

OIE Reference Laboratory Reports Activities

Activities in 2018

This report has been submitted : 2018-12-21 15:51:37

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Swine influenza
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Name (including Title) of Head of Laboratory (Responsible Official):	PROF.STEFANO CINOTTI
Name (including Title and Position) of OIE Reference Expert:	Dr.Emanuela Foni DVM Veterinary Manager
Which of the following defines your laboratory? Check all that apply:	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
haemoagglutination inhibition test	yes	15317	383
Direct diagnostic tests		Nationally	Internationally
Real-time PCR M gene	yes	1880	14
Egg isolation	yes	157	0
Cell culture isolation	yes	280	0
PCR for IAV-S typing	yes	175	3
Sequencing isolates	no	149	8

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

Swine influenza - Emanuela Foni - italy

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
A/swine/Italy/150383/2014_H1N2	Provided to Biobanking Veterinary Resources OIE Collaborative Centre	produced and provided	10 ml	10 ml	Available for any requesting OIE member country	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
A/swine/Italy/23721/2015/H1N1pdm	Provided to Biobanking Veterinary Resources OIE Collaborative Centre	produced and provided	10 ml	10 ml	Available for any requesting OIE member country	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
A/swine/Italy/114922/2014/H1N2	Provided to Biobanking Veterinary Resources OIE Collaborative Centre	produced and provided	10 ml	10 ml	Available for any requesting OIE member country	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
A/swine/Italy/280201/2013/H1N1	Provided to Biobanking Veterinary Resources OIE Collaborative Centre	produced and provided	10 ml	10 ml	Available for any requesting OIE member country	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
A/swine/Italy/124953/2014/H1N2	Provided to Biobanking Veterinary Resources OIE Collaborative Centre	produced and provided	10 ml	10 ml	Available for any requesting OIE member country	<input type="checkbox"/> Africa <input type="checkbox"/> Americ as <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Hyperimmune serum:H1N1 A/sw/It/311368/2013	haemoagglutination inhibition test	produced and provided	4,5 ml		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	haemoagglutination inhibition test	produced and provided	4,5 ml		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	haemoagglutination inhibition test	produced and provided	4,5 ml		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/282866/2013	haemoagglutination inhibition test	produced and provided	4,5 ml		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 H1N2 A/sw/It/284922/2009	haemoagglutination inhibition test	produced and provided	140 ml		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/311368/2013	haemoagglutination inhibition test	produced and provided	110 ml		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 H3N2: A/sw/It/311349/2013	haemoagglutination inhibition test	produced and provided	235 ml		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 pdm A/sw/It/282866/2013	haemoagglutination inhibition test	produced and provided	3 ml		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

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	165	0
HUNGARY	May	220	0
HUNGARY	August	8	0
SERBIA	June	8	0

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	sequences obtained from an isolated were discussed	e-mail
ITALY	A research program on IAV-S was discussed	Skype

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)	OIE Member Countries involved other than your country
CoVetLab NGS of European swine influenza viruses	2016-2018	Next-Generation Sequencing for genetic characterisation of swine influenza viruses in Europe	APHA,DTU,ANSES, CVILelystad, SVA, FLI	DENMARK FRANCE GERMANY SWEDEN THE NETHERLANDS UNITED KINGDOM
Risk assessment for influenza D in Europe	2018-2019	The objective is to develop an integrated approach to assess the emergence threat associated with influenza D viruses' circulation in Europe. By promoting transfer and exchange of knowledge and expertise between the partners we will pave the way towards scientific based decision-making and development of effective strategies for diagnosis and disease control	INRA,Utrecht University, Faculty of Veterinary Medicine Université de Liège : Luxembourg Institute of Health National Veterinary Institute	FRANCE LUXEMBOURG SWEDEN THE NETHERLANDS

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: 1

1. Moreno A, Lelli D, Lavazza A, Sozzi E, Zanni I, Chiapponi C, Foni E, Capucci L, Brocchi E. MAb-based competitive ELISA for the detection of antibodies against influenza D virus. *Transbound Emerg Dis.* 2018 Sep 4. doi: 10.1111/tbed.13012

b) International conferences: 6

1. A. Moreno, C. Chiapponi, S. Canziani, L. Baioni, S. Faccini, A. Luppi, G. Vaccari, E. Foni, G.L. Alborali, A. Lavazza. SWINE INFLUENZA A VIRUSES: EXTREMELY HIGH GENOMIC HETEROGENEITY IN ITALY IN THE LAST TWO DECADES. 2nd International Congress of the Italian society for Virology. Rome 28-30 November 2018

2. A. Moreno, C. Dalloli, C. Chiapponi, A. Bregoli, L.J. Vinco, D. Lelli, E. Sozzi, A. Lavazza, S. Testi, P. Ardigo, M. Giorgi. One health challenge: detection of a swine H1N2 influenza virus in commercial turkeys. *ESVV-EPIZONE 2018*

3. C. Chiapponi, S. Faccini, M. Merenda, A. Amorico, A. Moreno, C. Rosignoli, E. Pariani, C. Galli, P. Affanni, M. E. Colucci, E. Foni. Virological surveillance of influenza virus type A, B, C, D in Italy. *ESVV-EPIZONE 2018*

4. Sharon M. Brookes, Helen E. Everett, Pauline M. van Diemen, Alexander M.P. Byrne, Andrew Ramsay, Samantha Watson, Alejandro Nunez, Ana Moreno, Chiara Chiapponi, Emanuela Foni, Ian H. Brown. Assessment of zoonotic transmission of swine influenza A viruses to naive or vaccinated ferrets. 4th international symposium on neglected influenza viruses. 2018

5. Alexander MP Byrne, James Snowden, Vivien Coward, Chiara Chiapponi, Emanuela Foni, Helen E Everett, Sharon M Brookes and Ian H Brown. Optimisation of the culture and detection methods for Influenza D viruses. 4th international symposium on neglected influenza viruses. 2018

6. Ana Moreno, Davide Lelli, Antonio Lavazza, Enrica Sozzi, Irene Zanni, Chiara Chiapponi, Emiliana Brocchi, Emanuela Foni. Mab-based competitive ELISA for the detection of antibodies against influenza D virus. 4th international symposium on neglected influenza viruses. 2018

c) National conferences: 1

C. Chiapponi, E. Foni. FULL-GENOME SEQUENCING DEI VIRUS RESPIRATORI: I VIRUS INFLUENZALI COME MODELLO. WORKFLOW E STUDI MOLECOLARI. ID17604. *Atti del XLVII Congresso Nazionale AMCLI-Rimini-2018*

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?

No

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	Certificato Accredia 2017.pdf

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

Yes

Test for which your laboratory is accredited	Accreditation body
Matrix(M) gene PCR	ILAC-MRA_Accredia

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: ¹	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

¹ 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
Next-Generation Sequencing for genetic characterisation of swine influenza viruses in Europe	The overall aim of the project is to validate the methods used for genetic characterisation of swine influenza A viruses (swIAV) in European pigs by next-generation sequencing (NGS)	Animal and Plant Health Agency New Haw, Addlestone Surrey KT15 3NB Weybridge UNITED KINGDOM

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: