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Biography

Saida Marzanova has completed her PhD at the age of 25 years from Moscow State Academy of Veterinary Medicine and Biotechnology-MVA K. I. Skryabin, Russia. She is the Associate Professor of Moscow State Academy of Veterinary Medicine and Biotechnology-MVA K. I. Skryabin, Russia. She has over 50 publications that have been cited over 25 times, and her publication H-index is 3 and has been serving as an editorial board member of reputed Journal "Veterinary Medicine".

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THE PRESENT AND FUTURE OF VACCINEAL PREVENTION OF ANIMAL BRUCELLOSIS

The effectiveness of corrective measures for brucellosis is largely determined by the quality of epidemiological surveillance and the effectiveness of vaccine prevention. Used live vaccines do not fully protect against infection, at the same time they pose a potential risk of Brucella infection in animals with low immune resistance and post-vaccination complications and pose a danger to livestock breeders and the population consuming untreated products from vaccinated animals. Inactivated vaccines did not find practical application due to insufficient efficacy and high reactogenicity. Considering that vaccination is the basis for the prevention of Brucella infection, we conducted studies on the selection of strains, developed and experimentally tested a split conjugated biosafe vaccine based on immunogenically active subcellular and soluble peptides of three Brucella strains: *B.melitensis* and two strains of *Brucella bovis* biotype. To stimulate specific immunity, Brucella antigens were conjugated to an immunoprotector. The immunoprotector was obtained from a culture of B lymphocytes sensitized with Brucella antigens. Activity control was assessed by immunostimulating of the mechanisms of cellular and humoral immunity and immunogenic activity of the vaccine in guinea pigs. The immunogenic activity of the declared vaccine was studied on guinea pigs weighing 300-400 g, which were subcutaneously injected into the groin area with test specimens of vaccines at a dose of 0.5 cm^3. After four weeks vaccinated guinea pigs were infected with a virulent culture of B. bovis 10 in an infectious dose (ID). At the same time, non-vaccinated (control) guinea pigs were infected. 30 days after infection, guinea pigs were killed and bacteriological seeding of lymph nodes and organs on Brucella agar and Brucella broth was performed. Seeding was sterile in 100% of vaccinated guinea pigs. In seeding from control unvaccinated guinea pigs in 100% of cases, a culture of Brucella of the infecting strain was isolated. As, a result, immunization of the split-conjugated brucellosis vaccine activates the cellular and humoral immune response, enhancing the induction of specific antibodies. Advantages of a split-conjugated vaccine: biosafety, protection of immunized animals from infection with brucella during experimental infection, reliably exceeds the specific efficiency of live anti-brucella vaccines from strains B. abortus 19 and B. melitensis Rev-1.

Note: