

OIE Reference Laboratory Reports Activities

Activities in 2021

This report has been submitted : 2022-01-17 22:08:14

| | |
|--|--|
| Name of disease (or topic) for which you are a designated OIE Reference Laboratory: | Salmonellosis |
| Address of laboratory: | Viale dell'Università, 10, 35020 Legnaro (Padova) ITALY |
| Tel.: | +39-049 8084.296 |
| Fax: | +39-049 8830.268 |
| E-mail address: | aricci@izsvenezie.it |
| Website: | www.izsvenezie.com |
| Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Antonia Ricci - General Director - Istituto Zooprofilattico Sperimentale delle Venezie |
| Name (including Title and Position) of OIE Reference Expert: | Antonia Ricci |
| 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 | | | |
| - | - | - | - |
| Direct diagnostic tests | | | |
| Serotyping (slide agglutination) | yes | 2129 | 40 |
| PCR (salmonella confirmation and serovar detection) | yes | 450 | 52 |
| Geno-serotyping | no | 638 | 52 |
| MLVA | no | 695 | |
| PFGE | no | 45 | |
| WGS | no | 466 | |
| Test for live vaccine Salmonella Enteritidis strains | no | 90 | |

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?

No

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 |
|---|--------------|--|--|
| NIGERIA | October | 52 | 52 |

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 |
|--|---|-----------------------------|
| NIGERIA | To provide support about analytical problems related to the isolation/identification of Salmonella from poultry sources | remote - email |
| NIGERIA | Assistance in preparation of a scientific paper | remote - 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 |
|--------------------|----------|--|-------------------------|---|
| BIOPIGEE | 3 years | Development of biosecurity protocols for the control of Salmonella and HEV | Several EU Institutions | GERMANY |
| RIBMINS | 3 years | To combine and strengthen Europe-wide research efforts on modern meat safety control systems | Several EU Institutions | SPAIN |
| H-ALO | 3 years | To develop a cutting-edge bio-chemical photonic-based sensor enabling the on-site detection of microbiological and chemical contaminants in a broad number of different farm-to-fork food chains | Several EU Institutions | THE NETHERLANDS |

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 Laboratory collects data about Salmonella strains isolated from samples related to veterinary sector (isolated from feed, food and animals) at national level and these data are available for surveillance purposes at national and international level Salmonella data for the EFSA/ECDC Annual One Health report, 2020 |

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

Yes

| |
|--|
| If the answer is yes, please provide details of the data collected: |
| The laboratory contributes to the data collection in the framework of the EFSA molecular typing database and provides on request data to EURL in case of multi-country outbreaks |

**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: 6

Leati M., Zaccherini A., Ruocco L., D'Amato S., Busani L., Villa L., Barco L., Ricci A., Cibin V. (2021) The challenging task to select Salmonella target serovars in poultry: the Italian point of view. *Epidemiol.Infect.* 149:e160.

Petrin S., Orsini M., Mastroianni E., Longo A., Cozza D., Olsen J.E., Ricci A., Losasso C., Barco L. (2021) Identification and characterization of a spreadable IncI1 plasmid harbouring a blaCTX-M-15 gene in an Italian human isolate of Salmonella serovar Napoli. *Plasmid* 114:102566.

Piras F., Spanu V., Siddi G., Gymoese P., Spanu C., Cibin V., Schjørring S., De Santis E.P.L., Scarano C. (2021) Whole-genome sequencing analysis of highly prevalent Salmonella serovars in wild boars from a national park in Sardinia. *Food Control* 130

Napoleoni M, Villa L, Barco L, Busani L, Cibin V, Lucarelli C, Tiengo A, Dionisi AM, Conti F, Da Silva Nunes FR, Tantucci L, Staffolani M, Silenzi V, Fraticelli R, Morandi B, Blasi G, Rocchegiani E, Fisichella S, On Behalf Of The Enter-Net And Enter-Vet Peripheral Laboratories Referents For Marche Region. A strong Evidence Outbreak of Salmonella Enteritidis in Central Italy Linked to the Consumption of Contaminated Raw Sheep Milk Cheese. *Microorganisms*. 2021 Nov 29;9(12):2464. doi: 10.3390/microorganisms9122464.

Arai N, Sekizuka T, Tamamura-Andoh Y, Barco L, Hinenoya A, Yamasaki S, Iwata T, Watanabe-Yanai A, Kuroda M, Akiba M, Kusumoto M. Identification of a Recently Dominant Sublineage in Salmonella 4,[5],12:i:- Sequence Type 34 Isolated From Food Animals in Japan. *Front Microbiol.* 2021 Jul 1;12:690947. doi: 10.3389/fmicb.2021.690947.

Tamba M, Pallante I, Petrini S, Feliziani F, Iscaro C, Arrigoni N, Di Sabatino D, Barberio A, Cibin V, Santi A, Ianniello M, Ruocco L, Pozzato N. Overview of Control Programs for EU Non-regulated Cattle Diseases in Italy. *Front Vet Sci.* 2021 Apr 26;8:665607. doi: 10.3389/fvets.2021.665607.

b) International conferences: 1

Petrin S., Mancin M, Losasso C, Olsen J. E., Barco L. (2021) Effect Of Ph And Salinity On Salmonella Spp Ability To Form Biofilm. *World Microbe Forum / the FEMS2021 Congress - Online 20-24 June 2021.*

c) National conferences: 2

"Salmonella along the production chain: the role of the laboratory" - One Health approach for the control of pathogens - Marta Leati "Istituto Zooprofilattico Sperimentale del Piemonte, Liguria e Valle d'Aosta, 28/09/2021

"Effect of pH and salinity on the capability of different Salmonella serovars to produce biofilm" Sara Petrin - National Meeting SIDILV - 22/11/2021

d) Other:

(Provide website address or link to appropriate information) 1

www.izsvenezie.it

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) |
|-----------------------------------|---|
| 17025 | Accreditation Certificate.pdf |

16. Is your quality management system accredited?

Yes

| Test for which your laboratory is accredited | Accreditation body |
|---|--------------------------------------|
| Isolation and identification of Salmonella in food and primary production samples | ACCREDIA, Italian Accreditation Body |
| Serotyping of Salmonella strains | ACCREDIA, Italian Accreditation Body |
| Molecular serotyping of Salmonella strains | ACCREDIA, Italian Accreditation Body |
| PCR to differentiate S. Typhimurium and its monophasic variants | ACCREDIA, Italian Accreditation Body |
| Real Time PCR to detect Salmonella in food and feed | ACCREDIA, Italian Accreditation Body |
| Test to identify Salmonella vaccine strain Salmonella Enteritidis | ACCREDIA, Italian Accreditation Body |
| Pulsed Field Gel Electrophoresis | ACCREDIA, Italian Accreditation Body |
| MLVA for S. Typhimurium and monophasic variant of S. Typhimurium | ACCREDIA, Italian Accreditation Body |

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?

Yes

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?

No

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?

No

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?

Yes

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

| Purpose for inter-laboratory test comparisons ¹ | No. participating laboratories | Region(s) of participating OIE Member Countries |
|--|--------------------------------|---|
| Assess laboratories capability to isolate Salmonella in primary production samples (organiser) | 71 | <input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East |
| Assess laboratories capability to serotype Salmonella strains (organiser) | 13 | <input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East |
| Assess laboratories capability to isolate Salmonella in primary production and environmental samples (participant) | not available | <input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East |
| Assess laboratories capability to serotype Salmonella strains (participant) | not available | <input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East |
| Assess laboratories capability to characterise Salmonella strains by PFGE - MLVA and WGS (participant) | not available | <input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East |

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) |
|--|-------------------|-----------------------|
| Collaboration with the other OIE reference laboratories for the revision of the OIE Terrestrial Manual, Chapter 3.10.7 'Salmonellosis' | Remote assistance | Diagnosis - control |

25. Additional comments regarding your report:

