

## CHAPTER 5 CONCLUSIONS

The intestinal flora of cheetahs was shown to be similar to those of the domestic cat, although differences in bacterial species composition were seen (see section 4.1). More samples need to be taken from healthy cheetahs housed in different environments in order to establish a reference range of normal intestinal flora in the cheetah. Cheetahs tend to have higher numbers of faecal anaerobic bacteria and *Enterococci*, particularly if they are fed a meat-based diet.

The isolation of selected bacteria from healthy adult cheetahs produced a probiotic that showed promising results in this study. The juvenile cheetahs treated with the probiotic over a 28-day period gained relatively more weight than the control animals. There was a significant improvement in faecal quality in the Probiotic Group during the feeding of the probiotic. There was also a reduction in the number of faecal samples containing mucus and blood in the Probiotic Group. Faecal water, however, did not seem to be affected by treatment as discussed in section 4.3. As only juvenile cheetahs were tested, the study should be repeated on a wider range of animals of different ages, because the effects of the probiotic will differ in different age groups.

Unfortunately there were several confounding factors affecting some of the tests used to quantify the effect of the probiotic. The animals in the PG were slightly younger than the CG. High helminth burdens in the juvenile cheetahs and movement of animals into different camps affected the faecal consistency and the percentage diarrhoea in the camps. There were also changes in diet due to managerial reasons. Standardising the diet and routinely performing faecal flotation for helminths would have been beneficial. Potentially stressful situations such as movement of animals in and between camps should also be avoided. It would have been beneficial to standardise procedures particularly for faecal water and intestinal permeability by providing a stable environment and diet (see section 4.3). When dealing with wildlife and in particular valuable and endangered species such as the cheetah, this is not always possible.