

## Induction of *Toxoplasma gondii* in Goats

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**T**HE PREVALENCE of anti-*Toxoplasma gondii* antibodies was investigated in goats slaughtered for food in various areas of the Giza province, Egypt. Two hundred and thirty blood samples collected from the slaughtered goats were used for the serologic diagnosis of *T. gondii* infection by the modified agglutination test (MAT) with cut-off value 1:25. The antibodies to *T. gondii* were found in 44.3 % (102/230) of goat sera. Experimental infection of goats with the infective stages of both locally isolated and RH strains of *T. gondii* was carried out. Persistence of *T. gondii* tissue cysts and lesions were demonstrated in the different tissues and organs of the experimentally infected goats by the histo-pathological examination. This study is the 1st assay of toxoplasmosis in Egyptian goats by MAT and is the unique successful determination of the *T. gondii* infective stages within the experimentally infected goat tissues by the histo-pathological examination. Consequently the finding results obtained scope the public health significance of goat meat as source of human infection.

**Keywords:** *Toxoplasma gondii*, Goats, MAT, Experimental infection, Histopathology.

*Toxoplasma gondii* is a single-celled parasite of all warm-blooded hosts that is distributed worldwide. The organism can infect a wide range of animal species and man as an intermediate hosts. Cats are the definitive hosts which are the main reservoirs of the infection because they are the only hosts that can excrete the resistant stage (oocysts) of the parasite in the feces. Humans become infected by eating undercooked meat from infected animals or ingestion of food and water contaminated with oocysts. The infection causes mental retardation and loss of vision in children, and abortion in pregnant women and livestock. (Sreekumar *et al.*, 2005).

Goats are economically important food animals due to the minimal cost of rearing and maintaining them, and act as an important source of both meat and sometimes milk for humans in many countries (Dubey, 1990). Infection with *T. gondii* in goats not only results in significant reproductive disorders as abortion or neonatal mortalities but also has implications for public health since