OIE Reference Laboratory Reports Activities

Activities in 2021

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Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Campylobacteriosis
Address of laboratory:	PO Box 80.165, 3508 TD Utrecht, THE NETHERLANDS
Tel.:	+31 302534376
Fax:	
E-mail address:	j.wagenaar@uu.nl
Website:	http://www.uu.nl/faculty/veterinarymedicine/nl/
Name (including Title) of Head of Laboratory (Responsible Official):	Prof. Jaap A. Wagenaar, DVM, PhD, Dipl ECVM
Name (including Title and Position) of OIE Reference Expert:	Prof. Jaap A. Wagenaar, DVM, PhD, Dipl ECVM
Which of the following defines your laboratory? Check all that apply:	Governmental 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	
Indirect diagnostic tests		Nationally	Internationally
no	no	0	0
Direct diagnostic tests		Nationally	Internationally
Culture (primary or as isolate)	yes	654	0
nahE real-time PCR (van der Graaf et al., 2013)	yes	16	0
Whole Genome Sequencing (WGS)	yes	31	0
Maldi-Tof	yes	611	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?

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?

No

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

No

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?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
UNITED KINGDOM	Advice and assistance for culturing of novel Campylobacter infans species	E-mail and shipment of strains
POLAND	Advice and assistance for culturing, isolation and identification of Campylobacter species	E-mail and shipment of strains
INDIA	Advice and assistance for culturing, isolation and identification of Campylobacter fetus	E-mail and shipment of lab materials (primers and filters)
SPAIN	Advice on Campylobacter fetus antimicrobial resistances	E-mail
LUXEMBOURG	Advice for culturing, isolation and identification of Campylobacter fetus	E-mail
INDONESIA	Advice for culturing, isolation and identification of Campylobacter fetus	E-mail and online meetings

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
Campylobacter in the poultry meat production chain	ongoing	Descriptive epidemiology of Campylobacter in the poultry production chain in Sri Lanka	Vet School in Peradeniya	SRI LANKA
Bioinformatics approach and molecular analysis to identify Campylobacter fetus subspecies markers	ongoing	Study the host specificity and virulence of C. fetus subspecies	Universitas Gadjah Mada, Yogyakarta (UGM)	INDONESIA
BB LITVET-UU Collaborative Work For Implementing A New Diagnostic Strategy To Study Campylobacter Fetus In Cattle In Indonesia	ongoing	Investigation of a new diagnostic strategy for Campylobacter fetus isolation	INDONESIAN RESEARCH CENTRE FOR VETERINARY SCIENCE (IRCVS), Bogor	INDONESIA
One Health Genomic and Metagenomic Approaches to Campylobacter and Food Safety	ongoing	Study the role of plasmids in the evolution of Campylobacter spp. and emergence of AMR	Quadram Institute in Norwich	UNITED KINGDOM
One Health Genomic and Metagenomic Approaches to Campylobacter and Food Safety	ongoing	Study the role of plasmids in the evolution of Campylobacter spp. and emergence of AMR	Massey University	NEW ZEALAND

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:
The lab did not collect this information as it is the responsibility of the submitting country.

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:
The lab did not report as this is the responsibility of the submitting country.

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
Mederos A, Galarraga D, van der Graaf-van Bloois L, Buczinski S. Performance of bovine genital campylobacteriosis diagnostic tests in bulls from Uruguay: a Bayesian latent class model approach. Trop Anim Health Prod. 2021 Dec 30;54(1):32. doi: 10.1007/s11250-021-03039-w. PMID: 34966976; PMCID: PMC8716329.

Challenging the “gold standard” of colony-forming units - Validation of a multiplex real-time PCR for quantification of viable Campylobacter spp. in meat rinses.
Kerstin Stingl et al., Int J Food Microbiol. 2021 Dec 2;359:109417. doi:10.1016/j.ijfoodmicro.2021.109417. Epub 2021 Sep 24.

Duim B, van der Graaf-van Bloois L, Timmerman A, Wagenaar JA, Flipse J, Wallinga J, Bloembergen P, Miller WG, Zomer AL. Complete Genome Sequence of a Clinical Campylobacter Isolate Identical to a Novel Campylobacter Species. Microbiol Resour Announc. 2021 Feb 18;10(7):e00721-20.

Mughini-Gras L, Pijnacker R, Coipan C, Mulder AC, Fernandes Veludo A, de Rijk S, van Hoek AHAM, Buij R, Muskens G, Koene M, Veldman K, Duim B, van der Graaf-van Bloois L, van der Weijden C, Kuiling S, Verbruggen A, van der Giessen J, Opsteegh M, van der Voort M, Castelijn GAA, Schets FM, Blaak H, Wagenaar JA, Zomer AL, Franz E. Sources and transmission routes of campylobacteriosis: A combined analysis of genome and exposure data. J Infect. 2021 Feb;82(2):216-226.

b) International conferences: 1
Epidemics8 conference (30.11-3.12.2021)
Abstract: Anna Gamza et al., Understanding environmental pathogen transmission by combining parsimonious mathematical models and tailor-made animal experiments.

c) National conferences: 1
The Scientific Spring Meeting. Royal Dutch Society of Microbiology (KNMV) and the Dutch Society of Medical Microbiology. Arnhem, the Netherlands. 30-31 March 2021

d) Other:
(Provide website address or link to appropriate information) 2
The Reference Laboratory prepared the new version of Chapter 3.4.4. Bovine Genital Campylobacteriosis in the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (adopted May 2021).
https://www.oie.int/fileadmin/Home/eng/Health_standards/tahm/3.04.04_BGC.pdf

Institute webpage on Campylobacter fetus:
https://www.uu.nl/en/organisation/faculty-of-veterinary-medicine/veterinary-research/one-health/infection-immunity/clinical-infectiology/campylobacter-fetus

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): 1

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
Long-term training for Detection and characterization of Campylobacter fetus	Indonesia	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?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
ISO 17025	ISO_17025_2005.pdf
ISO 9001:2015	ISO_9001_2015.pdf

16. Is your quality management system accredited?

No

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?

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
Performance for culture	3	☐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:

In addition to ToR7 "Scientific and technical training":
Because of Covid most planned activities were cancelled.