

# WOAH Reference Laboratory Reports Activities 2023

## Activities in 2023

This report has been submitted : 8 mai 2024 12:08

### Laboratory Information

<b>Name of disease (or topic) for which you are a designated WOAHO Reference Laboratory:</b>	Varroosis (infestation of honey bees with Varroa spp.)
<b>Address of laboratory:</b>	Südufer 10
<b>Tel.:</b>	+49-38351 7 1246
<b>E-mail address:</b>	marc.schaefer@fli.de
<b>Website:</b>	<a href="https://www.fli.de/en/institutes/institute-of-infectology-imed/reference-laboratories/oie-andnrls-for-bee-diseases/">https://www.fli.de/en/institutes/institute-of-infectology-imed/reference-laboratories/oie-andnrls-for-bee-diseases/</a>
<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Dr. phil. nat. Marc O. Schäfer, head of the NRL for bee diseases
<b>Name (including Title and Position) of WOAHO Reference Expert:</b>	Dr. phil. nat. Marc O. Schäfer, head of the NRL for bee diseases
<b>Which of the following defines your laboratory? Check all that apply:</b>	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	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
Direct diagnostic tests		Nationally	Internationally
washing of honeybees		140	141

### TOR2: REFERENCE MATERIAL

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

No

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

No

4. Did your laboratory produce vaccines?

No

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

No

### TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

NAME OF THE WOAHS MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
ECUADOR	alcohol wash test according to the WHOA	I gave advice per email

### TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

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

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAHS MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
B-GOOD - Giving beekeeping guidance by computational-assisted decision making	June 2019 - November 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 Coimbra, 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

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

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:

We are participating in the German bee monitoring project, where we measure the varroa infestation levels of all participating colonies (about 1200) three times per year.

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:

The information is available on the project website <https://www.debimo.de/>

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:

1

*Insects*, 2023: *Bridging the gap between field experiments and machine 2 learning: The EC H2020 B-GOOD project as a case study to-3 wards automated predictive health monitoring of honey bee 4 colonies; Coby van Dooremalen, ..., Marc O. Schäfer, ... et al.*

b) International conferences:

3

*Apimondia, Santiago de Chile, 2023: Potential risk factors for honey bee health in Europe; Marc O. Schäfer, Severine Matthijs International Congress on Sustainable Honeybee Keeping, Dresden, Germany, 2023: Bee diseases overview & German bee monitoring (DeBiMo); Marc O. Schäfer Central European Section of the IUSSI, Cluj-Napoca, Romania, 2023: The diseased honey bee colony-Distribution of a brood pathogen; Sandra Ehrenberg, Lukas Rüttinger, Marc O. Schäfer, Robert Kammerer*

c) National conferences:

3

*Mülheimer Bienentage, Mülheim, Germany, 2023: 1. Virenanalysen von Honigbienenvölkern aus Deutschland und Europa; Marc O. Schäfer Mülheimer Bienentage, Mülheim, Germany, 2023: 2. Der Kleine Beutenkäfer – Aktuelle Situation und Forschung; Marc O. Schäfer AG Tagung, Potsdam, 2023: Validation of a lateral flow device for American foulbrood detection and genotype differentiation of ERIC I & ERIC II; Sandra Ehrenberg, Lukas Rüttinger, Friedrich Scholz, Marc O. Schäfer, Robert Kammerer*

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 WOAH 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 Varroa destructor	Deutsche Akkreditierungsstelle GmbH (DAKKS)

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?

No

### TOR10: NETWORK WITH WOAHP REFERENCE LABORATORIES

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

Yes

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHP REF. LABS
WOAHP Reference Laboratories designated for Varroosis	participant	5	FLI (Germany), ANSES (France) and MPI (New Zealand)

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?

No

### TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

*Consulted expert on Varroosis for DISCONTTOOLS (<https://www.discontools.eu/>); performed DISEASE & PRODUCT ANALYSIS together with other experts. We are performing diagnosis frequently and I am discussing Varroosis with colleagues at all kind of scientific meetings and in many presentations that I gave, Varroosis was also a subject. I do know Dr. Marie-Pierre Chauzat very well, and I also know Dr. Richard Hall, who joint last year, and we already had an online meeting to discuss about joint actions. We will now officially meet at least once a year to discuss about Varroosis. We are willing to participate in any proficiency test available, but there has been no such test in 2023. However, as Varroosis is ubiquitous and the Varroa mite is easy to see in infested colonies, as it is so large that one can spot it with the naked eye, identification is straightforward and no proficiency tests are needed to my opinion. I am very open to help anyone that is asking for help and I had visitors from other labs in the past, but there were no such visits in 2023.*