# **Titre d’article**: *Urinary shedding of pathogenic Leptospira in stray dogs and cats, Algiers: A prospective study*

**Abstract**

Background Leptospirosis is an important worldwide zoonosis. This disease is caused by pathogenic species of the genus Leptospira which are maintained in the environment via chronic renal infection of carrier animals which can be asymptomatic excretors of the organisms in their urines and become a source of infection for humans and other hosts. The prevalence of animal leptospirosis in Algiers, Algeria, is unknown. Methodology/principal findings Real-time PCR and standard PCR and sequencing were used to detect pathogenic Leptospira organisms in the urines of stray dogs and cats in Algiers. In the presence of appropriate controls, none of the 107 cat urine samples were positive while 5/104 (4.8%) canine urine samples (asymptomatic mixed-breed dogs, three females and two males) were positive in two real-time PCR assays targeting the rrs and hsp genes. The positivity of these samples was confirmed by partial PCR-sequencing of the rpoB gene which yielded 100% sequence similarity with Leptospira interrogans reference sequence. In this study, L. interrogans prevalence was significantly higher in dogs aged < one year (16.46% - 29.41%) than in adults (0%) (P value = 0.0001) and then in the overall dog population (2.68% - 4.8%) (P = 0.0007). Conclusions/significance These results suggest that dogs are maintenance hosts for zoonotic leptospirosis in Algiers, Algeria. To face this situation, effective canine vaccination strategies and raising public health awareness are mandatory. Further investigations incorporating a larger sample in more localities will be undertaken to document the epidemiology of urban animal leptospirosis in Algeria at large.