# **Titre d’article**: Seroepidemiological study of the exposure to Toxoplasma gondii among horses in Algeria and analysis of risk factors

**Abstract :**

Aim: The aim of this study was to assess the seroprevalence of the Toxoplasma gondii in horses in different parts of Algeria and to determine risk factors for the infection. Materials and Methods: A total of 736 blood samples were collected from horses of various breeds, gender, coat colors, and ages. All horses came from various farms, racecourses, and equestrian centers. The seroprevalence was investigated by three different methods: Indirect fluorescent antibody test (IFAT) as reference method, enzyme-linked immunosorbent assay (ELISA), and latex agglutination test (LAT). Results: Out of the 736 sera, 178 (24.18%) were positive for IFAT, 133 (18.07%) for LAT, and 317 (43.07%) for ELISA. It was found that IFAT and LAT were in high agreement (Kappa 0.79), indicating that LAT and IFAT had similar capabilities in the detection of anti-T. gondii antibodies from horse sera. Risk factors analysis based on IFAT results indicated that the habit of the animals was significant risk factors (p≤0.05) for Toxoplasma infection. The seroprevalence was significantly higher in horses living on farms. Moreover, a higher seroprevalence was found in older animals compared to younger ones. Furthermore, the seroprevalence in females was significantly higher than that in males and gelding. Breed, coat color, and water sources are also important factors to influence the seroprevalence of T. gondii. Conclusion: The results indicated that T. gondii is present in horses throughout Algeria and thus represents a risk for both human and animal health. These results underline the need to increase the vigilance and the preventive measures against this disease not only to protect the horses but also to limit the spread of the parasite.