WOAH Reference Laboratory Reports Activities 2022

Activities in 2022

This report has been submitted : 9 mars 2023 16:33

Laboratory Information

Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:	Avian mycoplasmosis (Mycoplasma gallisepticum)
Address of laboratory:	Istituto Zooprofilattico Sperimentale delle Venezie, via Bovolino 1C, 37060 Buttapietra (VR), Italy
Tel.:	0039 045 500 285
E-mail address:	scatania@izsvenezie.it
Website:	https://www.izsvenezie.com/reference-laboratories/
Name (including Title) of Head of Laboratory (Responsible Official):	Dr. Salvatore Catania
Name (including Title and Position) of WOAH Reference Expert:	Dr. Salvatore Catania
Which of the following defines your laboratory? Check all that apply:	Governmental

TOR1: DIAGNOSTIC METHODS

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 WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
Indirect ELISA for M. gallisepticum	yes	17666	0

Direct diagnostic tests		Nationally	Internationally
Real time PCR for M. gallisepticum	yes	2086	59
Mycoplasma culturing	yes	684	18
16s-rDNA PCR + Denaturing Gradient Gel Electrophoresis	yes	185	16
mgc2 gene sequencing	yes	34	24
Multi Locus Sequence Typing for Mycoplasma gallisepticum	yes	19	9

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAH?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOAH Members?

No

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH Members?

No

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

No

7. Did your laboratory validate diagnostic methods according to WOAH Standards for the designated pathogen or disease?

No

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOAH Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOAH Members?

Yes

NAME OF WOAH MEMBER COUNTRY SEEKING ASSISTANCE	DATE	WHICH DIAGNOSTIC TEST USED	NO. SAMPLES RECEIVED FOR PROVISION OF DIAGNOSTIC SUPPORT	NO. SAMPLES RECEIVED FOR PROVISION OF CONFIRMATORY DIAGNOSES
SPAIN	2022-04-04	Real-Time PCR for M. gallisepticum	11	0
SPAIN	2022-05-13	Real-Time PCR for M. gallisepticum	13	0

SPAIN	2022-05-27	Real-Time PCR for M. gallisepticum	8	0
SPAIN	2022-07-08	Real-Time PCR for M. gallisepticum	10	0
SPAIN	2022-09-02	Real-Time PCR for M. gallisepticum	2	0
SPAIN	2022-11-29	Real-Time PCR for M. gallisepticum	9	0
SPAIN	2022-04-11	Mycoplasma culturing	10	0
SPAIN	2022-05-27	Mycoplasma culturing	4	0
SPAIN	2022-09-02	Mycoplasma culturing	4	0
SPAIN	2022-04-11	16s-rDNA PCR + Denaturating Gradient Gel Electrophoresis	5	0
SPAIN	2022-05-27	16s-rDNA PCR + Denaturating Gradient Gel Electrophoresis	8	0
SPAIN	2022-09-02	16s-rDNA PCR + Denaturating Gradient Gel Electrophoresis	3	0
SPAIN	2022-05-13	mgc2 gene sequencing	11	0
SPAIN	2022-05-27	mgc2 gene sequencing	3	0
SPAIN	2022-06-27	mgc2 gene sequencing	3	0
SPAIN	2022-07-08	mgc2 gene sequencing	5	0
SPAIN	2022-12-02	mgc2 gene sequencing	2	0
SPAIN	2022-11-29	Multi Locus Sequence Typing for M. gallisepticum	19	9

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAH Member?

Yes

NAME OF THE WOAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY	PURPOSE	HOW THE ADVICE WAS PROVIDED
BELGIUM	Consultancy on development and validation of molecular methods (real-time PCR)	Remote (e-mail)
LEBANON	Diagnostic support	Remote (e-mail)
MOROCCO	Diagnostic support	Remote (e-mail)
GERMANY	Consultancy on diagnostic tests used for the diagnosis of M. gallisepticum infection	Remote: e-mail, zoom meeting.
TUNISIA	Diagnostic support	Remote (e-mail)

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

12. Did your laboratory participate in international scientific studies in collaboration with WOAH Members other than the own?

