



**Dr Gerhard Steenkamp**  
**BSc, BVSc, MSc**  
**Senior lecturer: Companion Animal Clinical Studies**  
**Orchid ID:**

## **Summary CV**

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I joined the University of Pretoria in a part-time capacity in January 1998 to develop the Dentistry and Maxillofacial surgery clinic. In November 2013 this association developed further when I was appointed on a full-time basis as senior lecturer.

My area of interest is dentistry and maxillofacial surgery of animals and hence I teach all the courses relating to this field to both undergraduate and post-graduate veterinary students as well as veterinary nurses. Students also do rotations through the Dentistry and Maxillofacial surgery clinic during their experiential training year at Onderstepoort.

I have supervised and co-supervised 4 master's students and am currently supervising or co-supervising 5 master's students and one PhD candidate.

My closest ally in my research field is the Dept. Of Oral Pathology at the Sefako Makgato Health Sciences University.

To date I have 25 published manuscripts in peer review journals.

## **Clinic Expertise/Interest**

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The dental and maxillofacial conditions of animals, in particular wild animals, is my area of interest. The comparative work between species is intriguing. Comparing this eventually to similar conditions in humans is exciting and the potential for modelling is being explored. Elephants with their enormous teeth are probably the species that challenges me the most. In order to understand the morphometry a little better I completed my MSc on this subject in 2008. I have been fortunate to work with a number of elephants in my career thus far and feel privileged every time I get this opportunity. Elephant dental disease have taken me to the corners of the earth and I am very grateful to these wonderful beasts who have unlocked some of their many secrets to me.

## **Research Expertise/Interest**

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My research focusses on clinically relevant questions we face daily.

- Comparative pathology

Describing pathology of many different animal species, comparing them to known animal models or to humans.

- Clinically relevant

Describing the haematology and specific serum chemistry parameters of healthy and injured rhinoceros. Further to this we also characterised the way rhinoceros horn grows in order to determine future horn surgery.

Describing new surgical techniques to combat pathology encountered in the maxillofacial complex of animals.

## Postgraduate Students

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- PhD

- Dr Emma Hooijberg started with her masters degree on haematology and serum chemistry validation of rhinoceros blood on a point of care machine with a gold standard laboratory bench analyzer. She also did field trials with the point of care analyzer to validate its use in field conditions. Her MSc has been upgraded to a PhD based on further work she is conducting looking at inflammatory proteins in traumatised and non-traumatised rhinos. It is hoped that we can identify inflammatory markers in rhino that may help us prognosticate injured rhinos better.

- MSc

- Dr Jacques du Preez completed his undergraduate training at Onderstepoort in 2015. Jacques is currently working on the comparison of haematology and blood chemistry values between traumatized and non-traumatised rhinos. The aim of his study is to ascertain the difference in haematology and serum chemistry between these two cohorts of animals.
- Dr. Jane Budd qualified from the Murdoch University Australia in 2007. Jane is currently working on investigating the status of gammaherpes virus infection in a captive Arabian ungulates population in the United Arab Emirates. The aim of this study is document the different gammaherpes viruses found in that collection and to see if those carried by the Arabian tahr are unique. This information could be very valuable in risks assessments done before introducing these species to captive collections.
- Dr. Roxanne Emslie graduated from Onderstepoort in 2014 and returned to Onderstepoort to complete a small animal internship in 2016. Roxy is currently working on the incidence of dental and oral pathology in free roaming Serval. The aim of this study is to document the incidence and extend of oral and dental pathology free roaming Serval in a specific game reserve may encounter. Understanding this will help us manage Serval in

captivity better. It may also help us understand similar conditions in domestic cats as well.

- Dr. Anndri Garret completed her undergraduate studies at Onderstepoort in 1997. Anndri is working on the development of the rings in the horns of Roan and Sable antelope. The aim of this study is to determine if these rings are genetically determined or if environmental factors may influence their development. Understanding horn ring development may also help us determine if they may be used in age determination in these species.