

# OIE Reference Laboratory Reports Activities

## *Activities in 2016*

**This report has been submitted : 2017-01-12 10:27:19**

<b>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</b>	Swine influenza
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<b>Name (including Title) of Head of Laboratory (Responsible Official):</b>	Prof. Stefano Cinotti
<b>Name (including Title and Position) of OIE Reference Expert:</b>	Emanuela Foni, DVM, Veterinary Manager
<b>Which of the following defines your laboratory? Check all that apply:</b>	Governmental

**ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards**

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 OIE Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
HI test	Yes	50148	1560
Direct diagnostic tests		Nationally	Internationally
PCR test	Yes	1397	1
Viral Isolation on Eggs	Yes	178	0
Viral Isolation on Cells	Yes	271	0

**ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards.  
To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.**

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
Virus:H1N1pdm09 A/sw/It/282866/2013	Haemagglutination inhibition test	produced	60ml (ready to use)	2ml( lyophilized)	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
H3N2: A/sw/It/311349/2013	Haemagglutination inhibition	produced	40ml(ready to use)	2ml lyophilized	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
H1N2: A/sw/It/284922/2009	Haemagglutination inhibition	produced	30 ml(ready to use)	2ml lyophilized	2	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Virus:H1N1 A/sw/It/311368/2013	Haemagglutination inhibition	produced		2ml lyophilized	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Hyperimmune serum:H1N1 A/sw/It/311368/2013	Haemagglutination inhibition	produced		6ml lyophilized	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Hyperimmune serum H3N2: A/sw/It/311349/2013	Haemagglutination inhibition			6ml lyophilized	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

Hyperimmune serum H1N2 A/sw/It/284922/2009	Haemagglutination inhibition			6ml lyophilized	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Hyperimmune serum H1N1 pdm09 A/sw/it/282866/2013	Haemagglutination inhibition			6ml lyophilized	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Virus H1N1 A/sw/It/7704/2001	Haemagglutination inhibition experimental infection			1,5 ml (lyophilized)	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Virus D/sw/It/199724-3/2015	HI and Virus isolation method development			2 ml (lyophilized)	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Virus H1N1 A/swine/Italy/233405/2012	to BIOBANKING Veterinary Resources OIE Collaborative Centre			10 ml (lyophilized)	The reagents	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Virus H1N1 A/swine /Italy/317775/2010	to BIOBANKING Veterinary Resources OIE Collaborative Centre			10 ml (lyophilized)	The reagents	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

Virus H1N1 Virus H1N2 A/swine/Italy/275736/2010	to BIOBANKING Veterinary Resources OIE Collaborative Centre			10 ml (lyophilized)	The reagents	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Virus N3N2 A/swine/Italy/302749/2010	to BIOBANKING Veterinary Resources OIE Collaborative Centre			10 ml (lyophilized)	The reagents	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Virus H3N2 A/swine/Italy/55925/2011	to BIOBANKING Veterinary Resources OIE Collaborative Centre			10 ml (lyophilized)	The reagents	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

***ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases***

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

**ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries**

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
HUNGARY	March	20	0
ROMANIA	November	20	0
ITALY	March		5
HUNGARY	April	75	
HUNGARY	May	170	
HUNGARY	July	30	
HUNGARY	August	30	
HUNGARY	September	30	
HUNGARY	November	30	

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
SERBIA	sharing information on reagents and primer to be used for confirmatory and subtyping test fo swine influenza virus and serological investigation	e-mail
ROMANIA	sharing information on reagents and primer to be used for confirmatory and subtyping test fo swine influenza virus and serologucal investigation	e-mail
ITALY	Genetic characterization of H1N1 swine influenza virus isolated from human	Local meeting

**ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations**

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)
CoVetLab	Sept 2016-March 2017	Next Generation Sequencing for genetic characterisation of swine influenza viruses in Europe	APHA,DTU,ANSES, CVI-Lelystad, SVA, FLI

**ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases**

11. Did your Laboratory collect epizootiological data relevant to international disease control?

Yes

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

Yes

**13. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category)**

a) Articles published in peer-reviewed journals: 3

1-Chiapponi C, Faccini S, de Mattia A, Baioni L, Barbieri I, Rosignoli C, Nigrelli A. and Foni E. Detection of influenza D virus among swine and cattle, Italy. *Emerg Infect Dis*. 2016 Feb 22(2): 352-354. <http://dx.doi.org/10.3201/eid2202.151439>

2- Baumann J, Kouassi NM, Foni E, Klenk H-D, Matrosovich M. 2016. H1N1 swine influenza viruses differ from avian precursors by a higher pH optimum of membrane fusion. *J Virol* 90:1569-1577. doi:10.1128/JVI.02332-15.

