

WOAH Reference Laboratory Reports Activities 2024

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LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:	American foulbrood of honey bees
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Website:	https://www.fli.de/en/institutes/institute-of-infectology-imed/reference-laboratories/woah-and-nrls-for-bee-diseases/
*Name (including Title) of Head of Laboratory (Responsible Official):	Dr. phil. nat. Marc O. Schäfer, head of the NRL for bee diseases
*Name (including Title and Position) of WOAHO Reference Expert:	Dr. phil. nat. Marc O. Schäfer, head of the NRL for bee diseases
*Which of the following defines your laboratory? Check all that apply:	Governmental

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

Diagnostic Test	Indicated in WOAHO Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Direct diagnostic tests		Nationally	Internationally
bacterial isolation	Yes	112	

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			55
conventional PCR	Yes	106	30
repPCR with ERIC primers	No	106	28
MLVA	No	43	28

TOR2: REFERENCE MATERIAL

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

No

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

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOA?H 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 WOA?H 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 WOA?H Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOA?H Members?

Yes

Name of WOA?H Member Country seeking assistance	Date	Which diagnostic test used	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
LUXEMBOURG	2024-06-19	bacterial isolation and conventional PCR; plus repPCR with ERIC primers and MLVA	3	3

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOA?H Member?

Yes

Name of the WOA?H Member	Country receiving a technical		
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consultancy	Purpose	How the advice was provided
ARGENTINA	They were asking to participate in international ringtests on AFB	I provided information on international ringtests that are performed by the european reference laboratory, the national ringtests we perform and how they could organize bilateral ringtests with other laboratories
SRI LANKA	They asked for diagnostic methods of honey bee diseases	I offered help on all kind of diagnostic methods that we are using. However, in the end they were interested only in diagnosis of sacbrood virus and I provided our protocol

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

No

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOA?

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:

2

1) *Allele Frequencies of Genetic Variants Associated with Varroa Drone Brood Resistance (DBR) in Apis mellifera Subspecies across the European Continent*, Lefebvre et al. *Insects* 2024, 15, 419. <https://doi.org/10.3390/insects15060419>

2) *Reliable molecular detection of small hive beetles*, Orlando Yañez, Marga van Gent-Pelzer, Anna Granato, Marc Oliver Schäfer, Peter Neumann, *NeoBiota* 95: 279–290 (2024) DOI: 10.3897/neobiota.95.124673

b) International conferences:

3

1) *Control of SHB with in-hive traps & control in the soil*, Miel Vert, La Reunion, 7.1.2024

2) *Overview of Aethina tumida in Europe*, Apimondia webinar on invasive species in Europe, 26.3.2024, online

3) Small hive beetle task force, COLOSS, Wageningen, 12/13.11.2024

c) National conferences:

2

1) Methodenspektrum NRL & aktuelle Situation meldepflichtiger Bienenseuchen, Beratung der AG Bienengesundheit M-V, Rostock, 18.4.2024

2) Neue invasive Feinde der Honigbiene, 150 Jahre Greifswalder Imkerverein, HGW 23.11.2024

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

1

1) Member of the Advisory Board of the project "Best Practices and Innovations for A Sustainable Beekeeping- B-Thenet" funded by the Horizon Europe Program of the European Commission: HORIZON-CL6-2021-GOVERNANCE-01-28- Grant Agreement number: 101059812 for its duration (from 01/09/2022 to 31/08/2026); <https://www.bthenet.eu/>

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

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

No

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
DIN EN ISO/IEC 17025:2018	Akkreditierungsurkunde_2024.pdf	Akkreditierungsurkunde_2024.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Identification of P. larvae in honey, bee and debris samples	Deutsche Akkreditierungsstelle GmbH
Identification of P. larvae by PCR	Deutsche Akkreditierungsstelle GmbH

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

Yes

Extensive biosecurity management with monthly meetings of a biosecurity council including an ethical council for validation of gain-of-function/DURC-related research.

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOA?H?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOA?H?

No

TOR10: NETWORK WITH WOA?H REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOA?H Reference Laboratories designated for the same pathogen or disease?

Yes

24. Do you network (collaborate or share information) with other WOA?H Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOA?H REF. LABS
WOA?H Reference Laboratories designated for AFB	Participant	3	FLI (Germany), ANSES (France)

25. Did you organise or participate in inter-laboratory proficiency tests with WOA?H Reference Laboratories designated for the same pathogen during the past 2 years?

Yes

Purpose of the proficiency test:	Role of your Reference Laboratory (organiser/ participant)	No. participating Laboratories	Participating WOA?H Ref. Labs/ organising WOA?H Ref Lab
Detection of Paenibacillus larvae / Melissococcus plutonius	Participant	Network of the european NRLs for bee health	FLI/ANSES

26. Did your laboratory collaborate with other WOA?H 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 WOA?H Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOA?H Member Countries
Detection of Paenibacillus larvae in honey samples	Organizer	27	AFB-2024	GERMANY, LUXEMBOURG, THE NETHERLANDS,

TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOA?

No

29. Additional comments regarding your report:

No