World Organisation for Animal Health

Chiara Chiapponi - Swine influenza - ITALY

WOAH Reference Laboratory Reports Activities 2025

LABORATORY INFORMATION

***Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:**	Swine influenza
***Address of laboratory:**	Via Bianchi 9 25124 Brescia
***Tel:**	+39 (0)52129.37.33
***E-mail address:**	chiara.chiapponi@izsler.it
Website:	https://www.izsler.it/
***Name (including Title) of Head of Laboratory (Responsible Official):**	Dr. Giorgio Varisco
***Name (including Title and Position) of WOAH Reference Expert:**	Dr. Chiara Chiapponi, senior scientist
***Which of the following defines your laboratory? Check all that apply:**	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	17605	6040
ELISA anti-NP	Yes	1164	196
Direct diagnostic tests		Nationally	Internationally
Real-time RT-PCR	Yes	3583	110
Multiplex RT-PCR	Yes	246	63
Cell culture isolation	Yes	396	15
Embryonated chicken eggs inoculation	Yes	209	7
Whole genome sequencing	Yes	117	12

TOR2: REFERENCE MATERIAL

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

No

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

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOAH Member Countries	Country of recipients
	RT-PCR, HI test, HI					

Swine influenza virus (multiple subtypes	characterization against the relevant ferret antisera (CVV evaluation). Antiviral susceptibility tests	produced/provided	205	20	3	FRANCE, ITALY, UNITED KINGDOM,
Swine influenza virus antisera (multiple subtypes)	HI tests	produced/provided	4	0	1	ITALY,

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH Members?

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 WOAH Standards for the designated pathogen or disease?

No

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

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

TOR4: DIAGNOSTIC TESTING FACILITIES

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

Yes

Name of WOAH Member Country seeking assistance	Date	Which diagnostic test used	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
GREECE	2025-03-10	RT-PCR	1	0
GREECE	2025-04-07	RT-PCR	2	0
GREECE	2025-05-21	RT-PCR	3	0
GREECE	2025-06-13	RT-PCR	5	0
GREECE	2025-06-27	RT-PCR	3	0
GREECE	2025-07-24	RT-PCR	7	0
GREECE	2025-08-06	RT-PCR	3	0
GREECE	2025-09-08	RT-PCR	4	0
GREECE	2025-10-09	RT-PCR	4	0
GREECE	2025-10-23	RT-PCR	5	0
GREECE	2025-12-23	RT-PCR	2	0
PORTUGAL	2025-01-16	MULTIPLEX RT-PCR	7	0
PORTUGAL	2025-02-05	MULTIPLEX RT-PCR	3	0
PORTUGAL	2025-02-14	MULTIPLEX RT-PCR	5	0
PORTUGAL	2025-04-04	MULTIPLEX RT-PCR	3	0
PORTUGAL	2025-04-15	MULTIPLEX RT-PCR	3	0
PORTUGAL	2025-05-29	MULTIPLEX RT-PCR	7	0
PORTUGAL	2025-06-13	MULTIPLEX RT-PCR	3	0
PORTUGAL	2025-07-01	MULTIPLEX RT-PCR	3	0
PORTUGAL	2025-07-15	MULTIPLEX RT-PCR	6	0
PORTUGAL	2025-08-11	MULTIPLEX RT-PCR	6	0
PORTUGAL	2025-08-18	MULTIPLEX RT-PCR	7	0
PORTUGAL	2025-09-22	MULTIPLEX RT-PCR	2	0
PORTUGAL	2025-10-17	MULTIPLEX RT-PCR	12	0

PORTUGAL	2025-10-23	MULTIPLEX RT-PCR	2	0
CYPRUS	2025-03-07	ELISA/HI TEST	50	0
FRANCE	2025-07-18	ELISA/HI TEST	20	0
GERMANY	2025-05-16	HI	490	0
GREECE	2025-02-03	ELISA/HI TEST	16	0
GREECE	2025-03-07	ELISA/HI TEST	26	0
GREECE	2025-04-07	ELISA/HI TEST	28	0
GREECE	2025-05-09	ELISA/HI TEST	56	0
GREECE	2025-05-16	ELISA/HI TEST	25	0
GREECE	2025-05-21	ELISA/HI TEST	55	0
GREECE	2025-05-27	ELISA/HI TEST	25	0
GREECE	2025-06-13	ELISA/HI TEST	103	0
GREECE	2025-06-27	ELISA/HI TEST	56	0
GREECE	2025-07-23	ELISA/HI TEST	33	0
GREECE	2025-08-04	ELISA/HI TEST	72	0
GREECE	2025-08-06	ELISA/HI TEST	24	0
GREECE	2025-08-08	ELISA/HI TEST	25	0
GREECE	2025-09-08	ELISA/HI TEST	99	0
GREECE	2025-09-12	ELISA/HI TEST	45	0
GREECE	2025-09-23	ELISA/HI TEST	24	0
GREECE	2025-09-25	ELISA/HI TEST	79	0
GREECE	2025-10-09	ELISA/HI TEST	30	0
GREECE	2025-10-23	ELISA/HI TEST	98	0
GREECE	2025-11-21	ELISA/HI TEST	36	0
GREECE	2025-12-24	ELISA/HI TEST	6	0

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

Yes

Name of the WOAH Member Country receiving a technical consultancy	Purpose	How the advice was provided
SWITZERLAND	TECHNICAL ADVICE FOR PCR AND SELECTION OF H3N2 STRAINS AS POSITIVE CONTROL	MAIL

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAH 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
Swine influenza data for OFFLU contribution to WHO vaccine composition meeting	ANNUAL	To share animal influenza data with WHO in order to assist with selection of the most appropriate viruses for human vaccines, which can include animal viruses that present a potential to emerge into pandemic threats.	OFFLU PARTNERS	AUSTRALIA CAMBODIA FRANCE GERMANY JAPAN NIGERIA THE NETHERLANDS UNITED KINGDOM UNITED STATES OF AMERICA
			Medicine, AUT; Faculty of Veterinary Medicine;ANSES Ploufragan-Plouzané- Niort Laboratory;Finnish Food Authority Ruokavirasto;University of Helsinki;Animal and Plant Health Agency;Aristotle University of	

COST Action CA21132, European Swine Influenza Network (ESFLU)	2022-2026	ESFLU gathers 76 experts in an interdisciplinary One Health approach. The Action will advance scientific knowledge concerning swIAV, improve disease surveillance and management capabilities, benefit pork production and reduce risks to both animal and human health.	Thessaloniki; Croatian veterinary Institute; Istituto zooprofilattico sperimentale delle venezie; Istituto Zooprofilattico Sperimentale della Lombardia ed Emilia Romagna;Teagasc; Norwegian Veterinary Institute;The Norwegian Veterinary Institute;Utrecht University;Royal GD Animal Health; FCIENCIAS.ID - ASSOCIACAO PARA A INVESTIGACAO E DESENVOLVIMENTO DE CIENCIAS; Faculty of Veterinary Medicine of the University of Lisbon; Institute for Research and development in Montanology;University Of Agricultural Sciences and Veterinary Medicine;Department of Animal Health and Antimicrobial Strategies; University of Ljubljana, Veterinary faculty; University of Sarajevo - Veterinary Faculty; Veterinary faculty, Veterinary institute; Diagnostic Veterinary Laboratory; Institute of Veterinary Medicine of Serbia; Scientific Veterinary Institute "Novi Sad"; University of Ghent	ALBANIA AUSTRIA BELGIUM BOSNIA AND HERZEGOVINA BULGARIA CROATIA CZECH REPUBLIC DENMARK FINLAND FRANCE GERMANY GREECE IRELAND LUXEMBOURG MONTENEGRO NORTH MACEDONIA (REP. OF) NORWAY POLAND PORTUGAL ROMANIA SERBIA SPAIN SWEDEN SWITZERLAND THE NETHERLANDS UNITED KINGDOM

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

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:
Viral strains are isolated for genetic and antigenic characterization. Origin and date of sampling are collected

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:
Sequencing data, origin and date of sampling (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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-Giovanetti M, Cella E, Soliani L, et al. From North to South: transmission dynamics of H1N1pdm09 swine influenza A viruses in Italy. J Gen Virol. 2025;106(11):002174. doi:10.1099/jgv.0.002174

-Soliani L, Mescoli A, Zanni I, et al. Human-Derived H3N2 Influenza A Viruses Detected in Pigs in Northern Italy. Viruses. 2025;17(9):1171. Published 2025 Aug 27. doi:10.3390/v17091171

-Coggon A, Lopes S, Simon G, et al. Quantifying the zoonotic risk profile of European influenza A viruses in swine from 2010 to 2020 inclusive. J Virol. 2025;99(7):e0030625.

doi:10.1128/jvi.00306-25

b) International conferences:

3
-CORDIOLI° B, SOLIANI° L, ZANNI° I, MESCOLI° A, BAIONI° L, ALBORALI° GL, MORENO° A, FACCINI° S, ROSIGNOLI° C, PUPILLO° G, BASSI° P, FIORENTINI° L,TORREGGIANI ° C, LUPPI° A, CHIAPPONI° C, PROSPERI° AEmergence of H1C2.4NX clade in swine influenza A Virus : surveillance in Northern Italy (2020–2025)International Congress of Veterinary Virology (ESVV) (13th : Portorož, Slovenia : September 2-5, 2025)
-FABLET C, GRAAF-RAU A, LARSEN LE, CHIAPPONI° C, MATEU E, EVERETT H, HERVÉ S, SCHMIES K, PROSPERI° A, MARTIN-VALLS G, LEETHAM S, LUPPI° A, SIMON G, ROSE NBiosecurity challenges and opportunities in herds enzootically infected with swine influenza virusEuropean Symposium on Porcine Health Management (ESPHM) : Kursaal Bern, Switzerland : 21st - 23th May, 2025)
-SOLIANI° L, PROSPERI° A, MESCOLI° A, BAIONI° L, PUPILLO° G, BASSI° P, FIORENTINI° L, CORDIOLI° B, TORREGGIANI C, LUPPI° A, CHIAPPONI° CCirculation of influenza A virus in wild boars in the Emilia- Romagna region, Italy (2023–2025)International Congress of Veterinary Virology (ESVV) (13th : Portorož, Slovenia : September 2-5, 2025)

c) National conferences:

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-CHIAPPONI° C, PROSPERI° A, MORENO° A, MESCOLI° A, SOLIANI° L, DE_MATTIA° A, TORREGGIANI° C, ZANNI° I, GUADAGNINI G, PONZONI D, PILERI E, LUPPI° A. Longitudinal study of the circulation of swine influenza viruses in two pig farms in Italy.Meeting Annuale della Società Italiana di Patologia ed Allevamento dei Suini (SIPAS) (50. : Lazise (VR) : 17/18 Aprile 2025)
-CHIAPPONI C. Centro di referenza WOAH per l'influenza suina, IZSLER: Epidemiologia dei virus influenzali di tipo A circolanti fra i suini: aggiornamenti. Giornata di studio SIPAS 2025 ww.sipas.org

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 WOAH 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)	
UNI CEI EN ISO/IEC 17025:2018	PDF	Accreditation_certificate.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Influenza type A: etiological agent- RT-PCR	ILAC-MRA_Accredia

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

Yes

The laboratory works according to tha Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4 and WHO Laboratory biosafety manual

TOR9: SCIENTIFIC MEETINGS

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

No

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

No

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

Yes

24. Are you a member of a network of WOAH Reference Laboratories designated for the same pathogen?

Yes

NETWORK/DISEASE	ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)	NO. PARTICIPANTS	PARTICIPATING WOAH REF. LABS
ESFLU COST ACTION	PARTICIPANT-MC MEMBER	36	WOAH reference Laboratory for swine influenza (APHA , UK)
OFFLU swine influenza virus technical group	PARTICIPANT	20	-WOAH reference Laboratory for swine influenza (APHA , UK) -WOAH reference Laboratory for swine influenza (Viral Disease and Epidemiology Research Division, National Institute of Animal Health, National Agriculture and Food Research Organizationi- Japan) -WOAH reference Laboratory for swine influenza (National Veterinary Services Laboratories, USDA, APHIS, USA)

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH 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 WOAH Ref. Labs/ organising WOAH Ref Lab
Evaluate laboratories' performance on detecting and subtyping swIAV strains from different European countries	Participant	to be communicated in the final report	-WOAH reference Laboratory for swine influenza (APHA , UK)

26. Did your laboratory collaborate with other WOAH 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 WOAH Reference Laboratories
COST Action CA21132, European Swine Influenza Network (ESFLU)	ESFLU gathers 76 experts in an interdisciplinary One Health approach. The Action will advance scientific knowledge concerning swIAV, improve disease surveillance and management capabilities, benefit pork production and reduce risks to both animal and human health.	-WOAH reference Laboratory for swine influenza (APHA , UK)

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
Detection of influenza A virus by molecular test	Participant	18	Influenza A detection by RT-PCR	ITALY,

TOR12: EXPERT CONSULTANTS

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

Yes

Kind of consultancy	Location	Subject (facultative)
OFFLU Swine Influenza virus expert technical meeting	online	Combined OFFLU Steering committee and all OFFLU Technical activities zoom meeting for introductions and discuss OFFLU work plan 2026

29. Additional comments regarding your report:

No