



Federal Research Center for Virology and Microbiology : activity areas

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Staff

- The total number of employees - 356;
- Researchers - 75 people, of them:
- Doctors of Science - 9;
- PhD - 29;
- The average age of researchers - 47 years;
- The number of researchers under 39 years - 38.



The history of FRCVM

- According to 28th of June 2017 Organization Charter, Federal Research Center for Virology and Microbiology has 3 branches.
- 1. Saratov Research Veterinary Institute – Branch of Federal Research Center For Virology And Microbiology (SarRVI)
- 2. Samara Research Veterinary Institute – Branch of Federal Research Center For Virology And Microbiology (SamRVI)
- 3. Nizhny Novgorod Research Veterinary Institute – Branch of Federal Research Center For Virology And Microbiology (NNRVI)



FRCVM aims

- The main functions: basic and applied research in
 - veterinary virology,
 - microbiology
 - epizootology,
 - studying the emerging, exotic and zoonotic infections.
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- FRCVM carries out monitoring the epizootic situation of Bluetongue, African and classical swine fever, avian influenza, anthrax, lumpy skin disease, sheep and goat pox and risk assessment for determination of spreading causative agents of infections into Russia.



National biobank of microorganisms causing emerging, transboundary, epizootic and exotic animal diseases

2300 strains;
140 nosological entities;
60 viral and bacterial strains for vaccine production
and diagnostic tools.

We address scientific challenges on the basis of
biobank such as

- studying the biological and molecular genetic characteristics of agent strains of animal infectious diseases,
- sampling for development of diagnostic tools, preventive measures,
- eradication of infectious diseases on the basis of obtained data for providing biosecurity of Russian Federation.



Genetic passportization of
microorganisms



Biological characteristic of microorganisms



The main aims of biobank:

- deposition of pathogens strains;
- storage in active state of strain biobank of bacterial, mycoplasmal and viral etiology;
- maintenance of strains dedicated to producing biopharmaceuticals and diagnostics kits for animal infectious diseases;
- providing to national diagnostic and pharmaceutical laboratories with testing culture of microorganisms, which are necessary for quality control of culture media, cell culture, validation and verification of diagnostic assays,
- staff training.



FRCVM has a license for producing biopharmaceuticals such as vaccines and diagnostic kits

FRCVM produces vaccines against

- Classical Swine Fever, Anthrax, Sheep-Pox, Rabies, Peste des Petits Ruminants, Rabbit Viral Hemorrhagic Disease, and Myxomatosis.
- Also FRCVM prepares a diagnostic kits for Bluetongue, Anthrax, Listeriosis, African and Classical Swine Fever and Aujeszky's disease.



Diagnosics of infectious animal diseases

- Certificate of accreditation for compliance with All-Union State Standard ISO 17025 ROSS RU.0001.21PE78 of 23th October 2014
- The list of diagnostic methods used in the Testing Center:
 - cultural;
 - molecular genetic (PCR, RFLP, etc.);
 - serological (ELISA, precipitation, neutralization, complement fixation, hemagglutination reaction and hemagglutination-inhibition test, immunofluorescence);
 - biological testing (bioassay on laboratory and target animals).



Scientific and Educational Activities

- Training of staff in biotechnology, virology, animal and veterinary science;
- Scientific leadership of graduate students;
- Supervision of bachelor's and master's theses from higher educational institutions;
- Training courses for specialists of diagnostic laboratories on infectious animal diseases, including bacterial and viral etiologies of zoonoses;
- Scientific and practical seminars for veterinary specialists in epizootiology, prevention and eradication of infectious animal diseases.



Regulatory activities

- Preparation of draft veterinary rules regulating the diagnosis, prevention and eradication of infectious animal diseases.
- In collaboration with the institutes of *Federal Service for Surveillance on Consumer Rights Protection and Human Wellbeing*, the «*Actualization of guidelines for laboratory diagnostics and detection of causative agents in the environment*» was developed.
- Development of federal laws on biological safety.



Contract-based activities

- Carrying out testing of antimicrobial and disinfection activities of disinfectants from different chemical classes concerning asfv and anthrax virus.
- Preparation of control samples on the basis of biological material of intact and infected animals for checking the competence of specialists working in diagnostic laboratories.



Thank you!

