OIE Reference Laboratory Reports Activities

Activities in 2017

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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
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Website:	https://umr-intertryp.cirad.fr/presentation
Name (including Title) of Head of Laboratory (Responsible Official):	Daniel Barthelemy, Directeur de département, CIRAD-Bios
Name (including Title and Position) of OIE Reference Expert:	Marc Desquesnes, Professeur associé, DVM, PhD, HDR, chercheur, coordinateur de projets
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	
Indirect diagnostic tests		Nationally	Internationally
ELISA T. vivax	Oui	0	89
ELISA T. brucei	Oui	0	89
ELISA T. congolense	Oui	0	89
ELISA T. evansi	Oui	1	793
CATT T. evansi	Oui	1	352
PCR T. vivax TVW	Oui	0	371
PCR Trypanozoon TBR	Oui	2	388
PCR T. congolense (TCS, TCF, TCK)	Oui	0	1306
PCR T. evansi	Oui	0	128
PCR autres	Non	2	244
Direct diagnostic tests		Nationally	Internationally
Examen de frottis Giemsa	Oui	0	84
Examen direct sang frais	Oui	0	0
HCT (test de Woo)	Oui	0	165
Culture sur rongeurs	Oui	0	24
Séparation DE52	Oui	0	1

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?

No

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 référence pour les ELISA trypanosomes	Publications en préparation
Dépôt des sérums sur papier filtre pour le diagnostic des trypanosomoses par ELISA	Publications en préparation

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
TRINIDAD AND TOBAGO	11	0	8

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
TRINIDAD AND TOBAGO	Confirmer une suspicion de trypanosomose bovine et bubaline	échanges et conseils par email
TUNISIA	Aider à la mise en place d'un réseau de veille et de contrôle sanitaire permanent des maladies prioritaires du dromadaire	échanges et conseils 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
Enquete sérologique chez le cheval	1 an	Déterminer la prévalence de la trypanosomose chez le cheval	Université de Kasetsart	THAILAND
Enquetes de prévalence chez les bovins	1 an	Déterminer la prévalence des trypanosomoses des bovins	Services vétérinaires	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

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

Yes

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: 5
1) Camoin, M., Kocher, A., Chalermwong, P., Yangtarra, S., Thongtip, N., Jittapalapong, S. & Desquesnes, M. (2017) Adaptation and evaluation of an ELISA for Trypanosoma evansi infection (surra) in elephants and its application to a serological survey in Thailand. Parasitology, 1-7. DOI: 10.1017/S0031182017001585.

2) Duvallet, G., Baldacchino, F. & Desquesnes, M. (2017) Stomoxyini (Diptera: Muscidae: Muscinae). Entomologie Médicale et vétérinaire. F R Duvallet, IRD Editions. Marseille, Versailles: 391-403.

3) Ortiz, P.A., Garcia, H.A., Lima, L., da Silva, F.M., Campaner, M., Pereira, C.L., Jittapalapong, S., Neves, L., Desquesnes, M., Camargo, E.P. & Teixeira, M.M.G. (2017) Diagnosis and genetic analysis of the worldwide distributed Rattus-borne Trypanosoma (Herpetosoma) lewisi and its allied species in blood and fleas of rodents. Infect Genet Evol. DOI: 10.1016/j.meegid.2017.09.001

4) Séré, M., S. Thévenon, AMG. Belem, T. de Meeûs. Comparison of different genetic distances to test isolation by distance between populations. Heredity.doi: 10.1038/hdy.2017.26

5) Tatard C., Garba M., Gauthier P., Hima K., Artige E., Dossou D.K.H.J., Dakare S., Genson G., Truc P., Dobigny G. (2017). Rodent-borne Trypanosoma from cities and villages of Niger and Nigeria : a special role for the invasive genus Rattus? Acta tropica 171:151-158. doi: 10.1016/j.actatropica.2017.03.027.

b) International conferences: 5
1) Dargantes, AP, Neil Anthony A. Dalangan, Marianne April A. Vicente, Shiela L. Dumuk, Joseph Rizalyndo P. Dargantes, Max Francis G. Talle & Marc Desquesnes. Melarsomine dihydrochloride (Cymelarsan®) as treatment of experimental Trypanosoma evansi infection among pigs in southern Philippines ; 8th Joint Symposium of Veterinary Research among Universities of Veterinary Medicine in East Asia and Pacific ; February 19-21, 2017 ; National Chung-Hsing University, Taichung, Taiwan

2) Tehseen1, S., Jahan1, N., Qamar2, M.F., Shahzad3, M.I. and Desquesnes4&5, M. ; Molecular identification of Trypanosoma evansi, species diversity and phenology of biting insects as potential vectors of surra in camels, Cholistan desert, Punjab, Pakistan ; 55th meeting British Society for Parasitology ; Dundee University from 2nd to 5th April 2017.

3) Kamyingkird Ketsarin1, Thianthada Pothipongsathorn3, Chalermwong Piangjai1, Chimnoi Wissnuwat1, Kengradomkij Chanya1, Inpankeaw Tawin1, Desquesnes Marc1&2 Trypanosoma evansi was found as vesicle like form in the cytoplasm of nucleated cells of horses, Sukhothai, Thailand ; 26th conference of the WAAVP, Kuala Lumpur, Malaysia, 4-8 September 2017.

4) Peylhard P., Berthier D., Flori L., Dayo G.K., Chantal I.,Thévenon S. Biological Pathways Discriminating African Trypanotolerant and Trypanosusceptible Cattle Breeds? Meeting Trypanosomatids, 04-06/12/2017, Paris.

5) Truc P. & Desquesnes M. Atypical human trypanosomoses: news and perspectives. 2nd International Conference OIE NTTAT, Antwerp 18/19 December 2017.

c) National conferences: 0

d) Other:
(Provide website address or link to appropriate information) 4
1) Baldacchino F, Desquesnes M & Duvallet G, 2017 ; Les Tabanides (Diptera : Tabanidae), 391-403 in Duvallet G, Fontenille D, Robert V (2017). Entomologie médicale et vétérinaire. IRD Editions et Quae, Marseille et Paris, 687p

2) Desquesnes, M, 2017. CHAPTER 2.4.17. Trypanosomosis (tsetse transmitted). Manual of Diagnostic tests and vaccines for terrestrial animals. OIE. Paris, France. 2: 12 pages (an update).

3) Frédéric BALDACCHINO, Marc DESQUESNES, Gérard DUVALLET, Timothy LYSYK, Steve MIHOK Veterinary importance and integrated management of Brachycera flies in dairy farms, in Pests and vector-borne diseases in the livestock industry ; Ecology and Control of Vector-borne diseases – Volume 5 – ISSN: 1875-0699, Edited by: Claire Garros, Jérémy Bouyer, Willem Takken and Renate C. Smallegange

4) Agbokounou A.M, Gbénangnon S.A, Bengaly Z., Youssao A.K., Mensah G. A., Kouinhouin B., et Hormick J.L., 2017. Columstrum immune quality of local sow breed in Benin : Growth, survival and acquisition of passive immunity in new-born piglet. African Journal of Biotechnology, vol16, 842-851.

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: 0
c) Hands-on training courses: 0
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
a	Burkina faso	1
d	Burkina Faso	1

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 certified according to an International Standard?

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 en septembre2016, 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 trypanosomosesanimales 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) ; 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.

16. Is your laboratory accredited by an international accreditation body?

Yes

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

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

Yes

(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?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
Réunion NTTAT	12/17	Anvers	Présentateur	Le réseau NAHIAT
Non Tsetse Transmitted Animal Trypanosomoses Network, 3rd Annual Meeting, 26 June 2017, OIE HQ Paris	06/12	Paris	Coordinateur associé	Update on NTTAT/OIE website

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?

Yes

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

Purpose for inter-laboratory test comparisons[1]	No. participating laboratories	Region(s) of participating OIE Member Countries
Standardisation inter-laboratoire des ELISA trypanosomes et des lectures de frottis de trypanosomes (répétabilité et repoductibilité inter-techniciens et inter-laboratoire)	1	☒Africa ☐Americas ☐Asia and Pacific ☐Europe ☐Middle East

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?

No

25. Additional comments regarding your report:

Le programme de jumelage CIRAD-CIRDES/OIE s'est achèvé le 31 décembre 2017, après 6 années d’une collaboration étroite entre le CIRAD et le CIRDES pour les activités de laboratoire de référence de l'OIE sur les trypanosomoses animales d'origine Africaine. Dans ce cadre, 4 formations collectives ont été organisées au CIRDES au profit du CIRDES et de ses laboratoires partenaires (pays membres du CIRDES), 4 séjours de techniciens ou chercheurs du CIRDES ont été organisés au CIRAD, la standardisation inter-laboratoire des méthodes de diagnostic a été effectuée, des méthodes de déshydratation des réactifs, des échantillons de référence et des échantillons de terrain ont été évaluées et validées, qui permettent de faciliter les échanges internationaux ; un recueil des méthodes de diagnostic des trypanosomes a été publié en français et en anglais pour être diffusé auprès des laboratoires partenaires et/ou demandeurs. De plus, avec les contributions de l’IRD et du CIRAD, le CIRDES a obtenu le co-financement d’une unité de production d’azote liquide permettant de sécuriser la chaine du froid et la conservation des souches de référence de trypanosomes au CIRDES. Il est souhaitable que le CIRAD et le CIRDES puissent continuer ce travail commun qui garantit la fourniture et la qualité du diagnostic international des trypanosomoses animales d’origine africaine, mais également d’assurer une recherche conjointe permettant l’évolution et le progrès continue des méthodes, tant sur le plan du diagnostic que sur ceux du contrôle des parasites et de leurs vecteurs. Le présent rapport est élaboré conjointement par le CIRAD et le CIRDES.