

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-18 17:38:30

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Theileriosis
Address of laboratory:	Istituto Zooprofilattico Sperimentale della Sicilia (IZSSi), via Gino Marinuzzi 3, 90129, Palermo ITALY
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Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Salvatore Seminara, General manager Istituto Zooprofilattico Sperimentale della Sicilia
Name (including Title and Position) of OIE Reference Expert:	Alessandra Torina, PhD, Director of Serological Diagnostic Area
Which of the following defines your laboratory? Check all that apply:	Governmental

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			
Theileria annulata IFI	yes	943	0
Theileria equi IFI	yes	0	0
Theileria equi ELISA	yes	0	0
Direct diagnostic tests			
PCR Theileria annulata (30kDa surface antigen gene)	yes	650	96
PCR real time Theileria annulata (gene 18S rRNA)	no	0	96
PCR Theileria ovis (SSU rRNA gene)	no	0	0
PCR Theileria equi (merozoite antigen 1)	yes	148	0
Theileria spp. blood smears	yes	0	0
Babesia/Theileria Reverse Line Blot	yes	148	96

**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
Theileria annulata Positive Serum	IFI	Produced	96	0.0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East
Theileria equi positive serum	IFI	Produced	0.1	0.0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Theileria ovis positive control	PCR	Produced	0.6	0.0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East
Theileria equi positive control	PCR	Produced	0.2	0.0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Theileria annulata positive control	PCR	Produced	2	0.0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East
Theileria annulata negative serum	IFI	Produced	12	0.0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

Theileria annulata negative control	PCR	Produced	2	0.0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input checked="" type="checkbox"/> Middle East
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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?

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
UNITED ARAB EMIRATES	Genuary	168	168

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
SPAIN	Consultant for Spanish researchers on health implications of Hyalomma ticks	Consultation and materials provided via e-mail
ARGENTINA	Laboratory technology information on diagnostic techniques for Theileria and contacts for the internship at the center	Consultation and materials provided via e-mail
UNITED KINGDOM	survey Global Burden of Animal Disease (GBADs)	Online survey
ZIMBABWE	Laboratory technology information on diagnostic techniques for Theileria and contacts for the internship at the center	Consultation and materials provided via e-mail
UNITED KINGDOM	Survey Standard Operating Procedures for Research Integrity (SOPs4RI)	Online survey

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
OIE Twinning contract between the OIE reference network of Istituti Zooprofilattici Sperimentali (IIZZSS) in Italy (Parent Collaborating Centre) and the Abu Dhabi Food Control Authority (ADFCA), the Animal Health Centre for Diagnostic and research in Abu Dhabi - United Arab Emirates (Candidate Centre) for the establishment and development of an OIE Collaborating Centre on camel diseases.	36 months	Twinning project	Abu Dhabi Food Control Authority - ADFCA Italian IIZZSS Network	UNITED ARAB EMIRATES
OIE Twinning project Enhancing Research for Africa Network (ERFAN) meeting	36 months	Twinning project	IZS Abruzzo and Molise, South Central Africa Countries and Maghreb	
Serological Survey and Molecular Characterization of Theileria annulata in Sicilian Cattle	18 months	Serological Survey and Molecular Characterization of Theileria annulata	Instituto Agroalimentario de Aragón-IA2 (Universidad de Zaragoza-CITA), Zaragoza, Spain	SPAIN
Serological Survey and Molecular Characterization of Theileria annulata in Sicilian Cattle	18 months	Serological Survey and Molecular Characterization of Theileria annulata	Fundación ARAID, Zaragoza, Spain	SPAIN
Serological Survey and Molecular Characterization of Theileria annulata in Sicilian Cattle	18 months	Serological Survey and Molecular Characterization of Theileria annulata	Facultad de Ciencias de la Vida, Universidad Andrés Bello, Santiago, Chile	CHILE
Tickborne Haemoparasites in Dromedarian Camels in Al-Dhafra Region of Abu Dhabi, UAE	18 months	Molecular investigation on tick-borne pathogens in camels	Abu Dhabi Agriculture and Food Safety Authority (ADAFSA), Abu Dhabi Emirate, UAE	UNITED ARAB EMIRATES
Ticks infesting humans and associated pathogens: a cross-sectional study in northwest Italy	36 months	A cross-sectional study in a 3-year period (2017-2019) on tick-borne pathogens in ticks from northwest Italy	Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle D'Aosta, Turin, Italy.	ITALY

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:
Studies of Theileria spp circulation in camels and ticks from the United Arab Emirates; Study of Theileria annulata circulation in cattle of Sicilian farms

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:
El Tigani-Asil ETA, Blanda V, Abdelwahab GE, Hammadi ZMA, Habeeba S, Khalafalla AI, Alhosani MA, La Russa F, Migliore S, Torina A, Loria GR, Al Muhairi SS. Molecular Investigation on Tick-Borne Hemoparasites and Coxiella burnetii in Dromedary Camels (Camelusdromedarius) in Al Dhafra Region of Abu Dhabi, UAE. Animals (Basel). 2021 Mar 2;11(3):666. doi: 10.3390/ani11030666. PMID: 33801532; PMCID: PMC8000914. Gargano V, Blanda V, Gambino D, La Russa F, Di Cataldo S, Gentile A, Schirò G, Torina A, Millán J, Vicari D. Serological Survey and Molecular Characterization of Theileria annulata in Sicilian Cattle. Pathogens. 2021 Jan 21;10(2):101. doi: 10.3390/pathogens10020101. PMID: 33494377; PMCID: PMC7910905.

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

El Tigani-Asil ETA, Blanda V, Abdelwahab GE, Hammadi ZMA, Habeeba S, Khalafalla AI, Alhosani MA, La Russa F, Migliore S, Torina A, Loria GR, Al Muhairi SS. Molecular Investigation on Tick-Borne Hemoparasites and Coxiella burnetii in Dromedary Camels (Camelusdromedarius) in Al Dhafra Region of Abu Dhabi, UAE. Animals (Basel). 2021 Mar 2;11(3):666. doi: 10.3390/ani11030666. PMID: 33801532; PMCID: PMC8000914.

Gargano V, Blanda V, Gambino D, La Russa F, Di Cataldo S, Gentile A, Schirò G, Torina A, Millán J, Vicari D. Serological Survey and Molecular Characterization of Theileria annulata in Sicilian Cattle. Pathogens. 2021 Jan 21;10(2):101. doi: 10.3390/pathogens10020101. PMID: 33494377; PMCID: PMC7910905.

Bellato, A., Pintore, M.D., Catelan, D., ...Casalone, C., Tomassone, L. Risk of tick-borne zoonoses in urban green areas: A case study from Turin, northwestern Italy Urban Forestry and Urban Greening, 2021, 64, 127297

Tania Audino, Alessandra Pautasso, Veronica Bellavia, Valerio Carta, Alessio Ferrari, Federica Verna, Carla Grattarola, Barbara Iulini, Maria Domenica Pintore, Mauro Bardelli, Germano Cassina, Laura Tomassone, Simone Peletto, Valeria Blanda, Alessandra Torina, Maria Caramelli, Cristina Casalone, Rosanna Desiato Ticks infesting humans and associated pathogens: a cross-sectional study in a 3-year period (2017–2019) in northwest Italy Parasites and Vectors, 2021, 14(1), 136

b) International conferences: 0

c) National conferences: 1

V BLANDA, A CARUANA, S BONACCORSO, F LA RUSSA, R D'AGOSTINO, S VILLARI, G CAMMILLERI, A TORINA, V FERRANTELLI. Development of a Reverse Line Blot for simultaneous detection of Tick-Borne Pathogens in equines.

Presented at XXXI Congresso SolPa & 2021 ESDA Event, 16-19 giugno 2021, Teramo (Italy)

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: 3

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
d	Spain	1
a	Iran	1
a	France	2

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	Certificato di Accreditamento n. 0246.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
PCR Theileria annulata	ACCREDIA
IFI Theileria equi	ACCREDIA
PCR Theileria equi	ACCREDIA
Theileria spp. smears	ACCREDIA
Real Time PCR Theileria annulata	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?

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)
Update of OIE Technical Disease Cards	Palermo, Italy	Theileriosis
OIE Terrestrial Manual- update of chapter 2.4.15./new chapter on ovine theileriosis	Palermo, Italy	Ovine theileriosis
Questions on Terrestrial Code chapter on Infection with Theileria annulata, T.orientalis and T. parva	Palermo, Italy	Bovine Theileriosis

25. Additional comments regarding your report:

Due to the COVID19 pandemic, some activities have been reduced, such as exchanges of students and trainees, technical visits and seminars as well as participation in conferences and training events.