WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 15 février 2023 15:57

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Rift Valley fever
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Website:	https://umr-astre.cirad.fr/
Name (including Title) of Head of Laboratory (Responsible Official):	VACHIERY Nathalie
Name (including Title and Position) of WOAH Reference Expert:	CETRE-SOSSAH Catherine
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
ELISA IgG	Yes	47	120
ELISA IgM	Yes		82
Direct diagnostic tests		Nationally	Internationally
RTqPCR	Yes		459
Partial sequencing	Yes		

			4
Full sequencing	Yes		1

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
Standard RVF positive goat serum	ELISA	produced		1 ml	10	Africa

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAH Members?

Not applicable

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 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
GABON	2022-01-06	RTqPCR	434	
GABON	2022-11-04	ELISA IgG	114	
SOUTH AFRICA	2022-01-06	ELISA IgM	6	

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
SUDAN	RVF training	Email Exchanges
BURUNDI	RVF vaccine production and training offers	Email Exchanges
CHAD	Possibility of collaboration with IRED for capacity building in animal disease diagnostic	Email exchanges

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
Study of the mechanisms of neuropathology associated with Rift Valley Fever virus infection Rift Valley fever virus (NEURORIFT)	3 years	Study of neuropathology associated with Rift Valley Fever virus infection with humans and ruminants RVFV strains from Mayotte and Mauritania respectively	INSERM, UMR PCCEI, Montpellier, France	FRANCE
Impact of genetic diversity of Rift Valley fever virus on its replicative capacity	3 years	Investigate the genetic diversity of Rift Valley fever virus in order to adapt prevention and control tools	INRAE, UMR IVPC, Lyon, France	FRANCE
Epidemiological and socio-economic status of Rift Valley fever (RVF) in Burundi	3 years	Investigate the socio-economic status of Rift Valley fever (RVF) in Burundi	LNV, Bujumbura, Burundi	BURUNDI
WOAH twinning LNERV-CIRAD	2 years	2 years Support LNERV to become regional ref lab for RVF	ISRA-LNERV	SENEGAL
WOAH twinning LCV-CIRAD	2 years	Support LCV to become regional ref lab for RVF	LCV	MALI
RFOROA One health	1 year	Diagnostic supportIRED, Smithsonian Institute	IRED, Smithsonian Institute	CHAD

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:
1) development of a rapid Diagnostic test to detect 2)RVF genetic diversity and evolution of RVFV genotype in West Africa;3) quality of RVFV sequence data published

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:
1) development of a rapid Diagnostic test to detect 2)RVF genetic diversity and evolution of RVFV genotype in West Africa;3) quality of RVFV sequence data published

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:

[22-01] Barry Y, Elbara A, Bollahi MA, Ould El Mamy AB, Fall M, Beyit AB, Khayar MS, Demba BA, Limine Haki ML, Faye O, Plee L, Bonbon E, Doumbia B, Arsevska E, Cetre-Sossah C. 2022. Rift Valley fever, Mauritania, 2020: Lessons from a one health approach. One Health 15. 100413. https://doi.org/10.1016/j.onehlt.2022.100413

[22-02] Seck I, Lo MM, Fall AG, Diop M, Ciss M, Cêtre-Sossah CB, et al. 2022. Identification of drivers of Rift Valley fever after the 2013–14 outbreak in Senegal using serological data in small ruminants. PLoS Negl Trop Dis 16(2): e0010024.https://doi.org/10.1371/journal.pntd.0010024

b) International conferences:

12th International ESVV Congress, 20-23 September, 2022, Ghent, Belgium. Impact of genetic diversity of the Rift Valley Fever virus, from the field isolates to a genetic determinant
Association of Institutions for Tropical Veterinary Medicine (AITVM), the Society for Tropical Veterinary Medicine (STVM) virtual event, Tuesday 17 May 2022. Investigation of the inflammatory response induced by a Rift Valley fever infection (RVF) with a specific focus on the central nervous system (CNS) and Impact of genetic diversity on the replication capacity of the Rift Valley Fever virus

c) National conferences:

Journées Françaises de Virologie, Strasbourg, France.11-12 April 2022. Etude des mécanismes inflammatoires associés à l'infection du système nerveux central humain par le virus de la fièvre de la vallée du Rift (vFVR),

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

https://umr-astre.cirad.fr/

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 :

b) Seminars : 2+38+40

c) Hands-on training courses: 2

d) Internships (>1 month)

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	Senegal	2
c	Burundi	12

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO 17025v2017		COFRAC Accreditation Certificate N° 1-2207 rev.15.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
ELISA, PCR	COFRAC

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

Yes

All efforts are being made to work under biosafety level 3 containment facilities in Montpellier and under biosafety level 2 containment under dedicated safe hood cabinet wherever it is available. Personal equipment (dedicated laboratory coat, gloves, masks, glasses) are being used. Senegalese and French rules are followed up. Transport of biological materials considered as infectious substances by air are done according to the international regulation's guidelines developed by the national regulations, ICAO/IATA/CITES* regulations, through an air carrier company from the country where the samples are collected to CIRAD (Montpellier, France) and vice versa. The reference laboratory is used to receive and send infectious animal substances by air and has persons dedicated to the management of these shipments that are fully aware of the relevant regulations and of the proper process (identification, categorization, packaging, marking, labelling, documenting and refrigerating). When the candidate laboratory will intend to send infectious animal samples, contact will be made with the person in charge to make the shipment and written procedures and assistance will be given. Briefly, the IATA dangerous goods regulation indicate for the packaging instruction 602 for the shipment to arrive in good condition and to present

no hazard to persons or to animals is the following: the package must include • A inner packaging comprising, watertight primary receptacle, a watertight secondary packaging • A list of the content placed between the secondary and the outer packaging • A rigid outer packaging of adequate strength for its capacity, weight and intended use. A special packaging Division 6.2 Infectious Substances must be used and assigned to UN2814 or UN2900 and the words of "Suspected Category A Infectious substances" must be shown.

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

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

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/ PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS/ ORGANISING WOAH REF. LAB.
Serology IgG and IgM	Participant	4	Participating WOAH RL

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?

Yes

TITLE OF THE PROJECT OR CONTRACT	SCOPE	NAME(S) OF RELEVANT WOAH REFERENCE LABORATORIES
Update of the Code and Terrestrial Manual	Review and update of the WOAH Code and Terrestrial Manual	ARC-OVI, Onderstepoort, South Africa
ELISA IgM serological method WAHO lab for RVFV	Exchange on the sensitivity/specificity of ELISA IgM RVFV method	ARC-OVI, Onderstepoort, South Africa

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)
Adhoc meetings online	Adhoc meetings online	Adhoc meetings online

29. Additional comments regarding your report: