

# WOAH Reference Laboratory Reports Activities 2024

This report has been submitted: 4 février 2025 11:12

## LABORATORY INFORMATION

<b>*Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:</b>	Swine influenza
<b>*Address of laboratory:</b>	Virology, APHA, Woodham Lane, New Haw, Addlestone, KT15 3NB, United Kingdom
<b>*Tel:</b>	+44 208 036 9669
<b>*E-mail address:</b>	Helen.Everett@apha.gov.uk
<b>Website:</b>	www.gov.uk/apha
<b>*Name (including Title) of Head of Laboratory (Responsible Official):</b>	Prof. Ashley Banyard
<b>*Name (including Title and Position) of WOAH Reference Expert:</b>	Dr. Helen Everett
<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
HI	Yes	710	19
Direct diagnostic tests		Nationally	Internationally
Detection of viral RNA in nasal swabs and/or respiratory tissues	Yes	829	0

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Real-time RT-PCR M gene	Yes	829	0
Real-time RT-PCR pH1N1 2009	Yes	62	0
Next Generation Sequencing - Illumina	Yes	30	0
Next Generation Sequencing - ONT	No	0	0
Egg inoculation/HA	Yes	2	0
Cell Inoculation/HA	Yes	8	18
Henritzi Subtyping qPCR	Yes	62	0

## 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?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOA?H Member Countries	Country of recipients
SwIV Antigen	HAIT	Produced and provide	2ml	3ml	1	ITALY,

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?

No

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

No

## TOR4: DIAGNOSTIC TESTING FACILITIES

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

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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
DENMARK FRANCE GERMANY	Expert Consultancy	Email
DENMARK FRANCE GERMANY ITALY JAPAN	Request of material	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
PIGIE co-funded by ICRAD and National funders	2021-2024	Longitudinal assessment of swine influenza in farmed pigs in six European countries Define genetic and antigenic traits of swine influenza viruses circulating in European pig herds and identify potential control strategies	University of Copenhagen ANSES FLI University of Barcelona IZSLER	DENMARK FRANCE GERMANY ITALY SPAIN
Centres of Excellence for Influenza Research and response (CEIRR)	2021-2029	Development of pipelines for evaluation of the emergence of swine influenza viruses of pre-pandemic or pandemic risk	NIAID funded programme. APHA supported via interactions with RVC and Penn-CEIRR. CEIRR Network (ceirr-network.org) <a href="https://www.niaid.nih.gov/research/centers-excellence-influenza-research-response">https://www.niaid.nih.gov/research/centers-excellence-influenza-research-response</a>	UNITED STATES OF AMERICA
OFFLU VCM	Ongoing annual	Swine viruses and antisera have been added to the WHO VCM activities and as such we have characterized isolates both using genetic and antigenic tools and	OFFLU swine subgroup plus miscellaneous institutes	AUSTRALIA ITALY UNITED STATES OF AMERICA

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		contributed this to the biannual VCM activities.		
Influenza D virus	Ongoing annual	Isolation of influenza D virus from field samples obtained in Great Britain.	APHA surveillance programme IZSLER	KOREA (REP. OF)

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

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:

The OFFLU-VCM report published Feb 2024 details the designation of new phylogroups of the 1B.1.1 subclade detected in the UK, namely 1B.1.1.1, 1B.1.1.2 and 1B.1.1.3. Reactivity with ancestral human seasonal strains was retained by 1B.1.1.2 strain but was lost by 1B.1.1.1 strains. A 1B.1.1.1 strain caused a variant infection in the UK in Oct- Nov 2023.

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:

Data relevant to epidemiology was disseminated through the OFFLU VCM report.

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:

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Jade Cogdale, Beatrix Kele, Richard Myers, Ruth Harvey, Abi Lofts, Tanya Mikael, Katja Hoshler, Ashley C. Banyard, Joe James, Benjamin C. Mollett, Alexander M. P. Byrne, Jamie Lopez-Bernal, Conall H. Watson, Meera Chand, William Welfare, Deborah A. Williamson, Isabel Oliver, Simon Padfield, Andrew Lee, Suzanne Calvert, Martin A. Bewley, Louise Wallace, Simon deLusignan, Nicola S. Lewis, Ian H. Brown, and Maria Zambon. "A case of swine influenza A(H1N2)v in England, November 2023." *Eurosurveillance*, Volume 29, Issue 3 (2024): <https://doi.org/10.2807/1560-7917.ES.2024.29.3.2400002>

b) International conferences:

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Dr Joe James: "Swine influenza virus in GB: H1N2v and One-Health responses", Philippines One-Health symposium, 25.01.24

Shannon Leetham: "Review of longitudinal monitoring carried out in the UK (P6-APHA)", PIGIE Final Meeting, 12.03.2024- 13.03.2024

Dr Helen Everett: "A decade of swine influenza surveillance and the first report of an H1N2v case in Great Britain", 2024 OFFLU Swine Influenza virus Technical Meeting, 03.04.2024-04.04.2024 and joint ESFLU-OFFLU meeting 04.04.2024-05.04.2024

Dr Helen Everett: "Susceptibility of camelids (alpacas) to experimental infection with Influenza C and D virus", 5th International Symposium on Neglected Influenza Viruses, 08.04.2024- 10.04.2024

Dr Joe James: "International work on Animal Influenza and Newcastle Disease", Ghana AIV/NDV Sequencing workshop, 13.05.2024

Dr Helen Everett: "Swine influenza A virus diagnostic challenges", ESFLU Annual meeting, 21.05.2024- 23.05.2024

Prof Ashley C. Banyard: "Introducing the IRL and AIM programme", OFFLU Technical reporting meeting, FAO, 02.07.2024-04.07.2024

Prof Ashley C. Banyard: "The use of proficiency panels and the role of the international reference laboratory for avian influenza, swine influenza and Newcastle disease", Regional training course on the production of secondary reference materials, SENACSA, 06.08.2024

Dr Pauline van Diemen: "Influenza D virus in pigs in England". 27th IPVS & 15th ESPHM, Leipzig, Germany, 04.06.2024- 07.06.2024

c) National conferences:

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Dr Helen Everett: "Swine Influenza Research at APHA and the first reported H1N2v human case in the UK", UK Pig Veterinary Society Spring meeting, 20.03.2024-24.03.2024

Dr Helen Everett: "Susceptibility of camelids (alpacas) to experimental infection with Influenza C and D virus", 5th International Symposium on Neglected Influenza Viruses, 08.04.2024- 10.04.2024

Dr Joe James: "Animal Influenza and Newcastle Disease at APHA", UK:Ukraine animal diseases event, 25.04.2024

Prof Ashley C. Banyard: "Animal Influenza and Newcastle Disease at APHA", Visit of the Chinese Academy of Sciences, 23.05.2024

Prof Ashley C. Banyard: "Overview of the Influenza and Avian Influenza workgroup", Defra senior management meeting, 10.08.2024

Dr Joe James: "Swine influenza surveillance in GB in relation to the human detection of H1N2v", UKHSA/NHS laboratory network, 04.12.2024

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

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Prof Ashley C. Banyard: "One Health and Influenza viruses: the continuing challenge of veterinary viruses to public health", St George's Medical school, 24.03.2024

Prof Ashley C. Banyard: "Avian and swine influenza viruses: Emergence and zoonotic risk", University of Sussex, 26.04.2024

## 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)	
ISO 17025	ISO 17025 Certificate.pdf	ISO17025 Certificate.pdf
ISO 9001	Certificate UK013916 - ISO 9001	ANIMAL PLANT HEALTH AGENCY - Certificate UK013916 - ISO 9001 - exp. 25-07- 2026.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Haemagglutination Inhibition test	UKAS
Matrix (M)-gene PCR	UKAS
Virus isolation in SPF eggs	UKAS

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

Yes

APHA maintains a complete and functioning laboratory biological risk management system which ensures that the laboratory is in compliance with applicable local, national (UK Health and Safety Executive), regional and international standards and requirements for biosafety and laboratory biosecurity.

## 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?

Yes

Title of event	Date	location	Role (speaker, presenting poster, short communications)	Title of the work presented
WOAH Swine Influenza Technical meeting	2024-04-02	Paris, France	Speaker	A decade of swine influenza surveillance and the first report of an H1N2v case in Great

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Britain

## 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
OFFLU	Organiser, Participant	3	Instituto Zooprofilattico Sperimentale delle Venezie, Italy CSIRO Australian Centre for Disease Preparedness SEPRL : USDA Agricultural Research Service, Georgia, USA

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

*Did not participate in proficiency test.*

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
PIGIE co-funded by ICRAD and National funders	Longitudinal assessment of swine influenza in farmed pigs in six European countries Define genetic and antigenic traits of swine influenza viruses circulating in European pig herds and identify potential control strategies	Instituto Zooprofilattico Sperimentale delle Venezie, Italy
OFFLU VCM	APHA has carried out testing and contributed reagents, data and expertise to the biannual WHO VCM activities	Instituto Zooprofilattico Sperimentale delle Venezie, Italy CSIRO Australian Centre for Disease Preparedness SEPRL : USDA Agricultural Research Service, Georgia, USA

## 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

*Did not participate in proficiency test.*

## TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
Oral presentation and participation in discussions at the WOA/FAO Swine influenza Technical expert meeting.	Paris, France	Swine influenza A virus diagnostic detection by molecular assays (RNA detection by PCR and whole genome sequencing (WGS) as well as serological assays (HAIT, ELISA)

29. Additional comments regarding your report:

No