World Organisation for Animal Health

Aruna Ambagala - - CANADA

WOAH Reference Laboratory Reports Activities 2024

This report has been submitted: 1 février 2025 01:05

LABORATORY INFORMATION

***Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:**	Classical swine fever
***Address of laboratory:**	1015 Arlington Street Winnipeg, Manitoba. R3E 3M4. Canada.
***Tel:**	+12047892013
***E-mail address:**	aruna.ambagala@inspection.gc.ca
Website:	https://inspection.canada.ca/en/about-cfia/science-and-research-cfia/our-laboratories/ncfad-winnipeg
***Name (including Title) of Head of Laboratory (Responsible Official):**	Kathleen Hooper-McGrevy
***Name (including Title and Position) of WOAH Reference Expert:**	Aruna Ambagala
***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
ELISA	Yes	5043	0

NPLA	Yes	28	0
Direct diagnostic tests		Nationally	Internationally
RRT-PCR	Yes	575	169

TOR2: REFERENCE MATERIAL

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

No

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

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOAH Member Countries	Country of recipients
Baculovirus expressed CSF E2 antigen	ELISA	NCFAD	0	3 mL	1	UNITED STATES OF AMERICA,
Serum	ELISA	NCFAD	180 mL	0	1	CANADA,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH 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.)
Oral Fluids for the Early Detection of Classical Swine Fever in Commercial Level Pig Pens	Viruses. 2024 Feb 20;16(3):318. doi: 10.3390/v16030318. PMID: 38543685

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

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Name of WOAH 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
BRAZIL	2024-06-23	ELISA NPLA	18	0
BAHAMAS	2024-05-09	RRT-PCR	13	0
TRINIDAD AND TOBAGO	2024-07-14	RRT-PCR	156	0
CUBA	2024-10-05	ELISA	598	0

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

Yes

Name of the WOAH Member Country receiving a technical consultancy	Purpose	How the advice was provided
ECUADOR	Diagnostic support	Virtually
MEXICO	Assay development	Virtually
COSTA RICA	Diagnostic Support	Virtually and on site

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAH 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
Pre and post vaccination sample assessment	5 years	Extensive sample characterization	Center for Genetic Engineering and Biotechnology, Cuba.	CUBA
Characterization of CSFV Strains from Brazil	2 Years	Molecular characterization and pathotyping of CSFV strains from Brazil	Laboratório Federal de Defesa Agropecuária (LFDA-MG) - Federal Laboratory for Agriculture Defense Secretaria de Defesa Agropecuária - Agriculture Defense Secretary Ministério da Agricultura e Pecuária - Ministry of Agriculture and Livestock	BRAZIL

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

No

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:
CSFV sequence and metadata related to the samples collected from Brazil

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:

2

1. Oral Fluids for the Early Detection of Classical Swine Fever in Commercial Level Pig Pens.
Robert E, Goonewardene K, El Kanoa I, Hochman O, Nfon C, Ambagala A.
Viruses. 2024 Feb 20;16(3):318. doi: 10.3390/v16030318.
PMID: 38543685

2. Porvac® subunit vaccine induces neutralizing antibodies against all three main classical swine fever virus genotypes.
Sordo-Puga Y, Santana-Rodríguez E, Pérez-Pérez D, Méndez-Orta MK, Sardina-González T, Vargas-Hernández M, Duarte CA, Rodríguez-Moltó MP, Estrada MP, Ambagala A, Suárez-Pedroso M.
Arch Virol. 2024 Dec 17;170(1):22. doi: 10.1007/s00705-024-06198-x. PMID: 39690193.

b) International conferences:

2

1. United States Swine Health Improvement Plan (USSHIP) House of Delegates Meeting. Bloomington MN USA, September 4, 2024.
Title: Potential Utility of Aggregate Sample Types in ASF & CSF Diagnostic Applications: From Our Experience. (Kalhari Goonewardene).

2. Conference for Research Workers against Animal Diseases. CRWAD, Chicago, USA.
Title: Molecular and pathological characterization of classical swine fever virus genotype 2 strains responsible for 2013-2018 outbreak in Colombia.

c) National conferences:

1

1. Canadian Food Inspection Agency – NCFAD Scientific Sessions. January 2024.
Title: Oral fluids for the early detection of classical swine fever in commercial level pig pens. (Kalhari Goonewardene).

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

1

1. Canadian Science Centre for Human and Animal Health - Community Liaison Committee (CLC) Meeting. National Microbiology

laboratory, Winnipeg, MB, Canada. March 19 2024, Oral presentation. Presentation Title: Rope Fluid for the Early Detection of African & Classical Swine Fevers. Presenter: Aruna Ambagala.

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH 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)	
ISO17025	See attached	ASB_CTF_15579-CFIA-Certificate.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
RRT-PCR	Standards Council of Canada
Conventional PCR	Standards Council of Canada
Sequencing	Standards Council of Canada
Virus Isolation	Standards Council of Canada
NPLA	Standards Council of Canada
ELISA	Standards Council of Canada

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

Yes

The Government of Canada’s Canadian Biosafety Standard (CBS) requires that a biosecurity plan be in place for facilities that handle infectious agents. This plan details the aspects the facility has in place for the prevention of theft, misuse or intentional release of pathogens. The National Centre for Foreign Animal Disease (NCFAD) Biosecurity Plan addresses the requirements that are outlined in Section 4.1.8 of the CBS 3rd Edition, and security requirements detailed in Public Health Agency Canada (PHAC)’s Physical Security Standard for the NCFAD at the Canadian Science Centre for Human and Animal Health (CSCHAH) The NCFAD Biosecurity Plan deals with all biological pathogens, including Risk Group 2, but its focus is on those in Risk Groups 3 and 4, which pose the greatest biosecurity risk. This plan includes details on the risk assessment of biological agents, physical protection of the facility, personnel suitability/reliability, information management, pathogen accountability and inventory, and incident and emergency response measures. Work areas covered include diagnostic and research laboratory spaces in Containment Level 3 (CL3), a large animal CL3-Ag zone including post mortem suite, and higher containment laboratories, namely restricted zoonotic CL3 and CL4 labs. CL4 space

includes a CL4 large animal zone. The NCFAD Biosecurity Plan will be reviewed biennially by the Director and/or Laboratory Executive Director (LED). Ad hoc review will take place in response to incident review outcomes and related document updates such as the Biosecurity Risk Assessment or Threat Risk Assessment.

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

No

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

No

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

No

No

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

No

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
Inter-laboratory method assessment	Organizer	17	ELISA RT-PCR	BELIZE, BRAZIL, CHILE, COSTA RICA, DOMINICAN (REP.), EL SALVADOR, GUATEMALA, JAPAN, MEXICO, NICARAGUA, PANAMA, PERU,

TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
Review of WOAH Standards	Emails and virtual meetings	WOAH Terrestrial Manual: chapter on classical swine fever

29. Additional comments regarding your report:

Yes

In 2024, NCFAD could not obtain an inter-laboratory proficiency panel for CSF due to logistical challenges