

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-03 09:28:19

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	American foulbrood
Address of laboratory:	National Reference Laboratory for Bee Diseases Friedrich-Loeffler-Institut Federal Research Institute for Animal Health Institute of Infectology Südufer 10 17493 Greifswald - Insel Riems GERMANY
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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 OIE Reference Expert:	Marc O. Schäfer
Which of the following defines your laboratory? Check all that apply:	Governmental

ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards

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 OIE Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests			
Direct diagnostic tests			
bacterial culture	yes	11	27
conventional PCR	yes	23	12
real-time PCR	no	23	13
repPCR with ERIC primers	no	65	0
MLVA	no	65	0
MALDI-TOF MS	no	0	3

**ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards.
To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.**

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
ZAMBIA	January	3	3
SOUTH AFRICA	April	24	24

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

No

ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE 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 Combria, 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

ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases

11. Did your Laboratory collect epizootiological data relevant to international disease control?

No

If the answer is no, please provide a brief explanation of the situation:

As we are a federal state, the responsibilities and the rights are within the federal state. This means that there is a Database, the TSN "Tierseuchennachrichtendienst", in which every case of a notifiable disease has to be entered by the competent authority. All the data belongs to the federal state, but the federation is collecting all the information in this database.

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

No

If the answer is no, please provide a brief explanation of the situation:

There is a public access to this with limited information, the TSIS "TierSeuchenInformationsSystem" (<https://tsis.fli.de/>). There, everybody can check the status of notifiable diseases in Germany.

13. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category)

a) Articles published in peer-reviewed journals: 2

Environmental Microbiology, 2021: Development and evaluation of a core genome multilocus sequence typing scheme for Paenibacillus larvae, the deadly American foulbrood pathogen of honeybees; Alicia C. Bertolotti, Eva Forsgren, Marc O. Schäfer, EuroPLarva Consortium, Fabrice Sircoulomb, Nicolas Gaïani, Magali Ribière-Chabert, Laurianne Paris, Pierrick Lucas, Claire de Boissésou, Joakim Skarin, Marie-Pierre Rivière
 Journal of Microbiological Methods, 2021: An international inter-laboratory study on Nosema spp. spore detection and quantification through microscopic examination of crushed honey bee abdomens; Véronique Duquesne, Cristina Gastaldi, Aurélie Del Cont, Nicolas Cougoule, Andrzej Bober, Marleen Brunain, Gabriela Chioveanu, Noel Demicoli, Petra Deakne Paulus, Pilar Fernandez Somalo, Miriam Filipova, Eva Forsgren, Anna Granato, Kalinka Gurgulova, Sirpa Heinikainen, Age Kärssin, Irena Kinduriene, Hemma Köglberger, Konstantinos Oureilidis, Zanda Ozolina, Martin Pijacek, Metka Pislak Ocepek, Marc Oliver Schäfer, Ivana Tlak Gajger, Maria José Valerio, Maureen Wakefield, Stéphanie Franco

b) International conferences: 3

5th B-GOOD consortium meeting, Online, 2021; Results of disease monitoring of B-GOOD pilot A (mini-apiaries) and pilot B in 2020; Marc O. Schäfer, Severine Matthijs

OIE Virtual regional workshop on honey bee diseases in Asia and the Pacific, Online, 2021: Introduction on major honey bee diseases in Europe; Marc O. Schäfer

COLOSS eConference, 2021: State of the art: small hive beetle biology, diagnosis and control; Peter Neumann, Marc O. Schäfer

c) National conferences: 2

68. Jahrestagung der Arbeitsgemeinschaft der Institute für Bienenforschung e.V., Online, 2021 (2 Presentations):

1.: Molecular diagnostic test for detection of Malpighamoeba mellificae PRELL; Marc O. Schäfer, Claudia Wylezich;

2.: Looking for a needle in a haystack - Production, selection and characterization of specific monoclonal antibodies for detection and distinction of American and European

d) Other:

(Provide website address or link to appropriate information) 1

Reviewer for the FAO Guidelines "Good beekeeping practices for sustainable apiculture"

ToR 7: To provide scientific and technical training for personnel from OIE Member Countries

To recommend the prescribed and alternative tests or vaccines as OIE Standards

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

No

ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

15. 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_2019.pdf

16. 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 (DAkkS)
Identification of P. larvae by PCR	Deutsche Akkreditierungsstelle GmbH (DAkkS)

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

Yes

(See *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4*)

ToR 9: To organise and participate in scientific meetings on behalf of the OIE

18. Did your laboratory organise scientific meetings on behalf of the OIE?

No

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
OIE Virtual regional workshop on honey bee diseases in Asia and the Pacific	08/21	Online	Speaker	Introduction on major honey bee diseases in Europe
COLOSS eConference, 2021	10/21	Online	Co-Speaker	State of the art: small hive beetle biology, diagnosis and control

ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results

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

No

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

No

22. Did your laboratory collaborate with other OIE Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

No

ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

Yes

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: <http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing> see point 1.3

Purpose for inter-laboratory test comparisons ¹	No. participating laboratories	Region(s) of participating OIE Member Countries
Determining a laboratory's capability to conduct specific diagnostic tests	24	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

ToR 12: To place expert consultants at the disposal of the OIE

24. Did your laboratory place expert consultants at the disposal of the OIE?

No

25. Additional comments regarding your report: