



# Epidemiological profile of rat leptospirosis in Butembo city

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Keywords: leptospirosis, knowledge, PCR, Butembo, *Leptospira interrogans*

Submitted 04/10/2024, Published online on 28<sup>th</sup> February 2025 in the [Journal of Animal and Plant Sciences \(J. Anim. Plant Sci.\) ISSN 2071 – 7024](#)

## 1 ABSTRACT

Leptospirosis is a cosmopolitan bacterial anthroponosis reported worldwide. It has a high incidence in tropical regions, where transmission conditions are favorable for the development of leptospires. Animals constitute the reservoir for the bacteria, particularly the rat (Azfar *et al.*, n.d.). poor knowledge of the disease can promote its maintenance in an environment. In this study, a cross-sectional survey in the city of Butembo, in the Nord-Kivu province/DRC, between January and May 2020 was conducted, with the aim of determining the prevalence of leptospirosis in rats, as well as the degree of knowledge of the disease among public health staff. A total of 150 urine samples from four municipalities in the city were collected from the rats. These samples were analyzed by conventional polymerase chain reaction (PCR) to detect the presence of DNA of leptospires. Simultaneously, the degree of knowledge of leptospirosis among 150 people working in the city's health services was assessed. A total of 55 doctors, 42 veterinary doctors, 23 pharmacists, 20 nurses, 5 laboratory technicians as well as 5 health workers were involved in this study. Their age ranged from 20 to 63 years with a median of 45 years. It appears, from this study, that a significant part of the staff (65.3%) had heard about leptospirosis especially from the internet (39.1%) and as part of their training (25.5%) and, to a lesser extent through books (17.6%) and seminars (9.8%). Among those who had heard of leptospirosis, more than half demonstrated a good knowledge of the symptoms, its zoonotic nature and its transmission source. This molecular analysis of 150 urine samples did not reveal the presence of leptospires in rats in Butembo. However, the absence of leptospirose in rats in Butembo does not exclude the presence of disease environment, hence the need to extend this study to other animal species as well as to human because in 1958 there was report