

**PREVALENCE OF CANINE HEARTWORM (*Dirofilaria immitis*)
INFECTION IN SELECTED AREAS IN CAVITE**

THESIS

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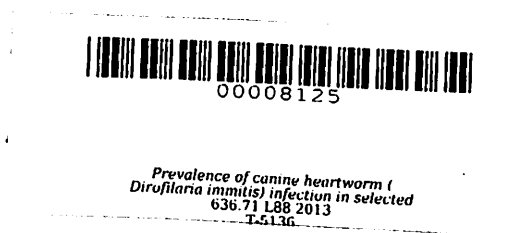
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**^c/PREVALENCE OF CANINE HEARTWORM (*Dirofilaria immitis*)
INFECTION IN SELECTED AREAS IN CAVITE**

Undergraduate Thesis
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ABSTRACT

LOPEZ, GLENN PAUL R. Prevalence of Canine Heartworm (*Dirofilaria immitis*) Infection in Selected Areas in Cavite. Undergraduate Thesis. Doctor of Veterinary Medicine. Cavite State University, Indang, Cavite. October, 2013. Adviser: Dr. Chester Joshua V. Saldaña.

This study determined the prevalence of canine heartworm (*Dirofilaria immitis*) infection in selected barangays in Bacoor City, Imus City and Dasmariñas City, Cavite and determined the risk factors associated with *Dirofilaria immitis* infection among dogs examined.

Systematic random sampling was used in selecting the barangays (28) from each city. One hundred seventeen dogs were included in the study. The dogs' owners were interviewed using structured questionnaire containing probable risk factors associated with dirofilariasis. The collected blood samples were processed and tested for hematologic profile, microscopic detection methods for microfilaria and Enzyme-linked immunosorbent assay (ELISA).

Results revealed that dogs' age of 7 years had the highest prevalence (50%) for dirofilariasis. Female dogs (48%) had higher prevalence than male dogs (35%). Also, mixed breed dogs (43%) and those that live outdoor (45%) had higher prevalence but the difference was not statistically significant.

Among the detection method used, Modified Knott's technique had the highest sensitivity (61%) but the specificity (84%) is comparable to microhematocrit method. Moreover, only anemia was observed in this study. The prevalence of canine heartworm infection was 42 percent. Highest was noted in Imus followed by Bacoor and Dasmariñas.

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INTRODUCTION

Dirofilariasis is an infectious disease of dogs with *Dirofilaria immitis* combined with cardiovascular and circulatory abnormalities. *Dirofilaria immitis* infects a wide variety of animal species, including domestic dogs, wolves, foxes, coyotes, domestic cats, ferrets, muskrats, sea lions, non domestic cats and even humans (Atkins, 2005). The heartworm disease can become a serious health risk when associated with severe infection (Ettinger, 2005). This filarial parasite needs mosquitoes as vectors, mostly those belonging to the genera *Culex*, *Aedes* and *Anopheles* (Genchi, Traldi, Di Sacco & Benedetti, 1988).

The initial clinical signs of the disease are exercise intolerance and weight loss. Cough, dyspnea, and chest pain are usually associated with the disease (Saritaş, Akın, Şahal & Öcal, 2005). Presence of live parasites in large numbers interferes with the blood