



**PREVALENCE OF *Leptospira interrogans* IN ENVIRONMENTAL  
WATERS OF DASMARIÑAS CITY, CAVITE**

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### ABSTRACT

Leptospirosis is recognized as an important public health problem worldwide, especially in tropical countries like the Philippines. It is one of the most common bacterial infections and waterborne illness caused by the pathogenic serovars of the spirochete *Leptospira*. A total of 45 water samples were collected from selected environmental waters in Dasmariñas City, Cavite such as slow-moving rivers, lakes, and deep well during April June and December. The physicochemical characteristics of selected environmental waters such as pH, conductivity, temperature, and salinity were measured. The samples were enriched in Ellinghausen-McCullough-Johnson-Harris (EMJH) broth before subjecting to LipL32 gene PCR method. The results showed that four samples from river (n=30) and two samples from deep well (n=6) rendered positive to LipL 32 gene. However, no LipL 32 genes were detected from the lake. Results show that no significant association between the different types of environmental water sample and LipL32 gene were observed ( $p>0.05$ ). Further, no significant association between the sampling months such as April, June and December, and LipL32 gene ( $p>0.05$ ) is observed, although flooding occurs during the month of December. The physicochemical characteristics such as pH, conductivity, and salinity also show no significant associations to the gene LipL32, however, temperature showed a significant association ( $p=0.023$ ) and can be implied that any decrease or increase on water temperature has an effect on the survival of *Leptospira interrogans*. The presence of LipL32 genes in the river and deep well samples may help understand the factors contributing to the survival of *Leptospira* in the environment and provide necessary means in preventing leptospirosis among people living near river banks.



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