

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-03-01 10:33:31

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Animal trypanosomoses of African origin
Address of laboratory:	Campus international de Baillarguet TA A-17 / G 34398 Montpellier Cedex 5 FRANCE
Tel.:	+33-(0)4 67 59 37 24
Fax:	+33-(0)4 67 59 37 98
E-mail address:	marc.desquesnes@cirad.fr
Website:	https://umr-intertryp.cirad.fr/presentation
Name (including Title) of Head of Laboratory (Responsible Official):	Thierry Lefrançois, Directeur du département CIRAD-Bios
Name (including Title and Position) of OIE Reference Expert:	Marc Desquesnes, DVM, PhD, HDR, chercheur, coordonnateur de projets de recherche
Which of the following defines your laboratory? Check all that apply:	Other: EPIC

ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards

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 OIE Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
ELISA T. vivax	oui	0	703
ELISA T. brucei	oui	0	392
ELISA T. congolense	oui	0	392
ELISA T. evansi	oui	0	0
CATT T. evansi	oui	0	0
PCR T. vivax TVW	oui	0	0
PCR Trypanozoon TBR	oui	0	394
PCR T. congolense (TCS, TCK, TCF)	oui	0	395
PCR T. evansi	oui	0	0
PCR autres Trypanosoma spp	non	0	0
Direct diagnostic tests		Nationally	Internationally
Examen frottis Giemsa	oui	0	393
Examen direct sang frais	oui	0	0
HCT (test de Woo)	oui	0	0
culture sur rongeurs	oui	0	0
Séparation DE52	oui	0	0

**ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards.
To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.**

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
antigènes T. vivax	ELISA T. vivax	produit	0	0,715	1	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
antigènes T. congolense	ELISA T. congolense	produit	0	0,715	1	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
antigène T. brucei	ELISA T. brucei	produit	0	0,715	1	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

Yes

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

Name of the new test or diagnostic method or vaccine developed	Description and References (Publication, website, etc.)
Lyophilisation des antigènes et sérums de références pour les ELISA trypanosomes et déshydratation des échantillons pour faciliter la diffusion des réactifs et l'expédition des échantillons de diagnostic	Manuscrit en préparation; Description sur : https://www.oie.int/fileadmin/Home/eng/Support_to_OIE_Members/docs/pdf/A16-REC-COMPENDIUM_PROTOCOLES_TRYPANO-En.pdf

ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
BURKINA FASO	courant 2020	0	311
GUINEA	courant 2020	0	393
THAILAND	courant 2020	122	0

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
EGYPT	caractérisation moléculaire de trypanosomes des dromadaires	par email
IRAN	caractérisation moléculaire de trypanosomes des chiens	par email

ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
Epidémiologie de la trypanosomose humaine et animale en Guinée »	1 an	Connaitre la circulation des trypanosomes humains chez l'homme et l'animal	Laboratoire national	GUINEA

ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases

11. Did your Laboratory collect epizootiological data relevant to international disease control?

No

If the answer is no, please provide a brief explanation of the situation:
pas de situations nouvelles détectées

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

No

If the answer is no, please provide a brief explanation of the situation:
pas de données nouvelles à analyser

**13. What method of dissemination of information is most often used by your laboratory?
(Indicate in the appropriate box the number by category)**

a) Articles published in peer-reviewed journals: 7

1. Camoin M, Kocher, A, Chalermwong, P, Yangtara, S, Kamyngkird, K, Jittapalapong, S and Desquesnes M (2019). The indirect ELISA *Trypanosoma evansi* in equids: optimisation and application to a serological survey including racing horses, in Thailand." *BioMed Research International* Article ID 2964639 | 12 pages | <https://doi.org/10.1155/2019/2964639> ;

2. Denphum Wongthangsiri, Marc Desquesnes, Sathaporn Jittapalapong, Theeraphap Chareonviriyaphap (2019). Redescription and iconography of *Tabanus striatus* (Diptera: Tabanidae) a common livestock pest and mechanical vector of *Trypanosoma evansi* in Asia; *ANRES*, 53: 320-326. <https://li01.tci-thaijo.org/index.php/anres/article/view/229898/156475>

