

# WOAH Reference Laboratory Reports Activities 2024

This report has been submitted: 31 janvier 2025 12:22

## LABORATORY INFORMATION

|  |  |
|--|--|
| <b>*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:</b> | Avian chlamydiosis                         |
| <b>*Address of laboratory:</b>   | Naumburger Str. 96a 07743 Jena             |
| <b>*Tel:</b>   | +49-3641 804 2435                          |
| <b>*E-mail address:</b>  | christiane.schnee@fli.de                   |
| <b>Website:</b>  | www.fli.de                                 |
| <b>*Name (including Title) of Head of Laboratory (Responsible Official):</b>                 | Prof. Christian Menge (Head of Institute)  |
| <b>*Name (including Title and Position) of WOAH Reference Expert:</b>                        | Dr. Christiane Schnee (Head of Laboratory) |
| <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 WOAH Manual (Yes/No) | Total number of test performed last year |                 |
|------------------------------------|-----------------------------------|--|-----------------|
| Indirect diagnostic tests          |                                   | Nationally                               | Internationally |
| -                                  |                                   | 0  | 0               |
| Direct diagnostic tests            |                                   | Nationally                               | Internationally |
| Real-Time PCR Family Chlamydiaceae | Yes                               | 191                                      | 0               |
| Real-Time PCR Chlamydia            | Yes                               | 13                                       | 0               |

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|                               |     |   |   |
|-------------------------------|-----|---|---|
| psittaci                      |     |   |   |
| Real-Time PCR Chlamydia avium | No  | 3 | 0 |
| Isolation by cell culture     | Yes | 5 | 0 |

## TOR2: REFERENCE MATERIAL

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

No

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

Yes

| Type of reagent available                      | Related diagnostic test  | Produced/ provide | Amount supplied nationally (ml, mg) | Amount supplied internationally (ml, mg) | No. of recipient WOA Member Countries | Country of recipients |
|--|--------------------------|-------------------|-------------------------------------|--|---------------------------------------|-----------------------|
| Chromosomal DNA of Chlamydia reference strains | PCR, Real- Time PCR      | produced          | 20x50 µl                            | 3x50 µl                                  | 2                                     | GERMANY, UKRAINE,     |
| Chlamydial strains in cell culture             | Chlamydia isolation, PCR | produced          | 1x500 µl                            | 0  | 1                                     | GERMANY,              |

4. Did your laboratory produce vaccines?

No

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

No

## TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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

Yes

| Name of the WOA Member Country receiving a technical consultancy | Purpose | How the advice was provided |
|--|---------|-----------------------------|
|--|---------|-----------------------------|

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|                 |   |                            |
|-----------------|---|----------------------------|
| THE NETHERLANDS | Advice on diagnosing and managing avian chlamydiosis                              | Remote assistance by email |
| BELGIUM         | Advice on C. psittaci DNA extraction and PCR                                      | Remote assistance by email |
| SPAIN           | Advice on detection of Chlamydia in raptors, specificity of current PCR protocols | Remote assistance by email |

## TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOA 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 |
|---|----------|---|---|--|
| Occurrence of chlamydia in birds of prey from Austria | 3 months | To evaluate the prevalence and disease burden of avian chlamydiosis in birds of prey and to analyse associated risk factors | Institute of Wildlife Research, Vetmeduni Vienna, Austria | AUSTRIA  |

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

Yes

### Research need : 1

**Please type the Research need:** Although serology alone is not appropriate for diagnosing a current chlamydial infection in birds due to the endemic nature of chlamydiae, there is a need and a lack of reliable (commercial) and specific (C. psittaci) serological tools for monitoring poultry flocks or wild bird populations.

**Relevance for WOA** Disease Control, Preventing zoonotic transmission,

**Relevance for the Code or Manual** Manual,

**Field** Epidemiology and Surveillance, Diagnostics,

**Animal Category** Terrestrial,

**Disease:**

Avian chlamydiosis

**Kind of disease (Zoonosis, Transboundary diseases)** Zoonosis, Transboundary diseases,

**If any, please specify relevance for Codes or Manual, chapter and title**

(e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture)

**Answer:**

**Notes:**

**Answer:**

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## 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?

Yes

If the answer is yes, please provide details of the data collected:

Our reference laboratory receives samples for confirmatory or differential diagnosis of psittacine birds, pigeons, poultry and wild birds from regional state laboratories. In case of disease outbreaks, results are reported to the regional authorities and also to the central German Animal Disease Information System (TSN).

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

Barth SA, Preussger D, Pietschmann J, Feßler AT, Heller M, Herbst W, Schnee C, Schwarz S, Kloss F, Berens C, Menge C. In Vitro Antibacterial Activity of Microbial Natural Products against Bacterial Pathogens of Veterinary and Zoonotic Relevance. *Antibiotics (Basel)*. 2024 Jan 30;13(2):135. doi:10.3390/antibiotics13020135.

b) International conferences:

1

Deutschendorf, J., Weber, M., Menge, C., Schnee, C. Comparative analysis of genomes and pathogenic potential of *Chlamydia avium* strains– a new player in Avian Chlamydiosis. *Chlam Health Meeting, Ascona Switzerland, Feb 19-23, 2024*

c) National conferences:

1

Deutschendorf, J., Weber, M., Menge, C., Schnee, C. Genom- und Virulenzvergleiche von *Chlamydia avium*-Stämmen aus Tauben und Papageien. *Meeting of German National Reference Laboratories, FLI Jena, April 24-26, 2024*

Schnee C. News from the NRL for Avian Chlamydiosis. *Meeting of the German National Reference Laboratories, FLI Jena, April 24-26, 2024*

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

1

Non-reviewed article:

Schnee, C.: Chlamydiose- eine unterschätzte Gefahr? DGS-Magazin für die Geflügelwirtschaft, 9:22-25

## TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOA 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) |                                 |
|-----------------------------------|---|---------------------------------|
| ISO17025                          | PDF                                     | Akkreditierungsurkunde_2024.pdf |

19. Is your quality management system accredited?

Yes

| Test for which your laboratory is accredited  | Accreditation body                   |
|---|--------------------------------------|
| Test for which your laboratory is accredited<br>PCR and real-time PCR Chlamydiaceae | DAkKS Deutsche Akkreditierungsstelle |
| Real-time PCR Chlamydia spp.  | DAkKS Deutsche Akkreditierungsstelle |
| Isolation and culture Chlamydia spp.  | DAkKS Deutsche Akkreditierungsstelle |

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

Yes

- Risk assesment for Chlamydia agents with regular updates - Appropriate risk control measures (biosafety and biosecurity) are installed
- A biological safety officer is appointed - Regular inspection of the laboratories by national authorities

## TOR9: SCIENTIFIC MEETINGS

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

No

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

No

## TOR10: NETWORK WITH WOA REFERENCE LABORATORIES

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

Yes

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

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Yes

| NETWORK/DISEASE    | ROLE OF YOUR LABORATORY<br>(PARTICIPANT, ORGANISER, ETC) | NO. PARTICIPANTS | PARTICIPATING WOAHP REF. LABS  |
|--------------------|--|------------------|--------------------------------|
| Avian chlamydiosis | participant  | 2                | ANSES Maisons-Alfort. FLI Jena |

25. Did you organise or participate in inter-laboratory proficiency tests with WOAHP 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 WOAHP Ref. Labs/organising WOAHP Ref Lab |
|--|---|---------------------------------|--|
| Assessment of technical competence of laboratories in detection of Chlamydiaceae, Chlamydia psittaci et al. genomic DNA in different matrices by Real-Time PCR | Organizer   | 2 WOAHP Ref. Labs 37 other labs | ANSES Maisons-Alfort. FLI Jena                         |

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?

Yes

| Title of the project or contract            | Scope  | Name(s) of relevant WOAHP Reference Laboratories |
|---|--|--|
| Chlamydia avium diversity and pathogenicity | Genome and phenotype comparison of Chlamydia avium strains                 | ANSES Maisons-Alfort. FLI Jena                   |
| Improvement of C. gallinacea culture        | Comparison of cell culture conditions for the cultivation of C. gallinacea | ANSES Maisons-Alfort. FLI Jena                   |

## 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 during the past 2 years?

Yes

| Purpose for inter-laboratory test comparisons <sup>1</sup>   | Role of your reference laboratory (organizer/participant) | No. participating laboratories | Name of the test    | WOAHP Member Countries                                  |
|--|---|--------------------------------|---------------------|---|
| Assessment of technical competence of laboratories in detection of Chlamydia psittaci genomic DNA in different matrices by Real-Time PCR | Organizer   | 33                             | LVU Chlamydien 2024 | AUSTRIA, BELGIUM, FRANCE, GERMANY, POLAND, SWITZERLAND, |

## TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

No