

OIE Reference Laboratory Reports Activities in 2012

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	RABBIT HAEMORRHAGIC DISEASE
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Name (including Title) of Head of Laboratory (Responsible Official):	Prof. Stefano Cinotti – IZSLER General Manager
Name (including Title and Position) of OIE Reference Expert:	Lorenzo Capucci DBR – Head of the Proteomic division
Date of submission to the OIE	24 Jan 2013

Instructions

This form should be used by an OIE Reference Laboratory to report activities that took place from January through December of the past year (2012), unless otherwise stated, and must be submitted by the end of January every year.

Only those activities that concern the disease (or topic) for which the laboratory is recognised by the OIE should be mentioned. The questionnaire structure follows the Terms of Reference (ToRs) for OIE Reference Laboratories, available at:

<http://www.oie.int/en/our-scientific-expertise/reference-laboratories/introduction/>

Each ToR (blue italicised text) has been placed as a heading covering the group of questions related to it.

Please note the red italicised text is given as guidance and should be deleted from your report and substitute with your data. Examples are based on past Annual Reports or have been invented.

The questionnaire represents a means of gathering information on activities carried out by OIE Reference Laboratories and making it available to OIE Member Countries and to the OIE Reference Laboratory network.

This annual report will remain available for consultation on the OIE web site:

[\(http://www.oie.int/en/our-scientific-expertise/reference-laboratories/annual-reports/\)](http://www.oie.int/en/our-scientific-expertise/reference-laboratories/annual-reports/):

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

Test recommended by the OIE	Total number of test performed last year	
	Nationally	Internationally
Indirect diagnostic tests		
c-ELISA	1284	120
anti-IgG ELISA	814	25
anti-IgA ELISA	814	25
anti-IgM ELISA	814	25
Direct diagnostic tests	Nationally	Internationally
sandwich ELISA	681	21
western blotting	0	0
RT-PCR	132	2
MAbs panel analysis	113	2
Genomic sequencing	7	1

ToR: 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 store imported standard reference reagents officially recognised by the OIE or other international bodies?

Yes

No

3. Did your laboratory supply standard reference reagents to OIE Member Countries?

Yes

No

Type of reagent available	Related diagnostic test	Produced/ stored	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	Name of recipient OIE Member Countries and of institutions
Serological kit RHD	c-ELISA	Produced	N° 22 kit (3300 tests)		Italy, IIZZSS network
Serological kit RHD	c-ELISA	Produced		N° 3 kit (450 tests)	N° 2 USDA, APHIS, VS, NVSL, FADDL Greenport, NY USA N° 1 National Veterinary Research

Type of reagent available	Related diagnostic test	Produced/ stored	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	Name of recipient OIE Member Countries and of institutions
					Institute Pulawy, Poland
Serological kit EBHS	Sandwich ELISA	Produced	N°19 kit (1330 tests)		Italy, IIZZSS network
Serological kit EBHS	Sandwich ELISA	Produced	N°5 kit (350 tests)		Italy, private companies
Serological kit EBHS	Sandwich ELISA	Produced		N°10 kit (700 tests)	Veterinary Diagnostic Directorate Budapest Hungary
Virological kit RHD/EBHS	Sandwich ELISA	Produced	N° 60 kit (4200 tests)		Italy, IIZZSS network
Virological kit RHD/EBHS	Sandwich ELISA	Produced		N°5 kit (350 tests)	N°1 USDA, APHIS, VS, NVSL, FADDL Greenport, NY USA N° 1 National Veterinary Research Institute Pulawy, Poland N° 3 Niedersächsisches Landesamt Für Verbraucherschutz Und Lebensmittelsicherheit Veterinärinstitut Hannover Germany

4. Did your laboratory produce diagnostic reagents other than the OIE-approved standard reference reagents?

Yes

No

5. Did your laboratory produce vaccines?

Yes

No

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

Yes

No

Vaccine name	Amount supplied nationally (ml, mg) (including for own use)	Amount supplied to other countries (ml, mg)	Name of recipient OIE Member Countries
EBHSV	30000 doses (1ml)		

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

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

Yes

No

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

Yes

No

Name of the new test or diagnostic method or vaccine developed	Description and References (Publication, website, etc.)
RT-PCR for RHDV2 (the new RHDV serotype detected in France on 2010)	The procedure is available on WEBSITE (http://www.izsler.it/izs_bs/s2magazine/index1.jsp?idPagina=377) Paper in preparation

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

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

Yes

No

Name of OIE Member Country seeking assistance	Date (dd/mm)	No. samples received for provision of diagnostic support (i.e. from surveillance campaign)	No. samples received for provision of confirmatory diagnoses
France	1/3		33
Malta	27/7		7
Malta	15/11		2
Spain	4/12		18
Sweden	15/5 and 3 following dates		7

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

Yes

No

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
Office National de la Chasse et de la Faune Sauvage - Direction des études et de la recherche, Nantes, France	Serological diagnosis on wild rabbit sera and interpretation of results, with reference to antibody response induced by presumptive apathogenic viruses	remote assistance
Hipra, Spain	Antigenic and genomic characterization of new viral strains identified in Spain and antibody detection in vaccinated rabbits	remote assistance
Animal Health Laboratory, Division of Veterinary Services, Mauritius.	Indications on the execution of HA diagnostic test	remote assistance
IZW, Berlin, Germany	Analysis of EBHS seroprevalence in wild hares in Germany the diagnosis of EBHS in captive hares and vaccination studies	remote assistance

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

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

Yes

No

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
RHDV and RHDV2 in wild and domestic lagomorphs	2 years	Serological diagnosis of RHDV infections in wild and domestic rabbits and studies of antigenic characterization and biological properties of the new antigenic RHDV2	French agency for food, environmental, and occupational health safety (ANSES) Unit of virology, immunology, and parasitology in poultry and rabbits, Ploufragan	France
Detection of anti-EBHSV antibodies in captive and wild hare populations	2 years	Serological diagnosis of EBHS in wild and captive hares and study of specific immune profile after vaccination for EBHS in captive hares	Zoo and Wildlife Medicine Research Institute of Wildlife Ecology University of Veterinary Medicine di Vienna	Austria
Circulation of RHDV in wild	4 years	Study on natural evolution and circulation of rabbit	Department of Water, Land and Biodiversity	Australia

populations.		lagoviruses in wild population in different climate condition and density situation	Conservation of the Australian Government & NRM Biosecurity Unit, Biosecurity SA Adelaide	
RHDV antigenic and genetic characterization	3 years	Characterization of RHDV isolates from different countries in relation to their antigenic and genetic profile and degree of pathogenesis.	Virology Laboratory, Elizabeth Macarthur Agriculture Institute di Menangle	Australia

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

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

Yes

No

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

Yes

No

14. 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:

b) International conferences:

c) National conferences:

d) Other:

List of publications

- FORDHAM DA, SINCLAIR RG; PEACOCK DE, MUTZE GJ, KOVALISKI J, CASSEY P, CAPUCCI L, BROOK BW European rabbit survival and recruitment are linked to epidemiological and environmental conditions in their exotic range. Austral Ecol. - Austral Ecology37(8), December 2012, Pages: 945–957. Article first published online : 17 FEB 2012, DOI: 10.1111/j.1442-9993.2011.02354.
- CAPUCCI L, LAVAZZA A Epidemiology, characterization and diagnoses of lagovirus. 4th World Lagomorph Conference, Vienna, Austria July 23-27, 2012. Proceedings (edited by Klaus Hacklaender, Christine Thurner, Institute of Wildlife Biology and Game Management, BOKU University of Natural Resources and Life Sciences – Vienna. 2012 - p 32-33.
- CAVADINI P, PUGGIONI G, LAVAZZA A, MANCA AF, MARTINELLI N, LIGIOS C, CAPUCCI L. Detection of RHDVFRA2010 in rabbits in Sardinia and identification as cause of an EBHS-like disease in the sardinian hare (*Lepus capensis mediterraneus*). IX International Congress of Veterinary Virology (ESVV) and joint meeting with the European Society of Clinical Virology: 4th - 7th September 2012, Madrid: final program & abstract book - p 68
- CHIARI M., BIANCHI A., SALA G., ZANONI M.G., LAVAZZA A., GAFFURI A.. The harmonized monitoring program of selected zoonotic diseases of wildlife in Lombardy, northern Italy. Proceedings joint 61st WDA /10th Biennial EWDA Conference “Convergence in wildlife health”. Lyon 23-27 July 2012. P.116
- CHIARI M, BONAVETTI E, ZANONI M, LAVAZZA A. Application of a surveillance program in wild European brown hares (*Lepus europeaus*) in Brescia Province, North Italy. 8. Congresso Italiano di Teriologia : 9-11

