CLONING AND CHARACTERIZATION OF REPETITIVE SEQUENCES FROM THE GENOME OF *DIROFILARIA REPENS*

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Dirofilaria repens is a common parasitic nematode of dogs in Sri Lanka. The infestation commonly known as canine filariasis or dirofilariasis is widely prevalent in the country. Infections of humans with *D repens* have also been reported.

Control and treatment of filariasis require sensitive and reliable diagnostic procedures. In this respect nucleic acid hybridisation using DNA probes offers many advantages compared to traditional methods such as microscopy. The present studies were undertaken to develop a DNA probe for the detection of *D. repens*.

DNA was extracted from adult worms and a genomic library of *D. repens* was constructed in the plasmid pUC 18 and screened for repetitive sequences. At the end of two cycles of screening one clone pDRep8 was selected for further analysis and characterization.

Aliquots of genomic *D. repens* DNA were digested with various restriction enzymes, southern blotted and probed with pDRep8. A typical ladder like pattern was seen in the case of Sau 3a and RsaI indicating the highly repetitive nature of the cloned fragment and its potential of being used as a DNA diagnostic probe.

Further studies showed that the clone did not cross react with either dog (Host) or *S. digitata* DNA and was capable of detecting *D. repens* DNA in the picogram range.

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