

Prof. Andrew Leisewitz

BVSc, BVSc(Hons), MMedVet(Med), PhD, Dipl. ECVIM

Professor: Small Animal Internal Medicine

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**Summary CV**

Prof. Leisewitz joined the Department in 1990 as a lecturer in Small Animal Internal Medicine. He completed his residency (MMedVet) in Small Animal Internal Medicine in 1995 and a PhD in 2006. He is also a diplomat of the European College of Veterinary Internal Medicine (Companion Animals). Prof. Leisewitz is an active teacher of under- and post-graduate veterinary students, leads an active research program in canine babesiosis, distemper infection and parvovirus infection in the section of Small Animal Medicine within the Department and is a frequently invited speaker and presenter of continuing education for the profession in the sub-region. Prof. Leisewitz has supervised/ co-supervised 12 MMedVet students, one MSc student and three PhD students. He currently has 49 publications in peer-reviewed journals.

**Research Expertise/Interest**

Prof. Leisewitz’s research interest is in disease mechanisms of infectious diseases. Particular interests include the use of animal models of human disease to advance global health. His PhD examined the immune response to blood stage malaria infection in a murine model system and was completed at the Weatherall Institute for Molecular Medicine, Oxford. Canine babesiosis now forms the basis of the majority of his work. This is a malaria like disease and in many ways offers unique modelling opportunities and comparative pathologies for human malaria. In addition to this, he has an interest in the pathogenesis of central nervous system inflammation and demyelination as caused by canine distemper virus infection (which acts as a model for human multiple sclerosis). He has also worked on canine parvo virus induced enteritis where he has examined the acid base and gut wall permeability pathology.

**Postgraduate Students**

* PhD (co-supervision)
  + Miss. Luise Robbertse completed her undergraduate education at the Natural and Agricultural Sciences Faculty of the University of Pretoria. She is working on a project to describe the host immune response to tick attachment and to the administration of an experimental anti-tick vaccine administered to three different cattle breeds.
  + Dr. Sintayehu Arega completed his undergraduate veterinary degree at the veterinary faculty in Addis Abba, Ethiopia. He is working on the effect of rabies vaccination in puppies on the immune system asking the question, “Can rabies vaccination increase survival of young puppies in low-income settings through a non-specific protective effect?”. The project is a randomized controlled trial being conducted in a rural setting close the Kruger National Park in South Africa.
* MMedVet and MSc
  + Dr. Anri Celliers completed her undergraduate training at the Faculty of Veterinary Science, University of Pretoria. Dr. Celliers is currently completing her research on the flow cytometric assessment of selected immunophenotypes in the spleen of dogs with natural *Babesia rossi* infections
  + Dr. Alischa Henning completed her undergraduate training at the Faculty of Veterinary Science, University of Pretoria and is currently working on a histological and immunohistological description of the spleen of dogs naturally infected with babesia caused by *Babesia rossi*.
  + Dr. Collin Martin completed his undergraduate training at the Faculty of Veterinary Science, University of Pretoria and is currently working on a histological and immunohistological description of the lung of dogs naturally infected with babesia caused by *Babesia rossi*.
  + Dr. Michelle Lewis completed her undergraduate training at the Faculty of Veterinary Science, University of Pretoria and is currently working on a histological and immunohistological description of the brain of dogs naturally infected with babesia with cerebral babesiosis caused by *Babesia rossi*.
  + Dr. Adri Bumby completed her undergraduate training at the Faculty of Veterinary Science, University of Pretoria and is currently working on a histological and immunohistological description of the bone marrow of dogs naturally infected with babesia caused by *Babesia rossi*.
  + Miss. Tessa Potgieter completed her undergraduate training in the Faculty of Natural and Agricultural Sciences, University of Pretoria. She is currently working on a description of the polymorphisms of the cell surface receptors on cells that allow cell entry for the canine distemper virus across a range of wild and domestic mammal species. She has also explored a transcriptomic approach to the investigation of differentially expressed genes in the brains of dogs with distemper virus encephalitis.
  + Dr. Lourens DeVilliers completed his undergraduate training at the Faculty of Veterinary Science, University of Pretoria and is currently working on a project comparing three different methods (manual counting, flow cytometry and qPCR) for quantifying *Babesia rossi* parasitaemia.