

OIE Collaborating Centres Reports Activities

Activities in 2021

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ToR: To provide services to the OIE, in particular within the region, in the designated specialty, in support of the implementation of OIE policies and, where required, seek for collaboration with OIE Reference Laboratories

ToR: To identify and maintain existing expertise, in particular within its region

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

Food safety	
Title of activity	Scope
OIE Twinning between the IZSAM "G. Caporale" and the Republican Veterinary Laboratory of Azerbaijan	The project aims to improve technical knowledge and skills of RVL staff, to enable RVL to become a reference laboratory for food safety and eventually to acquire OIE Collaborating Centre status.
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
EU Twinning Project "Strengthening the Veterinary Services and Food Safety Capacities of the Lebanese Ministry of Agriculture (EuropeAid/159778/DD/ACT/LB)" between the IZSAM "G. Caporale" and the Ministry of Agriculture Lebanon	<p>The general objective of this project is to strengthen the capacities of the Ministry of Agriculture of Lebanon in the field of veterinary public health in order to protect the health and security of the Lebanese consumers and secure the Lebanese animal production and food industry. In detail, the project aims to guarantee: 1) further alignment of Lebanese legislation with international SPS standards in the area of agriculture, live animals and food products; 2) capacity building of the Ministry of Agriculture - Animal Resources Directorate; 3) improvement of the communication with stakeholders (consumers, producers and other interested parties)</p> <p>Three online meetings were carried out the year 2021. The meeting aimed to define the residue monitoring plan for honey according to EU legislation.</p>
EU Twinning Project between LITHUANIA, HUNGARY, ITALY and BOSNIA AND HERZEGOVINA "EU's support to capacity building and gradual Union acquis alignment in the Food safety sector in Bosnia and Herzegovina" EuropeAid/166812/DD/ACT/BA	The objective of the project is to provide Bosnia and Herzegovina for efficient legislation, gradually aligned with Union acquis, and its effective implementation, as well as consolidated procedures related to the official controls across the policy area, in order to ensure consumer health protection are all part of the overall food safety system.
ERFAN Project on Determination of Salmonella spp. prevalence in slaughtered chicken carcasses in Zambia	A collaboration agreement between Central Veterinary Laboratory and IZSAM to check the prevalence of Salmonella spp. at slaughterhouses
ERFAN Project on Determination of Listeria monocytogenes spp. prevalence in Ready to eat meat and dairy products in Zambia	A collaboration agreement between Central Veterinary Laboratory and IZSAM to check the prevalence of Listeria monocytogenes in meat and dairy product
FAO Twinning Project on food safety between Tunisia and FAO and IZSAM on «Appui aux Services de Contrôles Officiels des Produits Animaux et Végétaux» (ASCO)	The ASCO twinning project aims to the creation and implementation of an information system for the Veterinary and Phytosanitary services of the Ministry of Agriculture of Tunisia

<p>ERFAN (Enhancing Research for Africa Network) online meetings for the working groups in the SADC region</p>	<p>A round table of the ERFAN working groups, including the ERFAN Food Safety Working Group, and an ERFAN general meeting were carried out during the year 2020. These meeting aimed to update the situation of the action plan previously established, and to schedule the next activities</p>
<p>ERFAN Food Safety Working Group project drafting on "Baseline study on prevalence of <i>Listeria monocytogenes</i> contamination in RTE meat products"</p>	<p>Baseline study started in 2021, the activity will be finalized in 2022 by IZSAM in collaboration with universities and other institutions in the SADC countries</p>
<p>ERFAN Food Safety Working Group Online Training Course on "Information Day - Food Hygiene WG: Detection of <i>Listeria</i> spp. and <i>Listeria monocytogenes</i>, in food matrices, food-producing environments and animals, according to ISO 11920-1:2017"</p>	<p>Online training course aimed to the members of the ERFAN Working Group, describing the most recent ISO laboratory method for detection of <i>Listeria</i> spp and <i>Listeria monocytogenes</i> in foodstuffs</p>
<p>ERFAN Food Safety Working Group Online Training Course on "Information Day - Food Hygiene WG: Detection of <i>Klebsiella pneumoniae</i> from different matrices, AMR and NGS"</p>	<p>Online training course aimed to the members of the ERFAN Working Group, describing the most recent scientific advances in the detection of <i>Klebsiella pneumoniae</i> in different foodstuffs</p>
<p>Med-Vet European Joint Program (EJP) Project on Adaptive traits of <i>Listeria monocytogenes</i> to its diverse ecological niches (Listadapt)</p>	<p>The project Listadapt is a multidisciplinary international project aiming to decipher genes and molecular mechanisms that underlie adaptation of Lm to its different ecological niches. This project will enhance our basic understanding and allow application of new knowledge to control the risks related to Lm and to improve food safety.</p>
<p>EJP Project on Novel approaches for design and evaluation of cost-effective surveillance across the food (Nova)</p>	<p>The project NOVA is a multidisciplinary international and striving to develop new surveillance tools and methods and to harmonise and optimise the use of existing surveillance system data to prevent foodborne outbreaks. The project group consist of a network of 19 Med and Vet institutions from 10 European countries</p>
<p>EJP Project on <i>Klebsiella pneumoniae</i>: from ecology to source attribution and transmission control (MedVetKlebs)</p>	<p>The project MedVetKlebs is a multidisciplinary international project aiming to define the ecology of <i>Klebsiella pneumoniae</i> (Kp) and the sources of infections of humans and animals in order to investigate transmission routes and to find an optimal way to control them.</p>
<p>EJP Project on Cross-sectoral framework for quality Assurance Resources for countries in the European Union (Care)</p>	<p>The CARE project will focus on developing new One Health concepts for proficiency testing (PT) of laboratories, reference materials and quality/availability of demographic data.</p> <p>The aim of CARE are:</p> <ul style="list-style-type: none"> to develop new proficiency testing schemes that can be used cross-sectorally and thereby used to evaluate the capacity to manage foodborne problems from a One Health perspective; to provide insight to available and desirable RM, identifying sources of both strains and genomic data, including the field of antimicrobial resistance, provided by reference laboratories and other relevant sources such as online repositories and national collections; to give visibility of the reference material and data associated for the scientific community. The emphasis will be on the availability and sustainability of this reference collection in order to contribute to the long-term needs of the European research; to disseminate more widely the information about the accessibility not only of the reference collection but also of CARE partner microbial collections; to assess the quality and availability of the demographic data and focus on how to improve and make the data better by raising awareness of EU authorities collecting and organizing demographic data.

EJP Project on Connecting dimensions in One-Health surveillance (Matrix)	MATRIX aims to advance the implementation of One Health Surveillance (OHS) in practice, by building on existing resources, adding value to them and creating synergies among the sectors. In particular, identifying and describing existing cross-sectorial OHS programmes or potential programmes, extending the efforts of existing integrative OHEJP projects which focus on separate or only two sectors.
EJP on Project Biosecurity practices for pig farming across Europe (Biopegee)	<p>The aims of the project are:</p> <p>To develop a biosecurity protocol for the primary production. Additionally, field and intervention studies will be completed in areas where current evidence is weak, e.g. effectiveness of management controls on HEV prevalence;</p> <p>To develop and apply a protocol for slaughterhouse biosecurity and disinfection effectiveness;</p> <p>To develop scenarios on country-specific biosecurity measures and on the measures' impact on human infection rate will be run. Results will be used to assess the economic profitability of the implementation of standard and specific intervention measures along the pig supply chain and to assess projected future pork-product derived human salmonellosis cases;</p> <p>To develop a catalogue of biosecurity measures based on the findings on the measures' effectiveness and costs for Salmonella and HEV.</p>
EJP Project on Biosecurity practices for pig farming across Europe (Airsample)	The project aimed to develop and validate air sampling as a low-cost and multi-purpose alternative to fecal droppings or boot swabs. The main outcome was a harmonized and standardized, filter-based sampling protocol that can replace the current cumbersome and time-consuming microbiological methods. Air sampling should be feasible for surveillance, monitoring and eradication of Campylobacter in confined and biosecured broiler production. The results also showed that the likelihood of detecting Campylobacter in a chicken flock has quadrupled with the new method. The method is especially useful to farmers to confirm the cleanliness of their house BEFORE inserting new chick.
EJP Project on Biosecurity practices for pig farming across Europe (Farmed)	The FARMED project aims to address AMR by using the ONT MinION, comparing this technology to other metagenomic sequencing technologies, and assessing its ability for diagnostic use on a range of sample matrices within both the laboratory and the field. The project will develop efficient real-time mapping strategies that identify the origin of the genetic context of AMR genes, identify the host bacterial species to enable specific pathogen detection.

