World Organisation for Animal Health

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WOAH Collaborative Centre Reports Activities 2025

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CENTRE INFORMATION

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TOR 1 AND 2: SERVICES PROVIDED

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOAH

Category	Title of activity	Scope
Epidemiology, surveillance, risk assessment, (true)	Design and support to the maintenance of Italian national information system	Italian national information system includes several applications for recording and analysing the results of activities carried out by the Italian veterinary services, both in the animal health/welfare and food safety sectors. The dashboard developed in 2022 for data exploring on prescriptions of veterinary medicines in food producing and companion animals has been maintaining in 2024. Several indicators of the use of antimicrobials in farms have been developed and represented.
Training, capacity building (true)	ERFAN (Enhancing Research for Africa Network) - ERFAN Dialogues - "Analyse des Norovirus et virus de l'Hépatite A dans les denrées agro-alimentaires"	On line asynchronous training course always available at the ERFAN website. https://www.erfan.it/en/home/
		The project "Improving Food Production in Sudan through Support to Small-Scale Producers in the Agriculture, Fisheries, and Livestock Sectors in Red Sea and Kassala States" (MIPRO-SUD) is an initiative

Diagnosis, biotechnology and laboratory (true)	MIPRO-Sud: Improving Food Production in Sudan through Support to Small-Scale Producers in the Agriculture, Fisheries, and Livestock Sectors in Red Sea and Kassala States	funded by the Italian Agency for Development Cooperation (AICS) and implemented by CIHEAM Bari, in collaboration with the Ministries of Production and Economic Resources (MOPER) of the Red Sea State and Kassala State. The project aims to achieve three key results: improving the quality of food products, increasing the productivity and profitability of producers, and reducing health risks associated with livestock epidemics and zoonoses. Within the project also the food safety component is included.
Food Safety (true)	ERFAN (Enhancing Research for Africa Network) - "Studies of E. coli, Salmonella spp. Klebsiella pneumoniae and Listeria monocytogenes prevalence and AMR in Raw and RTE meat in Khartoum state - ECOSAKAL	Baseline study started in 2022.
Food Safety (true)	Determination of residues of pharmacologically active substances and antiparasitic compounds in honey	A collaboration between the Lebanese Ministry of Agriculture and IZSAM was signed for the analytical determination and confirmation of residues of pharmacologically active substances and antiparasitic compounds in honey by the chemistry laboratory of IZSAM, in honey samples taken under the umbrella of the Residual Plan of Lebanon.
Diagnosis, biotechnology and laboratory (true)	AH&W EUP_AHW, HORIZON-CL6-2023-FARM2FORK-01 ecologic approach (SOA-19)	Development of new antimicrobial and antiparasitic compounds and of tools for assessing their efficacy and safety (SOA-19).
Diagnosis, biotechnology and laboratory (true)	AH&W EUP_AHW, HORIZON-CL6-2023-FARM2FORK-01 ecologic approach (SOA-12)	European Partnership Animal health and Welfare OO3 - Action 2: BETO - Better tools for diagnosis of infection diseases.
Diagnosis, biotechnology and laboratory (true)	AH&W EUP_AHW, HORIZON-CL6-2023-FARM2FORK-01 ecologic approach (SOA-08)	European Partnership Animal health and Welfare OO1 - Action 4: Surveillance of pathogens of veterinary importance and their antimicrobial resistance profiles
Diagnosis, biotechnology and laboratory (true)	Grant Agreement IZS-Teramo/Amadori-Gesco. Finanziamento 2023-2025	Isolation and characterization of bacteriophages against Salmonella Infantis.
Diagnosis, biotechnology and laboratory (true)	Ricerca Corrente 2021, Ministry of Health	Evaluation of Resensitization to Antibiotics of multi-resistant bacterial strains through the use of different Microbiological approaches (VARIAMI)
Diagnosis, biotechnology and laboratory (true)	Determination of veterinary drug residues and environmental contaminants including pesticides and heavy metals in animal tissues, biological fluids and feeds (Namibia)	A collaboration agreement between Central Veterinary Laboratory and IZSAM was signed for the analytical determination and confirmation of certain veterinary drugs residues and contaminants in food by the chemistry laboratory of IZSAM.
Diagnosis, biotechnology and laboratory (true)	Tackling climate change through sustainable livestock management. FAO project "TCCSLM"	The project aims to support the meat and dairy supply chains through technical laboratory assistance regarding Antimicrobial Resistance (AMR), benefiting the Central Laboratory and peripheral

		laboratories in Cairo, Egypt.
Epidemiology, surveillance, risk assessment, (true)	KlebNet GSP Project	International project KlebNet Genomic Surveillance Platform -Antimicrobial Resistance prediction program.
Epidemiology, surveillance, risk assessment, (true)	Mediterranean network for one Health - MEDNET 4OH (Mediterranean Network for One Health) Project	Enhanced understanding of AMR epidemiology and local capacity. Implementation of a surveillance system for a key resistant pathogen transferable to other healthcare facilities in Tunisia. Improved infection control measures based on surveillance data. Strengthened local capacity for AMR surveillance and outbreak response through training and technology transfer. in 2025, technical meetings were organized under the framework of activities titled: 'Genomic characterization of vector-borne pathogens from routine surveillance field samples, and antimicrobial-resistant bacteria collected from humans, animals, and the environment. Technical meetings: - April 2025: Coordination of the AMR pilot project with the Charles Nicolle Hospital in Tunis. - July 2025: Coordination meeting on AMR data flow and GENPAT platform integration.
Epidemiology, surveillance, risk assessment, (true)	EcoSurv Project	Establishment of a surveillance system on selected (re)emergent and at-risk of introduction zoonoses based on an ecologic approach.
Epidemiology, surveillance, risk assessment, (true)	Tackling climate change through sustainable livestock management. FAO project "TCCSLM"	The project aims to support the meat and dairy supply chains through technical laboratory assistance regarding Antimicrobial Resistance (AMR), benefiting the Central Laboratory and peripheral laboratories in Cairo, Egypt.
Training, capacity building (true)	ERFAN (Enhancing Research for Africa Network) - ERFAN Dialogues - "Detection of Salmonella spp. according to ISO6579-1 :2017"	On line asynchronous training course always available at the ERFAN website. https://www.erfan.it/en/home/
Training, capacity building (true)	ERFAN (Enhancing Research for Africa Network) - ERFAN Dialogues - "Brucellosis Diagnosis and Control"	On line asynchronous training course always available at the ERFAN website. https://www.erfan.it/en/home/
Training, capacity building (true)	ERFAN (Enhancing Research for Africa Network) - ERFAN Dialogues – "Campylobacteriosis: a public health issue"	This course was provided both in synchronous and asynchronous mode. The on-line asynchronous course is always available at the ERFAN website. https://www.erfan.it/en/home/
Training, capacity building (true)	EU Twinning Project MG 19 FED AG 01 21 EuropeAid/173682/DD/ACT/MG. "Support to improve the sanitary and phytosanitary quality monitoring and control system and compliance of agricultural and agri-food products in Madagascar"	The overall objective of the Twinning Project is to contribute to improving food security in Madagascar. The Project forms part of a regional programme intended to support food and nutritional security in the Indian Ocean, the aim of which, amongst others, is to encourage and promote agricultural exchanges between Member States of the Indian Ocean Commission. The Project will therefore indirectly contribute to improving food security in the other countries in the region that are

		partly dependent on imports to cover the food needs of their citizens.

TOR 3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main fucus area for which you were designated

Proposal title	Scope/Content	Applicable Area
Contribution to the activities of the European Commission on Food Safety	On behalf of the Ministry of Health, two IZSAM experts are members of the Working Group (WG) on "Persistent Organic Pollutants in Food", established by DG Health and Food Safety/Food and Feed Safety, Innovation. The aim of the WG is to define health guidelines and make proposals in the framework of the EU legislation on chemical contaminants in foodstuffs. Main issues discussed during 2025 were as follows: 1. Risk assessment of flame retardants and phenols: discussion on the necessity of new EFSA assessments for phosphorous flame retardants and updated risk profiles for brominated phenols, alongside evaluating analytical methods for PBDEs in food; 2. Legislative updates on dioxins and PCBs: revision of Maximum Levels (MLs) for specific categories and a comprehensive review of EU legislation following the update of Toxicity Equivalency Factors; 3. Control Plans and monitoring recommendations: implementation of minimum control frequencies for various commodities under Reg. (EU) 2022/931 and 2022/932, and the drafting of a Commission Recommendation for monitoring chlorinated paraffins in the food chain; 4. Fish consumption and emerging contaminants: establishment of a mandate for EFSA to conduct a comprehensive risk-benefit assessment of fish consumption.	Laboratory Expertise
Contribution to the activities of the European Commission on Food Safety	On behalf of the Ministry of Health, two IZSAM experts are members of the Working Group (WG) on "Methods of Analysis in Feed", established by DG Health and Food Safety/ Food Hygiene, Feed and Fraud. The aim of the WG is to define harmonized sampling procedures and standardized analytical performance criteria for feed, ensuring robust methodologies for the detection of contaminants and undesirable substances in compliance with EU regulations. Main issues discussed during 2025 were as follows: 1. Harmonization of sampling for pesticide residues: extensive discussion on aligning the sampling methods of Regulation (EC) 152/2009 with new draft regulations to ensure consistency in the control of pesticide residues across food and feed of both plant and animal origin. 2. Standardization and method validation: identification of priorities for standardizing feed analysis methods and the development of an action plan to establish missing repeatability and reproducibility criteria within the existing legal frameworks. 3. Performance criteria for undesirable substances: definition of specific analytical requirements for detecting contaminants, including heavy metals, mycotoxins, and plant toxins, to ensure high-quality safety controls. 4. Practical sampling tools and field guidance: technical exchange regarding the use of sampling shovels and mechanical dividers, focusing on field cleaning protocols and the potential drafting of official guidance for inspectors.	Laboratory Expertise
	On behalf of the Ministry of Health, two IZSAM experts are members of the Working Group (WG) on "Undesirable	

Contribution to the activities of the European Commission on Food Safety	Substances in Feed", established by DG Health and Food Safety/Food Hygiene, Feed and Fraud. The aim of the WG is to define updated recommendations and monitoring strategies for feed contaminants, ensuring regulatory alignment with the latest toxicological profiles and occurrence data for undesirable substances in feed. Main issues discussed during 2025 were as follows: 1. Mycotoxin occurrence and recommendations: discussion on the draft Commission Recommendation regarding key mycotoxins, with an analysis of the latest 2024 occurrence data from the EFSA database. 2. Dioxins and PCBs toxicity update: evaluation of the 2022 WHO Toxic Equivalency Factors (TEF) and their impact on calculating total TEQ levels in feed, ensuring regulatory alignment with the latest scientific toxicity profiles. 3. Management of nitrates and nitrites: deliberation on a draft Recommendation for the monitoring of nitrates and nitrites in specific feed materials to mitigate potential safety risks. 4. Contaminants in specific feed materials: assessment of maximum levels for total glucosinolates in oilseeds and the monitoring of heavy metals in algae and seaweed intended for animal nutrition.	Laboratory Expertise
Development of analytical criteria to harmonise the European regulations applicable to the surveillance and control of food and feed safety	Experts from the IZSAM are involved in the network "European Reference Laboratory and National Reference Laboratories for Halogenated Experts from the IZSAM are involved in the network "European Reference Laboratory and National Reference Laboratories for Halogenated POPs in Feed and Food", in order to harmonize the analytical methods used for the determination of POPs in food and feed. In particular, experts contributed to define/revise analytical criteria for the determination of Dioxins/PCBs, Brominated Flame Retardants and Perfluorinated compounds in food and feed.	Laboratory Expertise
European Commission / Italian Ministry of Health	Working group on "Microbiological criteria", DG-SANTE - for the drafting of a guideline on the "Official controls, under Regulation EC no. 2017/625, concerning microbiological sampling and testing of foodstuffs.	Animal Production
European Reference Laboratory for L. monocytogenes	ANSES/LSAliments/LSA-INS-1517- Version 03 "GenoListeria Multiplex: Identification by multiplex real-time PCR of 30 major clonal complexes of Listeria monocytogenes strains" to other Official laboratories (IZSPLV Turin) e IZSVe (Padova)	Laboratory Expertise
European Reference Laboratory for L. monocytogenes	WG32 ANSES ISO/TC 34/SC 9/WG 32 " Listeria monocytogenes and Listeria spp"	Laboratory Expertise

3. In exercising your activities, have you identified any regulatory research needs* relevant for WOAH?

Yes

Research need 1

Please type the Research need: To date, genomic epidemiology is a discipline characterised by constant and fast developments with several applications on several health issues. In particular, surveillance based on whole genome sequencing (WGS), in various contexts and following innovative approaches (for example wastewater surveillance for SARS-CoV-2 or other pathogens, including zoonotic agents, or for monitoring AMR trends and patterns), has clearly demonstrated to have good accuracy and be able to represent a valid alternative for early warning systems. We are not sure how this could impact Codes and Manuals, but more applications are expected in future for animal health, including trade and/or risk-based surveillance (for example for the demonstration of free status).

Relevance for WOAH

Relevance for the Code or Manual

Field

Animal Category

Disease:

Kind of disease (Zoonosis, Transboundary diseases)

If any, please specify relevance for Codes or Manual, chapter and title

(e.g. Terrestrial Manual Chapter 2.3.5 - Minimum requirements for aseptic production in vaccine manufacture)

Answer:

Notes:

Answer:

4. Did your Collaborating Centre maintain a network with other WOAH Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

Name of WOAH CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
EFSA- ECDC	Parma- Stockholm	Europa	• Technical support for the provision of the Campylobacter data visualization dashboard in the EFSA information system; • Data analysis and validation of data related to Campylobacter and Brucella within the EU collected in 2024 according to DIRECTIVE 2003/99/CE; • Drafting and revision of the European Union One Health report EFSA/ECDC on Zoonosis (data related to 2024), namely the chapter on Campylobacter and Brucella, both the section relating to occurrence in food and animals; • Participation in the 2025 EFSA communication campaign "Safe2Eat" as experts in Listeria monocytogenes (Personnel involved: Francesco Pomilio, Marina Torresi, Giacomo Migliorati). Letter of appointment ref. 505 dated March 26, 2025. Presentations and communications from April 2025 to September 2025. https://www.efsa.europa.eu/it/safe2eat. • EFSA Network on "Biohaz Microbial Risk Assessment". Participation as Member of the Network
			The EU-RL for Campylobacter's staff is involved in the following activities: • Participation in the EU-RL PT39 "to verify the performance of the laboratory in performing the enumeration of Campylobacter spp. on chicken skin (ISO 10272-2:2017) and species identification (the latter on voluntary basis)"; • Participation in the EU-RL PT40 on "Detection and species

European Reference Laboratory for Campylobacter spp.	Sweden	Europa	identification of Campylobacter"; • 12th CEN/TC 463/WG 3 Campylobacter meeting – 28 May 2025. The meeting was attended by the EURL Campylobacter manager and other colleagues from the CEN/TC463/WG3 working group to discuss the results of laboratory tests relating to the development of a new enrichment broth for the modification of standard ISO 10272/1. • Participation in the 20th Workshop, 30 September -1 October 2025- • Implement the use of WGS and cluster analysis through distance matrices or phylogenetic trees; • Test the laboratory's ability to address a Campylobacter outbreak based on sequencing data.
Istituti Zooprofilattici Sperimentali (Official Labs), Private laboratories and Local Competent Authority	Italy	Europa	In 2025 the LNR Lm organized the following PT and provided to other laboratories: • Research of Listeria monocytogenes FSIS 2025, ID number 26_2025. Provided to 10 Official Laboratories within the network of the Istituti Zooprofilattici Sperimentali; In 2025, the following blind tests were also conducted to verify the methods, ensuring the accuracy and reliability of the analytical results provided to Official Laboratories: • Identification of the Listeria monocytogenes serogroup using the following EURL for Listeria monocytogenes method: end-point PCR in accordance with the protocol "ANSES/LSAliments/LSA-INS-0415 Version 2. Molecular serotyping of Listeria monocytogenes: Determination of the Serogroup". Prot. 7367 dated May 22, 2025. Implementation period: Samples sent on May 22, 2025; results submitted to the LNRLm on August 28, 2025; notification of suitability from LNRLm prot. 14989 on October 22, 2025; • Identification of the Listeria monocytogenes serogroup using the following EURL for Listeria monocytogenes methods: end-point PCR in accordance with the protocol "ANSES/LSAliments/LSA-INS-0415 Version 2. Molecular serotyping of Listeria monocytogenes: Determination of the Serogroup" and real-time PCR in accordance with the protocol "ANSES/LSAliments/LSA-INS-1517 Version 03. GenoListeria Multiplex: Identification by multiplex real-time PCR of 30 major clonal complexes of Listeria monocytogenes strains". Prot. 12395 dated September 2, 2025.

Istituti Zooprofilattici Sperimentali (Official Labs), Private laboratories and Local Competent Authority	Italy	Europa	Technical reports sent to Offical Laboratories and to Competent Authorities: • Submission to IZSUM of the report concerning genomic correlation activities on Listeria monocytogenes strains related to two cases of human listeriosis linked to the consumption of a pork product. Prot. 392 of January 10, 2025. • Submission to IZSUM of updates regarding the report on genomic correlation activities of Listeria monocytogenes strains related to two cases of human listeriosis linked to the consumption of a pork product. Prot. 409 of January 13, 2025. • Submission to IZSUM of updates regarding the report on genomic correlation activities of Listeria monocytogenes strains related to two cases of human listeriosis linked to the consumption of a pork product. Prot. 1315 of January 30, 2025. • Submission to IZSUM of the report concerning genomic correlation activities between clinical and food strains of Listeria monocytogenes. Prot. 2825 of February 28, 2025. • Submission to IZSUM of the report concerning activities carried out on Listeria monocytogenes strains isolated from environmental swabs. Prot. 9378 of July 02, 2025
Istituti Zooprofilattici Sperimentali (Official Labs), Private laboratories and Local Competent Authority	Italy	Europa	Technical reports sent to Offical Laboratories and to Competent Authorities: • Submission to IZSUM of the report concerning genomic correlation activities between clinical and food strains of Listeria monocytogenes. Prot. 13099 of September 17, 2025. • Submission to IZSUM of the report concerning genomic correlation activities between clinical and food strains of Listeria monocytogenes. Prot. 16090 of November 11, 2025 • Submission to IZSLT of the report concerning genomic correlation activities between Listeria monocytogenes strains isolated from environmental swabs. Prot. 4167 of March 21, 2025 • Submission to USL 5 Polesana Rovigo and IZSVe of the report on activities conducted on Listeria monocytogenes strains isolated from dairy products. Prot. 7427 of May 23, 2025 • Submission to the Food Hygiene of Animal Origin Service (SIAOA) of the report on activities conducted on Listeria monocytogenes strains isolated from fish-based products. Prot. 10360 of July 21, 2025 • Submission to IZSVe of the report

			concerning genomic correlation activities between Listeria monocytogenes strains isolated from environmental swabs. Prot. 5338 of April 10, 2025.
Official Labs - Istituti Zooprofilattici Sperimentali	Italy	Europa	In 2025 the LNR for Campylobacter spp. organized the following PT and provided to other laboratories: • 15/2025"Detection of Campylobacter spp. from stool samples" according to ISO 10272-1:2023 – AMD 1 or other methods in use. • 03-2025 "Campylobacter Food for the enumeration of Thermotolerant Campylobacter numeration in chicken meat" with the aim of verifying the performances of the attending laboratories in numbering Campylobacter spp. from chicken meat matrix according to ISO 10272-2:2023 - AMD 1 or other method in use in laboratories. • 04/2025 "Molecular Identification of Campylobacter foetus according to own laboratory method. • PT_GENPAT_2025 "Prova interlaboratorio per la verifica della qualità nella produzione dei dati di sequenziamento dell'intero genoma di microrganismi batterici".
Official Labs - Istituti Zooprofilattici Sperimentali	Italy	Europa	In 2025 the LNR for Campylobacter spp. participated in the PT provided by IZS delle Venezie "AQUA MA 3-25" for the detection (ISO 10272-1:2017, AMD 2023) and enumeration (ISO 10272-2:2017) of Campylobacter spp. in milk powder and the detection of Campylobacter spp. (ISO 10272-1:2017, AMD 2023) in freeze-dried meat. In 2025 the National Reference centre for Brucellosis organized the following PT: • 06_2025 "Detection of Brucella spp. from milk and dairy products" according to WOAH Terrestrial Manual 2022-Chapter 3.1.4. – Brucellosis- Sections 1.2.3.3, 1.2.3.4 • 05_2025 "Detection of Brucella spp. from organs and biological fluids according to WOAH Terrestrial Manual 2022-Chapter 3.1.4. – Brucellosis- Sections 1.2.3. Working Groups: • Meeting of the IIZZSS working group on challenge tests and shelf-life studies. Online, June 23, 2025. • IIZZSS working group on challenge tests and shelf-life studies: Study Day. October 28, 2025 "Challenge tests: highlights and shadows after 20 years of application in microbiological food safety". Oral Presentation: "Challenge tests for the risk assessment

			of Listeria monocytogenes – Updates on regulations and reference document" and "Challenge test on arrosticini to study the microbial reduction of coagulase-positive Staphylococci and E. coli through thermal processes achieved by different cooking methods" (Maria Luisa Danzetta)
European Reference Laboratory for Listeria monocytogenes	France	Europa	• Participation at the EU-RL Lm PT: • Anses_LSAI_25_07_EURL_Lm_Typing Proficiency test on Listeria monocytogenes typing. • Anses Outbreak simulation exercise (OSE): cluster of ST1 infections linked to vegetal milk. • Anses_LSAI_25_01_EURL_Lm_Det_Enu EURL Lm Proficiency test dedicated to detection and enumeration of Listeria monocytogenes in plant based alternative products. • Participation at the EU-RL Lm WG32 ANSES ISO/TC 34/SC 9/WG 32 "Listeria monocytogenes and Listeria spp." • Participation at the Working Group "WG on Guidance Document for Food Business Operators on Listeria monocytogenes shelf-life studies for ready-to-eat foods, under Regulation (EC) No 2073/2005 of 15 November 2005 on microbiological criteria for foodstuffs". • Collaboration with EURLm during technical-operational meetings regarding: 'MALDI-TOF test for typing Listeria monocytogenes'. • Participation in the online training course "DNA Extraction protocol starting from first enrichment broth for Listeria strains," February 07-27, 2025 (Staff involved: Gabriella Centorotola, Fabrizia Guidi, Giovanna Robbe, Marina Torresi).
			• Participation in the training course "MALDI TOF test for typing Listeria monocytogenes." Online meetings: July 01, 2025, and September 23, 2025, organized by EURLm for the Italian and Croatian reference laboratories (Staff involved: Fabrizia Guidi, Marina Torresi for the Italian NRL, and Sanja Duvnjak and Lucija Hlebić for the Zagreb NRL). • Attendance to the "19th EURL workshop of the NRLs for Listeria monocytogenes Session on Shelf-life studies" Online 22 September 2025. • Attendance to the "19th EURL workshop of the NRLs for Listeria monocytogenes Session on Detection & Enumeration" Online 06 November