Yes

				WOAH MEMBER

Title of the study	Duration	PURPOSE OF THE STUDY	PARTNERS (INSTITUTIONS)	COUNTRIES INVOLVED OTHER THAN YOUR COUNTRY
MyMIC: Standardization of diagnostics and antimicrobial susceptibility testing and clinical interpretation in animal mycoplasmas.	2022-ongoing	This project aims to set up a network of laboratories working on mycoplasma diagnostics and their susceptibility to ATBs to compare the different methods used and the results of minimum inhibitory concentrations.	Universidad de Las Palmas de Gran Canaria. (Spain) National Veterinary Institute (Sweden) University of Melbourne (Australia) University of Maiduguri (Nigeria) University of Agriculture Peshawar (Pakistan) Anses (France) CIRAD (France) PIWET (Poland) University of Giessen (Germany) University of Bern (Switzerland) University of Veterinary Medicine, Vienna (Austria) Veterinary Medical Research Institute (Hungary) Kimron Veterinary Institute (Israel) Finnish Food Authority (Finland) GD Animal Health (The Netherlands) Centro Nacional de Sanidad Agropecuaria (CENSA, Cuba) University of Ghent (Belgium)	AUSTRALIA AUSTRIA BELGIUM CUBA FINLAND FRANCE GERMANY HUNGARY ISRAEL NIGERIA PAKISTAN POLAND SPAIN SWEDEN SWITZERLAND THE NETHERLANDS UNITED KINGDOM

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:
Minimum Inhibitory Concentration values of non-vaccine-derived M. gallisepticum strains isolated in Italy between 2010 and 2020. Data published on Antibiotics (MDPI) Journal (https://doi.org/10.3390/antibiotics11081021)

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

Yes

IF THE ANSWER IS YES, PLEASE PROVIDE DETAILS OF THE DATA COLLECTED:
Minimum Inhibitory Concentration values of non-vaccine-derived M. gallisepticum strains isolated in Italy between 2010 and 2020. Data published on Antibiotics (MDPI) Journal (https://doi.org/10.3390/antibiotics11081021)

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

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The Monitoring of Mycoplasma gallisepticum Minimum Inhibitory Concentrations during the Last Decade (2010–2020) Seems to Reveal a Comeback of Susceptibility to Macrolides, Tiamulin, and Lincomycin. Marco Bottinelli, Michele Gastaldelli, Micaela Picchi, Arianna Dall'Ora, Lorena Cristovao Borges, Ana Sofía Ramírez, Andrea Matucci, Salvatore Catania. Antibiotics. 2022 Jul 29; 11(8):1021. Doi:10.3390/antibiotics11081021.

Genomic Diversity of a Globally Used, Live Attenuated Mycoplasma Vaccine. Sara M Klose, Olusola M Olaogun, Jillian F Disint, Pollob Shil, Miklós Gyuranecz, Zsuzsa Kreizinger, Dorottya Földi, Salvatore Catania, Marco Bottinelli, Arianna Dall'Ora, Anneke Feberwee, Marleen van der Most, Daniel M Andrews, Gregory J Underwood, Chris J Morrow, Amir H Noormohammadi, Marc S Marenda. Microbiol Spectr. 2022 Dec 21; 10(6):e0284522. doi:10.1128/spectrum.02845-22.

In vitro susceptibility of Mycoplasma iowae isolates to antimicrobial agents. Dominika Buni, Lilla Udvari, Dorottya Földi, Nikolett Belecz, Cécile Yvon, Janet Bradbury, Salvatore Catania, Inna Lysnyansky, László Kovács, Miklós Gyuranecz, Zsuzsa Kreizinger. Avian Pathol. 2022 Aug; 51(4):374-380. Doi:10.1080/03079457.2022.2072271.

Detection of Mycoplasma columbinasale in Cases of Respiratory Disease in Domestic Pigeons (Columba livia var. domestica). Giuseppe Giglia, Ilaria Porcellato, Maria Luisa Marenzoni, Elisa Rampacci, Marco Bottinelli, Andrea Matucci, Fabrizio Passamonti, Elvio Lepri. Case Reports in Veterinary Medicine. 2022 Nov 19; 2022:3950684. doi: 10.1155/2022/3950684.

Antimicrobial susceptibility profiles of Mycoplasma hyorhinis strains isolated from five European countries between 2019 and 2021. Ulrich Klein, Dorottya Földi, Nikolett Belecz, Veronika Hrivnák, Zoltán Somogyi, Michele Gastaldelli, Marianna Merenda, Salvatore Catania, Arkadiusz Dors, Ute Siesenop, Philip Vyt, Zsuzsa Kreizinger, Wouter Depondt, Miklós Gyuranecz. PLoS One. 2022 Aug 11; 17(8):e0272903. Doi:10.1371/journal.pone.0272903.

b) International conferences:

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Mycoplasma gallisepticum and Mycoplasma synoviae in
the poultry sector: where to start for a better management of these pathogens. Salvatore Catania. 1st WVPA-Africa Meeting, Morocco 23-25 June 2022.

Determination of macrolide and lincomycin susceptibility of Mycoplasma hyorhinis isolates by a molecular biological assay. Dorottya Földi, Ulrich Klein, Salvatore Catania, Arkadiusz Dors, Ute Siesenop, Philip Vyt, Zsuzsa Kreizinger, Miklós Gyuranecz. 13th European Symposium of Porcine Health Management, 11-13 May 2022.

Antimicrobial susceptibility profiles of Mycoplasma hyorhinis strains isolated from diseased swine across Europe between 2019 and 2021. Ulrich Klein, Dorottya Földi, Salvatore Catania, Arkadiusz Dors, Ute Siesenop, Philip Vyt, Zsuzsa Kreizinger, Miklós Gyuranecz. 13th European Symposium of Porcine Health Management, 11-13 May 2022.

Pk/Pd And Clinical Relationships Of Vetmulin (Tiamulin Base) Administered To Pigs For The Treatment Of Mycoplasmal Arthritis. Ulrich Klein, Miklos Gyuranecz, Salvatore Catania, L. Claerhout, Wouter Depondt. 13th European Symposium of Porcine Health Management, 11-13 May 2022.

c) National conferences:

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Valutazione di ceppi di Mycoplasma synoviae di campo e vaccinali tramite metodica multi locus variable number of tandem repeats analysis (MLVA): risultati preliminari. Elisabetta Stefani, Andrea Matucci, Michele Gastaldelli, Lorena Cristovao Borges, Verdiana Righetti, Silvia Vianello, Annalucia Tondo, Salvatore Catania. VII Simposio Scientifico SIPA. 28th October 2022.

Caratterizzazione sanitaria nella conservazione animale. Salvatore Catania. Convegno finale BIONET 2017-2022, 13th October 2022.

d) Other (Provide website address or link to appropriate information):

1
Website of Istituto Zooprofilattico Sperimentale delle Venezie: https://www.izsvenezie.com/category/news-categories/research-projects/

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH Members?

No

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
ISO/IEC 17025:2017	Accreditation Certificate: https://www.izsvenezie.it/documenti/servizi/qualita-accreditamento/certificato-ISO-17025.pdf	certificato-ISO-17025.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Real-time PCR for Mycoplasma gallisepticum	ACCREDIA
Indirect ELISA for Mycoplasma gallisepticum	ACCREDIA

20. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned?

Yes

Use of MSC Class II biosafety cabinets.

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAH?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOAH?

No

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

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

No

24. Are you a member of a network of WOAH Reference Laboratories designated for the same pathogen?

No

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?

No

26. Did your laboratory collaborate with other WOAH Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

No

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen?

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Region(s) of participating WOAH Member Countries
Ring trial: Qualitative test (culturing) with known target (Mycoplasma gallisepticum)	Participant	3	Europe
Ring trial: qualitative real-time PCR	Participant	53	Europe
Ring trial: Mycoplasma gallisepticum antibodies (ELISA)	Participant	80	Europe

TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOAH?

No

29. Additional comments regarding your report: