ARC • LNR
Excellence in Agricultural Research and Development

Onderstepoort Veterinary Research

National Reference Laboratories for Veterinary Diseases, South Africa.

Challenges and Oppertunities

Dr Livio Heath

Onderstepoort Veterinary Institute
Agricultural Research Council
South Africa institution

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ONDERSTEPOORT BACTERIOLOGICAL LABORATORY 1908

Onderstepoort Veterinary Institute

Mission

To provide scientific support for Veterinary Services in effective risk management for quality of life for all in South Africa.

OVR promotes animal health and welfare by providing effective veterinary diagnostic and research services.

- National Reference Laboratories for Veterinary Diseases
- WOAH Reference Laboratories / FAO Collaborating centers

Thematic Programmes

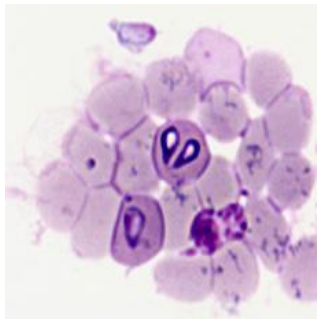
Dr Andrew Magadlela
Group Executive:
Animal Sciences

Dr Misheck Mulumba
Senior Manager: Animal Health and Protection

Vaccine Production

Vaccines & Diagnostics Development

Public Health & Zoonoses



Epidemiology, Parasites and Vectors

Diagnostic Services

International Recognition

WOAH REFERENCE LABORATORIES

- African Horse Sickness
- African Swine Fever
- Blue tongue
- Foot and Mouth Disease
- Lumpy Skin Disease
- Rabies
- Rift Valley Fever
- Theileriosis

African Swine Fever
Reference Laboratory Network

World Organisation
for Animal Health
Founded as OIE

OIE/FAO Reference Laboratory
Network for Foot-and-Mouth Disease

WOAH
Reference Laboratory
Network for PPR

FAO REFERENCE CENTRES

- Foot and Mouth Disease
- African Swine Fever Disease
- Vector and Vector-borne Diseases

Diagnostic Capacity

ISO 17025 Accredited

VIROLOGY (SANAS: V 0001)
- Serological Virology
- Molecular Virology

BACTERIOLOGY (SANAS: V 0003)
- Bacterial Serology
- General Bacteriology
- Molecular Bacteriology

TRANSBOUNDARY ANIMAL DISEASES (SANAS: V 0034)

DIAGNOSTIC PARASITOLOGY (SANAS: V 0017)

PUBLIC HEALTH AND ZOONOSIS (SANAS: V 0003)

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Aquatic Diagnostic Capacity

Molecular Diagnosis

Infectious salmon anaemia virus
Salmonid alphavirus
Renibacterium salmoninarum

Piscine orthoreovirus
Koi herpesvirus
Tilapia lake virus
Viral nervous necrosis virus

Infectious pancreatic necrosis virus
Epizootic haemopoietic necrosis virus
Infectious haemopoietic necrosis virus
Viral haemorrhagic septicaemia

Epizootic ulcerative syndrome

Virus Isolation

Infectious pancreatic necrosis virus
Epizootic haemopoietic necrosis virus
Infectious haemopoietic necrosis virus
Viral haemorrhagic septicaemia

Bacterial Isolation

Renibacterium salmoninarum

Clients of Aquatic Diagnostics

Surveillance of Commercial Farms

Predominantly commercial trout farms
Farms are sampled twice a year
> 250 – 500 submissions / year

Quarantine stations

Testing of imported material

- 50 - 150 submissions / year

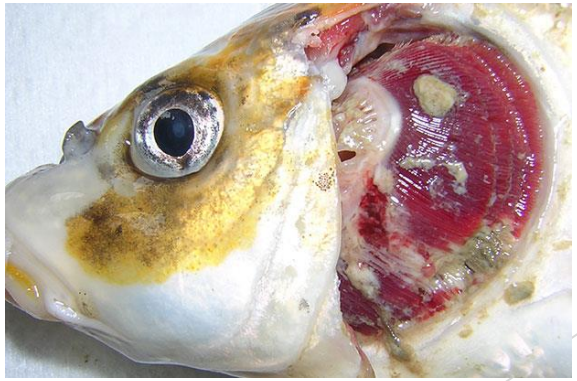
Provincial Veterinary Services

Surveillance for Koi herpesvirus

Private Veterinarians

Ad hoc Service
Confirmation of clinical diagnosis
e.g. Epizootic ulcerative syndrome

Infectious salmon anaemia



Koi herpesvirus

Opportunities and Challenges

Opportunities

Aquaculture is an emerging industry in South Africa.

Diagnostic capacity could be expanded to include aquatic animals other than fish.

Challenges

The current demand for services is relatively low.

The lack of reference material complicates validation of diagnostic assays.

International proficiency testing schemes for Aquatic diseases are limited.

Laboratory capacity and expertise are limited hampering the expansion of diagnostic services

Aquatic Diagnostic Services

Molecular Diagnosis

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