- maggio 2012, Piacenza. Hystrix Ital J Mammalogy. - Vol. n.s., suppl (2012) . - p 40
6. CHIARI M., E. GIOIA, N. FERRARI, L. CAPUCCI, A. LAVAZZA. Utility of blotting paper for serological tests to perform monitoring programs for European Brown Hare Syndrome (EBHS). Proceedings joint 61st WDA /10th Biennal EWDA Conference “Convergence in wildlife health”. Lyon 23-27 July 2012. P.384
 7. CHIARI M., G.L. ALBORALI, L. CAPUCCI, A. LAVAZZA. Application of a surveillance program in European hares (*Lepus europeus*) in Brescia province, North Italy. 4th World Lagomorph Conference, Vienna, Austria July 23-27, 2012. Proceedings (edited by Klaus Hacklaender, Christine Thurner, Institute of Wildlife Biology and Game Management, BOKU University of Natural Resources and Life Sciences – Vienna. 2012 - p.38
 8. CHIARI M., GIOIA E., FERRARI N., CAPUCCI L., LAVAZZA A. Comparison of different sampling methods for serological tests applied to European Brown Hare Syndrome (EBHS) monitoring programs. 4th World Lagomorph Conference, Vienna, Austria July 23-27, 2012. Proceedings (edited by Klaus Hacklaender, Christine Thurner, Institute of Wildlife Biology and Game Management, BOKU University of Natural Resources and Life Sciences – Vienna. 2012 - p 39
 9. LE_GALL-RECULE G, CAPUCCI L, LAVAZZA A, ZWINGELSTEIN F, LEMAITRE E, BERTAGNOLI S, GUERIN JL, DECORS A, BOUCHER S, LE_NORMAND B, MARCHANDEAU S Emergence of a new rabbit haemorrhagic disease virus (RHDV). 4th World Lagomorph Conference, Vienna, Austria July 23-27, 2012. Proceedings (edited by Klaus Hacklaender, Christine Thurner, Institute of Wildlife Biology and Game Management, BOKU University of Natural Resources and Life Sciences – Vienna. 2012 - p 79.
 10. PUGGIONI G, CAVADINI P, LAVAZZA A, LE_GALL-RECULE G, MANCA AF, MARTINELLI N, LIGIOS C, CAPUCCI L Detection of RHDV Fra2010 in rabbits in Sardinia and identification as cause of an EBHS-like disease in the Cape hare (*Lepus capensis mediterraneus*) in Sardinia. 4th World Lagomorph Conference, Vienna, Austria July 23-27, 2012. Proceedings (edited by Klaus Hacklaender, Christine Thurner, Institute of Wildlife Biology and Game Management, BOKU University of Natural Resources and Life Sciences – Vienna. 2012 - p 100.

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

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

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

Yes

No

If the answer is yes, please provide the total number of trained persons for each of the following categories:

- a) Technical visits:
- b) Seminars:
- c) Hands-on training courses:
- d) Internships (>1 month):

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
a	Australia	3
b	Australia	1
c	Australia	1

d	Romania	1
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ToR: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

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

Yes

No

Quality management system adopted
ISO 17025

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

Yes

No

Test for which your laboratory is accredited	Accreditation body
Antigen detection - Immunohistochemistry	ACCREDIA (n.148) ILAC-MRA
Antibody detection – competition ELISA	ACCREDIA (n.148) ILAC-MRA
Antigen detection immune-electron-microscopy	ACCREDIA (n.148) ILAC-MRA

18. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned? (See *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals* 2012, Chapter 1.1.3 or *Manual of Diagnostic Tests for Aquatic Animals* 2012, Chapter 1.1.1)

Yes

No

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

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

Yes

No

National/ International	Title of event	Co-organiser	Date (mm/yy)	Location	No. Participants

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

Yes

No

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short)	Title of the work presented

			communications)	
4th World Lagomorph Conference	23-27, July 2012	Vienna, Austria	Invited speaker Short communications and presenting poster	See list of publications at N. 2,7,8,9 and 10

ToR: 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

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

Yes

No

Not applicable (this is the sole OIE laboratory for RHD existing)

22. 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

No

Not applicable (this is the sole OIE laboratory for RHD existing)

Purpose of the proficiency tests: (validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.)	Role of your Reference Laboratory (organiser/ participant)	No. participants	Participating OIE Ref. Labs/ organising OIE Ref. Lab.

23. 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

No

Not applicable (this is the sole OIE laboratory for RHD existing)

Title of the project or contact	Scope	Name(s) of relevant OIE Reference Laboratories

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

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

Yes

No

Purpose for inter-laboratory test comparisons ¹	No. participating laboratories	Participating OIE Member Countries
EM detection and identification of viral particles	103	29 countries

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

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

Yes

No

Kind of consultancy	Location	Subject (facultative)
Responding to specific technical queries from OIE	Mail messaging	Terrestrial Code chapter on Rabbit Haemorrhagic Disease – Recommendations for importation from countries considered infected with RHD

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