazan, 2018. - P. 179-181.
39. Sprygin A. V., Artyukhova E. E., Babina Y. Y. et al. Epidemiological characterization of lumpy skin disease outbreaks in Russia in 2016 // *Transbound. Emerg. Dis*. - 2018. - May 10. doi: 10.1111/tbed.12889. [Epub ahead of print].
40. Volkov M.S., Irza V.N., Varkentin A.V. History of highly pathogenic avian influenza eradication in Russian Federation in 2016-2017 // *Veterinary Science Today*. - 2018. - No. 1. - P. 3-10.
41. Zinyakov N.G., Andriyasov A. V., Chvala I. A. Biological properties of the H5N1 avian influenza virus isolated in the delta of the Volga River in 2015 // 10th Intern. Symp. on Avian Influenza in Poultry and Wild Birds. - 2018. - C. 194.

b) International conferences: 12

- Igolkin A.S. Etiology and molecular and genetic properties of ASF virus isolates recovered in the RF in 2017// VIII International Veterinary Congress "One World-One Health". - 2018. - P. 239.
- Igolkin A.S., Karaulov A.V., Lozovoy D.A., Gruzdev K.N. African swine fever, 2017// VIII International Veterinary Congress "One World-One Health". - 2018. - P. 242-243.
- Irza V.N., Volkov M.S. Highly pathogenic avian influenza. Epidemic lessons learnt and forecasts// VIII International Veterinary Congress "One World-One Health". - 2018. - P. 146.
- Kononov A.V. Lumpy skin disease: current epidemic situation, diagnostic and prevention properties// VIII International Veterinary Congress "One World-One Health". - 2018. - P. 94-95.
- Kononov A.V., Rakhmanov A.M., Shumilova I.N. Clinical and diagnostic signs of lumpy skin disease// Current issues of animal pathology, morphology and treatment: proceedings of the 19th International research-to-practice conference for animal pathology. - Stavropol, 2018. - P. 119-124.
- Melnikov V., Irza V., Moroz N. Epidemic situation on Marek's disease in the European part of the Russian

Federation for the last five years // 12th Intern. Symp. on Marek's Disease and Avian Herpesviruses. - Yangzhou, China, 2018. - P. 65

7. Metlin A.Ye. Preparation of the international project "Complex of joint measures to be taken by CIS countries for rabies prevention and control until 2025"// Current issues of Veterinary Medicine: International research-to-practice conference devoted to 90th anniversary of Prof. V.A. Kirshin. - Kazan, 2018. - P. 237-238.

8. Metlin A.Ye., Paroshin A.V., Gruzdev K.N. Rabies epidemic situation and control in Russia// VIII International Veterinary Congress "One World-One Health". - 2018. - P. 264-267.

9. Mitrofanova M.N., Mudrak N.S., Menshikova A.E., Irza V.N. Reovirus serological monitoring on Russian poultry farms in 2011-2016// Current issues of Veterinary Medicine: International research-to-practice conference devoted to 90th anniversary of Prof. V.A. Kirshin. - Kazan, 2018. - P. 239-240.

10. Paroshin A.V., Metlin A.Ye., Gruzdev K.N. Phototraps – novel approach to control of oral vaccination results in animals// Current issues of Veterinary Medicine: International research-to-practice conference devoted to 90th anniversary of Prof. V.A. Kirshin. - Kazan, 2018. - P. 243-246.

11. Semakina V.P. Spread of senecavirus vesicular infection// Current issues of Veterinary Medicine: International research-to-practice conference devoted to 90th anniversary of Prof. V.A. Kirshin. - Kazan, 2018. - P. 265-269.

12. Volkova M.A., Nikonova Z.B., Osipova O.S., Chvala I.A. Detection of avian adenoviruses in Russian Federation during 2013-2017// Current issues of Veterinary Medicine: International research-to-practice conference devoted to 90th anniversary of Prof. V.A. Kirshin. - Kazan, 2018. - P. 213-217.

c) National conferences: 4

1. Kozlov A.A., Zinyakov N.G., Mudrak N.S., Chvala I.A. Biological properties of infectious laryngotracheitis virus isolates recovered in the Russian Federation// Science and innovations in XXI century agroindustry: Proceedings of All-Russian research-to-practice conference of young scientists devoted to the academy's 145th anniversary/ Kazan SAVS. - Kazan, 2018. - P. 137-139.

2. Pronin V.V., Fisenko S.P. Animal product veterinary and sanitary expertise including basic technology and standardization. Case study: Training manual for higher educational establishments. - 3d edition, reprint. - SPb.; M.; Krasnodar: Lan', 2018. - 239 p.

3. Prutnikov P.V., Shumilova I.N., Sprygin A.V., et al. Lumpy skin disease; features of diagnosis and specific prevention// Science and innovations in XXI century agroindustry: Proceedings of All-Russian research-to-practice conference of young scientists devoted to the academy's 145th anniversary/ Kazan SAVS. - Kazan, 2018. - P. 162-166.

4. Shumilova I.N., Kononova S.V., Prutnikov P.V. Lumpy skin disease clinical and post-mortem signs following experimental infection// Science and innovations in XXI century agroindustry: Proceedings of All-Russian research-to-practice conference of young scientists devoted to the academy's 145th anniversary/ Kazan SAVS. - Kazan, 2018. - P. 204-207.

d) Other

(Provide website address or link to appropriate information): 23

1. Biryuchenkova M.V., Timina A.M., Scherbakov A.V. Etiological structure of respiratory porcine diseases on Russian pig farms in 2013-2017// Proceedings of the Federal Centre for Animal Health. - M., 2018. - V. 16: FGBI "ARRIAH" 60th anniversary. - P. 265-281.

2. Borisov A.V., Klyuchevsky V.V., Irza V.N. Avian infectious bronchitis: topical issues of clinical disease, diagnosis and prevention: [interview]// BIO. - 2018. - No. 4. - P. 35-38.

3. Fomenko V.Yu. Selection of duck hepatitis culture system// Proceedings of the Federal Centre for Animal Health. - M., 2018. - V. 16: FGBI "ARRIAH" 60th anniversary. - P. 424-431.

4. Gruzdev K.N. ARRIAH: between two centuries// Proceedings of the Federal Centre for Animal Health. - M., 2018. - V. 16: FGBI "ARRIAH" 60th anniversary. - P. 7-22.

5. Gulyonkin V.M., Varkentin A.V., Volkov M.S., et al. Atlas of highly pathogenic avian influenza outbreaks in the Russian Federation [Electronic resource]: atlas; Rosselkhoznadzor. - Electronic data. - Vladimir: FGBI "ARRIAH", 2018. - 618 p.

6. Igolkin A.S., Karaulov A.K., Lozovoy D.A., Gruzdev K.N. African swine fever in 2017// Agrarnik - 2018. - No. 5. - P. 30-33.

7. Kononov A.V. Lumpy skin disease – gross economic lesions// Agrarnaya Nauka. - 2018. - No. 7-8. - P. 14-15.

8. Kononov A.V. Skin lesions in case of lumpy skin disease (LSD)// BIO. - 2018. - No 7. - P. 20-22.

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