Prevalence of *Toxoplasma gondii* in Belgian wildlife

De Craeye, S.¹, Speybroeck, N.², Baert, K.³, Ajzenberg, D.^{4,5}, Dardé, M.L.^{4,5}, Collinet, F.⁵, Tavernier, P.⁶, Van Gucht, S.⁷, Dorny, P.^{8,9}, Dierick, K.¹

¹Scientific Institute of Public Health, Communicable and Infectious Diseases, National Reference Center for Toxoplasmosis, Engelandstraat 642, B 1180 Brussels, Belgium

²Institute of Health and Society (IRSS), Université Catholique de Louvain, Boite 3058, Clos Chapelle aux champs 30, B 1200 Bruxelles, Belgium

³Research Institute for Nature and Forest, Wildlife management, Gaverstraat 4, B 9500 Geraardsbergen, Belgium, kristof.baert@inbo.be

⁴Centre National de Référence (CNR) Toxoplasmose / *Toxoplasma* Biological Resource Center (BRC), Centre Hospitalier-Universitaire Dupuvtren, Limoges, 87042, France

⁵Laboratoire de Parasitologie-Mycologie, EA 3174-NETEC, Faculté de Médecine, Université de Limoges, Limoges, 87025, France

⁶Wildsurv project, Operational Direction Interactions and Surveillance, Veterinary and Agrochemical Research Centre, Groeselenberg 99, B 1180 Brussels, Belgium

⁷Scientific Institute of Public Health, Communicable and Infectious Diseases, National Reference Center for Rabies, Engelandstraat 642, B 1180 Brussels, Belgium

⁸Department of Animal Health, Institute of Tropical Medicine, Nationalestraat 155, B 2000, Antwerp, Belgium ⁹Laboratory of Parasitology, Ghent University, Faculty of Veterinary Medicine, Salisburylaan 133, B 9820 Merelbeke, Belgium

DOI: 10.5073/jka.2011.432.117

Toxoplasma gondii, an obligate intracellular protozoan parasite, has a worldwide high prevalence in most warm-blooded animals and humans. Few studies are available on the occurrence of this parasite in wild animals. In this study we investigated the prevalence of *T. gondii* in Belgian wildlife. We tested brain samples from red foxes (*Vulpes vulpes*), European polecats (*Mustela putorius*), European pine martens (*Martes martes*), raccoons (*Procyon lotor*), brown rats (*Rattus norvegicus*), muskrats (*Ondatra zibethicus*) and roe deer (*Capreolus capreolus*). The samples were tested by Real Time PCR for the presence of *T. gondii* brain cysts. The amplified DNA target was the 529 bp *T. gondii* 'repeat element' (AF146527). To check for inhibition, the cellular r18S gene was used. The prevalence was found to be: red fox: 57/304; European polecat: 2/2; European pine marten: 1/2; raccoon: 0/2; brown rat 19/335; muskrat 2/10 and roe deer 1/33. Twenty-six of the *T. gondii* positive DNA samples from foxes were genotyped: 25 were type II and one type III. In addition, 73 roe deer serum samples were tested by SAG1 ELISA for the presence of anti- *T. gondii* antibodies, 38 (52%) were positive.