

OIE Reference Laboratory Reports Activities

Activities in 2013

This report has been submitted : 2014-02-11 13:01:53

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 General Director IZSLER
Name (including Title and Position) of OIE Reference Expert:	Lorenzo Capucci - Biologist Head of Proteomic Unit
Which of the following defines your laboratory? Check all that apply:	Governmental

ToR: 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
RHDV Competition ELISA	Yes	1501	150
RHDV2 Competition ELISA	No	780	120
RHDV Isotype ELISA	Yes	1380	86
RHDV2 Isotype ELISA	No	650	87
EBHSV Competition ELISA	Yes	602	0
Direct diagnostic tests		Nationally	Internationally
RHDV Sandwich ELISA	Yes	201	0
PCR RHDV	Yes	75	0
EBHS Sandwich ELISA	Yes	428	0
PCR EBHSV	Yes	10	0

**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 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
RHDV serological kit	ELISA	produced	32 kits	15 kits	3	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
EBHSV serological kit	ELISA	produced	32 kits	10 kits	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
RHDV/EBHS virological kit	ELISA	produced	30 kits	5 kits	3	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

4. Did your laboratory produce vaccines?

Yes

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

Yes

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 autovaccine	10000 dosesd (1ml each)	200 doese (1 ml each)	GERMANY

ToR: 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?

Yes

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

Yes

Name of the new test or diagnostic method or vaccine developed	Description and References (Publication, website, etc.)
RHDV2 serological cELISA based on specific MAbs RHDV2 virological sandwich ELISA based on specific MAbs	Not yet published - Validation is still in course
RHDV2 autovaccine	Not yet published - Registration of a commercial product is in due course by a private company

ToR: 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
SPAIN	January	14 rabbit sera	0
SPAIN	July	6 rabbit sera	0
FRANCE	June	160 rabbit sera	0
FRANCE	August	50 rabbit sera	0
FRANCE	December	60 rabbit sera	0
SWEDEN	May	1 rabbit serum	0
SWEDEN	November	4 rabbits sera	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
SPAIN	Serological diagnosis on rabbit sera and interpretation of results, with reference to antibody response induced by presumptive apathogenic viruses	remote assistance
FRANCE	Serological diagnosis on commercial rabbit sera and interpretation of results, with reference to antibody response induced by RHDV2 (RHDVFrance 2010 variant)	remote assistance
PORTUGAL	EBHSV serology	remote assistance
SPAIN	Protocols of RT-PCR for RHDV2	remote assistance
AUSTRIA	Analysis of EBHS seroprevalence in wild hares	remote assistance
GERMANY	Analysis of EBHS seroprevalence in wild hares 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

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)
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
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
Circulation of RHDV in wild populations	4 years	Study on natural evolution and circulation of rabbit lagoviruses in wild population in different climate condition and density situation	Department of Water, Land and Biodiversity Conservation of the Australian Government & NRM Biosecurity Unit, Biosecurity SA Adelaide
EBHSV phylogenetic and antigenic studies of EBHSV	2 years	Typing of old Sweden EBHSV isolates	University of Porto
RHD Accelerator	3 years	use natural selection to produce strains of Rabbit Haemorrhagic Disease Virus (RHDV) strains that are able to overcome immunity and potentially resistance to existing RHDV strains	Division of Ecosystem Sciences, Commonwealth Scientific and Industrial Research Organisation, Canberra ACT 2601, Australia

ToR: 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) Puggioni G, Cavadini P, Maestrone C, Scivoli R, Botti G, Ligios C, Le Gall-Recule G, Lavazza A, Capucci L. The new French 2010 Rabbit Hemorrhagic Disease Virus causes an RHD-like disease in the Sardinian Cape hare (*Lepus capensis mediterraneus*). *Vet Res.* 2013 Oct 7;44:96

2) Le Gall-Recule G, Lavazza A, Marchandeu S, Bertagnoli S, Zwingelstein F, Cavadini P, Martinelli N, Lombardi G, Guarin JL, Lemaitre E, Decors A, Boucher S, Le Normand B, Capucci L. Emergence of a new lagovirus related to Rabbit Haemorrhagic Disease Virus. *Vet Res.* 2013 Sep 8;44:81.

3) Strive T, Elsworth P, Liu J, Wright JD, Kovaliski J, Capucci L. The non-pathogenic Australian rabbit calicivirus RCV-A1 provides temporal and partial cross protection to lethal Rabbit Haemorrhagic Disease Virus infection which is not dependent on antibody titres. *Vet Res.* 2013 Jul 8;44:51.

b) International conferences: 1

"APHAEA harmonized Approaches in monitoring wildlife Population Health, And Ecology and Abundance" EMIDA ERANet Project "Meeting with External Partners" Brescia, Italy 27th-28th June, 2013. Invited Lectures: C. "Epidemiology, characterization and diagnosis of lagoviruses" Capucci, L.

c) National conferences: 1

ANNUAL ASIC (National Association of Rabbit production and Pathology) L. Capucci A. Lavazza "An update on RHDV2 in Italy)

d) Other:

(Provide website address or link to appropriate information) 0

Invited presentation at the 1° Workshop LIFE + Iberlince "Present and Future of Wild Rabbit Populations in Portugal and Spain" ICNF - IBERLINX Beja (Portogallo) 23-25 ottobre 2013 "Rabbit Haemorrhagic Disease, focusing on the latest advances and new virulent strains (A. Lavazza, L Capucci)"

LAVAZZA A., CAVADINI P., CAPUCCI L. RHDV2: un nuovo virus della malattia emorragica virale del coniglio BENV Bollettino Epidemiologico Nazionale Veterinario Ottobre 2013 Numero 14, 5-10.

**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**

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

Yes

- a) Technical visits: 0
 b) Seminars: 1
 c) Hands-on training courses: 0
 d) Internships (>1 month): 1

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
d	ROMANIA	1
b	PORTUGAL	25

ToR: 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
Accreditation Certificate n° 148 Rev. 0 (expiation 04/05/2017) It meets the requirements of the standard UNI CEI EN ISO/IEC 17025:2005 - General Requirements for the competence of testing and calibration Laboratories.

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?

No

(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)

ToR: 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: 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?

Not applicable (Only OIE Reference Lab. designated for disease)

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?

Not applicable (Only OIE Reference Lab. designated for disease)

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?

Not applicable (Only OIE Reference Lab. designated for disease)

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

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: 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:

During 2013 the laboratory has developed specific serological and virological test (ELISA and RT-PCR) towards the RHDV2, the new RHDV variant emerged in France in 2010. In addition we have worked, in collaboration with Anses, French (Agency for Food, Environmental and Occupational Health & Safety), to the general characterization of RHDV2, proposing that it is a new species of Lagovirus.

