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ESTABLISHMENT OF PCR BASED ASSAY TO DETECT
Dirofilaria TRANSMISSION IN MOSQUITOES

A PROJECT REPORT PRESENTED BY

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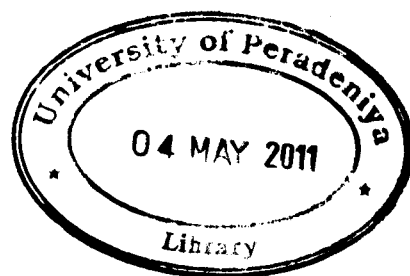
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Abstract**ESTABLISHMENT OF PCR BASED ASSAY TO DETECT *Dirofilaria* TRANSMISSION
IN MOSQUITOES**

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Dirofilaria (Nochtiella) repens is a filarial nematode that parasitizes the subcutaneous tissues of carnivores, mainly dogs. *Dirofilaria* is distributed worldwide and *Dirofilaria repens* is endemic to Sri Lanka. It is transmitted by mosquitoes mainly belonging to the family Culicidae that also act as the intermediate host of the parasite.

Dirofilaria repens particularly is a cause of human dirofilariasis; a zoonoses that is on the rise worldwide. Human dirofilariasis has also been on the rise over the past decade in Sri Lanka. In order to take the necessary measures to reduce the incidence of the disease both in human and in the natural host, a fast and accurate identification technique is essential. Therefore, this study was carried out to establish a Polymerase Chain Reaction (PCR) based assay to detect *Dirofilaria* in one of its mosquito vectors, *Armigeres spp.*

The study proved the sensitivity of the PCR in detecting *Dirofilaria*. The assay determined that just one solitary parasite is the minimum number of parasites in a single mosquito required for the detection. The proposed assay could be effectively used for the management of dirofilariasis.

