The aim of this study is to evaluate the role of cholinesterases as an inflammatory marker in acute and chronic infection by Trypanosoma evansi in rabbits experimentally infected. Twelve adult female New Zealand rabbits were used and divided into two groups with 6 animals each: control group (rabbits 1-6) and infected group (rabbits 7-12). Infected group received intraperitoneally 0.5 mL of blood from a rat containing 108 parasites per animal. Blood samples used for cholinesterases evaluation were collected on days 0, 2, 7, 12, 27, 42, 57, 87, 102 and 118 days post-inoculation (PI). Increased activity (P<0.05) of butyrylcholinesterase (BChE) and acetylcholinesterase (AChE) were observed in the blood on days 7 and 27, respectively and no differences were observed in cholinesterase activity in other periods. No significant difference in AChE activity (P>0.05) was observed in the encephalic structures. The increased activities of AChE and BChE probably have a pro-inflammatory purpose, attempting to reduce the concentration of acetylcholine, a neurotransmitter which has an anti-inflammatory property. Therefore, cholinesterase may be inflammatory markers in infection with T. evansi in rabbits.

Keywords
Acetylcholinesterase, butyrylcholinesterase, inflammation, T. evansi,