

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-20 14:29:01

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Contagious agalactia
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Name (including Title) of Head of Laboratory (Responsible Official):	Commissario Straordinario Dr Salvatore Seminara
Name (including Title and Position) of OIE Reference Expert:	Guido Ruggero Loria, Director of Specialistic Diagnostic Area
Which of the following defines your laboratory? Check all that apply:	Governmental Research

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			
ELISA Mycoplasma agalactiae	Yes	441	0
Immunoblotting	Yes	115	0
Direct diagnostic tests			
Mycoplasma isolation	Yes	956	0
PCR/DGGE for small ruminant Mycoplasmas species	Yes	439	0
Histological detection of Mycoplasma lesions	Yes	32	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
Positive serum	ELISA-Serology	Internally	10	50	3	<input 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?

Yes

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.)
LAMP to detect <i>M.agalactiae</i> DNA	S. Tumino, M. Tolone, A. Parco, R. Puleio, G. Arcoleo, C. Manno, ...(2020). Validation of Loop-Mediated Isothermal Amplification (LAMP) Field Tool for Rapid and Sensitive Diagnosis of Contagious Agalactia in Small Ruminants. <i>Animals</i> 10 (3), 509. https://doi.org/10.3390/ani10030509

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
LEBANON	Training	On line training
POLAND	Training	On line training
LIBYA	Training	On line training

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
Investigating survival and persistence of <i>M.agalactiae</i> in the farm environment	4 years	Evaluation of environmental impact of <i>M.agalactiae</i>	APHA	UNITED KINGDOM

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:
Notification to National Veterinary Health authority in order to be reported at National level and OIE data base

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:
Data reported through scientific events (workshop,meetings);

**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

S. Tumino, M. Tolone, A. Parco, R. Puleio, G. Arcoleo, C. Manno, ...(2020). Validation of Loop-Mediated Isothermal Amplification (LAMP) Field Tool for Rapid and Sensitive Diagnosis of Contagious Agalactia in Small Ruminants. *Animals* 10 (3), 509. <https://doi.org/10.3390/ani10030509>

R. Puleio, S. Tumino, L. Condorelli, A. Parco, M. Tolone, A. Tamburello, ...(2020). Detection of *Mycoplasma agalactiae* by In-situ Hybridization and Characterization of Inflammatory Infiltrates by Immunohistochemistry in Sheep Udders. *Journal of Comparative Pathology* 174, 180.

G. R. Loria, L. Ruocco, G. Ciaccio, F. Iovino, R. A. J. Nicholas, S. Borrello (2020) The Implications of EU Regulation 2016/429 on neglected diseases of small ruminants including contagious agalactia with particular reference to Italy (2020) *Animals* 2020, 10, 900; doi:10.3390/ani10050900

M. Urso, S. Tumino, E. Bruno, S. Bordonaro, D. Marletta, G.R. Loria, A. Avni, Y. Shacham-Diamand, F. Priolo, S. Mirabella (2020) Ultrasensitive Electrochemical Impedance Detection of *Mycoplasma agalactiae* DNA by Low-Cost and Disposable Au-Decorated NiO Nanowall Electrodes. *ACS Appl. Mater. Interfaces* 2020, 12, 44, 50143–50151 <https://doi.org/10.1021/acsami.0c14679>

b) International conferences: 0

c) National conferences: 0

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: 0

d) Internships (>1 month): 0

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
b	Lebanon	6
b	United Kingdom	8

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)
ISO17025	Certificato di Accreditamento n. 0246.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Culture and isolation of M.agalactiae	ACCREDIA
ELISA for M.agalactiae antibody detection	ACCREDIA
RT-PCR for M.agalactiae	ACCREDIA

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
ERFAN FOR SADC REGIONScientific Cooperation workshop: Strengthening Research and Training capacity in the SADC Region	08/2020	On line	Speaker	Sharing scientific and research proposals for WG4 activities
ERFAN FOR UMA REGIONS	07/2020	On line	Speaker	Sharing scientific and research proposals for WG4 activities
REMESA JOINT PERMANENT MEETING	12/2020	On line	Speaker	Role and activities of new Palermo's Unit (STOR-REMESA)
ERFAN FOR SADC REGIONScientific Cooperation workshop: Strengthening Research and Training capacity in the UMA Region	12/2020	On line	Speaker	Identification of priorities and future projects

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?

Yes

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.
RT-PCR	Organiser-Partner	2	APHA-UK
ELISA	Organiser-Partner	4	APHA-UK; Department of Cattle and Sheep Diseases, National Veterinary Research InstitutePoland; AUT-Greece

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
Investigating survival and persistence of <i>M.agalactiae</i> (Ma) in farm environment	Monitoring the environmental impact/risk of <i>M.agalactiae</i>	APHA OIE Reference laboratory for Contagious agalactia

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
ELISA ring trial	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
ERFAN	12	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input 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:

All activities of the Reference Laboratory particularly field and training activities have been reduced or stopped by the pandemic situation.