

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-01-21 16:01:24

| | |
|--|---|
| Name of disease (or topic) for which you are a designated OIE Reference Laboratory: | Myxomatosis |
| Address of laboratory: | Via Antonio Bianchi 9 25124 Brescia ITALY |
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| E-mail address: | antonio.lavazza@izsler.it |
| Website: | https://www.izsler.it/chi-siamo/per-chi-e-con-chi-lavoriamo/centri-di-referenza/internazionali/oie-reference-laboratory-for-myxomatosis-of-rabbits/ |
| Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Piero Frazzi, DVM, General Director |
| Name (including Title and Position) of OIE Reference Expert: | Dr. Antonio Lavazza, DVM, MSc, Director of Welfare and Animal Health Department, Head of Virology Unit |
| 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 | 657 | 79 |
| Direct diagnostic tests | | Nationally | Internationally |
| Negative satining EM | yes | 32 | 0 |
| Cell Culture isoaltaion | yes | 0 | 0 |
| Immunoperoxidase | yes | 0 | 0 |
| PCR | yes | 82 | 7 |
| Immunofluorescence | 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 | 2 | 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 | 1 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 |
|---|--------------|--|--|
| SPAIN | November | 22 | 0 |
| SPAIN | October | 0 | 7 |
| PORTUGAL | December | 0 | 57 |

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 | Myxoma virus Challenge Protocol for vaccine efficacy testing | Message by email including detailed protocol |
| BRAZIL | Myxomatosis testing for introduction of rabbits | By email |
| SPAIN | Interpretation of results from serological and virological testing of rabbits. Management of and outbreak in a farm | Series of video.talks and message by email |
| ARGENTINA | Protocol for the study of viral infections in hare (Lepus Europaeus) in Argentina | Message by email including detailed protocol |
| PORTUGAL | Evaluation of comparative results obtained with different methods | 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) | 36 months | 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 | 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 more frequently observed in those countries where rabbit farming is developed and among wild animals. We were recently able to get more information regarding the occurrence of a new myxomatosis strain affecting iberian hares and to get some more data on field cases in farmed animals affected by the amyxomatous form of the disease

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:

There are few available data reported from member countries and, when available they are often first object of publications on international journals, like in the case of the recent outbreaks due to the new "hare" strain in Iberian Peninsula, or just reported to the OIE WAHIS, like in the last case from Finland on July 2020. 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 and 2018), Australia (2015), Mexico (2015) Brazil (2013) and The Netherlands (2011).

**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

KWIT EWA, ZBIGNIEW OSIŃSKI, ANTONIO LAVAZZA, ARTUR RZEŻUTKA. Detection of myxoma virus using an AGID assay: statistical assessment of the assay's diagnostic performance. J Vet Res 64, 2020
DOI:10.2478/jvetres-2020-0049

b) International conferences: 0

Due to COVID emergence all the International and National Conferences were cancelled or delayed to 2021/2022

c) National conferences: 0

Due to COVID emergence all the International and National Conferences were cancelled or delayed to 2021/2022

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 - 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 further revise the draft of the Chapter on Myxomatosis of the OIE Terrestrial Manual. This revision was completed during 2020 |

25. Additional comments regarding your report:

Myxomatosis is a quite well-known disease, endemically present in some countries where its occurrence is only sporadically reported, mainly in wild animals. The epidemiological data are scarce, also due to the consolidated clinical aspects and distribution patterns with which the disease manifests itself in both wild and domestic animals. Thus, the request for testing samples and for scientific advice are equally rare.

The attention for this disease recently increased a little due to the occurrence of a new mutated strain typically affecting Iberian hares in Portugal and Spain, and the commercialization of new vaccines for which a control of efficacy in field condition is asked.

Also for these reasons we agreed to update and review the chapter of the OIE Terrestrial Manual including few new information on the disease.

Through the accomplishment of a new international project involving countries of the Mediterranean basin we hope to further 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.