

# OIE Reference Laboratory Reports Activities

## *Activities in 2021*

**This report has been submitted : 2022-01-24 16:57:11**

<b>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</b>	Nagana and Trypanosomosis (tsetse-transmitted)
<b>Address of laboratory:</b>	CIRAD (UMR InterTRyp) Campus international de Baillarguet TA A-17 / G 34398 Montpellier Cedex 5 FRANCE
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<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Thierry Lefrançois, Directeur du département CIRAD-Bios
<b>Name (including Title and Position) of OIE Reference Expert:</b>	Marc Desquesnes, DVM, PhD, HDR, chercheur, coordonnateur de projets de recherche
<b>Which of the following defines your laboratory? Check all that apply:</b>	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	339
ELISA T. brucei	oui	0	339
ELISA T. congolense	oui	0	339
ELISA T. evansi	oui	0	1
CATT T. evansi	oui	0	1
PCR T. vivax TVW	oui	0	28
PCR Trypanozoon TBR	oui	0	29
PCR T. congolense (TCS, TCK, TCF)	oui	0	28
PCR T. evansi	oui	0	2
PCR autres Trypanosoma spp	non	0	0
Direct diagnostic tests		Nationally	Internationally
Examen frottis Giemsa	oui	0	0
Examen direct sang frais	oui	0	0
HCT (test de Woo)	oui	0	311
culture sur rongeurs	oui	16	0
Séparation DE52	oui	8	8

**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
antigène T. vivax	ELISA T. vivax	produit	0	1.32mg	3	<input checked="" type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
antigène T. congolense	ELISA T. congolense	produit	0	0.715mg	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.)
ELISA indirect trypanosome spécifique chez le bovin avec des réactifs lyophilisés (antigènes et sérums de référence)	Bossard G, Millogo L, Thévenon S, Vitouley H, Bengaly Z, Desquesnes M. No more cold-chain failures, using dehydrated reagents in ELISA antibody-detection against animal trypanosomes of African origin. Vet Parasitol. 2021 Sep 4;299:109568. doi: 10.1016/j.vetpar.2021.109568

**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 2021	311	28

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
IRAN	Epidémiologie du surra chez les chiens ; détection de T. vivax ; choix de primers pour la caractérisation des infections par trypanosomes ; isolement et identification de T. equiperdum	par email
COLOMBIA	choix de primers pour la caractérisation des infections par trypanosomes, en particulier T. vivax	par email
INDONESIA	Conseils et soutien pour la gestion d'une épidémie de surra chez des chevaux, sur l'île de Sumba, Indonésie ; traitement et prévention de l'infection chez le cheval	par email
URUGUAY	Discussion et conseils sur le diagnostic sérologique de la trypanosomes à T. vivax par ELISA ; mise en contact avec le CIRDES pour obtention d'échantillons de référence	par email
INDIA	Identification de trypanosomes chez un bébé ; Trypanosoma lewisi-like, sur photos d'un frottis sanguin coloré	par email
SENEGAL	Revue bibliographique sur les TAA effectuée par les apprenants ; - Présentation publique des recherches bibliographiques effectuées par les apprenants, suivi d'échanges avec les formateurs -Cours théoriques suivis de cours pratiques au laboratoire sur les techniques courantes de diagnostic	par projection et apprentissage présentiel au laboratoire

***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
TRYPANO-2	7 mois (En cours depuis novembre 2022)	Evaluer expérimentalement le rôle épidémiologique des porcs dans la transmission de la THA	IPR; IRD; CIRAD; Services nationaux burkinabe chargés des ressources animales	BURKINA FASO

**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?

Yes

If the answer is yes, please provide details of the data collected:
Collecte de données épidémiologiques sur le terrain chez les porcs au Burkina Faso

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:
données non analysées pour le moment

**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: 4

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 (MTM): an innovative strategy for the control of biting flies as vectors. Constantianus J.M. Koenraadt, Jeroen Spitzen and Willem Takken (eds.) in Innovative strategies for vector control - Ecology and control of vector-borne diseases (ECVD) Volume 6 ; DOI 10.3920/978-90-8686-895-7\_5, © Wageningen Academic Publishers 2021 , 91-105

2) Bossard G, Millogo L, Thévenon S, Vitouley H, Bengaly Z, Desquesnes M. No more cold-chain failures, using dehydrated reagents in ELISA antibody-detection against animal trypanosomes of African origin. *Vet Parasitol.* 2021 Sep 4;299:109568. doi: 10.1016/j.vetpar.2021.109568

3) Tounkara M., A. Boulangé, M. Thonnus, F. Bringaud, A.M.G. Bélem, Z. Bengaly, S. Thévenon, D. Berthier, L. Rivière. 2021. Novel protein candidates for serodiagnosis of African animal trypanosomosis: Evaluation of the diagnostic potential of lysophospholipase and glycerol kinase from *Trypanosoma brucei*. *PLOS Neglected Tropical Diseases* 15(12): e0009985. <https://doi.org/10.1371/journal.pntd.0009985>

4) Martin Bienvenu Somda<sup>1,2\*</sup>, Jacques Kaboré<sup>1,3</sup>, Ernest Wendemanegdé Salou<sup>1,3</sup>, Dieudonné Ouattara<sup>1</sup>, Emilie Dama<sup>3</sup>, Soumaïla Pagabeleguem<sup>4,5</sup>, Sèssèya Arnaud Soha<sup>6</sup>, Issa Sidibé<sup>1,5</sup>, André Zongo<sup>7</sup>, Adrien Marie Gaston Belem<sup>2</sup>, Zakaria Bengaly<sup>1</sup>,. Optimisation d'un biomarqueur salivaire d'exposition des bovins aux piqûres de la mouche tsé-tsé basé sur une combinaison de peptides synthétiques. *REV. RAMRES - VOL.09 NUM.02.* 2021\*\* ISSN 2424-7235

b) International conferences: 1

1) Desquesnes M, Chalermwong P, Onju S, Drosne L, Thaisungnoen K, Masméatathip R, Ouma JO, Guillet P, Shah V, Grimaud Y, Rayaisse J-B+, Salou E, Gimonneau G, Shukri S, Bouhsira E, Liénard , Grisez C, Franc M, Duvallet G, Jittapalapong S & Jacquiet P (2021). A multi-target method for the control of hematophagous flies as vectors: an innovative strategy reducing the use and spread of insecticide; Presentation at the 28th conference of the World Association for the Advancement of Veterinary Parasitology; 19-22 July 2021, Dublin, Ireland.

c) National conferences: 1

Communication orale aux 8e journées de la Société de Parasitologie du Burkina Faso (Rapport de synthèse

disponible sur demande

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?

No

**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?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
<p>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 en septembre 2016, 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. En outre, un projet de certification ISO 9001 des activités de diagnostic des trypanosomes était envisagé à la suite de l'accréditation selon la norme ISO 17025 du génotypage des glossines au CIRDES</p>	<p>Certificat.pdf</p>

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 “biorisk 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)
Meeting of the ad hoc Group on diagnosis; Surra; 04/21	distanciel	Chapitres surra code terrestre
Meeting of the ad hoc Group on diagnosis; Dourine; 05/21	distanciel	Chapitres dourine code terrestre
Meeting of the ad hoc Group on diagnosis; Nagana; 06/21	distanciel	Chapitres Nagana code terrestre
Meeting of the ad hoc Group on diagnosis; 06/21	distanciel	Chapitres surra et dourine manuel et code
Revision of the Animal Trypanosomosis due to trypanosomes of African origin (ATTAO); 05/21	distanciel	Chapter on Animal Trypanosomosis due to trypanosomes of African origin (ATTAO)

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 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 en français et en anglais:

[https://www.oie.int/fileadmin/Home/fr/Support\\_to\\_OIE\\_Members/docs/pdf/A15-REC-RECUEIL\\_PROTOCOLES\\_TRYPA\\_NO-Fr.pdf](https://www.oie.int/fileadmin/Home/fr/Support_to_OIE_Members/docs/pdf/A15-REC-RECUEIL_PROTOCOLES_TRYPA_NO-Fr.pdf)

[http://www.oie.int/nttat/Attached%20files/A16-REC-COMPENDIUM\\_PROTOCOLES\\_TRYPANO-En.pdf](http://www.oie.int/nttat/Attached%20files/A16-REC-COMPENDIUM_PROTOCOLES_TRYPANO-En.pdf)

