

WOAH Reference Laboratory Reports Activities 2024

This report has been submitted: 31 janvier 2025 19:09

LABORATORY INFORMATION

*Name of disease (or topic) for which you are a designated WOA Reference Laboratory:	Equine rhinopneumonitis
*Address of laboratory:	Department of Veterinary Science ; College of Agriculture, Food and Environment; University of Kentucky; 1400 Nicholasville Road, Lexington, KY 40546
*Tel:	8592574757
*E-mail address:	l.goehring@UKy.edu
Website:	https://vetsci.ca.uky.edu/
*Name (including Title) of Head of Laboratory (Responsible Official):	Lutz S. Goehring, DVM, MS, Ph.D. Professor of Equine Infectious Diseases
*Name (including Title and Position) of WOA Reference Expert:	Lutz S. Goehring, DVM, MS, Ph.D. Professor of Equine Infectious Diseases
*Which of the following defines your laboratory? Check all that apply:	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	
Indirect diagnostic tests		Nationally	Internationally
Virus Neutralization assay (VN)	Yes	226	0
Direct diagnostic tests		Nationally	Internationally
Fluorescent Antibody	Yes	159	0

Lutz Goehring - -

PCR	Yes	3000	0
virus isolation	Yes	19	0
IHC	No	60	

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?

Yes

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

Yes

Name of the new vaccine developed	Description and References (Publication, website, etc)
work-in-progress: RNA vaccine development	Grant proposal at Grayson Jockey Club Equine Research Foundation. Work in progress: mRNA and saRNA formulations are tested for immunogenicity. It is collaborative work with expert virologist and immunologists in USA, Germany and UK. The vaccination challenge experiments will not be conducted at University of Kentucky.

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

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?

No

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

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:

EHV-1 abortion data

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:

6

Amjad Khan, Edward Olajide, Madeline Friedrich, Anna Holt, Lutz S Goehring. *Evaluation of Non-Invasive Sampling Techniques for the Molecular Surveillance of Equid Herpesviruses in Yearling Horses*. *Viruses*. 2024;16:1091. doi: 10.3390/v16071091.

Markus Grabatin, Robert Fu, Yury Zablotki, Lutz S Goehring, Tanja S Witte. *Taylorella equigenitalis in Icelandic intact males compared with other horse breeds using natural cover*. *Equine Vet J*. 2024. doi: 10.1111/evj.14121. Online ahead of print.

David P Lunn, Brandy A Burgess, David C Dorman, Lutz S Goehring, Peggy Gross, Klaus Osterrieder, Nicola Pusterla, Gisela Soboll Hussey. *Updated ACVIM consensus statement on equine herpesvirus-1*. *J Vet Intern Med*. 2024;38:1290-1299. doi: 10.1111/jvim.17047

K. S. Giessler, L. S. Goehring, S. I. Jacob, Allison Davis, M. M. Esser, Y. Lee, L. M. Zarski, P. S. D. Weber and G. S. Hussey. *Impact of the host immune response on the development of equine herpesvirus myeloencephalopathy in horses*. *Journal of General Virology* 2024;105:001987 DOI 10.1099/jgv.0.001987

Lutz Goehring; David C. Dorman; Klaus Osterrieder; Brandy A. Burgess; Kelsie Dougherty; Peggy Gross; Claire Neinast; Nicola Pusterla; Gisela Soboll-Hussey; David P. Lunn. *Pharmacologic interventions for the treatment of equine herpesvirus-1 in domesticated horses: A systematic review*. *J Vet Intern Med*. 2024;38:1892-1905. doi: 10.1111/jvim.17016.

Nicola Pusterla, David C Dorman, Brandy A Burgess, Lutz Goehring, Margaret Gross, Klaus Osterrieder, Gisela Soboll Hussey, David P Lunn. *Viremia and nasal shedding for the diagnosis of equine herpesvirus-1 infection in domesticated horses*. *J Vet Intern Med*. 2024;1765-1791. doi: 10.1111/jvim.16958.

Gisela Soboll Hussey, Klaus Osterrieder, David C. Dorman, Brandy A. Burgess, Lutz S. Goehring, Peggy Gross, Claire Neinast, Nicola Pusterla, David P. Lunn (2023). *Relationship between equine herpesvirus-1 viremia and abortion or equine herpesvirus myeloencephalopathy in domesticated horses: A systematic review* DOI: 10.1111/jvim.16948

David P Lunn, Brandy A Burgess, David C Dorman, Lutz S Goehring, Peggy Gross, Klaus Osterrieder, Nicola Pusterla, Gisela Soboll Hussey. *Updated ACVIM consensus statement on equine herpesvirus-1*. *J Vet Intern Med*. 2024 May-Jun;38(3):1290-1299. doi: 10.1111/jvim.17047.

b) International conferences:

3

2 in person (*International Herpesvirus Workshop, USA; Equine Infectious Diseases conference, France*), 1 on-line (*European College of Equine Internal Medicine, DK*)

c) National conferences:

1

AAVLD (*GenBank entry EHV-4*)

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

4

1. *monthly National Equine Conference call (phone)*
2. *bi annual Equine Industry Meeting, Newmarket, UK (virtual)*
3. *Equine Disease Quarterly - I summarize occurrence and frequency of (relevant) equine diseases*
4. *We isolated and sequenced EHV-4, and we made the sequence available via Genbank ID: PP765803*

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)	
American Association of Veterinary Diagnostic Laboratories	AAVLD_New expiration date_12.31.2025_2019.KYL.CERT_(2019.08).final.pdf	AAVLD_New expiration date_12.31.2025_2019.KYL.CERT_(2019.08).final.pdf

19. Is your quality management system accredited?

No

We are in the process of ISO17025 accreditation

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

Yes

we are BSL-2 certified and we have regular announced and unannounced inspections from University of Kentucky Institutional Biosafety

Committee

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
EHV-1, EHV-4	participant	4	Irish Equine Centre, IRE Rossdale's, Newmarket, UK

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?

No

I was not approached

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 during the past 2 years?

No

I did not receive samples. There are plans for 2025 though.

TOR12: EXPERT CONSULTANTS

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

No

29. Additional comments regarding your report:

Yes

Thank you for allowing me to include this paragraph into this report. I feel there is a different type of contribution coming from our side. We consult on many projects around equid alphaherpesvirus infections, both national and international.

Lutz Goehring - -

We contribute with expertise in outbreak management and in test result interpretation. We are one of the few locations that has the expertise and facilities to perform live animal experiments. We focus on transmission, on latency and on reactivation from latent locations and we are on the fore front of RNA vaccine development against EHV-1.