**WOAH Reference Laboratory Reports Activities 2023**

**Activities in 2023**

This report has been submitted : 27 mai 2024 15:02

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**Laboratory Information**

<table>
<thead>
<tr>
<th>Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:</th>
<th>Trichinellosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address of laboratory:</td>
<td>Department of Infectious Diseases, Istituto Superiore di Sanità, viale regina Elena 299. 00161 ROMA. Italy</td>
</tr>
<tr>
<td>Tel:</td>
<td>+390-6-49.90.2078</td>
</tr>
<tr>
<td>E-mail address:</td>
<td><a href="mailto:mariaangeles.gomezmorales@iss.it">mariaangeles.gomezmorales@iss.it</a></td>
</tr>
<tr>
<td>Website:</td>
<td><a href="https://www.iss.it/en/">https://www.iss.it/en/</a></td>
</tr>
</tbody>
</table>

**Name (including Title) of Head of Laboratory (Responsible Official):**

Professor Dr. Anna Teresa Palamara, Research Director, Head of the Department of Infectious Diseases

**Name (including Title and Position) of WOAH Reference Expert:**

Maria de los Angeles Gomez Morales, PhD, Research Director at the Department of Infectious Diseases

**Which of the following defines your laboratory?**

Check all that apply:

- Governmental

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**TOR1: DIAGNOSTIC METHODS**

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

<table>
<thead>
<tr>
<th>Diagnostic Test</th>
<th>Indicated in WOAH Manual (Yes/No)</th>
<th>Total number of test performed last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Indirect ELISA for human</td>
<td>Yes</td>
<td>Nationally: 4, Internationally: 0</td>
</tr>
<tr>
<td>Western blot for human</td>
<td>Yes</td>
<td>Nationally: 20, Internationally: 0</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artificial muscle digestion</td>
<td>Yes</td>
<td>Nationally: 32, Internationally: 0</td>
</tr>
<tr>
<td>Multiplex PCR</td>
<td>Yes</td>
<td>Nationally: 55, Internationally: 402</td>
</tr>
</tbody>
</table>

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**TOR2: REFERENCE MATERIAL**

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAH?

   - Yes

<table>
<thead>
<tr>
<th>TYPE OF REAGENT AVAILABLE</th>
<th>RELATED DIAGNOSTIC TESTING</th>
<th>PRODUCED/ IMPORTED</th>
<th>QUANTITY SUPPLIED NATIONWIDE (ML, MG)</th>
<th>QUANTITY SUPPLIED AT INTERNATIONAL LEVEL (ML, MG)</th>
<th>NAME OF BENEFICIARY WOAH MEMBER COUNTRIES</th>
</tr>
</thead>
</table>

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOAH Members?

   - Yes

<table>
<thead>
<tr>
<th>TYPE OF REAGENT AVAILABLE</th>
<th>RELATED DIAGNOSTIC TEST</th>
<th>PRODUCED/ PROVIDE</th>
<th>AMOUNT SUPPLIED</th>
<th>AMOUNT SUPPLIED INTERNATIONALLY</th>
<th>NO. OF RECIPIENT WOAH MEMBER</th>
<th>COUNTRY OF RECIPIENTS</th>
</tr>
</thead>
</table>
Maria Angeles Gomez Morales - Trichinosis - undefined

WOAH Reference Laboratory Reports Activities 2023

Trichinella spiralis infected mouse carcass
ISO 18743
Produced/ provided
5 units
7 units
7
CROATIA, ESTONIA, Germany, IRELAND, LITHUANIA, NORWAY, ROMANIA,

Trichinella spiralis crude worm extract
Indirect test
Produced/provided
0
10
2
FRANCE, GERMANY,

4. Did your laboratory produce vaccines?
No

5. Did your laboratory supply vaccines to WOAH Members?
No

**TOR3: NEW PROCEDURES**

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?
No

7. Did your laboratory validate diagnostic methods according to WOAH Standards for the designated pathogen or disease?
No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?
No

9. Did your laboratory validate vaccines according to WOAH Standards for the designated pathogen or disease?
No

**TOR4: DIAGNOSTIC TESTING FACILITIES**

10. Did your laboratory carry out diagnostic testing for other WOAH Members?
Yes

<table>
<thead>
<tr>
<th>NAME OF WOAH MEMBER COUNTRY SEEKING ASSISTANCE</th>
<th>DATE</th>
<th>WHICH DIAGNOSTIC TEST USED</th>
<th>NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT</th>
<th>NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>BULGARIA</td>
<td>2023-05-11</td>
<td>PCR</td>
<td>39</td>
<td>0</td>
</tr>
<tr>
<td>FINLAND</td>
<td>2023-11-20</td>
<td>PCR</td>
<td>73</td>
<td>0</td>
</tr>
<tr>
<td>FRANCE</td>
<td>2023-03-23</td>
<td>PCR</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>FRANCE</td>
<td>2023-09-27</td>
<td>PCR</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>ROMANIA</td>
<td>2023-10-27</td>
<td>PCR</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>SPAIN</td>
<td>2023-01-19</td>
<td>PCR</td>
<td>33</td>
<td>0</td>
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<tr>
<td>SPAIN</td>
<td>2023-01-26</td>
<td>PCR</td>
<td>17</td>
<td>0</td>
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<tr>
<td>SPAIN</td>
<td>2023-01-27</td>
<td>PCR</td>
<td>11</td>
<td>0</td>
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<tr>
<td>SPAIN</td>
<td>2023-02-16</td>
<td>PCR</td>
<td>20</td>
<td>0</td>
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<tr>
<td>SPAIN</td>
<td>2023-02-20</td>
<td>PCR</td>
<td>14</td>
<td>0</td>
</tr>
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<td>SPAIN</td>
<td>2023-02-28</td>
<td>PCR</td>
<td>35</td>
<td>0</td>
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<tr>
<td>SPAIN</td>
<td>2023-03-17</td>
<td>PCR</td>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>SPAIN</td>
<td>2023-03-20</td>
<td>PCR</td>
<td>10</td>
<td>0</td>
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<tr>
<td>SPAIN</td>
<td>2023-04-18</td>
<td>PCR</td>
<td>46</td>
<td>0</td>
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<tr>
<td>SPAIN</td>
<td>2023-05-05</td>
<td>PCR</td>
<td>9</td>
<td>0</td>
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<tr>
<td>SPAIN</td>
<td>2023-06-30</td>
<td>PCR</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SPAIN</td>
<td>2023-12-06</td>
<td>PCR</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>SPAIN</td>
<td>2023-12-21</td>
<td>PCR</td>
<td>14</td>
<td>0</td>
</tr>
<tr>
<td>SPAIN</td>
<td>2023-12-28</td>
<td>PCR</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SWEDEN</td>
<td>2023-01-19</td>
<td>PCR</td>
<td>0</td>
<td>6</td>
</tr>
<tr>
<td>SWEDEN</td>
<td>2023-11-16</td>
<td>PCR</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>SWITZERLAND</td>
<td>2023-09-07</td>
<td>PCR</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAH Member?
TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAH Members other than the own?
No

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOAH?
No

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?
Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

Epizootiological data relevant to Trichinella infection are collected in a database. The database is available at the International Commission on Trichinellosis website: https://trichinella.iss.it/

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?
Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:

Our laboratory disseminate information regarding epizootiological data under request

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

2


Marin AM, Mederle OA, Marucci G, Papovici DC, Mederle N. First Identification and Molecular Characterization of Trichinella britovi (Nematoda: Trichinellidae) from the Pine Marten (Martes martes Linnaeus, 1758) in Romania. Microorganisms. 2023 Sep 18;11(9):2339. doi: 10.3390/microorganisms11092339. PMID: 37764183
b) International conferences:

2

XVI International Conference on Trichinellosis, held in Belgrade, Serbia, August 30th to September 1st

XVIII Annual Workshop of the National Reference Laboratories for Parasites, held at the Istituto Superiore di Sanità, Roma, Italy, November 16-17, 2023

c) National conferences:

d) Other (Provide website address or link to appropriate information):

2

Chapter 3.1.22 Trichinellosis (infection with Trichinella spp.) for the twelfth edition of the WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals. Approved May 2023


TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH Members?
Yes

a) Technical visit: 5
b) Seminars: 0
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
---|---|---
A | BULGARIA | 1
A | LITHUANIA | 1
A | CZECH REPUBLIC | 1
A | GREECE | 1
A | ROMANIA | 1

TOR8: QUALITY ASSURANCE

19. Is your quality management system accredited?
Yes

Test for which your laboratory is accredited | accreditation body
---|---
Detection of anti-Trichinella antibodies in swine serum by indirect ELISA (MI-01) | ACCREDIA
Identification of Trichinella muscle larvae at species level by Multiplex PCR (MI-02) | ACCREDIA
Detection of anti-Trichinella antibodies in human serum by indirect ELISA (MI-03) | ACCREDIA
Identification of Trichinella spp. proteins recognized by specific IgG in serum of infected pigs by Western blotting (MI-13) | ACCREDIA

WOAH Reference Laboratory Reports Activities 2023
Identification of Trichinella spp. proteins recognized by specific IgG from serum samples of humans with trichinellosis by Western blotting (MI-16)  
Proficiency Testing on the digestion method to detect Trichinella larvae  
Proficiency Testing on the identification of Trichinella larvae at species level

20. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned?  
Yes

**TOR9: SCIENTIFIC MEETINGS**

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAH?  
No
22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOAH?  
No

**TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES**

23. Did your laboratory exchange information with other WOAH Reference Laboratories designated for the same pathogen or disease?  
Yes
24. Do you network (collaborate or share information) with other WOAH Reference Laboratories designated for the same pathogen?  
Yes

| NETWORK/DISEASE | ROLE OF YOUR LABORATORY  
(PARTICIPANT, ORGANISER, ETC) | NO. PARTICIPANTS | PARTICIPATING WOAH REF. LABS |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Trichinellosis</td>
<td>sharing information</td>
<td>2</td>
<td>Dr. Brad Scandrett Canadian Food Inspection Agency 116 Veterinary Road Saskatoon Saskatchewan S7N 2R3 Saskatoon</td>
</tr>
</tbody>
</table>

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?  
No
26. Did your laboratory collaborate with other WOAH Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?  
No

**TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING**

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen?  
Yes

| Purpose for inter-laboratory test comparisons | Role of your reference laboratory  
(organizer/participant) | No. participating laboratories | Name of the Test | WOAH Member Countries |
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Determining a laboratory’s capability to conduct specific diagnostic tests (Proficiency testing on the digestion method to detect Trichinella larvae in meat)</td>
<td>Organizer</td>
<td>32</td>
<td>Artificial digestion</td>
<td>ALBANIA, AUSTRIA, BELGIUM, BULGARIA, CROATIA, CYPRUS, CZECH REPUBLIC, DENMARK, ESTONIA, FINLAND, FRANCE, GERMANY, HUNGARY, ICELAND, IRELAND, ITALY, LATVIA, LITHUANIA, MALTA, NORTH MACEDONIA (REP. OF), NORWAY, POLAND, PORTUGAL, ROMANIA, SERBIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, SWITZERLAND, THE NETHERLANDS, UNITED KINGDOM</td>
</tr>
</tbody>
</table>

**TOR12: EXPERT CONSULTANTS**

28. Did your laboratory place expert consultants at the disposal of WOAH?  
No
29. Additional comments regarding your report:

No