ToR : To propose or develop methods and procedures that facilitate harmonisation of international standards and guidelines applicable to the designated specialty

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the surveillance and control of animal diseases, food safety or animal welfare

Proposal title	Scope/Content	Applicable area
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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 POPs in Feed and Food”, in order to harmonise 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 Brominated Flame Retardants in Food (in particular PBDEs e HBCDDs) and analytical criteria for the determination of Perfluorinated compounds in food and feed.	<input type="checkbox"/> Surveillance and control of animal diseases <input checked="" type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare
Contribution to the activities of the European Commission on Food Safety	<p>On behalf of Ministry of Health, two IZSAM experts are members of the DG Health and Food Safety - Working Group (WG) on Persistent Organic Pollutants in Food”. 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.</p> <p>Main issues discussed during 2021 were as follows:</p> <ol style="list-style-type: none"> 1) Information on possible new legislation on control of contaminants in food; 2) EFSA opinion on risks for animal and human health related to the presence of perfluoroalkyl substances (PFASs) in food and discussion on the regulatory follow-up to the EFSA opinion, including analytical aspects; 3) Exchange of views with EFSA to perform a risk-benefit assessment of fish consumption in relation to the presence of Halogenated POPs in fish; 4) Discussion on the review of the maximum levels for dioxins and dioxin-like PCBs in food. 	<input type="checkbox"/> Surveillance and control of animal diseases <input checked="" type="checkbox"/> Food safety <input type="checkbox"/> Animal welfare

ToR: To establish and maintain a network with other OIE Collaborating Centres designated for the same specialty, and should the need arise, with Collaborating Centres in other disciplines

ToR: To carry out and/or coordinate scientific and technical studies in collaboration with other centres, laboratories or organisations

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

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
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EFSA- ECDC	Parma- Stockholm	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	<ul style="list-style-type: none"> • Elaboration of European report on Zoonosis: Campylobacter and Listeria monocytogenes
European Reference Laboratory for Listeria monocytogenes	France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	<ul style="list-style-type: none"> • Providing data on temperatures of Italian domestic refrigerators (Ministry of Health funded project), to be used for amendments to the Technical Guidance Document for shelf life studies • Urgent inquiries related to multi-Countries outbreak of Listeriosis • Working group for the revision of the EURL Lm Technical document for conducting shelf-life studies on Listeria monocytogenes • Working group for the revision of the EURL Lm Guideline on environmental sampling for Listeria monocytogenes • Working group for the revision of the EURL Lm Guideline on competence of laboratory performing challenge tests • Study on matrix uncertainty in reference to ISO 19036:2019 standard
European Reference Laboratory for Campylobacter spp.	Sweden	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	<ul style="list-style-type: none"> • Providing data to define the benefit, in terms of detecting both Campylobacter jejuni and C. coli if present, of using a second agar medium in addition to mCCDA and if Preston or Butzler agar can be used as a second selective medium in pig samples. • Providing data on the use of a second selective medium for the isolation of Campylobacter jejuni and/or C. coli in chicken samples • Providing data for on a interlaboratory study for PCR 2020, for the inclusion of three PCR systems to be included in ISO 10272:2017 for confirmation and/or identification of thermotolerant Campylobacter spp. The validation is following ISO 16140-6. • Study on matrix uncertainty in reference to ISO 19036:2019 standard
Istituto Superiore di Sanità (Roma)	Italy	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	<ul style="list-style-type: none"> • Building a common database of NGS data containing human and non human strains of Listeria monocytogenes

University of Milan	Italy	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Studies on <i>Listeria monocytogenes</i> typing detected in food producing establishments
University of L'Aquila	Italy	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Studies on <i>Pseudomonas</i> spp. and <i>Klebsiella</i> spp. Strains contaminating food production environment
University of Teramo	Italy	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Studies on <i>Listeria monocytogenes</i> strains contaminating food production environment
Teramo Hospital	Italy	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	<ul style="list-style-type: none"> • Studies on <i>Listeria monocytogenes</i> strains detected in clinical cases in Abruzzo region
Istituto Zooprofilattico Sperimentale dell'Umbria e delle Marche	Italy	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	<ul style="list-style-type: none"> • Studies on <i>Listeria monocytogenes</i> strains detected in food producing establishments
Istituto Zooprofilattico Sperimentale della Lombardia ed Emilia Romagna	Italy	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	<ul style="list-style-type: none"> • Studies on <i>Listeria monocytogenes</i> strains detected in food producing establishments

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

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
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OIE CC University of Pretoria, National Central Veterinary Laboratories, and some Faculties of Veterinary Science of other African countries: Angola, Mozambique, Namibia, Tanzania, Zambia and Zimbabwe	Various countries in Africa. Regional meetings in Windhoek (Namibia) and Tunis (Tunisia)	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East	<p>ERFAN is a network to facilitate and strengthen collaboration among countries of the SADC Region and Arab Maghreb Union (UMA) as well as IZSAM in the Animal health and food safety domains. The main task is to allow the Parental Laboratory to support the Candidate Laboratory once the OIE Twinning Project is concluded, and the aims are to tackle some issues, as Efficiency of "Regional Pole of excellence" and Sustainability post OIE Twinning Project.</p> <p>During 2021, despite the COVID 19 pandemic, the ERFAN network continued its activities through regular online meetings of the working groups, a general ERFAN meeting and organizing online activities and courses.</p>
Central Veterinary Laboratory	Azerbaijan	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input checked="" type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East	Online assistance on Food safety laboratory quality assurance
National Veterinary Institute	Zambia	<input checked="" type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East	Collaboration for the studies <i>Listeria monocytogenes</i> , <i>Salmonella</i> spp and <i>Klebsiella</i> spp prevalence in food for human consumption, including AMR of detected strains

ToR: To place expert consultants at the disposal of the OIE.

5. Did your Collaborating Centre place expert consultants at the disposal of the OIE?

Yes

Name of expert	Kind of consultancy	Subject
Francesco Pomilio	Expertise in Food Safety and quality management of the laboratories	<ul style="list-style-type: none"> OIE Twinning between the IZSAM "G. Caporale" and the Republican Veterinary Laboratory of Azerbaijan Twinning Project "Strengthening the Veterinary Services and Food Safety Capacities of the Lebanese Ministry of Agriculture (EuropeAid/159778/DD/ACT/LB)" between the IZSAM "G. Caporale" and the Ministry of Agriculture Lebanon seminar on Foodborne outbreak investigation

Daniela D'Angelantonio, Gabriella Centorotola, Alessandra Cornacchia and Francesco Pomilio	Expertise in Food Safety	<ul style="list-style-type: none"> • OIE funded initiative "ERFAN": online meetings of the working groups in the SADC Region • Online ERFAN Information Day - Food Hygiene WG: Detection of <i>Listeria</i> spp. and <i>Listeria monocytogenes</i>, in food matrices, food-producing environments and animals, according to ISO 11920-1:2017 (training course) • Online ERFAN Information day "Food Hygiene WG: Detection of <i>Klebsiella pneumoniae</i> from different matrices, AMR and NGS
Loredana Annunziata, Gianfranco Diletti, Luigi Iannetti and Francesco Pomilio	Expertise in Food Safety and quality management	Twinning Project "Strengthening the Veterinary Services and Food Safety Capacities of the Lebanese Ministry of Agriculture (EuropeAid/159778/DD/ACT/LB)" between the IZSAM "G. Caporale" and the Ministry of Agriculture Lebanon
Giuseppe Aprea, Roberta Rosato and Stefania Salucci	Expertise in Food Safety and quality management	Twinning Project between LITHUANIA, HUNGARY, ITALY and BOSNIA AND HERZEGOVINA "EU's support to capacity building and gradual Union acquis alignment in the Food safety sector in Bosnia and Herzegovina" EuropeAid/166812/DD/ACT/BA
Gabriella Centorotola, Alexandra Chiaverini, Alessandra Cornacchia Giuliano Garofolo and Marina Torresi	Expertise in Food Safety genomics	<ul style="list-style-type: none"> • E.conference on "Listeria monocytogenes from the detection to deep typing: present and new perspectives". 7 July 2021 organised by CUVAS, Bahawalpur, Pakistan
Francesco Pomilio	Expertise in Food Safety genomics	<ul style="list-style-type: none"> • OIE Collaborating Centres for Food Safety in Asia and Pacific and Europe and Addis Ababa University/ILRI and IZSAM "G.Caporale", 2021 May 31 - June 11

ToR: To provide, within the designated specialty, scientific and technical training to personnel from OIE Member Countries

6. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by the OIE, to personnel from OIE Member Countries?

Yes

- a) Technical visits: 0
b) Seminars: 13
c) Hands-on training courses: 0
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	IZSAM as OIE Collaborating Centre for Veterinary Training, Epidemiology, Food Safety and Animal Welfare will support the RVL of Azerbaijan to improve scientific capabilities in relation to food safety testing (2021 remote assistance)	Azerbaijan	3
a	Twinning Project "Strengthening the Veterinary Services and Food Safety Capacities of the Lebanese Ministry of Agriculture (EuropeAid/159778/DD/ACT/LB)" between the IZSAM "G. Caporale" and the Ministry of Agriculture Lebanon (November 2021)	Lebanon	6
a	Twinning Project between LITHUANIA, HUNGARY, ITALY and BOSNIA AND HERZEGOVINA "EU's support to capacity building and gradual Union acquis alignment in the Food safety sector in Bosnia and Herzegovina" EuropeAid/166812/DD/ACT/BA. Three online and one on-site mission were carried out by the staff of the Animal Food Safety OIE CC in the framework of this project during 2021	Bosnia and Herzegovina	32
b	Online ERFAN Information Day - Food Hygiene WG: Detection of <i>Listeria</i> spp. and <i>Listeria</i> monocytogenes, in food matrices, food-producing environments and animals, according to ISO 11920-1:2017 (training course)	African countries	35
b	Online ERFAN Information day "Food Hygiene WG: Detection of <i>Klebsiella pneumoniae</i> from different matrices, AMR and NGS	African countries	35
c	E.conference on "Listeria monocytogenes from the detection to deep typing: present and new perspectives". 7 July 2021 organised by Cholistan University of Veterinary and Animal sciences (CUVAS) Bahawalpur, Pakistan	all countries of the world	120

ToR: To organise and participate in scientific meetings and other activities on behalf of the OIE

7. Did your Collaborating Centre organise or participate in the organisation of scientific meetings on behalf of the OIE?

No

ToR: To collect, process, analyse, publish and disseminate data and information relevant to the designated specialty

8. Publication and dissemination of any information within the remit of the mandate given by the OIE that may be useful to Member Countries of the OIE

a) Articles published in peer-reviewed journals: 40

1. Acciari VA, Del Matto I, Antoci S, Di Marzio V, Torresi M, Iannetti L, Marfoggia C, Centorotola G, Pomilio F. Genomic persistence of *Listeria monocytogenes* strains in dairy and meat processing plants in Italy. European Journal of Public Health, Volume 31, Issue Supplement_3, October 2021, ckab165.280,

<https://doi.org/10.1093/eurpub/ckab165.280>

2. Amagliani G, Blasi G, Scuota S, Duranti A, Fisichella S, Gattuso A, Gianfranceschi MV, Schiavano GF, Brandi G, Pomilio F, Gabucci C, Di Lullo S, Savelli D, Tonucci F, and Petruzzelli A. 2021. Detection and Virulence Characterization of *Listeria monocytogenes* Strains in Ready-to-Eat Products. *Foodborne pathogens and disease*, Volume XX, Number XX, 2021. DOI: 10.1089/fpd.2020.2923
3. Annunziata L, Schirone M, Campana G, De Massis MR, Scortichini G, Visciano P. 2022 (accepted on October 2021). Histamine in fish and fish products: An 8-year survey. Follow up and official control activities in the Abruzzo region (Central Italy). *Food Control* 133, 108651.
4. Annunziata L, Schirone M, Visciano P, Campana G, De Massis MR, Migliorati G. 2021. Determination of aflatoxins, deoxynivalenol, ochratoxin A and zearalenone in organic wheat flour under different storage conditions. *International Journal of Food Science and Technology* 56, 4139.
5. Antoci S, Iannetti L, Centorotola G, Acciari VA, Pomilio F, Daminelli P, Romanelli C, Ciorba AB, Santini N, Torresi M, Ruolo A, Castoldi F, Pierantoni M, Noè P, Migliorati G. Monitoring Italian establishments exporting food of animal origin to third countries: SSOP compliance and *Listeria monocytogenes* and *Salmonella* spp. contamination. 2021. *Food Control* 121 (2021) 107584. <https://doi.org/10.1016/j.foodcont.2020.107584>.
6. Aprea G and Mullan WMA (2021). Raw milk: benefits and hazards. In "Dairy Foods: Processing, Quality, and Analytical Techniques". Edited A.G. Cruz, C.S. Ranadheera, F. Nazzaro, A.Mortazavian. Woodhead Publishing, Cambridge, England.
7. Aprea G, Alessiani A, Rossi F, Sacchini L, Boni A, D'Angelantonio D, Scattolini S, Sperandii AF, Centorotola G, Neri D, Pomilio F, Di Giannatale E, Del Matto I, Tucci P, Migliorati, G (2021). Characterization of Lactic Acid Bacteria in Pecorino di Farindola Cheese and Manufacturing with a *Lactocaseibacillus paracasei* Autochthonous Culture. *Applied Sciences*, 11(17), 7897. <https://doi.org/10.3390/app11177897>.
8. Aprea G, Di Bartolo I, Monini M, D'Angelantonio D, Scattolini S, Boni A, Truglio G, Di Giacobbe S, Serio A, Antoci S, Di Marzio V, Migliorati G, D'Alterio N, Pomilio F. 2021. The role of staff and contaminated environmental surfaces in spreading of norovirus infection in a long-term health care facility in Italy. *Veterinaria Italiana* 2021. Accepted for publication. Doi: 10.12834/VetIt.2479.15150.1
9. Bergis H, Bonanno L, Asséré A, Lombard B, In collaboration with Polet M, Andersen JK, Hickey B, Pomilio F, in't Veld P, Verbart C, Skjerdal T, Betts G. 2021. EURL Lm TECHNICAL GUIDANCE DOCUMENT on challenge tests and durability studies for assessing shelf-life of ready-to-eat foods related to *Listeria monocytogenes*. Version 4 of 1 July 2021.
10. Boone I, Rosner B, Lachmann R, D'Errico ML, Iannetti L, Van der Stede Y, Boelaert F, Ethelberg S, Eckmanns T, Stark K, Haller S, Wilking H. Healthcare-associated foodborne outbreaks in high-income countries: a literature review and surveillance study (2021). *Eurosurveillance* 26 (41):pii=2001278. <https://doi.org/10.2807/1560-7917.ES.2021.26.41.2001278>
11. Ceci R, Diletti G, Bellocci M, Chiumiento F, D'Antonio S, De Benedictis A, Leva M, Pirito L, Scortichini G, Fernandes AR. 2022 (accepted on September 2021). Brominated and chlorinated contaminants in food (PCDD/Fs, PCBs, PBDD/ Fs PBDEs): simultaneous determination and occurrence in Italian produce. *Chemosphere*, 288, 132445.
12. Centorotola G, Cornacchia A, Marfoglia C, Saletti MA, Ciarrocchi A, Del Matto I, Galante D, Rodrigues C, Brisse S, Pomilio F. *Klebsiella pneumoniae* in vegetable products: antimicrobial resistance and consumer health risk. *European Journal of Public Health*, Volume 31, Issue Supplement_3, October 2021, ckab165.630, <https://doi.org/10.1093/eurpub/ckab165.630>
13. Centorotola G, Fabrizia G, D'Aurizio G, Salini R, Di Domenico M, Ottaviani D, Petruzzelli A, Fisichella S, Duranti A, Tonucci F, Acciari VA, Torresi M, Pomilio F and Blasi G. 2021. Intensive Environmental Surveillance Plan for *Listeria monocytogenes* in Food Producing Plants and Retail Stores of Central Italy: Prevalence and Genetic Diversity. *Foods*, 10, 1944. <https://doi.org/10.3390/foods10081944>
14. Centorotola G, Guidi F, D'Aurizio G, Salini R, Di Domenico M, Ottaviani D, Petruzzelli A, Fisichella S, Duranti A, Tonucci F, Acciari VA, Torresi M, Pomilio F, Blasi G. 2021. Intensive Environmental Surveillance Plan for *Listeria monocytogenes* in Food Producing Plants and Retail Stores of Central Italy: Prevalence and Genetic Diversity. *Foods*. 2021; 10(8):1944. <https://doi.org/10.3390/foods10081944>.
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b) International conferences: 4

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c) National conferences: 2

1. De Angelis ME, Acciari VA, Ancora M, Bosica S., Ciarrocchi A, Defourny S, Malatesta D, Martino M, Torresi M, Tieri EE, Petrini A, Di Teodoro G. One health approach: l'importanza della sorveglianza sanitaria della fauna selvatica, XX Congresso Nazionale SIDiLV on air, 25-26 novembre 2021 (poster)
2. Marotta F., Di Marcantonio L, Di Timoteo Federica, Romantini R, Telera GC, Perilli M, Zilli K, Abass A, Janowicz A, Garofolo G. Sorveglianza genomica nel pollame italiano. Poster. XX Congresso Nazionale SIDiLV on air, 25-26 novembre 2021, online, cod 2193C

d) Other

(Provide website address or link to appropriate information): 0
none

9. Additional comments regarding your report:

no more comments