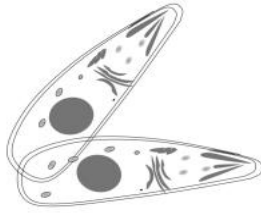


2024



ApiCOWplexa

LA PLATA, ARGENTINA

VII INTERNATIONAL MEETING OF
APICOMPLEXAN PARASITES
IN FARM ANIMALS

October 23-25, 2024

LA PLATA

ARGENTINA



APICOWPLEXA



samples from other tissues were collected when macroscopic cysts compatible with *Besnoitia* spp. were observed. Histopathology results revealed cysts in 2% (7/356) of the rodents, with their presence detected mostly in the semitendinosus muscle, followed by the masseter, tongue, heart, liver, pleural cavity, testes, and brain. These samples were further analyzed by PCR targeting the ITS-1 marker and flanking regions, and the 18S rRNA and *Coxl* gene fragments. ITS-1 PCR products were obtained in all seven samples with varying sizes of 448-500 bp with a 100% identity with *B. akodonti*, previously identified in *Akodon montensis* from Brazil. The 18S rRNA sequences from five samples matched 100% with *Besnoitia* sp. from Chile and *B. jellisoni* sequences, and 99.27% with *B. darlingi* and *B. oryctofelisi* sequences. The *Coxl* sequences (n = 4), showed only 92-93% similarity to an uncharacterized *B. besnoiti* protein. This is the first study to identify *B. akodonti* in naturally infected *Mus musculus*, *Oxymycterus rufus*, *Necomys* spp., and *Akodon azarae*. Previous phylogenetic analyses suggested that felines could be definitive host. However, coprological and molecular studies on potential definitive hosts present in the region would be necessary to confirm this hypothesis and clarify the transmission cycle.

EEI5- *Neospora caninum* and *Toxoplasma gondii* in naturally infected synanthropic (Muridae) and wild (Cricetidae) rodents from Argentina

Bentancourt Rossoli J. V.^{1,2*}, Campero L. M.^{2,4}, Moré G.^{2,3}, Soto-Cabrera A.^{2,4}, Moore D. P.^{2,4}, Basso W.³, Morrell E. L.⁴, Pedrana J.², Hecker Y. P.^{2,5}, Scioscia N. P.^{1,2}

¹*Instituto de Investigaciones en Producción, Sanidad y Ambiente (IIPROSAM), Facultad de Ciencias Exactas y Naturales, Universidad Nacional de Mar del Plata (FCEyN-UNMdP), Argentina*

²*Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Buenos Aires, Argentina*

³*Institute of Parasitology, Department of Infectious Diseases and Pathobiology, Vetsuisse Faculty, University of Bern, Switzerland*



⁴Instituto de Innovación para la Producción Agropecuaria y el Desarrollo Sostenible (IPADS Balcarce), Ruta 226 Km 73,5, Balcarce, Buenos Aires, Argentina

⁵Grupo SALUVET, Facultad de Veterinaria, Avenida, Universidad Complutense de Madrid, Madrid, España.

*Presenting author: judithbentancourt@mdp.edu.ar

Neospora caninum and *Toxoplasma gondii* are coccidian parasites (Phylum Apicomplexa) with canids and felids serving as their definitive hosts, respectively. Numerous studies worldwide have reported natural infections by these parasites in rodents. However, there is limited information available regarding the presence of these protozoans in rodents in our country. The objective of the present study was to detect *T. gondii* and *N. caninum* infections in rodents captured on dairy cattle farms in the Humid Pampa of Argentina. A total of 356 rodents were captured, including 212 from the family Muridae and 144 from the family Cricetidae, on dairy farms in three localities in the southeast of Buenos Aires province. Histopathological, serological and molecular analysis were performed. No cysts of either parasite was found in histological sections of organs and muscles. However, using IFAT, 1.4% (5/356) of the animals were seropositive for *N. caninum* (3/193 *Mus musculus*; 1/58 *Oxymycterus rufus*; 1/41 *Necromys* spp.) and 9.6% (34/356) were seropositive for *T. gondii* (19/193 *M. musculus*; 9/58 *O. rufus*; 3/41 *Necromys* spp.; 2/29 *Akodon azarae*; 1/11 *Oligoryzomys flavescens*). Only one individual (*M. musculus*) was positive for antibodies against both parasites. DNA was extracted from the brains of these 41 rodents. Using conventional PCR, *T. gondii* was detected in 9 out of 41 (22%) samples (5 *O. rufus*, 2 *Necromys* spp., 1 *A. azarae*, and 1 *M. musculus*), while *N. caninum* was negative in all samples. These results suggest that rodents may not play a role in the life cycle of *N. caninum* in dairy farms, whereas they could potentially act as reservoirs for *T. gondii*. This study represents the first investigation of *N. caninum* and *T. gondii* in cricetid



rodents from Argentina and adds to the existing knowledge on these parasites in murine rodents.

EEI6- Detection of *Toxoplasma gondii* in retail meat from São Paulo megacity, Brazil

Pontes Chiebao D.^{1*}, Amaku M.², Miyagi S. A.², Wu X.³, Catalano S.³, Stewart C.⁴, Smith D.³, Burgess S.³, Ewing D.⁵, Innes E.³, Hamilton C.³, Pena H.²

¹Instituto Biologico, Sao Paulo, Brazil;

²University of Sao Paulo, Sao Paulo, Brazil;

³Moredun Research Institute, Midlothian, UK;

⁴Newcastle University, Newcastle, UK;

⁵Biomathematics and Statistics Scotland (BioSS), Edinburgh, UK

*Presenting author: daniela.chiebao@sp.gov.br

Toxoplasmosis is recognized as a major foodborne disease transmitted by different routes, including the ingestion of *Toxoplasma gondii* cysts within raw or undercooked infected meat. Detection of *T. gondii* specific antibodies among humans shows a high prevalence in Brazil and can be associated with severe clinical symptoms. Brazil is one of the top 10 countries for meat consumption per capita. To address the gap in knowledge about the risk of human infection from retail meat, this study aimed to verify the prevalence of parasite DNA in three popular meat cuts consumed in a large urban location, Sao Paulo megacity, comparing the occurrence over five different macro regions and three types of commercial retailers. Fresh cuts of chuck, loin and thighs, each from cattle, pig and chicken, respectively, were analyzed using qPCR targetting the 529bp repeat element of *T. gondii* and myostatin was used for the internal control. The Exact Fisher's test was used to compare proportions of positive results with 95% confidence level. After sampling over 3 year periods, 958 samples were obtained from five regions, 257,