

WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 3 juin 2024 18:25

Laboratory Information

Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:	FOOT AND MOUTH DISEASE
Address of laboratory:	TALCAHUANO 1660, MARITNEZ CP 1640 BUENOS AIRES ARGENTINA
Tel.:	+54-11 48.36.19.95
E-mail address:	sgaldo@senasa.gob.ar
Website:	WWW.SENASA.GOB.AR
Name (including Title) of Head of Laboratory (Responsible Official):	ANA MARIA NICOLA , DVM MSc DIRECTORA GENERAL DE LABORATORIO Y CONTROL TECNICO, DGLYCT, SENASA
Name (including Title and Position) of WOAHO Reference Expert:	SSABRINA GALDO NOVO, DVM, PhD, Head of FMDV Diagnosis Department nbs 4 woah laboratory for FMDV, DLA , DGLYCT, SENASA
Which of the following defines your laboratory? Check all that apply:	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 WOAHO Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
3 ABC ACTIVE SURVEILLANCE 2023 FOR EVIDENCING ABSCENCE OF VIRAL CIRCULATION 3 ABC ELISA		3443	3068
VIAA		70	286
LP ELISA		5080	0
VTN TEST FOR AB TITER DETERMINATION		7185	0
r1 value for vaccine matching assessment		334	0
EITB CONFIRMATIONS FROM 3 ABC ELISA TEST		64	0
Direct diagnostic tests			
SUSPECTED CASES FOR Q RT PCR DETECTION AND VIRAL ISOLATION		4	21
vp1 sequencing		2	21
p1 sequencing		0	6
cell viral isolations and amplification		104	0

TOR2: REFERENCE MATERIAL

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

No

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

Yes

TYPE OF REAGENT AVAILABLE	RELATED DIAGNOSTIC TEST	PRODUCED/ PROVIDE	AMOUNT SUPPLIED NATIONALLY (ML, MG)	AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)	NO. OF RECIPIENT WOAHO MEMBER COUNTRIES	COUNTRY OF RECIPIENTS
GUINEA PIG COMPLEMENT	COMPLEMENT FIXATION TEST	498 ML / 256 ML	256 ML	0	1	ARGENTINA,
GUINEA PIG HYPERIMMUNE SERA OF DIFFERENT FMDV STRAINS	FOR COMPLEMENT FIXATION TEST AND AS SERA OF REFERENCE	144 ML / 62 ML	12 ML	62 ML	3	ARGENTINA, JORDAN, PARAGUAY,
RABBIT HEMOLYSINE	COMPLEMENT FIXATION TEST FOR FA	34 ML / 0 ML	0	30 ML	1	PARAGUAY,
INACTIVATED VIRAL ANTIGENS FOR FMDV	FOR VACCINE CONTROL AND OTHER VIRAL YIELD STUDIES	32950 ML / 30000 ML	30000 ML	0	1	ARGENTINA,
FMDV VIRUS SUSPENSION FOR CEPARIUM MANTAINANCE	PD50 TESTS, PGP TEST, VIRUSNEUTRALIZATION TEST, VACCINE STUDIES, GENETIC CHARACTERIZATION AND ANTIGENIC CHARACTERIZATION	34090 ML / 305 ML	305 ML	0	1	ARGENTINA,
SERA FOR PANEL REFERENCE	FOR AB VNT DETERMINATION, VACCINE MATCHING TEST, ANTIGENIC CHARACTERIZATION	5682 ML / 0 ML	0 ML	0ML	1	ARGENTINA,

4. Did your laboratory produce vaccines?

Yes

5. Did your laboratory supply vaccines to WOAHO Members?

No

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 WOAHO Standards for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
ELISA 3 ABC GIII PNAFTOSA	LEGAL DOCUMENT IF-2024-25896096-APN-DLA_SENESA. INFORME DE REVALIDACION. PANAFTOSA.

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

Yes

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

Yes

NAME OF THE NEW VACCINE DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
ASIA1 /SINDH-08/ CONFIDENTIAL STRAIN	FMD vaccine strain Asia 1/Sindh-08: immunogenicity studies in cattle and cross immunity against prevalent Asia 1 field viruses November 2023 DOI: 10.13140/RG.2.2.17308.05769 Conference: GFRA SCIENTIFIC MEETING, KAMPALA, UGANDA Lab: FMDV WOAHO REFERENCE LAB AT SENESA ARGENTINA

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

NAME OF WOA MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT	NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES
VIETNAM	2023-05-03	VIRAL ISOLATION AND GENETIC AND ANTIGENIC CHARACTERIZATION	21	21

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

Yes

NAME OF THE WOA MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
THAILAND	FMDV VACCINE CONTROL	APRIL OFFICIAL VISIT AT SENASA ARGENTINA
THAILAND	FMDV VACCINE CONTROL	DECEMBER OFFICIAL VIRTUAL MEETING WITH SENASA ARGENTINA
NEW ZEALAND	MEETING ON POSSIBLE COOPERATION ACTIVITIES WITH MPI NEW ZEALAND	SEPTEMBER VIRTUAL WEBINAR AND MEETING ON POSSIBLE SUBJECTS FOR COOPERATION

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOA Members other than the own?

