

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-20 15:50:42

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Leptospirosis
Address of laboratory:	Meibergdreef 39 1105 AZ Amsterdam THE NETHERLANDS
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Website:	http://leptospira.amc.nl/leptospira-library/
Name (including Title) of Head of Laboratory (Responsible Official):	Marga G.A. Goris PhD, Head OIE and National Collaborating Centre for Reference and Research on Leptospirosis, Academic Medical Centre, Department of Medical Microbiology
Name (including Title and Position) of OIE Reference Expert:	Marga Goris
Which of the following defines your laboratory? Check all that apply:	Academic

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
Microscopic Agglutination Test	yes	566	99
IgM ELISA	no	712	
Ig Total ELISA	no	712	
Direct diagnostic tests		Nationally	Internationally
Culture	yes	478	
PCR	yes	853	

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
Rabbit Reference Sera	MAT ELISA IFAT	produced	0	267	8	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East
Monoclonal antibodies	MAT ELISA IFAT	produced	0	11.5	3	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Leptospira strains	MAT	provide	1	80	11	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East
EMJH culture media (litres)	MAT Culture	produced	3	42	6	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" 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.)
Real time PCR with internal control	Ahmed, AA, Goris, MGA & Meijer, MC 2020, 'Development of lipL32 real-time PCR combined with an internal and extraction control for pathogenic <i>Leptospira</i> detection', PLoS ONE, vol. 15, no. 11 November, e0241584. https://doi.org/10.1371/journal.pone.0241584

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?

No

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

No

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?

No

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:
Due to Covid-19 situation some research is temporarily stopped

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

Yes

If the answer is yes, please provide details of the data collected:

Papers are published about research in Thailand and Spain

**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: 8

Altheimer K, Jongwattapanisan P, Luengyosluetchakul S, Pusoonthornthum R, Prapasarakul N, Kurilung A, Broens EM, Wagenaar JA, Goris MGA, Ahmed AA, Pantchev N, Reese S, Hartmann K. *Leptospira* infection and shedding in dogs in Thailand. *BMC Vet Res*. 2020 Mar 17;16(1):89. doi: 10.1186/s12917-020-2230-0. PMID: 32178664; PMCID: PMC7077098.

Murillo A, Cuenca R, Serrano E, Marga G, Ahmed A, Cervantes S, Caparrós C, Vieitez V, Ladina A, Pastor J. *Leptospira* Detection in Cats in Spain by Serology and Molecular Techniques. *Int J Environ Res Public Health*. 2020 Mar 2;17(5):1600. doi: 10.3390/ijerph17051600. PMID: 32121670; PMCID: PMC7084519.

Ahmed AA, Goris MGA, Meijer MC. Development of lipL32 real-time PCR combined with an internal and extraction control for pathogenic *Leptospira* detection. *PLoS One*. 2020 Nov 2;15(11):e0241584. doi: 10.1371/journal.pone.0241584. PMID: 33137154; PMCID: PMC7605690.

Krijger IM, Ahmed AAA, Goris MGA, Cornelissen JBWJ, Groot Koerkamp PWG, Meerburg BG. Wild rodents and insectivores as carriers of pathogenic *Leptospira* and *Toxoplasma gondii* in The Netherlands. *Vet Med Sci*. 2020 Aug;6(3):623-630. doi: 10.1002/vms3.255. Epub 2020 Mar 5. PMID: 32134214; PMCID: PMC7397885.

Nally JE, Ahmed AAA, Putz EJ, Palmquist DE, Goris MGA. Comparison of Real-Time PCR, Bacteriologic Culture and Fluorescent Antibody Test for the Detection of *Leptospira interrogans* in Urine of Naturally Infected Cattle. *Vet Sci*. 2020 May 15;7(2):66. doi: 10.3390/vetsci7020066. PMID: 32429076; PMCID: PMC7356886.

Murillo A, Goris M, Ahmed A, Cuenca R, Pastor J. Leptospirosis in cats: Current literature review to guide diagnosis and management. *J Feline Med Surg*. 2020 Mar;22(3):216-228. doi: 10.1177/1098612X20903601. PMID: 32093581.

de Vries SG, van Eekeren LE, van der Linden H, Visser BJ, Grobusch MP, Wagenaar JFP, Goris MGA, Goorhuis A. Searching and finding the hidden treasure: Rickettsial disease among Dutch international travelers - a retrospective analysis. *Clin Infect Dis*. 2020 Jan 30:ciaa091.

Philip N, Bahtiar Affendy N, Ramli SNA, Arif M, Raja P, Nagandran E, Renganathan P, Taib NM, Masri SN, Yuhana MY, Than LTL, Seganathirajah M, Goarant C, Goris MGA, Sekawi Z, Neela VK. *Leptospira interrogans* and *Leptospira kirschneri* are the dominant *Leptospira* species causing human leptospirosis in Central Malaysia. *PLoS Neglected Tropical Diseases* 2020, vol.14, no. 3

b) International conferences: 0

c) National conferences: 0

d) Other:

(Provide website address or link to appropriate information) 1

<https://leptospira.amc.nl/leptospira-library/leptospira-strains/>

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)
NEN-EN-ISO 15189:2012	20180220 Certificate ISO 15189.pdf
NEN-EN-ISO 15189:2012	M178-sce prolonged.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Microscopic Agglutination Test	Raad voor Accreditatie (RvA)
ELISA	Raad voor Accreditatie (RvA)
PCR	Raad voor Accreditatie (RvA)
Culture	Raad voor Accreditatie (RvA)
Typing	Raad voor Accreditatie (RvA)

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?

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?

No

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?

Yes

Purpose of the proficiency tests: ¹	Role of your Reference Laboratory (organiser/participant)	No. participants	Participating OIE Ref. Labs/organising OIE Ref. Lab.
MAT proficiency testing	Organizer	106	all OIE Reference Laboratories

¹ validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

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?

Yes

Title of the project or contract	Scope	Name(s) of relevant OIE Reference Laboratories
Serotyping of leptospires with monoclonal antibodies	Serological typing of Leptospiral isolates	National Veterinary Services Laboratories USDA, APHIS, Veterinary Services P.O. Box 844 Ames, Iowa 50010 UNITED STATES OF AMERICA

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
MAT, ELISA and PCR interlaboratory comparison study	4	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> 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:

Due to Covid-19 restrictions visits to our laboratory and vv were not possible in 2020. We had a lot of online communication however.