

WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 26 avril 2023 11:22

Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Foot-and-Mouth Disease
Address of laboratory:	Foot-and-Mouth Disease sub-Saharan Africa Regional Reference Laboratory, Botswana Vaccine Institute, Private Bag 0031 Gaborone, Botswana
Tel.:	+267 3912711
E-mail address:	jhyera@bvi.co.bw
Website:	www.bvi.co.bw
Name (including Title) of Head of Laboratory (Responsible Official):	Mr. Andrew Madeswi, Chief Executive Officer, Botswana Vaccine Institute
Name (including Title and Position) of WOA Reference Expert:	Dr. Joseph M. Hyera (B.Vet.Med., Dip. Trop. Vet. Sci., MPhil., PhD), Head of R&D and Ref Laboratory
Which of the following defines your laboratory? Check all that apply:	Parastatal organization under the Ministry of Agricultural Development and Food Security, Botswana Government Governmental

TOR1: DIAGNOSTIC METHODS

1. Did your laboratory perform diagnostic tests for the specified disease/topic for purposes such as disease diagnosis, screening of animals for export, surveillance, etc.? (Not for quality control, proficiency testing or staff training)

Yes

Diagnostic Test	Indicated in WOA Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
FMD NSP ELISA	Yes	1040	342
Liquid phase blocking ELISA	Yes	577	500
Virus Neutralization Test	Yes	55	0
Direct diagnostic tests		Nationally	Internationally
FMD virus isolation	Yes	19	

			53
FMD Antigen ELISA typing	Yes	9	33
RT-PCR & VP1 Sequencing	Yes	19	53

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOA?H?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA?H Members?

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOA?H MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
FMD ELISA reagents for 5 serotypes2, SAT1-3, A and O	Liquid phase blocking ELISA	Produced	150ml	200ml	2	Africa

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOA?H Members?

Not applicable

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

No

7. Did your laboratory validate diagnostic methods according to WOA?H Standards for the designated pathogen or disease?

No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOA?H Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOA?H Members?

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOA?H Member?

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

FMD situation in sub-Saharan Africa was discussed during the WOAHA Network meeting

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

VP1 sequencing was performed and resulting phylogenetic analysis reports were disseminated to countries of sample origin.

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

1

Banda, F., Shilongo, A., Hikufe, E. H., Khaiseb, S., Kabajani, J., Shikongo, B., Set, P., Kapapero, J. K., Shoombe, K. K., Zaire, G., Kabilika, W., Quan, M., Fana, E. M., Mokopasetso, M., Hyera, J. M. K., Wadsworth, J., Knowles, N. J., Nardo, A. D., & King, D. P. (2022). The first detection of a serotype O foot-and-mouth disease virus in Namibia. *Transboundary and Emerging Diseases*, <https://doi.org/10.1111/tbed.14561>

b) International conferences:

1

17th WOAHA/FAO FMD Reference Laboratories Network Annual Meeting, 29th November – 1st December 2022. Hosted by: Wageningen Bioveterinary Research Institute (WBRI), Lelystad, The Netherlands.

c) National conferences:

0

d) Other (Provide website address or link to appropriate information):

0

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAHA Members?

Yes

a) Technical visit : 3

b) Seminars :

c) Hands-on training courses: 1

d) Internships (>1 month)

Type of technical training provided (a, b, c or d)	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
Liquid Phase Blocking ELISA test set up and training of laboratory staff	Namibia	4

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO/IEC 17025-2005	pdf	Certificate of Accreditation.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
FMD Virus Isolation in cell culture and detection by antigen ELISA	Southern African Development Community Accreditation Services (SADCAS)
Virus Isolation in cell culture and detection by RT-PCR & VP1 Sequencing	SADCAS
Virus Genome detection by RT-PCR and VP1 Sequencing	SADCAS

20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?

Yes

The laboratory has a Safety Health and Environment (SHE) Biosecurity Policy and Manual document that guides on biorisk management.

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOA?H?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOA?H?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
17th WOA?H/FAO FMD Reference Laboratories Network Annual Meeting	2022-11-29	Wageningen Bioveterinary Research Institute (WBR), Lelystad, The Netherlands.	Speaker	Foot-and-mouth disease virus circulation in the regional pools: Pools 4-6

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOAHP Reference Laboratories designated for the same pathogen or disease?

Yes

24. Are you a member of a network of WOAHP Reference Laboratories designated for the same pathogen?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS/ ORGANISING WOAHP REF. LAB.
Validation of diagnostic procedures	Participant	70	BVI-RRLSSA/WRL-FMD

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP Reference Laboratories designated for the same pathogen?

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS/ ORGANISING WOAHP REF. LAB.
Validation of diagnostic procedures	Organiser	3	WRL-FMD, CFIA, Sciensano

26. Did your laboratory collaborate with other WOAHP Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

Yes

TITLE OF THE PROJECT OR CONTRACT	SCOPE	NAME(S) OF RELEVANT WOAHP REFERENCE LABORATORIES
The first detection of a serotype O foot-and-mouth disease virus in Namibia	Molecular characterization of a serotype O incursion into Namibia	WRL-FMD

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAHP Reference Laboratories for the same pathogen?

No

TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOAHP?

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
FMD outbreak control strategy formulation	South Africa	
Field technical support	Malawi	
Outbreak Investigation	Mozambique	

FMD outbreak sampling and submission	Malawi	
Field technical support	Namibia	
Field technical support	Zimbabwe	
Field technical support	Zambia	

29. Additional comments regarding your report: