

# WOAH Reference Laboratory Reports Activities 2023

## Activities in 2023

This report has been submitted : 29 juin 2024 00:06

### Laboratory Information

<b>Name of disease (or topic) for which you are a designated WOA Reference Laboratory:</b>	Scrapie
<b>Address of laboratory:</b>	University of Bern, Division of Neurological Sciences, Vetsuisse Faculty, Bremgartenstrasse 109a, CH-3006 Bern, Switzerland
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<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Prof. Dr. med. vet. Torsten Seuberlich
<b>Name (including Title and Position) of WOA Reference Expert:</b>	Prof. Dr. med. vet. Torsten Seuberlich
<b>Which of the following defines your laboratory? Check all that apply:</b>	Academic institution

### 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	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
Direct diagnostic tests		Nationally	Internationally
Scrapie Western immunoblot		5	0
Scrapie reapid test (ELISA)		20	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 (nonWOA-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
Scrapie positive brain material	TSE rapid test and Western blot	provide	0	10 ML	1	BOSNIA AND HERZEGOVINA,

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAHA Members?

Not applicable

### **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 WOAHA Standards for the designated pathogen or disease?

Yes

NAME OF THE NEW TEST OR DIAGNOSTIC METHOD DEVELOPED	DESCRIPTION AND REFERENCES (PUBLICATION, WEBSITE, ETC.)
Scrapie Western immunoblot signal detection by near-infrared fluorescence	Internal validation of new signal detection method

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOAHA Standards for the designated pathogen or disease?

No

### **TOR4: DIAGNOSTIC TESTING FACILITIES**

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

No

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

No

### **TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES**

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

Yes

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	WOAHA MEMBER COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
Eradication of Scrapie in Iceland	2 years	Evaluation of eradication strategies for scrapie in Iceland	Network	FRANCE GERMANY ICELAND ITALY UNITED KINGDOM

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

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:

Conduction of passive surveillance in Switzerland

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:

8

Clavadetscher G, Biner B, Schaub M, Studer E, Dürr S, Blatter S, Schmelz P, Steinborn R, Brandt S, Seuberlich T, Steiner A, Alsaad M. Risikofaktoren für chronisch perforierende Hautläsionen im Zehenbereich beim Rind auf Schweizer Alpen [Risk factors for chronic perforating skin lesions in the area of the digits in cattle on Swiss alpine pastures]. *Schweiz Arch Tierheilkd*. 2023 Dec;165(12):771-782. German. doi: 10.17236/sat00412. PMID: 38014543.

Zingre T, Pisano SRR, Wildi N, Dawson KLD, Cristina E, Seuberlich T, Schmidt-Posthaus H. Detection of novel RNA viruses in wild noble crayfish (*Astacus astacus*): A virome analysis in Swiss water bodies. *J Invertebr Pathol*. 2023 Nov;201:108011. doi: 10.1016/j.jip.2023.108011. Epub 2023 Oct 30. PMID: 37907116.

Dawson KLD, Wildi N, Cavalli M, Rubbenstroth D, Oevermann A, Seuberlich T. Feline morbillivirus infection associated with fatal encephalitis in a Bengal cat. *J Vet Intern Med*. 2023 Nov-Dec;37(6):2510-2513. doi: 10.1111/jvim.16916. Epub 2023 Oct 28. PMID: 37897301; PMCID: PMC10658552.

Dawson KLD, Wildi N, Koch MC, Oevermann A, Rosato G, Grest P, Hilbe M, Seuberlich T. Virus discovery in dogs with non-suppurative encephalitis reveals a high incidence of tick-borne encephalitis virus infections in Switzerland. *Schweiz Arch Tierheilkd*. 2023 Oct;165(10):656-666. English. doi: 10.17236/sat00407. PMID: 37822248.

Wildi N, Seuberlich T. The Roles of the 5' and 3' Untranslated Regions in Human Astrovirus Replication. *Viruses*. 2023 Jun 20;15(6):1402. doi: 10.3390/v15061402. PMID: 37376701; PMCID: PMC10302652.

Seuberlich T, Kuhn JH, Schmidt-Posthaus H. Near-Complete Genome Sequence of Lötschberg Virus (<i>Mononegavirales</i>: <i>Filoviridae</i>) Identified in European Perch (*Perca fluviatilis* Linnaeus, 1758). *Microbiol Resour Announc*. 2023 Apr 18;12(4):e0002823. doi: 10.1128/mra.00028-23. Epub 2023 Mar 16. PMID: 36926992; PMCID: PMC10112208.

Wildi N, Bagatella S, Koch MC, Oevermann A, Seuberlich T. Archival wild-type poliovirus 1 infected central nervous system tissues of the pre-vaccination era in Switzerland reveal a distinct virus genotype. *Acta Neuropathol*. 2023 Mar;145(3):357-359. doi: 10.1007/s00401-023-02545-5. Epub 2023 Jan 31. PMID: 36719503; PMCID: PMC9888746.

Alsaad M, Schmid RM, Zwahlen N, Soto S, Wildi N, Seuberlich T, Steiner A. First description of interdigital hyperplasia associated with contagious ovine digital dermatitis in two sheep. *Front Vet Sci*. 2023 Jan 5;9:1028880. doi: 10.3389/fvets.2022.1028880. PMID: 36686194; PMCID: PMC9849560.

b) International conferences:

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Annual Meeting of the TSE/BSE EURL, Roma  
TSE Network of the EFSA, Parma

c) National conferences:

1

Schweizer Laborleitertagung

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

## TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAHA 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)
ISO 17025	We are running a QM System according to ISO17025. Accreditation of this system is currently on hold due to reorganisations of the Faculty. We are in the process of re-accreditation, which will likely be effective by end 2024.

19. Is your quality management system accredited?

No

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

Yes

The biorisk management system is in line with national requirements (Ordinance on the containment of pathogens and genetically modified organisms)

## TOR9: SCIENTIFIC MEETINGS

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

No

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

No

## TOR10: NETWORK WITH WOAHA REFERENCE LABORATORIES

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

Yes

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

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAHA REF. LABS
SciCE Project, Scrapie in Iceland	Participant	12	APHA, UK

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

Yes

PURPOSE OF THE PROFICIENCY TESTS: 1	ROLE OF YOUR REFERENCE LABORATORY (ORGANISER/PARTICIPANT)	NO. PARTICIPANTS	PARTICIPATING WOAHA REF. LABS/ ORGANISING WOAHA REF. LAB.
Scrapie rapid test	participant	24	WOAHA ref. lab. Torini/Roma Italy
Scrapie Western immunoblot	participant	24	WOAHA ref. lab. Torini/Roma Italy
TSE discriminatory Western immunoblot BSE /Scrapie	participant	16	WOAHA ref. lab. Torini/Roma Italy
Scrapie immunohistochemistry	participant	16	WOAHA ref. lab. Torini/Roma Italy

26. Did your laboratory collaborate with other WOAHA 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 WOAHA REFERENCE
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		LABORATORIES
SciCE project, scrapie in Iceland	Improving disease control and scrapie eradication in Iceland	WOAH ref. lab. Torini/Roma Italy; WOAHA ref. lab, APHA Weybridge, UK

## TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAHA Reference Laboratories for the same pathogen?

No

## TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

*In the past years, requests for testing and consultancy regarding scrapie remained at a very low level. This is mainly due to strong activities of the European Union Reference Laboratory in our region that is funded by the EU and covers the needs of many WOAHA member states in Europe. Nonetheless, we continue maintaining our expertise in this domain, also because of a strong link between Scrapie and BSE diagnostics and epidemiology. Currently our QM system is undergoing reakkreditation which will be complete by the end of the year. Until then we continue working under ISO 17025 standards. Regarding the participation in interlaboratory proficiency testing themes, we would like to state that the schemes listed in TOR10 comprise WOAHA reference labs as well as WOAHA member states. The schemes can therefore also be listed under TOR11, however, the identity of the member states is not known. We therefore decided to not provide the information under TOR11.*