**WOAH Reference Laboratory Reports Activities 2022**

**Activities in 2022**

This report has been submitted: 25 avril 2023 17:02

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**Laboratory Information**

| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Infestation of honey bees with Tropilaelaps spp. |
| Address of laboratory: | Les Templiers 105 route des Chappes CS 20111 06902 Sophia Antipolis FRANCE |
| Tel.: | +33492943700 |
| E-mail address: | stephanie.franco@anses.fr |
| Website: | https://www.anses.fr/fr |
| Name (including Title of Head of Laboratory (Responsible Official)): | Richard THIERY (Head of the Anses Sophia Antipolis Laboratory) |
| Name (including Title and Position of WOAH Reference Expert): | Stéphanie Franco (Head of the National Reference Laboratory for Bee Health in France, Scientist in charge of macro and microscopic diagnostics at the Anses laboratory Anses - Sophia Antipolis) |
| Which of the following defines your laboratory? Check all that apply: | Governmental Research agency |

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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></td>
<td>Nationally</td>
<td>Internationally</td>
</tr>
<tr>
<td>Indirect diagnostic tests</td>
<td>NO</td>
<td>0</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td>YES</td>
<td>0</td>
</tr>
<tr>
<td>Identification of Tropilaelaps spp. by morphological examination</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Identification of Tropilaelaps spp. by PCR | YES | 0 | 0
Identification of Tropilaelaps species by sequencing | NO | 0 | 0

**TOR2: REFERENCE MATERIAL**

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAH?
   No
3. Did your laboratory supply standard reference reagents (non-WOAH-approved) and/or other diagnostic reagents to WOAH Members?
   No
4. Did your laboratory produce vaccines?
   Not applicable
5. Did your laboratory supply vaccines to WOAH Members?
   Not applicable

**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>SWITZERLAND</td>
<td>2022-02-15</td>
<td>Morphological identification</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?
    Yes

<table>
<thead>
<tr>
<th>NAME OF THE WOAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY</th>
<th>PURPOSE</th>
<th>HOW THE ADVICE WAS PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>TAJIKISTAN</td>
<td>Monitoring, prevention and control of Tropilaelaps</td>
<td>Emails</td>
</tr>
</tbody>
</table>
**TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES**

12. Did your laboratory participate in international scientific studies in collaboration with WOAH Members other than the own?
Yes

<table>
<thead>
<tr>
<th>Title of the study</th>
<th>Duration</th>
<th>PURPOSE OF THE STUDY</th>
<th>PARTNERS (INSTITUTIONS)</th>
<th>WOAH MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collection of Tropilaelaps specimens in Thailand</td>
<td>2 years</td>
<td>To obtain a high number of Tropilaelaps mites in order to: (i) Maintain and supply the laboratory's internal collections, and be able to disseminate reference samples to the laboratory networks (ii) Maintain the capacity of the laboratory networks to diagnose infestation through the organisation of inter-laboratory tests, (iii) Consolidate validation data for reference diagnostic methods.</td>
<td>Chiang Mai University (Thailand), CIRAD (Vietnam), Anses Sophia Antipolis (EURL for bee health)</td>
<td>THAILAND</td>
</tr>
</tbody>
</table>

**TOR6: EPIZOOLOGICAL DATA**

14. Did your Laboratory collect epidemiological data relevant to international disease control?
No

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?
No

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:
0

b) International conferences:
0

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

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: 1
   b) Seminars:
   c) Hands-on training courses:
   d) Internships (>1 month)

<table>
<thead>
<tr>
<th>Type of technical training provided (a, b, c or d)</th>
<th>Country of origin of the expert(s) provided with training</th>
<th>No. participants from the corresponding country</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Denmark</td>
<td>2</td>
</tr>
</tbody>
</table>

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?
   Yes

<table>
<thead>
<tr>
<th>Quality management system adopted</th>
<th>Certificate scan (PDF, JPG, PNG format)</th>
</tr>
</thead>
</table>

19. Is your quality management system accredited?
   Yes

<table>
<thead>
<tr>
<th>Test for which your laboratory is accredited</th>
<th>Accreditation body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification of Tropilaelaps spp. by morphological examination</td>
<td>COFRAC</td>
</tr>
</tbody>
</table>

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

The biological risk is low for Tropilaelaps spp., as the samples to be analysed arrive dead at the laboratory. If they arrive alive, specific procedures are implemented (opening the package in a confined environment, deep-freezing the samples to kill the specimens).

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?
Not applicable (only WOAH Reference Laboratory designated for the disease)

24. Are you a member of a network of WOAH Reference Laboratories designated for the same pathogen?
Not applicable (Only WOAH Reference Laboratory designated for the disease)

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?
Not applicable (Only WOAH Reference Laboratory designated for the disease)

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?
Not applicable (Only WOAH Reference Laboratory designated for the disease)

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

<table>
<thead>
<tr>
<th>Purpose for inter-laboratory test comparisons</th>
<th>Role of your reference laboratory (organizer/participant)</th>
<th>No. participating laboratories</th>
<th>Region(s) of participating WOAH Member Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluate the conformity of the results obtained by European national reference laboratories for the identification of Tropilaelaps spp. by morphological examination</td>
<td>Organizer</td>
<td>7</td>
<td>Europe</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:
Yes

The Anses laboratory in Sophia Antipolis has been working for several years to develop and validate quality diagnostic methods for the identification of Tropilaelaps species. These methods have been disseminated to WOAH Member States, through the Manual of Diagnostic Tests and Vaccines, making them autonomous in their use. The laboratory thus remains in little demand in terms of diagnosis at the international level. The epidemiological situation of this parasite, which is exotic in many regions, probably also explains the low number of requests for analysis and expertise.

The Tropilaelaps specimen collection project in Asia, which started in 2022, should enrich the laboratory’s sample library and thus facilitate the possibilities of disseminating reference material and organising inter-laboratory comparisons.

More generally, the complexity of administrative procedures and the costs of sending samples internationally are often an obstacle to the implementation of reference activities.