

WOAH Reference Laboratory Reports Activities 2024

This report has been submitted: 23 décembre 2024 16:56

LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Foot and mouth disease
*Address of laboratory:	TALCAHUANO 1660, MARTINEZ, BUENOS AIRES, CP 1640
*Tel:	+54- 11 48.36.19.95
*E-mail address:	sgaldo@senasa.gob.ar
Website:	https://www.argentina.gob.ar/senasa/laboratorios
*Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Rodrigo Balzano Parodi MV, MSc DIRECTOR GENERAL DE LABORATORIO Y CONTROL TECNICO, DGLYCT, SENASA
*Name (including Title and Position) of WOAH Reference Expert:	Dr. Sabrina Galdo Novo, DVM,Esp, PhD COORDINATOR ANIMAL HEALTH, 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 WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
3 ABC ACTIVE SURVEILLANCE 2023 FOR EVIDENCING ABSCENCE OF VIRAL	Yes	3658	410

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CIRCULATION 3 ABC ELISA			
EITB CONFIRMATIONS FROM 3 ABC ELISA TEST	Yes	31	4
VIAA	Yes	40	0
LP ELISA FOR POTENCY VACCINE CONTROL	Yes	3979	0
VTN TEST FOR AB TITER DETERMINATION	Yes	1110	0
r1 value for vaccine matching assessment	Yes	52	0
Viral bovine epithelia adaptation	Yes	2	0
PGP for in vivo challenge registration	Yes	4	0
Direct diagnostic tests		Nationally	Internationally
SUSPECTED CASES FOR Q RT PCR DETECTION AND VIRAL ISOLATION	Yes	6	0
vp1 sequencing	No	13	20
p1 sequencing	No	4	1
cell viral isolations and amplification	Yes	59960	0

TOR2: REFERENCE MATERIAL

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

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOA 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 Member Countries	Country of recipients
GUINEA PIG COMPLEMENT	COMPLEMENT FIXATION	663/270	270	0	1	ARGENTINA,
GUINEA PIG HYPERIMMUNE SERA OF DIFFERENT FMDV STRAINS	FOR COMPLEMENT FIXATION TEST AND AS SERA OF REFERENCE	197/50	10	40	2	ARGENTINA, PARAGUAY,
RABBIT HEMOLISINE	COMPLEMENT FIXATION TEST FOR FA	97/5	5	0	1	ARGENTINA,
FMDV VIRUS	PD50 TESTS, PGP TEST, VIRUSNEUTRALIZATION					

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SUSPENSION FOR CEPARIUM MANTAINANCE	TEST, VACCINE STUDIES, GENETIC CHARACTERIZATION AND ANTIGENIC CHARACTERIZATION	59960 ml	0	0	1	ARGENTINA,
SERA FOR PANEL REFERENCE	FOR AB VNT DETERMINATION, VACCINE MATCHING TEST, ANTIGENIC CHARACTERIZATION	200 ml	00	0	1	ARGENTINA,
BOVINE ADAPTED INFECTED EPITHELIUM	AS REFERENCE REAGENT FOR VIRAL CHALLENGES	60 ML	58 ML	2 ML	2	ARGENTINA, THE NETHERLANDS,

4. Did your laboratory produce vaccines?

Yes

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

No

TOR3: NEW PROCEDURES

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

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
INOCUITY TESTING CONTROL METHOD BY QRTPCR	INOCUITY TESTING CONTROL METHOD BY QRTPCR TO BE PUBLISHED.

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?

Yes

Name of the new vaccine developed	Description and References (Publication, website, etc)
SAT 2 VACCINE	CONFIDENTIAL mid scale experinmental batch (SEE PUBLICATION AS INITIAL DOCUMENTATION OS 2024 EUFMD ALCALA MADRID SPAIN)

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

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Name of the WOA Member Country receiving a technical consultancy	Purpose	How the advice was provided
CANADA	INFORMATION ON ANTIGEN BANK	LABORATORY VISIT
UNITED STATES OF AMERICA	INFORMATION ON ANTIGEN BANK	LABORATORY VISIT
VIETNAM	TRAINING AT OMSA BSL4 REFERENCE LABORATORY	EXCHANGE OF PROPOSAL VIA OFFICIAL COMMUNICATION THROUGH THE CHANCELLERY
QATAR	TRAINING AT OMSA BSL4 REFERENCE LABORATORY	EXCHANGE OF PROPOSAL VIA OFFICIAL COMMUNICATION THROUGH THE CHANCELLERY AND WORKING PLAN THROUGH A MEMORANDUM OF UNDERTANDING

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
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	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	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 CVYVA INTA,	ARGENTINA UNITED STATES OF AMERICA

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			HURLINGHAM, BUENOS AIRES ARGENTINA.	
Animal reduction and replaceent studies	5 year	avaluation correlacion of animal replacement of in vivo studies and animal reduction	Universidad de Buenos Aires , Facultad de Ciencias Exactas Dr. Guidobuono Santiago y Laboratorio de Referencia OMSA Para Fiebre Aftosa, Dirección de Laboratorio Animal, SENASA , CP1640 Martínez Buenos Aires, Argentina	ARGENTINA
" Inoculación de ratones C57BL/6JLAE con mezclas de clones moleculares de dos virus FMDV de serotipo A2001 (A01Lc y A01NLc) para evaluación de la evolución y virulencia de poblaciones virales en plasma y órganos"	2 years	Esta propuesta plantea el intercambio científico entre el IABIMO (UEDD INTA-CONICET) y el SENASA para la realización de experimentos de evolución molecular del virus de la fiebre aftosa (FMDV) en cultivos celulares y en el modelo ratón C57BL/6 adulto. Se propone la utilización de las instalaciones de bioseguridad del SENASA en Martínez, Buenos Aires, para la ejecución de los experimentos con virus activo en colaboración con investigadores del SENASA	INTA CVYVA HURLINGHAM BUENOS AIRES ARGENTINA Y Laboratoio de Referencia OMSA Para Fiebre Aftosa, Dirección de Laboratorio Animal, SENASA , CP1640 Martínez Buenos Aires, Argentina	ARGENTINA
Evaluación de vacunas contra el Virus de la Fiebre Aftosa en el modelo murino	2 years	n el laboratorio de Inmunología y Nanobiotecnología en el Instituto de Virología e Innovaciones Tecnológicas (IVIT) (INTA-CONICET) trabajamos con el modelo murino, evaluando en el mismo la inmunidad conferida por vacunas anti-aftosa. El objetivo consiste en la evaluación de cápsides virales vacías (VLPs) quiméricas A/Argentina/2001–O1/Campos/Brazil/58, como nuevos candidatos	INTA CVYVA HURLINGHAM BUENOS AIRES ARGENTINA Y Laboratoio de Referencia OMSA Para Fiebre Aftosa, Dirección de Laboratorio Animal, SENASA , CP1640 Martínez Buenos Aires, Argentina	ARGENTINA

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vacunales contra el Virus de
la Fiebre Aftosa (VFA).

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

Yes

Research need : 1

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

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

Relevance for the Code 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: 3.1.8.

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:

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

No

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:

3

FMDV strains isolated in Vietnam during 2010-2019: genetic characterization and antigenic relatedness with Euro SA vaccine

February 2024 *Archives of Virology* 169(3)

DOI: 10.1007/s00705-024-05960-5

Phylogenetic analysis of foot-and-mouth disease virus evolution in Mar Chiquita, Argentina

April 2024 *Archives of Virology* 169(5)

DOI: 10.1007/s00705-024-06028-0

Impact of Different Foot and Mouth Disease Vaccine Schemes in Cross-Neutralization Against Heterologous Serotype O Strains in Cattle

November 2024 *Viruses* 16(11):1732

DOI: 10.3390/v16111732

b) International conferences:

2

CONTROL DE INACTIVACION VIRAL DE VACUNAS ANTIAFTOSA MEDIANTE CUANTIFICACION POR RT-qPCR. XLIV REUNIÓN CIENTÍFICA ANUAL DE LA SOCIEDAD ARGENTINA DE VIROLOGÍA 04 DE DICIEMBRE DE 2024

Taffarel A.(1); Tognon M.(1); Berteza M(1).; Lago Aladro, E (1); Ponde A(1); Bonastre, P(1); Galdo Novo S(1).

(1) Laboratorio de referencia OMSA para Fiebre Aftosa, Dirección de Laboratorio, Animal, SENASA, Martínez Buenos Aires CP1640, Argentina.

Alcalá de Henares (Madrid), Spain

29-31 October 2024

EuFMD OS24

CDV FMD VACCINE: Immunogenicity study in

swine and cross protection against prevalent

FMD viral lineages in Asia

R. Sierra^{1*}, M. Barrios², A. Fernandez Acevedo¹, A. Heredia¹, S. Galdo Novo², A. Taffarel², P. Di Tella¹

¹ Centro Diagnóstico Veterinario (CDV), Pilar, Buenos Aires, Argentina

² Servicio Nacional de Sanidad y Calidad Agroalimentaria, SENASA, Buenos Aires, Argentina

EuFMD OS24 Alcalá de Henares, Madrid, Spain 29 - 31 october 2024

NEWLY DEVELOPED SAT 2 FMD VACCINE STRAIN: IMMUNOGENICITY STUDIES IN CATTLE AND CROSS-IMMUNITY AGAINST EMERGENT

SAT 2 FIELD VIRUSES. C. Caldevilla¹, C. Malnero¹, L. Niño, R. Scian¹, P. Mejías¹, J. Filippi¹, G. Baladon¹, M. Barrios², A. Taffarel²; S.

Galdo Novo², M. Berteza², A. Carrizo², S. Cardillo¹

¹ Biogénesis Bagó S.A. Ruta Panamericana km 38.5 Garín. Buenos Aires, Argentina. ² WOA Reference Laboratory for FMDV, DGLyCT,

Servicio Nacional de Sanidad y Calidad Agroalimentaria (SENASA), Buenos Aires, Argentina.

romina.scian@biogenesibago.com

EuFMD OS24 Alcalá de Henares, Madrid, Spain 29 - 31 october 2024

c) National conferences:

1

CONTROL DE INACTIVACION VIRAL DE VACUNAS ANTIAFTOSA MEDIANTE CUANTIFICACION POR RT-qPCR. XLIV REUNIÓN CIENTÍFICA ANUAL DE LA SOCIEDAD ARGENTINA DE VIROLOGÍA 04 DE DICIEMBRE DE 2024

Taffarel A.(1); Tognon M,(1); Bertea M(1).; Lago Aladro, E (1); Ponde A(1); Bonastre, P(1); Galdo Novo S(1).