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAH MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
Application of the Nagoya Protocol to veterinary pathogens: concerns for the	1 YEAR	Promote wider awareness of the Nagoya Protocol, evaluating its impacts on the regular exchange and use of biological materials collected from clinical cases which underpin FMD research	1European Commission for the Control of Foot-and-Mouth Disease (EuFMD), Rome, Italy 2Boehringer Ingelheim Animal Health, Lyon, France 3WOAH/FAO FMD Reference Laboratory Network 4Animal Health Laboratory, UMR1161 Virology, INRAE, ANSES, ENVA, Paris-Est University, Maisons-Alfort, France 5Regional Reference Laboratory for FMD in Southeast Asia, Pakchong, Thailand 6Global Foot-and-Mouth Disease Research Alliance (GFRA) 7Foot and Mouth Disease National Laboratory, Embakasi, Directorate of Veterinary Services, State Department of Livestock, Nairobi, Kenya 8Wageningen Bioveterinary Research (WBVR), Lelystad, Netherlands 9Servicio Nacional de Sanidad y Calidad Agroalimentaria (SENASA), Buenos Aires, Argentina 10Animal Health Institute (AHI), Sebeta, Ethiopia 11FAO World Reference Laboratory for FMD, The Pirbright Institute, Pirbright, United Kingdom 12Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia-Romagna, Brescia, Italy 13Transboundary Animal Disease Laboratory, Onderstepoort Veterinary Institute, Agricultural Research Council, Onderstepoort,	ARGENTINA AUSTRALIA BELGIUM BRAZIL CANADA ETHIOPIA FRANCE ITALY KENYA SOUTH AFRICA THAILAND THE

control of foot-and-mouth disease		activities, develop new epidemiologically relevant vaccines and other diagnostic tools to control the disease.	South Africa 14WOAH Reference Laboratory for FMD, Botswana Vaccine Institute, Lejara, Gaborone, Botswana 15MSD Animal Health, Boxmeer, Netherlands 16Sciensano, Scientific Direction of Infectious Diseases in Animals, Service for Exotic and Vector-borne Diseases, Brussels, Belgium 17Food and Agriculture Organization of the United Nations (FAO), Rome, Italy 18College of Veterinary Medicine, Animal Resources, and Biosecurity, Makerere University, Kampala, Uganda 19Canadian Food Inspection Agency, National Centre for Foreign Animal Disease, Winnipeg, MB, Canada 20World Organisation for Animal Health (WOAH), Paris, France 21Pan American Health Organization, Regional Office for the Americas of the World Health Organization, Rio de Janeiro, Brazil 22Biogenesis Bago, Buenos Aires, Argentina 23Viral Research Division, National Veterinary Research Institute, Vom, Nigeria 24Australian Centre for Disease Preparedness, Commonwealth Scientific and Industrial Research Organisation (CSIRO) Health and Biosecurity, Geelong, VIC, Australia	NETHERLANDS UGANDA UNITED KINGDOM
Foot-and-mouth disease virus strains isolated in Vietnam during 2010-2019: genetic characterization and antigenic relatedness to the Euro SA vaccine	2 years	Genetic and antigenic characterization of vietnamese strains during the last decade and the evaluation of cross protection with vaccines formulated with fmdv strains used in south america as vaccine strains	1 Laboratorio de Referencia OMSA Para Fiebre Aftosa, Dirección de Laboratorio Animal, SENASA, CP1640 Martínez Buenos Aires, Argentina 2 Department of Animal Health, Regional Animal Health Office (RAHO) No 6, Ho Chi Min QMW4, Vietnam 3 Biogenesis Bago, Garin, CP1619 Buenos Aires, Argentina	ARGENTINA VIETNAM
Understanding cross- reactive responses between heterologous FMD virus strains in the bovine model	2 years	Evaluation heterologous cross protection studies with different vaccine formulations	1 USDA, ARS, Plains Area Foreign Animal Disease Research Unit 40550 Route 25 Orient, New York 11957 2 Laboratorio de Referencia OMSA Para Fiebre Aftosa, Dirección de Laboratorio Animal, SENASA, CP1640 Martínez Buenos Aires, Argentina	ARGENTINA UNITED STATES OF AMERICA

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOA?H?

