



Online World One Health Day Symposium 2021

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You are cordially invited to a One Health Day symposium to be hosted at the Faculty of Veterinary Science and co-hosted with the Faculties of Health Sciences and Natural and Agricultural Sciences. This event will bring together specialists from human, animal, and environmental health to discuss the importance of the One Health approach in advancing research and training at the University of Pretoria. The event is to be held in person at Onderstepoort campus and online.

Date: 18 November 2021

Time: 08:00-16:00

Register: <https://forms.gle/vbVG9XzZChVKLZFn8>

Event link: <https://eu.bbcollab.com/guest/565b24d387984d50a9ec7e7cc17723b0>

The day will cover three overarching themes namely zoonosis, anti-microbial resistance, and the environment as well as training opportunities, research and outreach at UP.



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Faculty of Veterinary Science

Fakulteit Veeartsenykunde
Lefapha la Disaense tša Bongakadiruiwa



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Fakulteit Natuur- en Landbouwetenskappe
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Faculty of Health Sciences

Fakulteit Gesondheidswetenskappe
Lefapha la Disaense tša Maphelo



one
health
DAY
NOV 3

100
YEARS
OF VETERINARY EDUCATION



A N N U A L

one health DAY

november 3

Promoting efforts around the world to bring together
all human, animal, and environmental health disciplines

hosted by



✓ check **www.onehealthday.org** for more information



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Animal health impact

improved livestock health and productivity (minimizing stress) with greater wildlife biodiversity

ANIMALS

Zoology

Biology (Ecology)

decreased disease transmission at wildlife/livestock interface

Ecosystem and Earth Sciences or Geosciences

Environmental impact

greater sustainability of natural resources and preserved genetic diversity

ENVIRONMENT

Agriculture and Engineering

reduced anthropogenic effects and preservation of ecosystem services

One Health

HUMANS

Social sciences and Humanities

Human Medicine

Comparative Medicine

food security plus disease control and prevention, and improved livelihoods

Veterinary Medicine

Human health impact

improved health and global security (enabling people to live and thrive)





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100
YEARS
OF VETERINARY EDUCATION

Faculty of Veterinary Science





Five Academic Departments

- Companion Animal Clinical Studies
- Production Animal Studies
- Veterinary Tropical Diseases
- Paraclinical Sciences
- Anatomy and Physiology

Three Research Centres

- Equine Research Centre
- Centre for Veterinary Wildlife Research
- Exotic Leather Research Centre

Two Chairs

- SARCHi in Poultry Health and Production
- Primary Animal Health Care



Skills lab

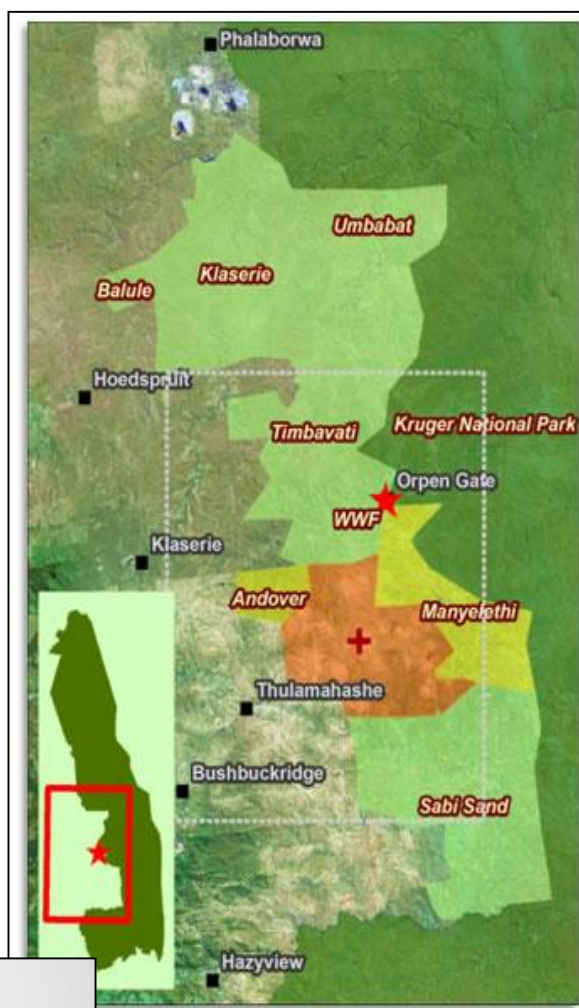
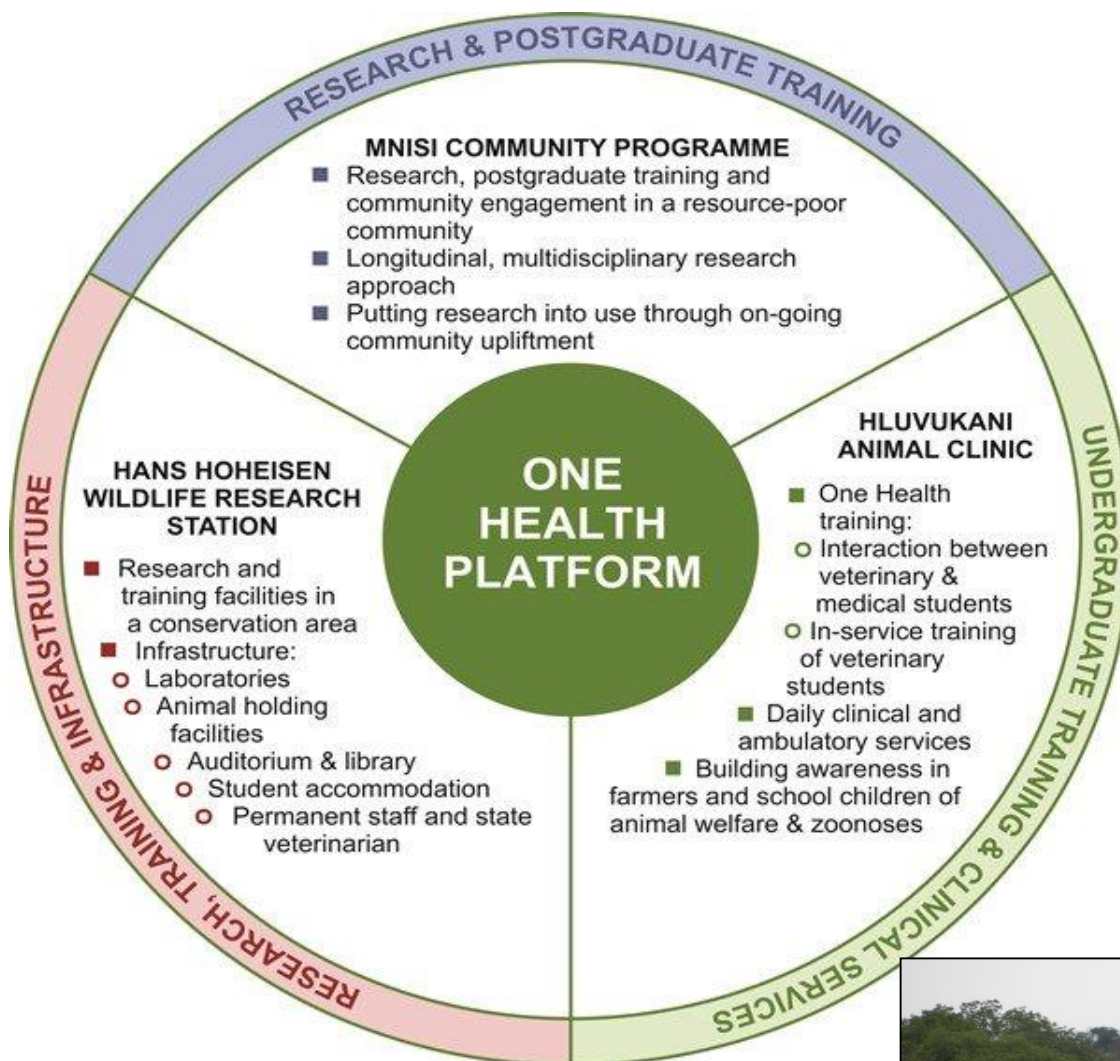
- Students are taught by means of models and simulation