(1) Laboratorio de referencia OMSA para Fiebre Aftosa, Dirección de Laboratorio, Animal, SENASA, Martínez Buenos Aires CP1640, Argentina.

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

2

summary con vesicular disease suspected animals

<https://www.youtube.com/watch?v=1uB12BdHEPA>

information of international audits received

<https://www.youtube.com/watch?v=WcF0r-4Tw9Y>

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

No

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
3D Q RT PCR FOR FMDV DETECTION	ORGANISMO DE ACREDITACION ARGENTINO
ELISA 3ABC	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	location	Role (speaker, presenting poster, short communications)	Title of the work presented
EuFMD os24	2024-10-29	Alcala de Henares, Madrid , Spain	POSTER PRESENTATION	Newly developed SAT 2 FMD vaccine strain: Immunogenicity studies in cattle and cross-immunity against emergent SAT 2 field viruses
EuFMD	2024-10-29	Alcala de Henares, Madrid , Spain	POSTER PRESENTATION	
SAV 2024	2024-12-04	La Plata, Buenos Aires, Argentina	SPEAKER	CONTROL DE INACTIVACION VIRAL DE VACUNAS ANTIAFTOSA MEDIANTE CUANTIFICACION POR RT-qPCR
SAV 2024	2024-12-04	La Plata, Buenos Aires, Argentina	SPEAKER PRESENTATION BY DR J BIDART	ESTUDIO DE LA INMUNIDAD INDUCIDA EN MODELO MURINO POR VIRUS LIKE PARTICLES QUIMERICAS DEL VIRUS DE LA FIEBRE AFTOSA COMO CANDIDATO PARA UNA VACUNA
GFRA WEBINAR	2024-12-12	VIRTUAL	PARTICIPANT	Molecular Interplays of FMDV with the type I IFN Response: Importance of the model and potential links with viral persistence
GFRA WEBINAR	2024-11-07	VIRTUAL	PARTICIPANT	erspectives, experiences, and a suggested way forward from implementation of the AgResults FMD Vaccine Challenge Project in Eastern Africa

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GFRA WEBINAR	2024-10-08	VIRTUAL	PARTICIPANT DAIRA CASTILLO	Tackling FMD in the African Environment and Technology Development for Trade.
GFRA WEBINAR	2024-03-13	VIRTUAL	PARTICIPANT	Status of FMD vaccine availability in Africa and prospects for improved FMD control through vaccination
TAF FORUM WEBINAR	2024-05-15	VIRTUAL	SPEAKER	GOOD QUALITY VACCINE SCIENTIFIC AND TECHNICAL SUPPORT FOR FOOT AND MOUTH DISEASE VACCINE REQUIREMENTS
TAFS Conference	2024-07-29	CABA, Buenos Aires, Argentina	PARTICIPANT	Sustainable control of Foot and Mouth Disease in a Changing Environment

TOR10: NETWORK WITH WOAHA REFERENCE LABORATORIES

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

Yes

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHA REF. LABS
FMDV NETWORK https://foot-and-mouth.org/Ref-Lab-Network	PARTICIPANT	20	https://foot-and-mouth.org/Ref-Lab-Network
IVSRN	PARTICIPANT	21	https://foot-and-mouth.org/Ref-Lab-Network

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHA Reference Laboratories designated for the same pathogen during the past 2 years?

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOAHA Ref. Labs/ organising WOAHA Ref Lab
Comparación internacional prueba FMD ELISA gIII, para la detección de anticuerpos contra la proteína no estructural 3ABC utilizando el kit ELISA FMD gIII	PARTICIPANT	15	PANAFTOSA

26. Did your laboratory collaborate with other WOAHA Reference Laboratories for the same disease on scientific research projects for the

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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 WOA Terrestrial Manual FMD Chapter	DRAFTING TABLE 1 TO BE INCLUDED to update the FMD Chapter in the Terrestrial Manual	FMDV WOA NETWORK PARTNERS

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 during the past 2 years?

No

NO

TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
BIBLIOGRAFIC MATERIAL PHOTOS - VIDEOS REQUEST	BUENOS AIRES ARGENTINA	PREPARING BIBLIOGRAPHIC MATERIAL FOR WOA TERRESTRIAL MANUAL
VIA MAIL FORMAT TECHNICAL INFORMATION	VIA E MAIL	Update of FMDV chapter 3.1.8. Terrestrial Manual.

29. Additional comments regarding your report:

Yes

This report include activities done during 2024 until november the 30th.

Activities performed during December may not be included since the month has not ended

The number reported for cell viral passages and amplifacctions is equivalent to ml (militeros of viral suspension produced)