List of Figures

Fig. 1: Transverse section of female *D. immitis*: external cuticle (C), lateral cords (LC), muscle fibres (M), uterus (U), oocytes (O) and intestine (I) are evident (Haematoxylin-Eosin) (magnification x 200)

Fig. 2: Transverse section of female *D. immitis*: external cuticle (C), lateral cords (LC), muscle fibres (M), uterus (U), oocytes (O) and intestine (I) are evident (Haematoxylin-Eosin) (magnification X 400)

Fig. 3: Transverse section of a gravid female *D. immitis* showing developing embryos in morula (M) stages, (magnification X 1000)

Fig. 4: Microfilaria of *D. immitis*

Fig. 5: Relative Movability (RM %) value of mf against time for different concentrations (µg/ml) of tetracycline

Fig. 6: Relative Movability (RM %) value of mf against time for tetracycline, acaciasides and tetracycline + acaciasides at 50µg/ml

Fig. 7: Relative Movability (RM %) value of mf against time for different concentrations (µg/ml) of acaciasides

Fig. 8: Relative Movability (RM %) value of mf against time for different concentrations (µg/ml) of azithromycin

Fig. 9: Relative Movability (RM %) value of mf against time for azithromycin, acaciasides and azithromycin + acaciasides at 50µg/ml

Fig. 10: Percent reduction in viability of mf against time for different concentrations (µg/ml) of tetracycline

Fig. 11: Percent reduction in viability of mf against time for 50 µg/ml each of tetracycline (T), acaciasides (A) and tetracycline + acaciasides (T+A)

Fig. 12: Percent reduction in viability of mf against time for different concentrations (µg/ml) of acaciasides (µg/ml)

Fig. 13: Percent reduction in viability of mf against time for different concentrations (µg/ml) of azithromycin (µg/ml)

Fig. 14: Percent reduction in viability of mf against time for 50 µg/ml each of azithromycin (AZ), acaciasides (A) and azithromycin+acaciasides (AZ+A)

Fig. 15: *In vitro* cytotoxicity assay of acaciasides
**Fig. 16:** Polymerase chain reaction of *Setaria cervi* total genomic DNA using primers specific for filarial 28S rRNA and eubacterial 16S rRNA

**Fig. 17:** Polymerase chain reaction of *Dirofilaria immitis* total genomic DNA using primers specific for *Wolbachia* 16S rRNA, filarial 28S rRNA and eubacterial 16S rRNA

**Fig. 18:** Percentage of microfilaria (*D. immitis*) per 0.25 ml of blood in control and azithromycin treated dogs.

**Fig. 19:** Percentage of microfilaria (*D. immitis*) per 0.25 ml of blood in control and azithromycin + acaciasides treated dogs.

**Fig. 20:** Percentage of microfilaria (*D. immitis*) per 0.25 ml of blood in control and acaciasides treated dogs.

**Fig. 21:** Polymerase chain reaction of total genomic DNA of *D. immitis* mf using filarial 28S rRNA specific primers before and after azithromycin treatment

**Fig. 22:** Polymerase chain reaction of total genomic DNA of *D. immitis* mf using *Wolbachia* 16S rRNA primers (FIL-5 and FIL-6) before and after azithromycin treatment

**Fig. 23:** Percentage of microfilaria (*D. immitis*) per 0.25 ml of blood in control and tetracycline treated dogs.

**Fig. 24:** Percentage of microfilaria (*D. immitis*) per 0.25 ml of blood in control and tetracycline + acaciasides treated dogs.

**Fig. 25:** Polymerase chain reaction using total genomic DNA of *D. immitis* mf using filarial 28S rRNA specific primers before and after tetracycline treatment

**Fig. 26:** Polymerase chain reaction using total genomic DNA of *D. immitis* mf using *Wolbachia* wsp specific primers (WSPintF and WSPintR) before and after tetracycline treatment

**Fig. 27:** Percent reduction in mf count per 0.25 ml blood in control and treated groups during treatment and post-treatment

**Fig. 28:** Effects of saponins on MDA formation in *S. cervi* microsomal membrane

**Fig. 29:** Effects of saponins, superoxide dismutase, catalase and thiourea on MDA formation in *S. cervi* microsomal membrane
Fig. 30: Effects of saponins on CD formation in *S. cervi* microsomal membrane

Fig. 31: Effects of saponins, superoxide dismutase, catalase and thiourea on CD formation in *S. cervi* microsomal membrane

List of Tables

**Table 1:** Mean mf count / 0.25 ml blood in control, azithromin and azithromycin + acaciasides treated groups

**Table 2:** Side reactions of the drugs

**Table 3:** Mean mf count / 0.25 ml blood in control, tetracycline and tetracycline + acaciasides treated groups