3. Desquesnes M, Bouhsira E, Chalermwong P, Drosne L, Duvallet G, Franc M, Gimonneau G, Grimaud Y, Guillet P, Himeidan Y, Jacquiet P, Jittapalapong S, Karanja W, Liénard E, Onju S, Ouma J, Rayaisse J-B, Masméatathip R, Salou E, Shah V, Shukri S, Thaisungnoen K (2019). The Multi Targets Method (MTM): an innovative strategy for the control of biting flies as vectors. 'Ecology and Control of Vector-borne Diseases' (ECVD), Volume 6. accepted.

4. Dobigny G, Gauthier P, Houéméno G, Dossou HJ, Badou S, Etougbétché J, Tatard C, Truc P. 2019. Spatio-temporal survey of small mammal-borne *Trypanosoma lewisi* in Cotonou, Benin, and the potential risk of human infection. *Infect Genet Evol.* November. pii S1567-1348(19)30185-6, doi.org/10.1016/j.meegid.2019.103967.

5. Kamyngkird, K., Chalermwong, P., Saechan, V., Kaewnoi, D., Desquesnes, M. & Ngasaman, R. (2020) Investigation of *Trypanosoma evansi* infection in bullfighting cattle in Southern Thailand. *Vet World* 13(8), 1674-1678. DOI: 10.14202/vetworld.2020.1674-1678.

6. Sathaporn Onju, Kornkanok Thaisungnoen, Rongthip Masméatathip, Gérard Duvallet, Marc Desquesnes. Comparison of a reference blue cotton fabric and four polyester blue fabrics to attract hematophagous flies in cattle farms in Thailand 2020, *Journal of Vector Ecology* Vol. 45, no 2.

7. Verney M, Grey F, Lemans C, Géraud T, Berthier D, Thévenon S, Rincé A, Hans A, Morrison L, Hébert L. (2020). Molecular detection of 7SL-derived small RNA is a promising alternative for trypanosomosis diagnosis. *Transbound Emerg Dis.* 2020 Jul 20. doi: 10.1111/tbed.13744

b) International conferences: 5

1. Desquesnes M, Bouhsira E, Chalermwong P, Drosne L, Duvallet G, Franc M, Gimonneau G, Grimaud Y, Guillet P, Himeidan Y, Jacquiet P, Jittapalapong S, Karanja W, Liénard E, Onju S, Ouma J, Rayaisse J-B, Masméatathip R, Salou E, Shah V, Shukri S, Thaisungnoen K (2019). The Multi targets method, an innovative strategy for the control of biting flies as vectors. Oral communication at the Fifth annual meeting of the OIE Network on Non Tsetse Transmitted Animal Trypanosomes (NTTAT), OIE, Paris, 27 June 2019.

2. Desquesnes, M., Onju, S., Chalermwong, P., Bouhsira, E., Drosne, L., Duvallet, G., Franc, M., Gimonneau, G., Grimaud, Y., Guillet, P., Himeidan, Y., Jacquiet, P., Jittapalapong, S., Karanja, W., Liénard, E., Ouma, J., Rayaisse, J.B., Masméatathip, R., Shah, V, Shukri, S & Thaisungnoen, K., Salou E (2019) Control of hematophagous flies with a "Multi Target Method " using insecticide incorporated screens : a proof of concept ; communication at the 35th general conference of the ISCTRC 23-27 Sept 2019, Abuja, Nigeria.

3. Salou E., Rayaisse JB, Gimonneau GC, Jacquiet P, Solano P et Desquesnes M (2019) Innovative tools in the control of Palapalis group tsetse : plastic screens ; communication at the 35th general conference of the ISCTRC 23-27 Sept 2019, Abuja, , Nigeria.

4. Truc P. Rodent-borne *Trypanosoma lewisi* in Cotonou: a way to track human cases. Oral communication at the Fifth annual meeting of the OIE Network on NTTAT, OIE, Paris, 27 June 2019.

5. Truc P, Gauthier P, Tatard C, Garba M, Rossi JP, Dossou HJ, Etougbétché J, Badou S, Houéménou G, Cœur d'Acier A, Dobigny G (2019). la zoonose atypique à Trypanosoma lewisi et son risque de transmission au Niger, Nigeria et Bénin. XXVe Actualités du Pharo 2019, Parc du Pharo, Marseille, France.

c) National conferences: 2

1. P Truc, Journées de la Société de Pathologie Exotique, 28-29 mai 2019 à Paris sur le thème « les rongeurs en pathologie exotique ».

2. P. Truc, Membre invité du réseau OIE/NTTAT (trypanosomoses animales non transmises par les tsé-tsé) depuis 2015. Responsable de l'axe « Zoonoses ».

d) Other:

(Provide website address or link to appropriate information) 0

ToR 7: To provide scientific and technical training for personnel from OIE Member Countries

To recommend the prescribed and alternative tests or vaccines as OIE Standards

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

Yes

a) Technical visits: 0

b) Seminars: 1

c) Hands-on training courses: 1

d) Internships (>1 month): 2

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	Cambodge	24
b	Cambodge	56
d	France	2

ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

15. Does your laboratory have a Quality Management System?

No

Explain Quality Management System in adoption process or currently in place

Le système de gestion de la qualité mis en place est très proche des normes ISO 17025 mais adapté aux spécificités des trypanosomes; la description détaillée des mesures a été adressée à l'OIE, constitué de la « Procédure pour le traitement de la demande et des échantillons pour le diagnostic de la trypanosomose animale dans le cadre du laboratoire de référence de l'OIE sur les trypanosomoses animales d'origine africaine » (64 pages) et du « Recueil des protocoles standardisés des techniques de diagnostic des trypanosomoses animales d'origine africaine », un document généré dans le cadre du jumelage CIRAD-CIRDES/OIE (105 pages, disponible en ligne sur le site de l'OIE) ; en outre il s'adosse sur l'accréditation du CIRAD pour la sérologie (ISO17025 COFRAC) et sur celle du laboratoire jumeau, le CIRDES pour le génotypage des glossines (ISO 17025 TUNAC); ces éléments ont été accueillis favorablement par la commission des standards biologiques de l'OIE en 2017 et sont donc considérés comme un système équivalent à l'ISO17025.

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Diagnostic sérologique	COFRAC / CIRAD
Génotypage des glossines	TUNAC / CIRDES

17. Does your laboratory maintain a "bio-risk management system" for the pathogen and the disease concerned?

No

(See *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4*)

ToR 9: To organise and participate in scientific meetings on behalf of the OIE

18. Did your laboratory organise scientific meetings on behalf of the OIE?

No

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

No

ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results

20. Did your laboratory exchange information with other OIE Reference Laboratories designated for the same

pathogen or disease?

Not applicable (Only OIE Reference Lab. designated for disease)

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

Not applicable (Only OIE Reference Lab. designated for disease)

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

Not applicable (Only OIE Reference Lab. designated for disease)

ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

No

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: <http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing> see point 1.3

ToR 12: To place expert consultants at the disposal of the OIE

24. Did your laboratory place expert consultants at the disposal of the OIE?

Yes

Kind of consultancy	Location	Subject (facultative)
révision des chapitres du code et du manuel des animaux terrestres	Par correspondance email	trypanosomoses animales d'origine africaine
révision des chapitres du code et du manuel des animaux terrestres	Par correspondance email	surra
révision des chapitres du code et du manuel des animaux terrestres	Par correspondance email	dourine

25. Additional comments regarding your report:

Dans le cadre du rapprochement entre les instituts, le présent rapport a été préparé conjointement par le CIRAD à Montpellier et à Bangkok (Université de Kasetsart) et le CIRDES, Bobo-Dioulasso, Burkina Faso.

Le recueil des méthodes de diagnostic des trypanosomes agréé par l'OIE a été publié en français et en anglais pour être diffusé auprès des laboratoires partenaires et/ou demandeurs; cet ouvrage est disponible sur le site web de l'OIE:

http://www.oie.int/nttat/Attached%20files/A16-REC-COMPENDIUM_PROTOCOLS_TRYPANO-En.pdf