

OIE Reference Laboratory Reports Activities

Activities in 2021

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Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Myxomatosis
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Name (including Title) of Head of Laboratory (Responsible Official):	Piero Frazzi, DVM. General Director
Name (including Title and Position) of OIE Reference Expert:	Dr. Antonio Lavazza, DVM, Head of Dept. Animal Health and Welfare De
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
c-ELISA	YES	799	71
Direct diagnostic tests		Nationally	Internationally
Negative staining EM	YES	2	0
Cell Culture isolation	YES	0	0
Immunoperoxidase	YES	0	0
PCR	YES	162	0
Immunofluorescence	YES	0	0
REAL TIME PCR	YES	0	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
Serological kit	C-ELISA	produced	0	3 kits (300 sera each)	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
Monoclonal antibodies	Immunohistochemistry	produced	0	3ml	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
Positive reference sera	C-ELISA	provided	0	11	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
SWITZERLAND	august 2021	1	0
PORTUGAL	june 2021	71	0
SPAIN	june 2021	29	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	Virus detection by PCR in samples taken by live rabbits	Message by email
SPAIN	Use of c-ELISA to detect antibodies in sera of hares	Message by email
PORTUGAL	Serological analysis of hare sera	Message by email
CANADA	To give information on heat inactivation of myxomavirus	Message by email

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
Improvement of preventive actions to emerging LAGoviruses in the MEDiterranean basin: development and optimisation of methodologies for pathogen detection and control(LAGMED)	3 years	i) To monitor RHD epidemiology in the Mediterranean basin and perform a genomic characterization of circulating strains, ii) To test and apply biosecurity measures to prevent outbreaks and better contain the disease in the field and in rabbit-production systems, particularly in countries located south to the Mediterranean basin. iii) To advise and train stakeholders and partners in Africa on disease diagnosis and prophylaxis, and technical management.	1.CIBIO/InBIO-UP Portugal 2.INIA Spain 3.Universidad de Córdoba Spain 4.ANSES France 5.ONCFS France 6.INRA-ENVt France 7.ENMV de Sidi Thabet Tunisia 8.ENSv d'Alger Algeria	ALGERIA FRANCE PORTUGAL SPAIN TUNISIA

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

If the answer is yes, please provide details of the data collected:

The outbreaks of myxomatosis worldwide are extremely rare. Indeed, the disease is still observed in those countries where rabbit farming is developed and where rabbits are present as wild animals. More recent data come from the Iberian peninsula regarding the occurrence of the disease in Iberian hares. Indeed, few cases of myxomatous in farmed animals evolving in the amyxomatous, respiratory form have been observed

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

No

If the answer is no, please provide a brief explanation of the situation:

Other than what reported to WAHIS based on data contained on the official reports (immediate notifications and follow-up reports, six-monthly reports and annual reports), there are few available data reported from member countries and, when available they are often published on international journals. Myxomatosis is an "old" disease and its occurrence is only sporadically reported mainly in wild animals. Its incidence in farmed rabbits is low and nowadays has a low economic impact in endemic areas (e.g. South Europe) being the infection quite well controlled by vaccination. Other than the recent (2018-2020) occurrence of new Myxomatosis strains affecting hares in Iberian Peninsula, in the last ten years the disease has been reported in Finland last year (2020), in UK (2016, 2018, 2020), Australia (2015), Mexico (2015) Brazil (2013) and The Netherlands (2011). However, based on WAHIS data the disease is present in some other countries in Europe and in the Americas.

**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: 0

b) International conferences: 1

AGULLÓ_ROS I, GARCÍA_BOCANEGRA I, JIMÉNEZ_MARTÍN D, CAMACHO_SILLERO L, GORTÁZAR C, CAPUCCI L, CANO_TERRIZA D, GÓMEZ_GUILLAMÓN F, ZORRILLA I, LAVAZZA A, RISALDE MA. Pathological changes and viral antigen distribution in tissues of iberian hare (*Lepus granatensis*) infected with myxoma virus. Joint virtual conference 69th WDA, 14th EWDA "Managing wildlife diseases for sustainable ecosystems", Cuenca, August 31 to September 2, 2021. p 59

c) National conferences: 0

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?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
UNI CEI ENISO/IEC 17025	CERTIFICATO-DI-ACCREDITAMENTO.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
PCR	ILAC MRA - ACCREDIA
Serological Competitive MAb ELISA (c-ELISA)	ILAC MRA - ACCREDIA
Immunohistochemistry	ILAC MRA - ACCREDIA
EM negative staining methods ILAC MRA	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?

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 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?

Yes

Kind of consultancy	Location	Subject (facultative)
Review of OIE Standards	on site	We have been asked to revise the draft of the Chapter on Myxomatosis of the OIE Terrestrial Manual. This revision was completed during 2020, and at the beginning 2021 we were asked to further answer to question and comments of reviewers. The new draft was then finally approved during the last General Session held on May 2021

25. Additional comments regarding your report:

Myxomatosis is a well-known disease, which is still present, often endemically, in some countries. However, its occurrence is only sporadically reported, mainly in wild and feral animals. Therefore the available epidemiological data are scarce, also due to the fact that the clinical aspects and distribution patterns are the same since its original appearance, making the diagnosis often performed just on the base of clinical signs. Thus, the request for testing samples and for scientific advice are equally rare. As pointed the in the report 2020, the attention for this disease increased in Europe due to the occurrence of a new mutated strain typically affecting Iberian hares in Portugal and Spain. According to that we updated and review the chapter of the OIE Terrestrial Manual including new information on the disease. To note that some request for specific reagents,

especially for serological surveys and pathological studies were asked from those two countries, the sole apparently affected by this new variant strain.

Through the accomplishment of a new international project involving countries of the Mediterranean basin we are going to increase the number of formal and informal contacts with laboratories from member countries for supplying PCR methods and reference samples, and for performing diagnostic tests.