

THE EFFECT OF THE ORAL VACCINATION OF FOXES AGAINST RABIES BY IMMUNOLOGICAL TESTS

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Summary. During the last years the wild animals are vector and reservoir, and an important factor of the rabies in Lithuania. Analysis performed during the period from 2003 to 2007 by immunofluorescence (IF) had shown that 72.81% of raccoon dogs and 52.28% of foxes samples were positive for rabies.

Oral vaccination (ORV) of foxes with bites containing live rabies virus (Lysvulpen, Bioveta, Czech Republic) started in June 2006-September 2007. The present study investigated the effectiveness of ORV in Lithuania foxes considering that an antibody titer ≥ 0.5 IU/mL is protective. During the study period 490 of foxes sera samples were tested by ELISA Platelia Rabies II test (Bio-Rad, France) and in 238 of tested samples (48.57%) were found antibodies for rabies.

Furthermore, the comparison of 50 samples of fox sera using IF and fluorescent antibody virus neutralization (FAVN) test methods had shown comparable sensitivity. Some wildlife specimens were cytotoxic in the FAVN, resulting in possible false positive reaction. In view of this ELISA is rapid and simple technique on field fox sera. We obtained, with fox sera sampled in the same area, the same distribution of high, medium and low titres within all categories of serum quality (high to very poor quality) and therefore conclude that this ELISA test allows a reliable titration even with highly contaminated body fluids. The results demonstrated 92% correlation between IF and FAVN methods.

Key words: Rabies, foxes, oral vaccination, ELISA, IF, FAVN.