Yes

Research need : 1

Please type the Research need: Reduction and replacement of in vivo challenges for FMDV vaccine licence registration

Relevance for WOA?H Standard Setting, Animal Welfare, Facilitation of international collaboration,

Relevance for the Codes or Manual Manual,

Field Vaccines,

Animal Category Terrestrial,

Disease:

Foot and mouth disease

Kind of disease (Zoonosis, Transboundary diseases) Transboundary diseases,

If any, please specify relevance for Codes or Manual, chapter and title

(e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture)

Answer: FMDV Chapter 1.3.8. "Vaccines"

Notes:

Answer:

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:

Data collected from poblational immunity and absence of viral circulation active surveillance determinations. This information was sent to COSALFA meeting for year 2023 and 2024.

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:

Data collected from poblational immunity and absence of viral circulation active surveillance determinations. This information was sent to COSALFA meeting for year 2023 and 2024.

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:

2

Broad immunogenic spectrum of monovalent and trivalent foot-and-mouth disease virus vaccines containing O1 campos, A24 cruzeiro and A Argentina 2001 strains against circulating viral lineages in cattle and pigs

Viviana Malirat a, Cecilia Caldevilla b, Sabrina Cardillo b, Ana María Espinoza b, Sabrina Galdo Novo c, Ana Taffarel c, Melanie Barrios Benito c, Ingrid E. Bergmann a, Vaccine, <https://doi.org/10.1016/j.vaccine.2023.08.007>

Horsington J, Abbeloos E, Kassimi LB, Boonsuya Seeyo K, Capozzo AV, Chepkwony E, Eblé P, Galdo-Novo S, Gizaw D, Gouverneur L, Grazioli S, Heath L, Hudelet P, Hyera JMK, Illott M, King A, Lefebvre DJ, Mackay D, Metwally S, Mwiine FN, Nfon CK, Park M-K, Pituco EM, Rosso F, Simon F, Ularamu HG, Vermeij P, Vosloo W and King DP (2023) Application of the Nagoya Protocol to veterinary pathogens: concerns for the control of foot-and-mouth disease. *Front. Vet. Sci.* 10:1271434. doi: 10.3389/fvets.2023.1271434

(PDF) Application of the Nagoya Protocol to veterinary pathogens: concerns for the control of foot-and-mouth disease. Available from: https://www.researchgate.net/publication/375872075_Application_of_the_Nagoya_Protocol_to_veterinary_pathogens_concerns_for_the_control_of_foot-and-mouth_disease#fullTextFileContent [accessed May 06 2024].

b) International conferences:

1

FMD vaccine strain Asia 1/Sindh-08: immunogenicity studies in cattle and cross immunity against prevalent Asia 1 field viruses. November 2023

DOI: 10.13140/RG.2.2.17308.05769

Conference: GFRA SCIENTIFIC MEETING, KAMPALA, UGANDA

Lab: FMDV WOAHP REFERENCE LAB AT SENASA ARGENTINA

c) National conferences:

0
Análisis de la respuesta inmune heteróloga contra el virus de la Fiebre Aftosa, serotipo O

December 2023

Conference: Sociedad Argentina de Virología

Lab: FMDV WOAHP REFERENCE LAB AT SENASA ARGENTINA

Melanie Barrios BenitoMelanie Barrios BenitoMaría Cruz MiragliaMaría Cruz MiragliaSabrina Galdo NovoSabrina Galdo Novo

Perez Filgueira M

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

3
<https://www.argentina.gob.ar/senasa/programas-sanitarios/cadena-animal/bovinos-y-bubalinos/bovinos-y-bubalinos-produccion-primaria/fiebre-aftosa>

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 1

b) Seminars : 2

c) Hands-on training courses: 2

d) Internships (>1 month) 0

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
A	THAILAND	4
B	ARGENTINA	22
B	ARGENTINA	26
C	ARGENTINA	14
C	ARGENTINA	66

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO 17025	PDF	Certificado_de_acreditación.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
ELISA 3ABC	ORGANISMO DE ACREDITACION ARGENTINO
3D Q RT PCR FOR FMDV DETECTION	ORGANISMO DE ACREDITACION ARGENTINO

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

Yes

A Biosecurity commission and biosecurity specialists in an individual technical department is guaranteed. A technical service department is also responsible for technical requisites. SOP's are elaborated and all the employees comply with the requirements according to ISO 17025 and following international standard recommendations.