European Reference Laboratory for Listeria monocytogenes	France	Europa	2025. • Attendance to the "19th EURL workshop of the NRLs for Listeria monocytogenes Session on Characterization & Typing". Online 18 November 2025. • Management and distribution of bacterial strains received from EURL to National Reference Laboratories for the implementation of shelf life studies and challenge tests upon request. 14 strains sent to Laboratories in 2025. • Management and distribution of pBluescript SK(+) reference plasmid material for the execution of the method: ANSES/LSAliments/LSA-INS-1517-Version 03. GenoListeria Multiplex: Identification by multiplex real-time PCR of 30 major clonal complexes of Listeria monocytogenes strains
Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise	Italy	Europa	Launch of the project on Development of a rapid diagnostic test for the detection of Campylobacter in livestock production and food based on CRISPR-Cas and lateral-flow technology. (CAMP-RADAR)
Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise	Italy	Europa	Launch of the project: Progetto di Ricerca Corrente 2024: Monitoraggio e comparazione dei trend di diffusione della resistenza antimicrobica nelle strutture di ricovero, nelle produzioni zootecniche e nell'ambiente: analisi fenotipica e genotipica delle resistenze di microrganismi patogeni e indicatori (Monitor AMR).
Istituto Zooprofilattico Sperimentale dell'Umbria e delle Marche	Italy	Europa	Project IZSLT 04/23 "Evaluation of innovative analysis and sanitation protocols for the characterization of Listeria monocytogenes strains isolated in Ready-to-Eat product facilities and the containment of contamination risks": meeting with Istituto Zooprofilattico Sperimentale dell'Umbria e delle Marche. February 2025.
Istituto Zooprofilattico Sperimentale delle Venezie	Italy	Europa	Meeting with IZSVe regarding the ListeriaST121 cluster in sandwiches. Online meeting, June 26, 2025.
Human health system of Abruzzo and Molise	Italy	Europa	Characterization of L. monocytogenes strains from clinical cases in Abruzzo region.
			• Building a common database of NGS

Istituto Superiore di Sanità (Rome) - ISS	Italy	Europa	data containing human and non-human strains of Listeria monocytogenes. • Working group "Export USA" with official labs for testing food intended for USA export. • Audit Export audit, conducted at the Istituto Zooprofilattico Sperimentale of Lombardia and Emilia Romagna (Parma branch), April 14-15, 2025
Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise	Italy	Europa	Research project on the Development of an optimised Antimicrobial Resistance monitoring strategy for wastewaters (DeARM-WATER). The project aims to define practical guidelines for wastewater monitoring and validation of standardized protocols as well as to determine threshold values for risk assessment related to the presence of specific resistance genes".
Istituti Zooprofilattici Sperimentali: Lombardia e dell'Emilia Romagna, Piemonte Liguria e Valle d'Aosta, Venezie, Lazio e Toscana, Umbria e Marche, Sardegna, Mezzogiorno, Puglia e Basilicata, Sicilia	Italy	Europa	Research project IZSLER 10/23 RC Assessment of emerging hazards in meat substitutes (MicrobioPrepVeg).
Istituti Zooprofilattici Sperimentali: Lombardia e dell'Emilia Romagna, Piemonte Liguria e Valle d'Aosta	Italy	Europa	Research project IZS PLV 01/24 "Sistema di sorveglianza early-warning per l'individuazione di fattori di rischio presenti nella filiera a latte crudo e prodotti lattiero-caseari tradizionali" acronimo E_ARLERT (Early Alert Risk in Raw milk and Traditional dairy products)
College of Milan – Department of Veterinary Medicine and Animal Sciences	Italy	Europa	Principal Investigator in the Research project IZS AM 04/23 RC: "Miglioramento delle performance dei metodi di analisi utilizzati per la ricerca di Listeria monocytogenes in alimenti e tamponi provenienti da ambienti di produzione degli alimenti".
Istituto Zooprofilattico Sperimentale delle Venezie, del Lazio e della Toscana, Local Health Units (province of Roma and Viterbo), Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise	Italy	Europa	Research project IZS LT 04/23 RC "Valutazione di protocolli innovativi di analisi e sanificazione per la caratterizzazione di ceppi di Listeria monocytogenes isolati in aziende di prodotti Ready to Eat ed il contenimento del rischio di contaminazione
Istituto Zooprofilattico Sperimentale delle Venezie, del Lazio e della Toscana, Istituto			Research project IZS LT 09/23 RC: Identificazione del pericolo di listeriosi nell'uomo basata sulla caratterizzazione

Zooprofilattico Sperimentale dell'Abruzzo e del Molise, Istituto Superiore di Sanità	Italy	Europa	di determinanti genomici in isolati di Listeria monocytogenes di origine umana, alimentare e ambientale. Studio di un modello per una gestione One Health-based".
National Reference Laboratory for Listeria monocytogenes of Zaghreb and EURLm	Italy	Europa	Collaboration with the National Reference Laboratory for Listeria monocytogenes of Zaghreb and the EURLm: technical meetings related to "MALDI TOF test for typing Listeria monocytogenes".
Izs Umbria e Marche, Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise, Izs Lombardia Emilia Romagna, IZS Venezie	Italy	Europa	Research project lead by Istituto Zooprofilattico Sperimentale dell'Umbria e delle Marche "ASFREE Meat Research"on the meat safety about African Swine Fever.
College of Milan – Department of Veterinary Medicine and Animal Sciences	Italy	Europa	Research project PRIN "Campylobacter in the Italian poultry meat chain: prevalence, risk assessment, and consumer's role in food handling – CAMPITALY"
Istituto Superiore di Sanità (Rome) - ISS	Italy	Europa	CCM Program 2022 – 2024-2026, Central Actions: Genomic analysis extension of serotypes of Salmonella spp. e Campylobacter spp. relevant species for public health and comparison of available data along the food chain and at the animal level.
Istituto Zooprofilattico Sperimentale delle Venezie	Italy	Europa	• Clustering analysis between clinical case's strain and strains isolated from food. • Collaboration to train lab staff on genomic characterization of L. monocytogenes. • Collaboration on the assessment of challenge test and risk analysis related to Listeria monocytogenes in ready-to-eat and not ready-to-eat food Consultancy for the use of Listeria innocua in challenge test in production plants.
Ministry of Health (Rome) - MoH	Italy	Europa	Participation in the coordinated working group for the drafting of the national guideline on official controls for food.
Ministry of Health (Rome) - MoH	Italy	Europa	Participation in the coordinated working group for the drafting of the national guideline on foodborne outbreak investigation.
			- Participation in the permanent Working Group coordinated by DGISAN (including ISS, involved Regions,

