

economic damage to stockbreeding i.e. loss of cattle, slow growth of young animal, lack of offsprings, decrease of reproduction properties.

Monovaccines are used for these disease prophylaxis as well as associated and polyvalented vaccines.

Taking into consideration the necessity of vaccine improvement and great amount of associated vaccines, one of the main problems of veterinary is the development of vaccines of new generation, which can induce immunity against several diseases in agricultural animals.

That is why, radiative biotechnology of radiovaccines creation was developed and is used in radiative laboratory of Uzbek Scientific Veterinary Institute (Bulkhanov R.U., 1999, 2001), «Associated radiovaccine against colibacteriosis, salmonellosis of calves, kids», «Associated radiovaccine against colibacteriosis and salmonellosis of calves», «Polyvalented radiovaccine against pasterellosis, salmonellosis and colibacteriosis in agricultural animals» were developed with the help of radiative biotechnology and are successfully used in veterinary practice.

The advantage of these radiovaccines is that they produce one year immunity and you need twice less dosage and revaccinations.

More than million of lambs were vaccinated for the last 7-8 years. These vaccines are successfully used for calves, sucking-pigs disease prophylaxis.

We are going to receive a patent for two of the above mentioned vaccines.

Using radiative biotechnology we can make vaccines against the most bacterial infections, contaminants of which grow well on firm medium.



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ACCELERATOR BASED NEUTRON SOURCE FOR NEUTRON CAPTURE THERAPY

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The Budker Institute of Nuclear Physics (Novosibirsk) and the Institute of Physics and Power Engineering (Obninsk) have proposed an accelerator based neutron source for neutron capture and fast neutron therapy for hospital. Innovative approach is based upon vacuum insulation tandem accelerator (VITA) and near threshold ${}^7\text{Li}(p,n){}^7\text{Be}$ neutron generation. Pilot accelerator based neutron source for neutron capture therapy is under construction now at the Budker Institute of Nuclear Physics, Novosibirsk, Russia. In the present report, the pilot facility design is presented and discussed. Design features of facility components are discussed. Results of experiments and simulations are presented. Complete experimental tests are planned by the end of the year 2005.