

Evidence of *Neospora caninum* antibodies in sera from farmed and free living deer in Poland

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The protozoan parasite *Neospora caninum* has been shown to be a cause of abortion and reproductive failure of ruminants. The presence of the parasite was earlier confirmed in cattle, bison, foxes and dogs in Poland.

Antibodies against *N. caninum* were detected in wild canids and ruminants in many countries, in non-carnivorous wildlife from Spain, in roe deer and chamois in the Italian Alps, in roe deer (*Capreolus capreolus*), sika deer (*Cervus nippon*), red deer (*Cervus elaphus*), fallow deer (*Dama dama*) and mouflon (*Ovis montanus*) from the countryside or in captivity in the Czech Republic. Neosporosis was also diagnosed in black-tailed deer (*Odocoileus hemionus columbianus*), white-tailed deer (*Odocoileus virginianus*), deer (*Cervus eldi siamensis*) in USA, in sika deer from Japan and captive deer in zoos in France and Germany.

Sera from 47 free living deer were collected during hunting season 2006/2007 and from 111 farmed deer during veterinary handling in the field station in Kosewo Gorne, Mazurian Lakes Area, Poland.

For the detection of antibodies in tested sera, a modified iscom-ELISA was used. The procedure was elaborated and performed in collaboration with the National Veterinary Institute, Department of Parasitology, Uppsala, Sweden. As a positive control, sera from experimentally infected deer were used. Both, positive and negative control sera were kindly provided by J.P. Dubey, United States Department of Agriculture, Agricultural Research Service, Animal and Natural Resources Institute, Animal Parasitic Diseases Laboratory, Beltsville, MD, USA.

12 sera taken from deer (*Cervus elaphus* and *Cervus nippon*) living in the field station and 6 from hunted animals were classified as positive (prevalence 10.8% and 12.7%, respectively).

This is the first *N. caninum* seroprevalence study in farmed and free living deer and the first evidence of *N. caninum* infection in deer in Poland. These results confirmed the existence of *N. caninum* life cycle in wild animals in Poland.