

**DETECTION OF *Dirofilaria repens* IN PET DOGS IN NUGEGODA AREA IN COLOMBO DISTRICT, SRI LANKA**

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Canine dirofilariasis is a mosquito borne disease caused by Nematodes that belongs to the Genus *Dirofilaria*. Due to its ability to cause ocular dirofilariasis in humans, *Dirofilaria repens* is considered as an important zoonotic parasite. Although ample numbers of studies about human dirofilariasis are recorded in Sri Lanka, only few were focused on canine dirofilariasis. The main objective of this preliminary study was to investigate the prevalence of *D. repens* in domesticated dogs in Nugegoda, a suburb in Colombo District, in order to determine their potential reservoir status. Blood samples (5 mL) were collected from conveniently selected 30 pet dogs from Nugegoda area in Colombo District by registered veterinary surgeons. A single step multiplex PCR was carried out to detect *D. repens* in the blood samples using a set of primers previously designed on a portion of the small subunit ribosomal RNA gene of the mitochondrion (12S rDNA). Positive samples of *D. repens* were provided by the Faculty of Medicine, University of Kelaniya. PCR products were visualized in agarose gel electrophoresis. Modified Knott's Concentration methods was also used as an alternative method. All 30 samples were found negative for PCR methods, which indicates that all owned dogs tested were negative for *D. repens*. Three samples were recorded positive for filarial worms by the modified Knott's concentration method. These may be some other canine filarial worms except *D. repens* as specific PCRs were negative. Further morphological identification is needed to confirm these filarial worms. According to the results, the prevalence of *D. repens* in owned dogs in Nugegoda area are very low. This might be due to the deworming treatments and hygienic conditions provided for owned dogs. However, identification of other filarial worms prevalent in the owned dogs is important as there may be other zoonotic filarial worms also present. Further studies should be proceeded to identify the prevalence of *D. repens* and other possible zoonotic filarial worms in stray dogs and owned dogs.

**Keywords:** Canine dirofilariasis, Kontt's concentration method, PCR, Sri Lanka