Comprehensive specialist veterinary hospital

- State of the art facilities including an MRI scanner
- Supportive mobile and satellite services
- Dedicated wildlife clinic (with holding facilities/bomas)







Mnisi Community Programme



healthy animals
swifuwo leswihanyeke



healthy people
vanhu lavahanyeke



healthy environment
matshamelo lamanene ya rihanyu

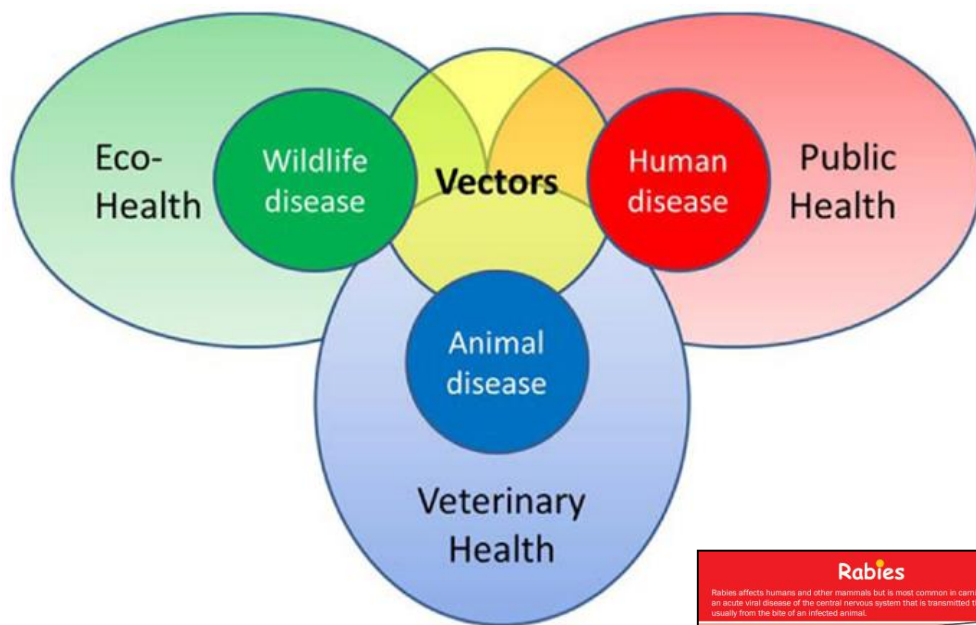
Some research projects done in the area over the past few years

- Influence of sociodemographic factors on infectious and zoonotic pathogen risk in a resource-limited community at the livestock-wildlife interface
- Landscape preferences of grazing cattle in the Mnisi community
- Herding for Health, a community-driven approach to address challenges faced by farmers living in and adjacent to protected areas
- Small ruminant movement in Bushbuckridge Municipality
- Mosquito assemblages across a human-livestock-wildlife interface
- Monitoring DDT and heavy metal contamination in the faeces of wild mammals to evaluate terrestrial ecosystem health
- Epidemiology of Rift Valley fever virus and other arboviruses of zoonotic importance present in the Mnisi community
- Modelling of rabies and prevention in the Mnisi area
- Bats as a source of mycosal pathogens

Research projects currently ongoing

- **Antimicrobial use** in humans and animals in the Mnisi community
- **Antimicrobial resistance** in small scale farming systems in relation to the development of human food-borne illnesses
- **Tick-borne disease** dynamics at the human-livestock-wildlife interface in the Mnisi community
- Investigating ***Rickettsia africae*** (cause of tick bite fever) infection in ticks in the Mnisi community.
- Unravelling the dynamics of **toxoplasmosis** in the Mnisi community
- Investigation of **zoonotic tuberculosis** at the human-livestock-wildlife interface, using a One Health approach
- Biodiversity, prevalence and risk of **brucellosis** in domestic animals, wildlife and humans in the region
- **Zoonotic tick-borne pathogens** (including rickettsiosis, Q fever, leptospirosis) as a cause of acute febrile illness in the Mnisi community

Veterinary Tropical Diseases



TB & Brucellosis

- One Health
- Epidemiology
- Improved diagnostic developments
- Vaccine approaches for improved disease control

Vector & Vector-Borne Diseases

- Ticks and tick-borne diseases
- Arboviruses and their vectors
- Endoparasites of domestic animals and wildlife
- Trypanosomes and tsetse flies



OIE Collaborating Centre
for Training in
Integrated Livestock and Wildlife
Health and Management



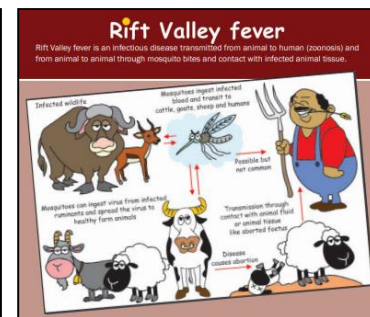
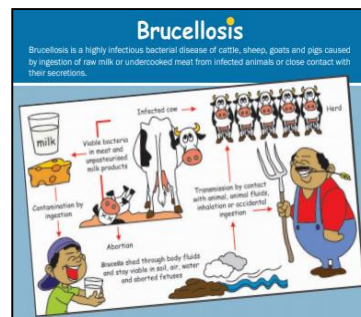
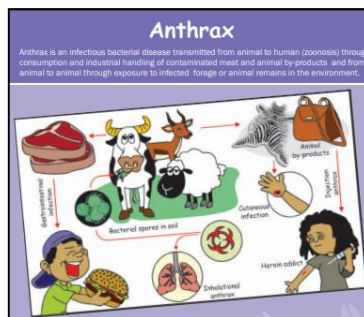
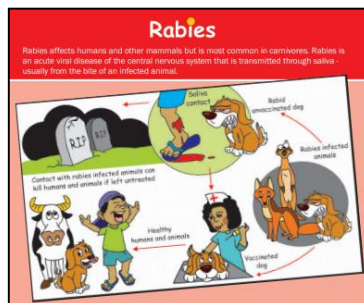
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NATIONAL HEALTH
LABORATORY SERVICE



agriculture,
forestry & fisheries



- **ELEPHANT (Empowering universities' Learning and rEsearch caPacities in the One Health Approach for the maNagement of animals at the wildlife, livestock and human interface in SouTh Africa)**
- **Spread and modelling of anthrax in KZN and Etosha**
- **Zoonotic disease and abattoir surveillance**



**Joint MSc in Global One Health:
Diseases at the human-animal interface**

Production Animal Studies

– Risk Assessment modelling (industry funded)

- Collaboration with NAS – COP in risk assessment
- Close ties with the National Animal Health Forum (NAHF)

– Epidemiology

- Foot and Mouth, Rift Valley Fever, brucellosis, AI, Q Fever, ASF

– Avian Diseases

- Avian Influenza and vaccine development
- Viral like protein (AI and Coronavirus)

– Milk Laboratory

- Mastitis causing organisms and link to human health
- AMR and emerging pathogens

– Primary Animal Health Care

- Empower farmers to enhance food security and family income



Paraclinical Sciences

- **Antimicrobial Resistance, surveillance and mitigation**
- **Ecotoxicology**
 - Impact of drugs on the environment
 - Aquatic health and production
 - Heavy metal toxicity (linked to sport hunting)
- **Veterinary Pathology**
 - Disease diagnosis and intercalation with diagnostic labs
 - Wildlife interface disease study in collaboration with the National Zoological Gardens, National Biobank



Centres

- **Equine Research Centre**
 - Pleasure animals and sports racing
 - AHS, vaccine development
- **Centre for Veterinary Wildlife Research**
 - Wildlife conservation – protecting natural heritage
 - Ecotourism and Wildlife ranching
- **Exotic Leather Research Centre**
 - Aquatic health
 - Crocodiles as sentinels of ecosystem health



One Health training - undergraduates

- **Veterinary One Health module (VOH)**
- **From 2022 delivered to BVSc and MBChB students**
- **Aim: deliver it as a service module to other faculties from 2023**
- **Ideally undergraduate students will have multiple contact sessions over their degree**
 - 3rd year -> Practical exposure and introduction to the concept
 - 5th year -> Theoretical knowledge of the concept
 - 6th year -> Collaborative practical rotation in the Mnisi community



The Earth's Future is in our Hands



“Animal Health Matters”



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