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
WOAH/FAO FMD Reference Laboratory Network Annual Meeting 18th Meeting in Winnipeg, Canada.	2023-10-12	Hosted by National Centre for Foreign Animal Disease (NCFAD), Winnipeg, Canada and online by video conferencing on 10th - 12th October 2023.	SPEAKER	WOAH Reference Laboratory for Foot and Mouth Disease Dirección de Laboratorio Animal, DGLyCT, SENASA, Argentina
"Importance of vaccines, diagnostics, and appropriate surveillance systems in disease control	2023-11-17	Abu Dhabi,, UAE	SPEAKER DELEGATED TO DR ANA TAFFAREL	SUCCESSFUL CONTROL OF FMDV, SOUTH AMERICAN EXPERIENCE
TAFS Roundtable "FMD vaccine quality and potency verification"	2023-11-22	Madrid, Spain	SPEAKER	Round Table
Conference: Sociedad Argentina de Virología	2023-12-23	buenos aires, Argentina	SPEAKER DELEGATED TO DR MELANIE BARRIOS	Análisis de la respuesta inmune heteróloga contra el virus de la Fiebre Aftosa, serotipo O
GFRA RESEARCH WEBINAR SERIES	2023-06-21	VIRTUAL	PARTICIPANT	Usage of Replicons to understand biological importance of variability of FMDV genome observed in nature. Dr. Lidia Lasecka-Dykes

TOR10: NETWORK WITH WOA?H REFERENCE LABORATORIES

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

Yes

24. Do you network (collaborate or share information) with other WOA?H Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS
FMDV NETWORK https://foot-and-mouth.org/Ref-Lab-Network	PARTICIPANT	15	https://foot-and-mouth.org/Ref-Lab-Network
IVRSN	PARTICIPANT	15	https://foot-and-mouth.org/Ref-Lab-Network

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS/ ORGANISING WOA?H REF. LAB.
Organización Mundial de Sanidad Animal/ Organización de las Naciones Unidas para la Alimentación y la Agricultura (OMSA/FAO) para la Fiebre Aftosa y Estomatitis Vesicular del Centro Panamericano de Fiebre Aftosa y Salud	PARTICIPANT	RESULTS REPORT PENDING	RESULTS REPORT PENDING

Pública Veterinaria ENSAYO DE APTITUD
ronda 2023 (PEP- 2023)

26. Did your laboratory collaborate with other WOA 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 WOA REFERENCE LABORATORIES
update on work to revise the Terrestrial Animal Health Code Chapter 8.8 Infection with foot-and-mouth disease virus	update on work to revise the Terrestrial Animal Health Code Chapter 8.8 Infection with foot-and-mouth disease virus	FMDV WOA NETWORK PARTNERS
Working group on OIE Terrestrial Manual FMD Chapter	support work in parallel to update the FMD Chapter in the Terrestrial Manual	WOAH collaborating Centre for validation, quality assessment and quality control of diagnostic assays and vaccine testing for vesicular diseases in Europe, and FAO Reference Centre for Vesicular Diseases Sciensano, Belgium FAO and WOA FMD Reference Laboratory, National Centre for Foreign Animal Disease National Centres for Animal Disease, Canadian Food Inspection Agency, Canada WOA FMD Reference Laboratory, French Agency for Food and, Environmental and Occupational Health & Safety (ANSES), France WOA/FAO FMD Reference Laboratory, Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna (IZSLER), Italy FAO FMD Reference Laboratory, Wageningen Bioveterinary Research, Lelystad, Netherlands FAO World Reference Laboratory (WRLFMD) and WOA FMD Reference Laboratory The Pirbright Institute Pirbright, United Kingdom WOA FMD Reference Laboratory, Foreign Animal Disease Diagnostic Lab, Plum Island Animal Disease Center (PIADC), United States of America

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

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

No

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
VIA MAIL FORMAT TECHNICAL INFORMATION	VIA E MAIL	Consultation on WOA Terrestrial Code Chapter 8.8 FMD _ inactivation of FMDV in milk
VIA MAIL FORMAT TECHNICAL INFORMATION	VIA E MAIL	PGP AND PD50 INTERPRETATION
VIA MAIL FORMAT TECHNICAL INFORMATION	VIA E MAIL	Update of FMDV chapter 3.1.8. Terrestrial Manual.

29. Additional comments regarding your report:

Yes

Due to the actual economic situation most of our participation in technical scientific events was affected during 2023, by the lack of funds and authorization of transfers, for this reason we have sent scientific works to international events but we have not participated in some of them, nor have we been able to attend international and local conferences. Additionally we have not been granted funds to make any type of publications.