Ministry of Health (Rome) - MoH	Italy	Europa	LNRLm, IIZZSS, and ASL) for the management of listeriosis outbreaks and for managing positive findings in USA-export products. Videoconference meetings held as needed (Staff involved: Fabrizia Guidi, Gabriella Centorotola, Alexandra Chiaverini, Marina Torresi, Maria Luisa Danzetta, Francesco Pomilio) - Working group of the MoH (coordinated by the ISS) on national microbiological criteria related to food. - Expert opinion to the MoH to conduct investigations relating to outbreaks of listeriosis in Italy.
Ministry of Health (Rome) - MoH	Italy	Europa	Rapid outbreak Assessment (ROA) and technical report for the Ministry of Health: - Listeria Cluster_390_ST1. Updates regarding genomic analyses conducted within the Listeria Cluster_390_ST155 outbreak. Emails sent to the "dav allerta" mailing list, ISS (National Institute of Health), laboratories, and relevant local competent authorities by Marina Torresi on April 08, 2025, and May 07, 2025. - Listeria ST1 Cluster_291. Updates regarding genomic analyses conducted as part of the Listeria ST1 Cluster_291 outbreak linked to baked black olives. Email communication dated January 10, 2025. - Listeria Cluster_208 ST451. Updates regarding genomic analyses conducted as part of the Listeria Cluster_208 ST451 outbreak. Emails sent to the "dav allerta" (alert department), ISS, laboratories, and local competent authorities involved by Marina Torresi and Alexandra Chiaverini on June 19 and 25, 2025, and September 11, 2025. - RASFF_News_773293. Update regarding genomic analyses conducted following the report from the NAS (Carabinieri Health Protection Unit) of Ragusa concerning a case of Listeriosis – Activation of RASFF_News_773293. Email sent to the "dav allerta", ISS, laboratories, and local competent authorities involved by Francesco Pomilio on July 15, 2025.
			- RASFF conversation 128335. Updates regarding genomic analyses conducted within the framework of RASFF conversation 128335 – Listeria monocytogenes ST224 cgMLST CT15874. Emails sent to the "dav allerta", ISS, laboratories, and local competent authorities involved by Maria Luisa Danzetta and Marina Torresi

Ministry of Health (Rome) - MoH	Italy	Europa	on August 18 and 21, 2025, respectively. - ROA ST173. Updates regarding genomic analyses conducted as part of the joint ECDC-EFSA Rapid Outbreak Assessment on a prolonged multi-country outbreak of Listeria monocytogenes ST173 linked to the consumption of fish products. Email sent to the "dav allerta", ISS, laboratories, and local competent authorities involved by Marina Torresi on September 25, 2025. - ROA ST155. Updates regarding genomic analyses conducted as part of the joint ECDC-EFSA Rapid Outbreak Assessment on a “Prolonged multi-country cluster of Listeria monocytogenes ST155 infections linked to ready-to-eat fish products.” Email sent to the "dav allerta", ISS, laboratories, and local competent authorities involved by Alexandra Chiaverini on October 09, 2025. -National Reference Centres Coordination Committee: - Coordination activities II.ZZ.SS. 12 February 2025 (G. Garofolo) - Coordination activities II.ZZ.SS. 30 September 2025 (G. Garofolo) - Coordination activities II.ZZ.SS. 11 November 2025 (G. Garofolo).
Ministry of Health (Rome) - MoH	Italy	Europa	Meetings with the Ministry of Health: - Online meeting regarding Listeria monocytogenes ST155 listeriosis cases (Cluster 390). Held online on January 8, 2025; - Online meetings with the Ministry and IIZZSS (Italian Experimental Zooprophylactic Institutes) working group for the revision of Annexes 6 and 7 of the State-Regions Agreement (Intesa Stato-Regioni) 212/2016 – Microbiology Working Group. Held online on February 21; March 3, 10, and 19; April 1, 15, and 30; May 19; and October 13, 2025; - Meeting with the Bologna Competent Authority (Area B), the Ministry of Health and the Italian Meat and Cured Meat Producers Association (ASSICA) regarding genomic results obtained from environmental sampling at the “Vitali Prosciuttificio” (Castel d’Aiano, Bologna). Held online on April 15 and 29, 2024.
			Food processing sampling in the framework of Food borne outbreak’s investigation: - Eurocash Plant, Avezzano (L’Aquila province): Site inspection for the collection of suspect environmental samples related to cases

Ministry of Health (Rome) - MoH	Italy	Europa	of listeriosis. Sampling performed on June 18 and July 10, 2025. (Staff involved: Maria Luisa Danzetta). - Vitali Plant, Castel d'Aiano, (Bologna province): Site inspection conducted in collaboration with the Ministry of Health and the Italian Meat and Cold Cuts Industry Association (ASSICA). Provided support to the Competent Authority for environmental sampling aimed at evaluating a persistence issue within the facility. March 7, 2025. (Staff involved: Francesco Pomilio, Alexandra Chiaverini).
College of Bologna – Department of Veterinary Medicine	Italy	Europa	Research project on MALDI-TOF and Artificial intelligence for bacterial typing, direct diagnosis and antimicrobial rapid detection (MALD-IA). To develop a MALDI-TOF MS spectra analysis system based on machine learning algorithms for the: (i) identification and rapid typing of Brucella, Campylobacter and L. monocytogenes; (ii) identification of the main etiological agents of mastitis from milk; (iii) rapid identification of antibiotic resistance in the pathogens of interest (MALD-IA).
Anses - Agence nationale de sécurité sanitaire de l'alimentation	France	Europa	Project for provision of support to EFSA and to ECDC in the production of the EU One Health Zoonoses report and in related zoonoses online interactive data visualisation dashboards and zoonoses.

TOR 4 AND 5: NETWORKING AND COLLABORATION

5. Did your Collaborating Centre maintain a network with other WOAH Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

Name of WOAH CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Istituto Superiore di Sanità (ISS)	Italy	Europe	Project for provision of support to EFSA and to ECDC in the production of the EU One Health Zoonoses report and in related zoonoses online interactive data visualisation dashboards and zoonoses. On line call and provision of sequences.
			European Twinning project on food safety funded by the EU with the Ministry of

Italian and Madagascar Ministry of Agriculture	Madagascar, Italy	Africa Europe	Agriculture and the Ministry of Education and Scientific Research of Madagascar "Appui au renforcement du dispositif de surveillance et de contrôle de la qualité et conformité sanitaire et phytosanitaire des produits agricoles et agroalimentaires à Madagascar". A collaboration with the colleagues of the italian Ministry of Agriculture was established within the project and the WOAH CC Animal production and Food safety coordinated the activities.
Central Veterinary Research Laboratories - Khartum	Sudan	Africa	Distance learning and analysis of listeria isolates from milk: in silico analysis for bacillus and Corynebacterium species under the ERFAN antimicrobial resistance (AMR) framework.
Ministry of Agriculture of Tunisia	Tunisia	Africa Europe	The Reference Center WOAH has activated during 2024 a dialogue with these countries to plan future collaborations within the framework of AMR, Sequencing and bioinformatics, including food safety. In particular, in 2024, the IZS of Teramo was identified as a partner for participation in the TANIT programme (Tandem Italy-Tunisia) to improve food security in Tunisia. The TANIT programme, funded by the Italian Government (Mattei Plan), aims to modernise the Tunisian agricultural sector, improve water management and promote innovation in the agri-food sector.
Water Research Institute - National Research Council of Italy (CNR-IRSA), Molecular Ecology Group (MEG)	Italy	Europe	Collaboration for the genomic characterisation of antibiotic resistance genes, mobile genetic elements (MGE) and CRISPR-Cas systems of strains of Klebsiella pneumoniae isolated in sea water in Abruzzo.
			• Research project on the use of a natural preservative for the Abruzzo salami: challenge

Abruzzo Region, food business operators	Italy	Europe	test for the study of inactivation and growth potential of C. sporogenes, Listeria monocytogenes and E. coli • Research project on the "Arrosticino d'Abruzzo DOP": challenge test for the study of the inactivation of E. coli and S. aureus through three different cooking methods.
Abruzzo Region	Italy	Europe	Molecular epidemiological study on strains of Klebsiella pneumoniae, Staphylococcus aureus, Enteroccus faecium isolated in hospitals of the Abruzzo Region. Collaboration with the Laboratory of Clinical Pathology and Microbiology of the G. Mazzini Hospital in Teramo.

TOR 6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOAH?

Yes

Name of expert	Kind of consultancy	Subject
Alessandra Cornacchia, Maria Luisa Danzetta, Francesco Pomilio	Expertise in Food Safety and quality management	European Twinning project on food safety funded by the EU with the Ministry of Agriculture and the Ministry of Education and Scientific Research of Madagascar "Appui au renforcement du dispositif de surveillance et de contrôle de la qualité et conformité sanitaire et phytosanitaire des produits agricoles et agroalimentaires à Madagascar"
Francesca Marotta, Giuliano Garofolo	Expertise in Food Safety	Study visit / Laboratory stage IAEA FS-SRB5005-2401992. "Campylobacter and Campylobacteriosis, wgs typing and cluster analysis" to Marko Dmitric, Veterinary Specialized "Kraljevo" Republic of Serbia. Teramo, 10-14 February 2025 (F. Marotta).
Francesca Marotta, Roberta Di Romualdo, Eugenio Felicioni	Expertise in Food Safety	"Organisation and management of a proficiency test" to Nabila Guezmir, Ouardia Hacene, Hafsa Madani Institut National de la Medicine Veterinaire - Laboratoire Central Veterinaire, Algeria. Teramo, 6-7 novembre 2025. (F.Marotta)

TOR 7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

Yes

A core function of this WOAH CC is delivering specialized consultancy and technical services, with a primary focus on designing robust surveillance frameworks and risk assessment models. We support Competent Authorities across WOAH Member Countries by developing integrated information systems and implementing targeted capacity-building programs. These initiatives are sustained through a diverse portfolio of funded projects and international scientific exchanges. Our geographical engagement primarily targets North and East Africa (including Madagascar), the Balkans, the Middle East, and the Arabian Peninsula, while our collaboration with Sub-Saharan Africa is channeled through the ERFAN network.

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8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOAH, to personnel from WOAH Members?

Yes

a) Technical visit : 2

b) Seminars : 8

c) Hands-on training courses: 1

d) Internships (>1 month) : 0

Type of technical training provided (a, b, c or d)	Content	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
A	Capacity Building training held in Teramo on 11-13 February 2025 in the framework of FLAVEAT	Palestine, Jordan	6
C	FAO LoA TCP/SNE/3902 Beekeeping Health Epidemiology, Laboratory Diagnosis of Bee Diseases and Honey Quality Analysis Teramo, 08-10/04/2025	Algeria, Morocco, Lybia, Mauritania, Tunisia	9
B	One Health Award 2025. New Geographies, Opening conference Teramo, 10/10/2025	United Kingdom, New Zealand, Brazil, Italy	300
B	One Health Award 2025. New Geographies Teramo, 11/10/2025	United Kingdom, New Zealand, Brazil, Italy	1500
B	Organic contaminants Teramo, 19-20/06/2025	Italy	37
B	Workshop on Health and Beekeeping: Challenges and Opportunities	Italy	288
B	Seminar on Brucellosis Rome, 25/09/2025	Italy	161
A	Joint meeting between the Arenas-Gamboa Brucellosis Laboratory, Texas A&M Institute, USA, and IZS-Teramo Teramo, 6-11/10/2025	United States of America	3
B	EcoSurv: results from the First 18 Months of the Project 12/11/2025	Italy	62
B	National Reference Centre for Whole Genome Sequencing of microbial pathogens: database and bioinformatic analysis Teramo, 19/11/2025	Italy	60
B	National Reference Laboratory for Listeria monocytogenes Teramo, 20/11/2025	Italy	37

TOR 8: SCIENTIFIC MEETINGS

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOAH?

No

TOR 9: DATA AND INFORMATION DISSEMINATION

10. Publication and dissemination of any information within the remit of the mandate given by WOAH that may be useful to Members of WOAH

a) Articles published in peer-reviewed journals:

24

1. Abichu, G., De Massis, F., Rufael, T., Scacchia, M., Aliyi, A., Garofolo, G., & van Heerden, H. (2025). Seroprevalence, characterization, and risk factors of brucellosis in cattle, sheep, goats, and camels in the Oromia region, Borena Zone, Ethiopia. Preventive Veterinary Medicine, 106634.

2. Alessandra Cornacchia, Andrea Di Cesare, Gianluca Corno, Tomasa Sbaffi, Gabriella Centorotola, Alexandra Chiaverini, Maria Antonietta Saletti, Luciano Ricchiuti, Cesare Cammà, Pierpaolo Piccone, Sofia Chiatamone Ranieri, Nicola D'Alterio, Francesco Pomilio. Bathing seawater and sand as reservoirs of clinically relevant and antimicrobial resistant Klebsiella pneumoniae strains. Science of the Total Environment 1006 (2025) 180930.

3. Alessiani, A., Baffoni, M., Averaimo, D., Cantelmi, M. C., Coccaro, A., Rulli, M., Piersanti, V., Pompilii, C., Cito, F., Chiaverini, A., & Petrini, A. (2025). Antimicrobial Resistance and Genetic Characterization of Streptococcus equi subsp. zooepidemicus in Equines from Central Italy: Insights from a One Health Perspective. Animals : an open access journal from MDPI, 15(18), 2713. https://doi.org/10.3390/ani15182713

4. Annalisa Lombardi, Alessandra Cornacchia, Tonia Borriello, Maria Luisa Maccauro, Alfonso Nardo, Serena Bosica, Mattia Ferrara, Eugenio Toscano, Ida Torre, Francesco Pomilio, Francesca Pennino. Pseudomonas aeruginosa investigation in water samples of Campania region, Southern Italy. American Journal of Infection Control xxx (xxxx) xxx–xx

5. Averaimo, D., Defourny, S. V. P., Alessiani, A., Rulli, M., Chiaverini, A., Di Domenico, M., Mangone, I., Pompilii, C., Piersanti, V., Giancristofaro, R., Ricci, L., & Petrini, A. (2025). Microorganisms, 13(9), 2020. Vagococcus lutrae Isolation in a Cat with Feline Urological Syndrome in Italy: A Case Report.

6. Battistelli, N., D'Angelantonio, D., Tittarelli, F., Acciari, V.A., Scattolini, S., Centorame, P., Di Lollo, V., Olivieri, S., Pomilio, F. and Aprea, G. Activity of bacteriophage endolysins LP101_021 and PlyP100 against Listeria monocytogenes for Squacquerone soft cheese decontamination. International Journal of Dairy Technology published by John Wiley & Sons Ltd on behalf of Society of Dairy Technology. doi: 10.1111/1471-0307.70002

7. Capitaine, K., Te, S., Asséré, A., Plodková, H., Michel, V., Sabrou, P., Bourdonnais, E., Gillot, G., Mouhali, N., Brauge, T., Dumaire, C., Feurer, C., Houry, B., Lueth, S., Sréterné Lancz, Z., Centorotola, G., Guidi, F., Torresi, M., Mathisen Fagereng, T., Skjerdal, T., ... Félix, B. Interlaboratory validation trial report on multiplex real-time PCR method for molecular serotyping and identification of the 30 major clonal complexes of Listeria monocytogenes circulating in food in Europe. ASM Journals Microbiology Spectrum Vol. 13, No. 7.

8. Carolina Veneri, G. Bonanno Ferraro, D. Congiu, A. Franco, D. Brandtner, P. Mancini, M. Iaconelli, The SARI Network, L. Lucentini, E. Suffredini and Giuseppina La Rosa. Wastewater-Based Surveillance of Human Adenoviruses in Italy: Quantification by Digital PCR and Molecular Typing via Nanopore Amplicon Sequencing. Viruses. 2025 May 30;17(6):791. doi: 10.3390/v17060791.

9. Castello, A., Alio, V., Torresi, M., Centorotola, G., Chiaverini, A., Pomilio, F., Arrigo, I., Giammanco, A., Fasciana, T., Ortoffi, M. F., Gattuso, A., Oliveri, G., Cardamone, C., & Costa, A. (2025). Molecular Characterization and Antimicrobial Resistance Evaluation of Listeria monocytogenes Strains from Food and Human Samples. Pathogens (Basel, Switzerland), 14(3), 294.

10. Cito, F., Di Francesco, C. E., Averaimo, D., Chiaverini, A., Alessiani, A., Di Domenico, M., Cresci, M., Rulli, M., Cantelmi, M. C., Di Bernardo, M. D., Giammarino, A., Vincifori, G., & Petrini, A. (2025). Streptococcus equi subsp. zooepidemicus: Epidemiological and Genomic Findings of an Emerging Pathogen in Central Italy. Animals 15(10), 1351.

11. Cossu, C. A., Garofolo, G., Janowicz, A., De Massis, F., Wentzel, J., Ledwaba, M. B., ... & Van Heerden, H. (2025). Phylogenomics of Brucella abortus isolated from African Buffalo in Kruger National Park: New perspectives on wildlife-cattle disease dynamics. Veterinary Microbiology, 304, 110493.

12. Di Marcantonio, L., Chiatamone Ranieri, S., Toro, M., Marchegiano, A., Cito, F., Sulli, N., Garofolo G... & Janowicz, A. (2025). Comprehensive regional study of ESBL Escherichia coli: genomic insights into antimicrobial resistance and inter-source dissemination of ESBL genes. Frontiers in Microbiology, 16, 1595652.

13. García-Fernández A, Artuso I, Marotta F, Di Romualdo R, Arena S, De Marchis ML, Pitti M, Primavilla S, Napoleoni M, Aschbacher R, Bracco S, Gradassi M, Janowicz A, Garofolo G, Villa L. WGS-based surveillance for Campylobacter spp. in human infections and chicken meat production in Italy (2023). BMC Microbiol. 2025 Oct 28;25(1):696. doi: 10.1186/s12866-025-04272-1. PMID: 41152732; PMCID: PMC12570518.

14. Garcia-Vozmediano A, Moroni B, Marra C, Pitti M, Garofolo G, Marotta F, Di Romualdo R, Zoppi S, Ru G. From Barns to Bushes: Exploring the ECOFF-Based Non-Wild-Type Status of Campylobacter spp. in Pets, Livestock, Synanthropic Birds and Wild Animals in Northwestern Italy. Zoonoses Public Health. 2025 Oct 25. doi: 10.1111/zph.70020. Epub ahead of print. PMID: 41137582.
https://doi.org/10.3390/app15031454

15. Ivanova M, Laage Kragh M, Szarvas J, Tosun ES, Holmud NF, Gmeiner A, Amar C, Guldimann C, Huynh TN, Karpíšková R, Rota C, Gomez D, Aboagye E, Etter A, Centorame P, Torresi M, De Angelis ME, Pomilio F, Okholm AH, Xiao Y, Kleta S, Lüth S, Pietzka A, Kovacevic J, Pagotto F, Rychli K, Zdovc I, Papić B, Heir E, Langsrud S, Møretrø T, Brown P, Kathariou S, Stephan R, Tasara T, Dalgaard P, Njage PMK, Fagerlund A, Aarestrup F, Truelstrup Hansen L, Leekitcharoenphon P. Large-scale phenotypic and genomic analysis of Listeria monocytogenes reveals diversity in the sensitivity to quaternary ammonium compounds but not to peracetic acid. Applied and Environmental Microbiology Volume 91, Issue 4

16. Krasteva I, Schirone M, Di Pancrazio C, Manocchia F, D'Onofrio F, Maggetti M, Perletta F, Pomilio F, Bruno G, Torresi M, Centorotola G, Paparella A, Sacchini F, D'Alterio N and Luciani M. Comparative proteomics of Listeria monocytogenes strains of food and clinical origin reveals strain-specific adaptation mechanisms. Front. Microbiol., 26 August 2025

17. Luciani, M., Krasteva, I., Schirone, M., D'Onofrio, F., Iannetti, L., Torresi, M., Di Pancrazio, C., Perletta, F., Valentinuzzi, S., Tittarelli, M., Pomilio, F., D'Alterio, N., Paparella, A., & Del Boccio, P. Adaptive strategies of Listeria monocytogenes: An in-depth analysis of the virulent strain involved in an outbreak in Italy through quantitative proteomics. International Journal of Food Microbiology 427 (2025) 110951

18. Maria Elisabetta De Angelis, Giovanna Alessia Robbe, Cesare Cammà, Massimo Ancora, Serena Bosica, Mattia Ferrara, Marina Torresi, Frank M. Aarestrup, Alexander Gmeiner, Narong Nuanmuang, Patrick Murigu Kamau Njage, Chiara Bravaccini, Viviana Belardo, Chiara Di Iorio, Silvia Di Zacomo, Paolo Fazii, Francesco Pomilio and Pimlapas Leekitcharoenphon. GWAS Study Applied to Phenotypically Slow Growth Strains of Listeria monocytogenes Workflow and Outcome. Microorganisms2025, 13(9), 2011;https://doi.org/10.3390/microorganisms13092011

19. P. Mancini · D. Brandtner · C. Veneri · G. Bonanno Ferraro · M. Iaconelli · S. Puzelli · M. Facchini · G. Di Mario ·P. Stefanelli · L. Lucentini · A. Muratore · The SARI network · E. Suffredini · G. La Rosa. Evaluation of Trends in Influenza A and B Viruses in Wastewater and Human Surveillance Data: Insights from the 2022–2023 Season in Italy. Food Environ Virol 17, 6 (2025). https://doi.org/10.1007/s12560-024-09622-2

20. Rossi, F., Poltronieri, P., Pomilio, F., & Centorotola, G. Latest Developments of Research on the Viable Non-Culturable State of L. monocytogenes and Implications for Food Safety. Appl. Sci. 2025, 15(3), 1454;

21. Russini, V., De Marchis, M. L., Sampieri, C., Onorati, C., Zucchitta, P., De Santis, P., Varcasia, B. M., De Santis, L., Chiaverini, A., Gattuso, A., Vestri, A., Gasperetti, L., Condoleo, R., Palla, L., & Bossù, T. (2025). Exploratory Genomic Marker Analysis of Virulence Patterns in Listeria monocytogenes Human and Food Isolates. Foods (Basel, Switzerland), 14(10), 1669.

22. Savelli, D., Baldelli, G., Gabucci, C., Amagliani, G., Schiavano, G. F., Cavaliere, F., Garofolo G., ... & Petruzzelli, A. (2025). Integrated culture-based and molecular approach for the detection of three Arcobacter species in sushi and fresh vegetables. Food Microbiology, 104843.

23. Serena Bosica, Anna Janowicz, Teresa Romualdi, Mattia Ferrara, Marco Di Domenico, Roberta Di Romualdo, Giovanna Alessia Robbe, Violeta Di Marzio, Lisa Di Marcantonio, Silvia Di Zacomo, Chiara Di Iorio, Andrea Stanziale, Giuliano Garofolo, Francesco Pomilio and Paolo Fazii. Genomic epidemiology of a Bacillus cereus bacteraemia outbreak linked to contaminated hospital laundry. Microb Genom. 2025 Sep;11(9):001487.doi: 10.1099/mgen.0.001487.

24. Stella, S., Sgoifo Rossi, C. A., Pomilio, F., Centorotola, G., Torresi, M., Chiaverini, A., Addis, M. F., Bernardi, C., Penati, M., Locatelli, C., Moroni, P., Grossi, S., Fusi, V., Urgesi, P., & Tirloni, E. (2025). Foods (Basel, Switzerland), 14(19), 3372. Evaluation of Listeria monocytogenes Dissemination in a Beef Steak Tartare Production Chain. Foods (Basel, Switzerland), 14(19), 3372.

b) International conferences:
0

c) National conferences:
11

1. Pomilio, F., Centorotola, G., Centorame, P., Danzetta, M. L., Torresi, M. & Vergara, A. Study of Listeria monocytogenes growth dynamics in new ready to eat products performing challenge test. Annual Meeting of the Associated PhD Course in Cellular and Molecular Biotechnologies. Teramo; 24 September, 2025; Presentazione Orale. https://hdl.handle.net/11575/167622.

2. Robbe, G. A., Centorotola, G., Guidi, F., Pomilio, F., Torresi, M. & Vergara, A. Innovative methods for the detection and quantification of Listeria monocytogenes clones in food matrices. Annual Meeting of the Associated PhD Course in Cellular and Molecular Biotechnologies. Teramo; 24 September, 2025; Presentazione Orale. https://hdl.handle.net/11575/163442.

3. Workshop LNRLm 2025. Importanza dell'analisi di SNPs nell'indagine associata a focolai di listeriosi. Oral presentation.

4. XXIX Congresso AIOL Association of Limnology and Oceanology. Ancona 3-6th June 2025. Oral presentation.

5. AMCLI 2025 Associazione Microbiologi Clinici Italiani. Analisi epidemiologico molecolare degli isolati clinici di Klebsiella pneumoniae produttrice di carbapenemasi nell'azienda sanitaria locale di Teramo. Poster.

6. FAT 2025 Fiera dell'Agricoltura di Teramo - Convegno: "Acque e sicurezza: dal controllo ambientale alla salute umana". Risultati del monitoraggio sanitario nella volpe (Vulpes vulpes) delle regioni Abruzzo e Molise nel periodo 2021 2025. Poster.

7. Il Laboratorio Nazionale di Riferimento per Listeria monocytogenes. SO/TC 34/SC 9/WG 32 ISO 11290-1, ricerca di Listeria monocytogenes: esperienza dell'IZSAM nell'ottimizzazione della fase di pre-arricchimento. Presentazione orale.

8. Il controllo ufficiale a garanzia della qualità e della sicurezza alimentare. Produzione di latte e prodotti trasformati. E. coli STEC nella filiera lattiero casearia - un problema emergente. Oral presentation.

9. Metodi analitici rapidi: informazioni tempestive a beneficio di sicurezza alimentare e sostenibilità. La visione USDA per la sicurezza: rilevazione e conferma con tecnica PCR. Un esempio di flusso rapido. Oral presentation.

10. VETFORUM 2025 – Zoonosi in gravidanza e nell'età pediatrica. Listeria monocytogenes – rischi correlati al consumo di alimenti in gravidanza: vecchi e nuovi problemi. Oral presentation.

11. 9th National Congress of the Italian Society for Virology - One Virology One Health.

d) Other (Provide website address or link to appropriate information):
9

PUBLICATIONS IN EFSA JOURNAL:

1. The European Union One Health 2024 Zoonoses Report, EFSA Journal. EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control), (2025). The European Union One Health 2024 Zoonoses report. EFSA Journal, 23(12), e9106. https://doi.org/10.2903/j.efsa.2025.9759

THESIS DISSERTATION:

- -

1. Annamaria Iannetta. "Valutazione della patogenicità di Listeria monocytogenes in forme embrionali di zebrafish". Facoltà di medicina Veterinaria, Università degli Studi di Teramo. 2025. Patrizia Centorame e Francesco Pomilio.

2. Marilia Della Porta. "Persistenza di Listeria monocytogenes nelle aziende che producono alimenti tradizionali e tipici: studio della resistenza ai biocidi, della produzione di biofilm e dei fattori di virulenza mediante l'utilizzo di tecniche genomiche e fenotipiche". Facoltà di medicina Veterinaria, Università degli Studi di Teramo. 2025. Fabrizia Guidi e Francesco Pomilio.

PEER REVIEW ACTIVITIES:
1.Barker, C. R., Greig, D. R., Olonade, I., Swift, C., Crewdson, A., Painset, A., Pittock, N., Rajendram, D., Godbole, G., & Ribeca, P. (2025). Characterization of a Listeria monocytogenes plasmid with antibiotic and stress resistance genes. Microbial genomics, 11(7), 001445. https://doi.org/10.1099/mgen.0.001445.

2.Kishore P., Valamattath M.A., Varghese K.S., Nadella R.K., Uchoi D., Mohan C.O., Chatterjee N.S., Panda S.K., and Zynudheen A. A. Characterization and genome analysis of 1/2b serotype of Listeria monocytogenes isolated from frozen shrimp. Current Microbiology, CMIC-D-25-01151.

3.Alteio, L. V., Spiegel, F., Rychli, K., & Wagner, M. (2025). Nevertheless, they persist: addressing the stalemate of persistence in food-associated Listeria monocytogenes research. Critical reviews in microbiology, 1–21. Advance online publication. https://doi.org/10.1080/1040841X.2025.2555938.

4.Barre, L., Guillier, F., Lombard, B., Danan, C., Hennekinne, J. A., Constantin, B., Le Neve, R., Nguyen, S., Boubetra, A., Chemaly, M., Nia, Y., & Bonifait, L. (2025). Interlaboratory proficiency tests to assess the analytical competency of French official control laboratories for the analysis of Listeria monocytogenes, Salmonella spp. and coagulase-positive staphylococci in food. International journal of food microbiology, 438, 111218. https://doi.org/10.1016/j.ijfoodmicro.2025.111218.

5.Wenjuan Liu,Yunlong Tian, Lili Xing, XinYu,Zhang, Wenjun Wang, and Jian Yang. Contamination Status and molecular characteristics of Listeria monocytogenes in Yantai City, China: A 11-year Continuous Monitoring Study. Foodborne Pathogens and Disease. Codice: #FPD-2025-0010.

6.Shi, Q., Zhang, X., Wang, D., Zhang, W., Jin, X., Sun, Y., & Huang, A. (2025). Genetic Diversity, Antimicrobial Resistance, and Virulence Profiles of Listeria monocytogenes Isolates from Nantong, China (2020-2023). Foodborne pathogens and disease, 10.1089/fpd.2025.0027. Advance online publication. https://doi.org/10.1089/fpd.2025.0027.
RELEVANT WEBSITES:
National Reference Laboratory for Listeria monocytogenes. https://www.izs.it/IZS/Engine/RAServePG.php/P/256410010520/L/1
National Reference Centre for Whole Genome Sequencing of microbial pathogens: database and bioinformatic analysis. https://www.izs.it/IZS/Centres_of_excellence/National_Centres/CRN_-_Sequenze_Genomiche
National Reference Laboratory for Campylobacter. https://www.izs.it/IZS/Centres_of_excellence/National_Centres/LNR_-_Campylobacter
SINVSA (National Veterinary Information System for Food Safety): accessible through the National Veterinary Information System VETINFO http://www.vetinfo.sanita.it
SINVSA Export USA: accessible through the National Veterinary Information System VETINFO http://www.vetinfo.sanita.it
SINVSA Export to other Third Countries: accessible through the National Veterinary Information System VETINFO http://www.vetinfo.sanita.it
SEAP (Information system for the epidemiological surveillance of food pathogens): https://sorveglianza.izs.it/seap/common/reset.do?locale=it
Prove interlaboratorio: http://proveinterlaboratorio.izs.it/

11. What have you done in the past year to advance your area of focus, e.g. updated technology?
The field of epidemiology is being transformed by cutting-edge data analysis methodologies, particularly through the integration of WGS, machine learning, and big data analytics. This WOAH CC is actively enhancing its core competencies by: (i) engaging staff in high-level global training programs on emerging techniques, (ii) fostering strategic partnerships with international Centres of excellence in innovation, and (iii) expanding our technical capacity through the recruitment of specialized experts and doctoral researchers.

12. Additional comments regarding your report: