



Who's Who in One Health



Stellenbosch University / Iyunivesithi Universiteit National Health Laboratory

One Health Activities

<http://www.sun.ac.za/virology>

1. Organization/ Group Name and website url:

Division of Medical Virology

Department of Pathology, Faculty of Medicine and Health Sciences, Stellenbosch University and National Health Laboratory Service (NHLS) Tygerberg

2. Description and Scope of One Health Activities

Research in potentially zoonotic and/or emerging viruses; emphasis on small mammals (rodents, shrews, bats) and corona-, hanta-, paramyxo- and astroviruses

3. Key Collaborators / Participants and contact information (Email address, Telephone, and if they agree to share contact information on this posting in case One Health stakeholders want to contact them)

Prof. Wolfgang Preiser; E-mail: preiser@sun.ac.za; Tel: +27 21 938 9353

Dr. Ndapewa Ithete; E-mail: ndapewa@sun.ac.za; Tel: +27 21 938 9353

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Dr. Tongai Maponga; E-mail: tongai@sun.ac.za; Tel: +27 21 938 9353

4. Type of Organization Academic Institution (Stellenbosch University)

5. Address of Organization/ Group

Faculty of Medicine and Health Sciences Tygerberg
Francie van Zijl Drive
PO Box 241
Cape Town
SOUTH AFRICA

6. Sources of funding for Organization/Group

In-house funding; research funding from variety of sources: German Research Foundation DFG (Africa Infectiology Programme), South African National Research Foundation, Poliomyelitis Research Foundation, NHLS Research Trust, Harry Crossley Foundation

7. One Health Course/Certificate/Training Offered by Organization or Group

Title of Course/Certificate/Training: Contact person's name and email: Link to informational web page:

None at present

8. Other One Health Activities / Initiatives

(Symposiums, Summits, Workshops, Discussion Series, etc) Title/description of program:
Contact person's name and email: Link to program informational web page:

None at present

9. Brief History of Your Organization's One Health Involvement

We are a small but active and growing research group aiming to identify and characterise novel viruses that potentially may be transmitted zoonotically and cause human disease in our region.

Through screening small mammals, i.e. rodents, shrews and bats, for the presence of viral genomes, we have identified and are in the process of characterising several novel astro-, arena- and coronavirus sequences in rodents, shrews and bats (Witkowski et al., Virus Res 2014 and Emerg Infect Dis 2015). This work is done in close collaboration with zoologists, ecologists and veterinarians who not only contribute animal samples for testing, but also valuable zoological and ecological data to better understand the relationship between these viruses and their wildlife hosts as the key to estimating the magnitude of the risk to humans.

The most intriguing discovery to date is a novel beta-coronavirus which turned out to be a close relative of the recently emerged Middle East Respiratory Syndrome (MERS)

coronavirus. This work provides important clues to bats as a possible original source of this ongoing outbreak (Ithete et al., *Emerg Infect Dis* 2013; Corman et al., *J Virol* 2014). Having detected infection with hepatitis E virus (HEV) in several patients in Cape Town (Andersson et al., *AIDS* 2013 and *J Clin Virol* 2015) and determined the prevalence of past and active HEV infection in blood donors in the Western Cape Province of South Africa (Lopes et al., *Epidemiol Infect* 2017), we are now seeking serological and molecular evidence of HEV infection in pigs slaughtered locally in co-operation with the Provincial Veterinary Services in Elsenburg.

10. Updates: 3-19-23

Professor Wolfgang Preiser, head of the Division of Medical Virology at Stellenbosch University's Faculty of Medicine and Health Sciences (FMHS), was involved in the discovery of SARS coronavirus in a German patient in 2003 and contributed to the discovery of the Beta and Omicron variants of SARS-CoV-2 in South Africa in 2021.

Preiser is also head of the South African National Health Laboratory Services' (NHLS) Division of Medical Virology, and his laboratory made invaluable contributions to the sequencing and discovery of SARS-CoV-2 variants, as well as the mammoth national Covid-19 testing effort in South Africa, particularly at the start of the Covid-19 pandemic.

Read the *The Lancet Infectious Diseases'* profile article of Prof Wolfgang Preiser:

Wolfgang Preiser – co-discoverer of SARS-CoV-2 variants, *LANCET*, March 2022

https://www.thelancet.com/journals/laninf/article/PIIS1473-3099%2822%2900079-2/fulltext?dgcid=raven_jbs_etoc_email