WOAH Reference Laboratory Reports Activities 2023

Activities in 2023

This report has been submitted : 25 juin 2024 13:53

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Surra (Trypanosoma evansi)
Address of laboratory:	Nationalestraat 155, 2000 Antwerpen, BELGIUM
Tel.:	+32-3 247.63.71
E-mail address:	nvanreet@itg.be
Website:	www.itg.be
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Vet. Rombouts Caroline
Name (including Title and Position) of WOAH Reference Expert:	Dr. Van Reet Nick
Which of the following defines your laboratory? Check all that apply:	Research agency

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
CATT / T. evansi		76	359
Immune Trypanolysis		0	6
ELISA / water soluble extract		0	146
ELISA / RoTat 1.2 VSG		0	146
Direct diagnostic tests		Nationally	Internationally
Blood smear Giemsa		0	229

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
						AUSTRALIA, BRAZIL, BULGARIA, CHILE, CHINA (PEOPLE'S REP. OF), EGYPT, FRANCE,

CATT / T. evansi	Surra antibody detection	produced 39 268 tests	0	53 250 tests	24	GERMANY, HONG KONG, ISRAEL, ITALY, KOREA (REP. OF), MALAYSIA, MAURITANIA, MOROCCO, PHILIPPINES, QATAR, SAUDI ARABIA, SERBIA, SPAIN, SWITZERLAND, TURKEY, UNITED ARAB EMIRATES, UNITED KINGDOM,
DNA of T. evansi type B	PCR	provide 1 aliquot	0	1x 0.05 ml	1	EGYPT,
T. evansi strains	PCR	provide 14 rodent adapted T. evansi strains	0	14 x 1 ml	1	UNITED KINGDOM,
Dromedairy sera from Algeria	ELISA	Provided 300 sera from seropostive and seronegative dromedairy camels	0	300 x 0.1 ml	1	UNITED KINGDOM,

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.)
Trypanozoon-RT-qPCR	Multiplexed RT-qPCR that targets the Trypanosoma brucei repeat (TBR) sequence in combination with 18S rRNA detection. (publication in preparation)

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

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
BELGIUM	2023-12-31	CATT / T.evansi	76	0
CANADA	2023-12-31	CATT / T.evansi	4	0
CANADA	2023-12-31	Giemsa	4	0
GERMANY	2023-12-31	CATT / T.evansi	31	0
ISRAEL	2023-12-31	CATT / T.evansi	2	0
ISRAEL	2023-12-31	Giemsa	3	0
ITALY	2023-12-31	CATT / T.evansi	8	0
THE NETHERLANDS	2023-12-31	CATT / T.evansi	0	66
THE NETHERLANDS	2023-12-31	Immune Trypanolysis	0	1
NEW ZEALAND	2023-12-31	CATT / T.evansi	2	0

NEW ZEALAND	2023-12-31	Giemsa	2	0
PORTUGAL	2023-12-31	CATT / T.evansi	7	0
PORTUGAL	2023-12-31	Giemsa	5	0
SPAIN	2023-12-31	CATT / T.evansi	3	0
UNITED KINGDOM	2023-12-31	CATT / T.evansi	3	0
UNITED KINGDOM	2023-12-31	Giemsa	1	0
UNITED STATES OF AMERICA	2023-12-31	CATT / T.evansi	213	0
UNITED STATES OF AMERICA	2023-12-31	Giemsa	213	0
UNITED STATES OF AMERICA	2023-12-31	Immune Trypanolysis	0	1
SOUTH AFRICA	2023-12-31	CATT / T.evani	6	0
SOUTH AFRICA	2023-12-31	Giemsa	2	0
SOUTH AFRICA	2023-12-31	Immune Trypanolysis	0	4
SWEDEN	2023-12-31	CATT / T.evansi	15	0
THE NETHERLANDS	2023-12-31	ELISA / RoTat 1.2 VSG	0	146
THE NETHERLANDS	2023-12-31	ELISA / water soluble antigen	0	146

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
EGYPT	Request for Trypanosoma evansi DNA	email
THE NETHERLANDS	Inquiry about the testing of horses in ELISA / RoTat 1.2 and ELISA / water soluble antigen	email, zoom
THE NETHERLANDS	Inquiry about the CATT rotator	email
UNITED KINGDOM	Inquiry about the scoring system in CATT / T.evansi	email
SPAIN	Inquiry about a research project on verification of surra elimination	email
UNITED KINGDOM	Request for Trypanosoma evansi strains	email, zoom
UNITED KINGDOM	Request for dromedairy sera for validation of ELISA test	email

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

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

Yes

Research need : 1

Please type the Research need: Surra, a disease affecting animals and caused by the parasite Trypanosoma evansi, poses significant challenges to livestock health and the broader agricultural economy. The current diagnostic landscape for surra is fragmented, primarily revolving around the Card Agglutination Trypanosomiasis Test (CATT/T. evansi) and immune trypanolysis targeting the RoTat 1.2 variant antigen. Both methods have their limitations in terms of specificity, sensitivity, and practicality in field conditions. A standardized Enzyme-Linked Immunosorbent Assay (ELISA) format could significantly enhance surra detection by offering a more consistent, reliable, and easily deployable diagnostic tool. This would facilitate early detection, improve disease surveillance accuracy, and enable more effective management and control strategies. A commercialised ELISA / T. evansi could bridge the gaps between existing tests and allow research laboratories an additional method for serological diagnosis which would generate standardised results between different labs. However, further development of such a commercialised kit would require substantial funding.

Relevance for WOAH Disease Control,

Relevance for the Codes or Manual Manual,

Field Epidemiology and Surveillance, Diagnostics,

Animal Category Terrestrial,

Disease:

Surra (Trypanosoma evansi)

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

Additional keywords if needed: One keyword per entry

ELISA

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: Chapter 3.1.21. – Surra in all species (Trypanosoma evansi infection)

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:
Seroprevalence and parasitological prevalence of surra in the samples received for diagnostic testing.

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:

in preparation for 2024

b) International conferences:

c) National conferences:

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

1
Internal dissemination of results

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

Yes

a) Technical visit : 0

b) Seminars : 0

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

C	TURKEY	2

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
EN ISO/IEC 17025:2017	PDF	147-TEST.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
CATT / T.evansi	BELAC
Giemsa for microscopy	BELAC

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

Yes

Cultivation of T. evansi in rodents is described in the biosafety procedure: ITG BWPD-01

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?

Yes

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS
WOAH Non-Tsetse Transmitted Animal Trypanosomoses Network	To create awareness on NTTAT as high impact neglected veterinary diseases To develop tools that enhance countries' capacity for surveillance of the NTTAT in view of improved disease reporting To foster collaborative research on identified topics To respond to needs for scientific evidence as expressed by endemic countries and/or organisations engaged in NTTAT control To fill gaps in knowledge on disease epidemiology, pathogenesis, drug efficacy, vaccines, modes of transmission, reservoir hosts and vector control.	4	RL for Dourine Dr. Laurent Hebert ANSES, France E-mail: Laurent.hebert@anses.fr RL for Surra Prof. Noboru Inoue National Research Center for Protozoan Diseases, Obihiro University of Agriculture and Veterinary Medicine E-mail: ircpmi@obihiro.ac.jp Dr. Keisuke Suganuma E-mail:k.suganuma@obihiro.ac.jp RL for trypanosomoses (tsetse-transmitted) Dr. Marc DESQUESNES CIRAD-IRD, FRANCE E-mail: marc.desquesnes@cirad.fr

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

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?

No

TOR12: EXPERT CONSULTANTS

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

Yes

KIND OF CONSULTANCY	Location	SUBJECT (FACULTATIVE)
ad hoc Group	Paris	surra and dourine

29. Additional comments regarding your report:

No