



## ABSTRACT

A total of twenty dogs in a temporary rescue shelter in Quezon City were subjected to blood extraction for the investigation on the prevalence of blood parasites. This study will benefit the community, especially dog owners, for they can be informed regarding the possible blood parasites that can affect both humans and dogs. Thus, preventive measures can be done, such as vaccinations and deworming. By using Knott's technique and preparation of thin and thick blood smears of the blood samples, two species of blood parasites were detected, and these were *Babesia spp.* and *Dirofilaria immitis*. 15 out of 20 dogs were infected with these said blood parasites, which resulted to a high prevalence rate of 75%. Physical characteristics of the dogs, such as their age, sex, size, and color of fur were determined and a complete blood count test was also done to examine the hematologic properties of the dogs, such as their red blood cell count, white blood cell count, haemoglobin and haematocrit levels, and platelet count. The physical characteristics and hematologic properties of the dogs were correlated with the presence of parasites to determine any significance. In correlation to the presence of *Babesia spp.* alone, there was a moderate positive significant correlation ( $r_s=0.696$ ,  $P=0.025$ ) with the color of fur only. In the presence of both *Babesia spp.* and *D. immitis*, there was also a strong positive significant correlation ( $r_s=0.791$ ,  $P=0.034$ ) with the color of fur. The dark-colored fur had a higher prevalence than the light-colored fur dogs. In the correlation for the presence of blood parasites and their hematologic properties, the 75% total prevalence rate had no significant correlation with most of the blood components, except with the white blood cell count which had a strong positive correlation ( $r_s=0.721$ ,  $P=0.002$ ).

*Key words: Babesia spp., Dirofilaria immitis, hematologic properties*