

WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

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Laboratory Information

Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	American foulbrood
Address of laboratory:	Südufer 10
Tel.:	03835171246
E-mail address:	marc.schaefer@fli.de
Website:	https://www.fli.de/en/institutes/institute-of-infectology-imed/reference-laboratories/oie-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 WOA 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 WOA Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Direct diagnostic tests		Nationally	Internationally
bacterial culture	yes	18	57

conventional PCR	yes	32	12
qPCR	no	1	3
repPCR with ERIC primers	no	48	9
MLVA	no	48	9

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
NEW CALEDONIA	2022-02-03	Bacterial isolation, conventional PCR, qPCR, repPCR, MLVA	7 samples for P. larvae ERIC genotyping	

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

No

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAH MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
B-GOOD - Giving beekeeping guidance by computational-assisted decision making	June 2019 - May 2023	B-GOOD has the overall goal to provide guidance to beekeepers and help them make better and more informed decisions	Universiteit Gent, Stichting Wageningen Research, BeeSources di Raffaele Dall'Olio, Pensoft Publishers, Institut National de la Recherche Agronomique, Martin-Luther-Universität Halle-Wittenberg, Universitatea de Stiinte Agricole si Medicina Veterinara Cluj Napoca, Aarhus Universitet, Universidade de Combra, The Nottingham Trent University, Universität Bern, Stichting BEEP, Suomen Mehiläishoitajain liitto SML ry, Uniwersytet Jagiellonski, Sciensano, SCIPROM Sari	BELGIUM BULGARIA FINLAND FRANCE ITALY POLAND PORTUGAL ROMANIA SWITZERLAND THE NETHERLANDS UNITED KINGDOM

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

Veterinary Sciences, 2022: *Molecular detection of Malpighamoeba mellificae in honey bees*; Marc O. Schäfer, Juliane Horenk, Claudia Wylezich

International Journal for Parasitology: Parasites and Wildlife, 2022: *Epidemiology of a major honey bee pathogen, deformed wing virus: potential worldwide replacement of genotype A by genotype B*; Robert J. Paxton, Marc O. Schäfer, Francesco Nazzi, Virginia Zanni,

Desiderato Annoscia, Fabio Marroni, Diane Bigot, Eoin R. Laws-Quinn, Delphine Panziera, Christina Jenkins, Hassan Shafiey

b) International conferences:

2

7th B-GOOD consortium meeting, Soesterberg, The Netherlands, 2022: WP1: Task 1.3: Laboratory analyses; Severine Matthijs, Marc O. Schäfer

The first North African meeting for honey bee diseases (online), March 2022: American foulbrood; Marc O. Schäfer

c) National conferences:

3

*69. Jahrestagung der Arbeitsgemeinschaft der Institute für Bienenforschung e.V., Bad Überkingen-Oberböhringen, 2022 (2 Presentations): 1.: Two novel diagnostic tools for the detection of American foulbrood (AFB) including a genotype differentiation of the AFB causing agent *Paenibacillus larvae*; Sandra Ehrenberg, Lukas Rüttinger, Friedrich Scholz, Marc O. Schäfer, Robert Kammerer; 2.: Molecular detection of *Malpighamoeba mellificae*; Marc O. Schäfer, Juliane Horenk, Claudia Wylezich*

DVG Vet-Congress, Berlin, Germany, 2022: Anpassung der amtlichen Methoden an das Animal Health Law; Marc O. Schäfer

Junior Scientist Symposium, Greifswald, Germany, 2022: Challenges of keeping honey bees healthy change over time; Marc O. Schäfer

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

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_2022.pdf	Akkreditierungsurkunde_2022.pdf

19. Is your quality management system accredited?

Yes

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

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 WOAHP?

No

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

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
The first North African meeting for Honey bee diseases	2022-03-08	online	speaker	American foulbrood

TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

No

24. Are you a member of a network of WOAHP Reference Laboratories designated for the same pathogen?

No

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

No

26. Did your laboratory collaborate with other WOAHP 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 WOAHP Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons ¹	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Region(s) of participating WOAHP Member Countries
Examination of honeybee brood for the diagnosis of American foulbrood	Participant	4	Europe

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No