Swine Brucellosis, Epizootological Monitoring, Isolation and Identification of Strains from Pigs and Wild Boars, Antigenic Relation of Isolated Strains in Ukraine

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NSC “Institute of Experimental and Clinical Veterinary Medicine”

The oldest in Ukraine Institute of Experimental and Clinical Veterinary medicine was founded in 1922 by special decision of the Government.

Since its foundation Institute worked on such problems as malleus, anthrax, brucellosis, plague, swine fever, foot-and-mouth disease, stachyobotryotoxicosis and others.

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Ukraine is free from brucellosis since 1975. Vaccination against brucellosis is forbidden since 1982. Up to 1985 there were registered some sporadic cases of brucellosis in cattle and pigs. There were conducted serological and bacteriological investigations of wild animals (elks, roes, wild boars). Brucellosis was registered only among wild boars in the South and Central regions of Ukraine.

Researchers of the National Scientific Center "Institute of Experimental and Clinical Veterinary Medicine" have conducted epizootological analysis concerning brucellosis of farm animals since 1949 to 2008.
126 epizootic brucella strains are kept in the Museum of the National Scientific Center, including 71 strains B. abortus, 4 strains B. meletensis, 15 strains B. suis, 36 strains B. ovis.

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Goal of project:

✓ to determine epizootic welfare concerning brucellosis of domestic pigs and wild boars in Ukraine

Guidelines of researches:

epizootological

✓ questioning of the results of planned annual investigations concerning brucellosis of domestic pigs and wild boars conducted by regional state laboratories of veterinary medicine in different regions of Ukraine, determination of geographic estimation concerning seropositivity and refinement of brucellosis diagnostics;

✓ immediate conducting of epizootological investigation of swine population, conducting of serological and bacteriological investigations, isolation and typing of brucella culture in the cases of enzootic outbreaks of swine brucellosis in different regions of Ukraine;

✓retrospective epizootological analysis of revealing of swine brucellosis outbreaks and results of brucella cultures typing since 1990 to 2008 in Ukraine;

Laboratory investigations:

✓ of blood samples and biomaterial by serological, molecular-and-genetic and bacteriological methods;

✓development and approbation of the methods of differentiation of pseudo-positive serological reactions and refinement of brucellosis diagnostics;

✓development of the system of swine brucellosis control at slaughter-houses, meat-packing plants and meat-control stations at the markets.

Methods of investigations:

- ✓ Rose-Bengal test;
- ✓ Bordet-Gengou test;
- ✓ immune-enzyme analysis;
- ✓ PCR;
- ✓ bacteriological investigations: isolation of agent culture;
- ✓ biotest on guinea pigs;

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