

WOAH Reference Laboratory Reports Activities 2025

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Heartwater
*Address of laboratory:	CIRAD UMR ASTRE - Domaine de Duclos - Prise d'eau - 97170 Petiti Bourg
*Tel:	+590 590 25 54 47
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Website:	http://umr-astre.cirad.fr/
*Name (including Title) of Head of Laboratory (Responsible Official):	Dr Nonito Pages
*Name (including Title and Position) of WOA Reference Expert:	Valérie Rodrigues
*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 WOA Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
ELISA Indirect pan especes	No	70	447
Direct diagnostic tests			
qPCR gene PCS20	Yes	20	33

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
Serum positif de référence	ELISA indirect pan especes	produced	0	1 ml	1	SOUTH AFRICA,

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOA Members?

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.)
Indirect ELISA pan species	End of validation ongoing, will be include in the WOAHP terrestrial manual soon

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

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

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

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

Name of WOAHP 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
SOUTH AFRICA	2025-07-14	indirect pan species ELISA	414	0
SAINT LUCIA	2025-01-30	Sérological (indirect ELISA) et moléculaire detection (PCS20 gene qPCR)	66	0

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

Yes

Name of the WOAHP Member Country receiving a technical consultancy	Purpose	How the advice was provided
SAINT LUCIA	Action to be taken following serological results: organize a tick collection in the field to confirm/rule out the presence of the pathogen.	By email. Sample collection in progress.

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAHP Member Countries involved other than your country
Development of strategies to control tick-borne bacterial pathogens of livestock	48	Implementation of artificial engorgement of Amblyomma ticks	ARS-USDA	UNITED STATES OF AMERICA
Assessing the risk of Arthropod-Borne Disease in the Caribbean and the Americas (RACE Risk of Arthropod-borne diseases in the Caribbean)	60	to better understand the epidemiology of Heartwater and to assess the risk of expansion of this disease and its vector, within the Caribbean region and beyond.	ARS-USDA	UNITED STATES OF AMERICA
Guadeloupe Une Santé	36	Long-lasting immunity of an inactivated vaccine under controlled conditions in goats	EU-Région Guadeloupe	FRANCE

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

Yes

Research need : 1

Please type the Research need: Development of new vaccines against Heartwater

Relevance for WOA Disease Control,

Relevance for the Code or Manual

Field Vaccines,

Animal Category Terrestrial,

Disease:

Kind of disease (Zoonosis, Transboundary diseases) vector borne 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:

Notes:

Answer: New collaborative projects are being considered to test new formulations with vaccine potential against this disease, which threatens to spread throughout the Caribbean and the American continent and is extending on the African continent.

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:

A study was conducted on the seropositivity of several wild species in South Africa.

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

1. Dufleit V, Guerrini L, Dhune M, Viry L, Belfort A, Jacquet-Crétides L, Deddy J, Cozier J, Naves M, Arthein L, Samut T, Lecollinet S, Pezeron M, Rodrigues V, Meyer DF, Etter EMC. Prevalence of heartwater in Guadeloupe (2024): stable endemicity and evidence of spread to Les Saintes. *Ticks Tick Borne Dis.* 2025 Nov;16(6):102569. doi: 10.1016/j.ttbdis.2025.102569. Epub 2025 Nov 16. PMID: 41248612.

2. Dufleit V, Guerrini L, Dhune M, Viry L, Belfort A, Jacquet-Crétides L, Deddy J, Cozier J, Naves M, Arthein L, Samut T, Lecollinet S, Pezeron M, Rodrigues V, Meyer DF, Etter EMC. Prevalence of heartwater in Guadeloupe (2024): stable endemicity and evidence of spread to Les Saintes. *Ticks Tick Borne Dis.* 2025 Nov;16(6):102569. doi: 10.1016/j.ttbdis.2025.102569. Epub 2025 Nov 16. PMID: 41248612.

3. Downscaling local distribution of cattle over Guadeloupe archipelago: an adapted method for disaggregating census data
Dufleit Victor, Guerrini Laure, Marius Gilbert, Daniele Da Re, Etter Eric
bioRxiv 2025.05.02.651856; doi: <https://doi.org/10.1101/2025.05.02.651856>

b) International conferences:

no participation in 2025

c) National conferences:

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

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)	
ISO17025	Portée Générale Attestation d'accréditation CIRAD Guadeloupe.pdf	Portée Générale Attestation d'accréditation CIRAD Guadeloupe.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Molecular diagnosis of Heartwater by qPCR of the PCS20 gene	COFRAC

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

Yes

1. Processing of samples and waste in a Level 2 containment laboratory for local samples and Level 3 for the rest of the world. 2. Storage of samples in a sample library managed by the MiVeC Biological Resource Center.

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOA REFERENCE LABORATORIES

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

Not applicable (only WOA Reference Laboratory designated for the disease)

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

Not applicable (only WOA Reference Laboratory designated for the disease)

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

Not applicable (Only WOA Reference Laboratory designated for the disease)

seul laboratoire de référence OMSA pour la cowdriose

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?

Not applicable (only WOA Reference Laboratory designated for the disease)

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

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during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
Détection moléculaire de la cowdriose par qPCR du gène PCS20	organizer	3	diagnostic moléculaire de la cowdriose sur sang d'animal	FRANCE, ZIMBABWE,

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

No consulting has been carried out but is available if required.