# **Titre d’article**: First Report of Coxiella Burnetii among Horses in Algeria: Seroprevalence and Associated Risk Factors

**Abstract :**

Q fever is a worldwide zoonotic disease caused by Coxiella burnetii (an obligate intracellular bacterium). This pathogen affects humans, ruminants, equines, carnivores, rodents, and birds. A cross-sectional study was carried out from March 2017 to May 2018 to assess the seroprevalence and identify the risk factors of C. burnetii infection in horses (Equus Caballus) residing in three districts of Algerian, namely Tiaret, El-Bayadh, and Ghardaia. Serum samples collected from 182 horses were analyzed via enzyme-linked immunosorbent assay (ELISA). Association of seropositivity with potential risk factors related to animals (e.g., age, gender, breed, housing, and presence of ticks), breeding characteristics (e.g., geographical localization, contact with animals), and environmental characteristics (i.e., presence of water source) was analyzed by univariate and multivariate logistic regression. An overall seroprevalence of 9.9% (18/182) was obtained. The univariate analysis of risk factors for C. burnetii seroprevalence demonstrated higher seropositivity in horses that had contact with small ruminants (p=0.004) and dromedaries (p=0.002) as well as in those living near a water source (p=0.036) and in El-Bayadh district (p=0.005). The multivariate logistic regression analysis indicated that the risk of C. burnetii infection was significantly higher in horses that were in contact with small ruminants (RR: 15.6). Algeria is endemic for Q fever in horses and prophylactic measures must be taken to reduce /prevent its transmission to animals and humans.