### Laboratory Information

| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | European foulbrood |
| Address of laboratory: | |
| Tel: | +33 (0)4 92 94 37 00 |
| E-mail address: | marie-pierre.chauzat@anses.fr |
| Website: | |
| Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Richard Thiéry (Head of the Anses Sophia Antipolis Laboratory) |
| Name (including Title and Position) of WOAH Reference Expert: | Dr Marie-Pierre CHAUZAT (WOAH expert for Nosemosis, American foulbrood, European foulbrood, varroosis and nosemosis; Head the European laboratory for honeybee health) |

### 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 Nationally</th>
<th>Internationally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td>none</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td>Recherche de la loque européenne par examen bactérioscopique</td>
<td>7</td>
<td>0</td>
</tr>
</tbody>
</table>

### 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 (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 NATIONALLY (ML, MG)</th>
<th>AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)</th>
<th>NO. OF RECIPIENT WOAH MEMBER COUNTRIES</th>
<th>COUNTRY OF RECIPIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contrôle positif</td>
<td>Culture bactérienne</td>
<td>Souche de référence M. plutonius</td>
<td>0.1 ml</td>
<td>2 x 0.1 ml</td>
<td>2</td>
<td>HUNGARY, KOSOVO,</td>
</tr>
</tbody>
</table>

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?
No

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>BRAZIL</td>
<td>Implémentation de tests diagnostic par PCR temps réel</td>
<td>Conseils à distance par voie de courriers électroniques : 1/ Discussions sur la méthode 2/ Corrections de runs de PCR sur photos</td>
</tr>
<tr>
<td>TURKEY</td>
<td>Demandes de conseils concernant la culture de M. plutonius et la gestion de souches de reference</td>
<td>Conseils à distance par voie de courriers électroniques : 1/ Discussions sur la méthode</td>
</tr>
<tr>
<td>BELGIUM</td>
<td>Demandes de conseils concernant la gestion de constituants de ruche contaminés par M. plutonius (en l’occurrence il s’agissait de hausses de ruche)</td>
<td>Avis/Conseil à distance par voie de courrier électronique</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?
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?
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:

b) International conferences:
c) National conferences:

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

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Le laboratoire diffuse, selon le besoin et/ou la situation, des informations sur la loque américaine sur les sites Internet :
- Page web du laboratoire de Sophia Antipolis : https://www.anses.fr/fr/portails/1807/content/150751
- Site Internet du LRUE : https://eurl-bee.anses.fr/en/minisite/abeilles/welcome-website-eu-it-bee-health

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH Members?
No

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>
<tbody>
<tr>
<td>ISO 17025</td>
<td>pdf</td>
</tr>
</tbody>
</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>Recherche de la loque européenne par examen bactérioscopique</td>
<td>cofrac</td>
</tr>
<tr>
<td>Identification de Melissococcocus plutonius agent de la loque européenne par PCR conventionnelle</td>
<td>cofrac</td>
</tr>
<tr>
<td>Identification de Melissococcocus plutonius agent de la loque européenne par PCR temps réel</td>
<td>cofrac</td>
</tr>
</tbody>
</table>

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

Au sein du laboratoire, différentes mesures de biosécurité et de biosûreté sont mises en place pour gérer le risque biologique de façon générale (gestion des déchets, nettoyage/désinfection, contrôle des accès aux locaux et au système informatique, procédures techniques pour la réception des échantillons et les analyses, formation et habilitation des personnels...). En outre, des locaux distincts sont affectés aux essais immuno-sérologiques, à la biologie moléculaire, aux manipulations en microbiologie et à la culture des cellules saines ainsi qu’aux contaminants chimiques. Toutes ces procédures/mesures sont inscrites dans le système de management de la qualité du laboratoire.

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?
25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?

Yes

<table>
<thead>
<tr>
<th>PURPOSE OF THE PROFICIENCY TESTS.</th>
<th>ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/PARTICIPANT)</th>
<th>NO. PARTICIPANTS</th>
<th>PARTICIPATING WOAH REF. LABS/ORGANISING WOAH REF. LAB.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection of Paenibacillus larvae / Melissococcus plutonius, agents of American / European foulbrood, in crushed bee larvae by: Microscopy, PCR, Culture</td>
<td>organisateur</td>
<td>1</td>
<td>Organisateur OMSA</td>
</tr>
</tbody>
</table>

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

<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>Name of the Test</th>
<th>WOAH Member Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detection of Paenibacillus larvae / Melissococcus plutonius, agents of American / European foulbrood, in crushed bee larvae by: Microscopy, PCR, Culture</td>
<td>Organisateur</td>
<td>23</td>
<td>Detection of Paenibacillus larvae / Melissococcus plutonius, agents of American / European foulbrood, in crushed bee larvae by: Microscopy, PCR, Culture</td>
<td>AUSTRIA, BELGIUM, BULGARIA, CROATIA, CZECH REPUBLIC, ESTONIA, FINLAND, GERMANY, GREECE, HUNGARY, IRELAND, ITALY, KOSOVO, LATVIA, NORWAY, POLAND, ROMANIA, SLOVAKIA, SLOVENIA, SPAIN, SWEDEN, THE NETHERLANDS,</td>
</tr>
<tr>
<td>Bilateral assay on the detection of Paenibacillus larvae / Melissococcus plutonius, agents of American / European foulbrood, in crushed bee larvae by Microscopy</td>
<td>Organisateur</td>
<td>1</td>
<td>Bilateral assay on the detection of Paenibacillus larvae / Melissococcus plutonius, agents of American / European foulbrood, in crushed bee larvae by Microscopy</td>
<td>TURKEY,</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 Sophia Antipolis laboratory has been working for several years on the development and validation of quality diagnostic methods for the detection and/or identification of American and European foulbrood agents.

Most of the methods used by Anses Sophia Antipolis derive from those described in the Manual of diagnostic tests and vaccines for terrestrial animals. WHOA Member States have easy access to the Manual and often demonstrate that they are autonomous in their uses. In addition, for both diseases, the clinical characteristics and diagnostic approaches are well-documented, or even quite well known; and the diagnostic methods are easy to implement. As a result, the Anses Sophia Antipolis laboratory remains very little requested in terms of diagnostics at the international level.

Most often, the questions we receive concern details of the implementation of methods but mainly relate to the supply of reference materials (MRs), organization of proficiency tests (PTs) and sometimes provision of training. The latter topics are subject to a number of administrative and budgetary constraints. Indeed, apart from sending DNAs, sending MRs for microscopy and/or culture diagnosis; or for the participation in PTs require obtaining pathogen import permits and shipping under UN3373 conditions. These formalities are time consuming and most of the time the cost can be prohibitive, including for certain European countries. Concerning training requests,
the question of financing these remains relevant. Consequently, the interactions that Anses Sophia Antipolis may have with the requesting laboratories are found to be limited only to exchanges and/or discussions on the pathogens or the methods used by email or Visio call.