3- Henritzi D., Zhao N., Starick E, Simon G., Krog J.S., Larsen L.E., Reid S.M., Brown I.H., Chiapponi C., Foni E., Wacheck S., Schmid P., Beer M., Hoffmann B., Harder T.C. (2016). Rapid detection and subtyping of European swine influenza viruses in porcine clinical samples by hemagglutinin- and neuraminidase-specific tetra- and triplex real-time RT-PCRs. *Influenza Other Respir Viruses*. 2016 Jul 11. doi: 10.1111/irv.12407. [Epub ahead of print

b) International conferences: 3

1- Foni E., Chiapponi C., Faccini S., Baioni L., De Mattia A., Barbieri I., Rosignoli C., Merenda M., Nigrelli A. (2016) Circulation of the novel influenza virus, proposed as influenza D virus, in Italian pig farms. *Proceedings of 24th International Pig Veterinary Society Congress*. Dublin, June 7th-10th 2016,598.

2-Reid S.M., Russell C., Williamson S., Simon G., Loeffen W, Larsen S., Zohari S., Chiapponi C., Harder T., Gorin S., Krog J.S., Foni E., Brookes S. M., Brown I. H. (2016) Development and validation of real-time RT-PCR protocols for sub-typing swine influenza viruses. *Proceedings of 24th International Pig Veterinary Society Congress*. Dublin, June 7th-10th 2016, 600.

3-Chiapponi C., Faccini S., Bolzoni L., Merenda M., Baioni L., Manfredi R., Zanni I., Rosignoli C., De Mattia A.,

Nigrelli A., Foni E. (2016) Circulation of influenza D virus in cattle in Italy. Proceedings of 6th European Congress of Virology, October 19-22, 2016 , Hamburg, Germany. P.26-3

c) National conferences: 2

1-Foni E., Chiapponi C., Faccini S., Baioni L., Barbieri I., Rosignoli C., Merenda M., Zanni I., Manfredi R., Sandri G., Nigrelli A. Sulla circolazione di virus influenza D in suini di allevamenti del Nord Italia. Atti del XLII meeting Annuale della Società Italiana di Patologia ed Allevamento dei Suini. Montichiari (BS)10-11 Marzo 2016, 151-155.  
2-Rosignoli° C, Merenda° M., Faccini° S, Chiapponi° C, De\_Mattia° A, Bufalo G, Garbarino° C, Baioni° L, Nigrelli° AD, Foni° E (2016) Virus influenza D e malattia respiratoria del bovino : indagine in allevamenti italiani. Buiatria (2016) . - 6 p. - 16 bib ref

d) Other:

(Provide website address or link to appropriate information) 0

**ToR 7: To provide scientific and technical training for personnel from OIE Member Countries**

**To recommend the prescribed and alternative tests or vaccines as OIE Standards**

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

Yes

a) Technical visits: 0

b) Seminars: 0

c) Hands-on training courses: 1

d) Internships (>1 month): 0

Type of technical training provided (a, b, c or d)	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
c	Romania	2

**ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned**

15. Does your laboratory have a Quality Management System certified according to an International Standard?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
EN ISO/IEC 17025:2005	Accreditation Certificate.pdf

16. Is your laboratory accredited by an international accreditation body?

No



17. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned?

Yes

(See *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4*)

**ToR 9: To organise and participate in scientific meetings on behalf of the OIE**

18. Did your laboratory organise scientific meetings on behalf of the OIE?

No

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

No

**ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results**

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

Yes

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

Yes

Purpose of the proficiency tests: <sup>1</sup>	Role of your Reference Laboratory (organiser/participant)	No. participants	Participating OIE Ref. Labs/organising OIE Ref. Lab.
Proficiency test Real time PCR for M gene of Influenza virus	partecipant	13	OIE Reference Laboratory for Avian Influenza IzsVe Padua

<sup>1</sup> validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

22. Did your laboratory collaborate with other OIE 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 OIE Reference Laboratories
CoVetLab	Next Generation Sequencing for genetic characterisation of swine influenza viruses in Europe	APHA (UK)

***ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results***

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

No

Note: See *Interlaboratory test comparisons in: Laboratory Proficiency Testing* at: <http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing> see point 1.3

***ToR 12: To place expert consultants at the disposal of the OIE***

24. Did your laboratory place expert consultants at the disposal of the OIE?

No

25. Additional comments regarding your report: