

# OIE Collaborating Centres Reports Activities

## *Activities in 2021*

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<b>Title of collaborating centre:</b>	Epidemiology, modelling and surveillance
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<b>Name of writer:</b>	Paolo Calistri

**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

Epidemiology, surveillance, risk assessment, modelling	
Title of activity	Scope
Design and implementation of an information system for veterinary and phyto-sanitary services of Tunisia (Conception et mise en place d'un système d'information des Services Vétérinaires e des Services Phytosanitaires en Tunisie"	During 2021 OIE CC personnel worked in close cooperation with representatives of Tunisian veterinary services under a FAO-funded project for the design and development of a national information system allowing the services to record, manage and analyse data produced by their activities and to able to provide an always updated picture of the epidemiological situation of Tunisia regarding animal health and food safety issues. The information system will include modules for collection and management of data on: outbreaks of animal diseases, results of surveillance and vaccination activities in animal populations, management of activities for import and export of live animals and products thereof, results of monitoring plans in food of animal origin for human consumption.
National Veterinary Epidemiological Bulletin (BENV	During 2021, has been continued the quarterly publication of the National Veterinary Epidemiological Bulletin (BENV <a href="https://www.izs.it/BENV_NEW/index_en.html">https://www.izs.it/BENV_NEW/index_en.html</a> ). BENV publishes articles on veterinary epidemiology, zoonosis, food safety and emerging animal infectious diseases and reports the epidemiological situation in Italy for the main notifiable animal diseases. The contents are directed to all veterinarians, public and private. BENV is published in Italian and English.
Disease Monitoring Dashboard	Disease Monitoring Dashboard ( <a href="https://netmed.izs.it/networkMediterraneo/index.jsp">https://netmed.izs.it/networkMediterraneo/index.jsp</a> ) is a portal in which (official and not official published) data on the occurrence of some vectors borne diseases (bluetongue and West Nile disease) in the Mediterranean Basin are geographically and temporally represented. Tools for exploring the phylogenetic trees and maps of West Nile virus are also included.
EpiExploreR: a ShinyWeb application for the analysis of Animal Disease data	EpiExploreR is a user-friendly, flexible, R-Shiny web application, providing tools for the analysis of spatiotemporal data on animal diseases including notified outbreaks, surveillance of vectors, animal movements and remotely sensed data. Data exploration and analysis results are displayed through an interactive map, tables and graphs. EpiExploreR is addressed to scientists and researchers, including public and animal health professionals wishing to test hypotheses and explore data on surveillance activities. Link: <a href="https://pub.epiexplorer.izs.it/app_direct/epi01pub/">https://pub.epiexplorer.izs.it/app_direct/epi01pub/</a>
Web-GIS developed under the project "Strengthening of Centres for Aquaculture production and Safety surveillance in Adriatic Cross-border Countries"	The European legislation requires a systematic monitoring of chemical and microbiological contaminants in live bivalve molluscs, live echinoderms, live tunicates and live marine gastropods for human consumption. A consortium of five Adriatic countries was set up with the aim of collecting data and distribute information on harvesting and production in mollusc areas. A web-GIS application was developed to support the partners to manage data and to make these data available to final users, policy makers and to risk assessors. The GIS is divided into two levels, the national and the supranational one, and it distributes spatial and epidemiological information coming from various data acquisition and management sites, concerning 230 production and relay areas and the results of laboratory tests performed on collected samples.
Analytical tool for the prediction of WNV circulation	Based on Earth Observation satellite data (Land Surface Temperature, Normalized Difference Vegetation Index and Surface Soil Moisture) and historical WNV surveillance data, through the application of machine learning approaches, a model for the prediction of WNV circulation has been developed ( <a href="https://doi.org/10.3390/rs12183064">https://doi.org/10.3390/rs12183064</a> ). This model is able to predict 20-days in advance the WNV circulation in Italy with a spatial resolution of 250 meters and a temporal precision of 16 days. On the basis of this model an interactive and continuously updated web dashboard has been developed ( <a href="http://mapserver.izs.it/gis_wn_predictions/#">http://mapserver.izs.it/gis_wn_predictions/#</a> )
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. Within the system, Web-GIS applications and various dashboards integrating temporal and spatial representation of data have been developed.
StoryMap on Integrated surveillance of West Nile and Usutu virus	An ArcGIS StoryMaps has been created to report WNV Surveillance plan results using maps, narrative text and other multimedia content. ( <a href="https://storymaps.arcgis.com/collections/b50666024702441dac792d0cb3aee32c?item=1">https://storymaps.arcgis.com/collections/b50666024702441dac792d0cb3aee32c?item=1</a> )

Training, capacity building	
Title of activity	Scope
OIE Collaborating Centre Twinning Project on Epidemiology and risk assessment between Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale" (IZSAM), Teramo, Italy and the Department of Animal Resources Risk Assessment (KSA ARRAD), Riyadh, Kingdom of Saudi Arabia	The general objective is to strengthen the skills and capacities of KSA ARRAD's personnel in performing relevant epidemiological data analysis and risk assessment studies. Due to the COVID-19 emergency, only a limited part of the planned activities has been performed, and therefore the end of project was postponed to 31/12/2023. Next training session for three officials of KSA ARRAD is planned from 24 January to 1 February 2022.
Rift Valley fever online course Organised by ERFAN (Enhancing Research For Africa Network)	From 8th to the 24th of November 2021 an online course on RVF was held with the participation of several experts, including two experts on epidemiology, GIS and risk assessment from the OIE CC. The course was free to all participants and sponsored by ERFAN in collaboration with Office International des Epizooties (OIE) - the World Organization for Animal Health. The online course was open to ERFAN partners in both Africa and Europe. In total 73 participants from 13 countries registered for the course with an average daily attendance of 30 people for the duration of the 2.5 week online event. The course content included a history of RVF on the African continent and the risk of its introduction in the Mediterranean Basin. The course also covered current work on Rift Valley fever and other topics focused on aetiology, epidemiology, vectors and the disease in humans and animals, diagnosis, risk reduction and control.
EFSa/IZSAM Animal Health Crisis Preparedness Exercise with Mediterranean Countries	In July 2021, the European Food Safety Authority (EFSA) jointly co-organised an online workshop on animal health crisis preparedness with IZSAM, focusing on Rift Valley fever (RVF). The overall training objective was to improve incident response collaboration between animal and public health authorities from multiple countries, using a 'One Health' approach. Workshop content was jointly developed by EFSA and IZSAM, with input from ECDC, FAO, OIE, WHO and EC DG SANTE. Twenty-seven participants from six EU Member States and three EU candidate countries attended the training, as well as, 12 observers from three EU Member States and three international organisations. Plenary and working group activities extended across three days (6-8 July 2021), preceded by the availability of an online RVF 'eLearning package developed by IZSAM (pre-training eLearning phase: 14 June - 5 July 2021).
Training course on "Methods and approaches for risk assessment in Animal Health"	During 2021 two modules of an online course on "Methods and approaches for risk assessment in Animal Health" were held. Eight epidemiologists and other professionals of the Regional Veterinary Epidemiology Office of Campania Region were trained. The two modules (15-16 / 20-21 September 2021; 26-28-29 October 2021) addressed the following topics: <ul style="list-style-type: none"> <li>-Introduction to risk assessment methods</li> <li>-Main stochastic processes and Bayes theorem</li> <li>-Use of @Risk</li> <li>-Use of R for data analysis</li> </ul>

**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
Recommendations for the epidemiological investigation of SARS-CoV-2 in exposed animals ( <a href="https://doi.org/10.4060/cb7140en">https://doi.org/10.4060/cb7140en</a> )	OIE CC personnel participated to the preparation of the FAO recommendations for the epidemiological investigation of SARS-CoV-2 in exposed animals. The document aims at proposing a full One Health investigation for events where livestock and companion animals are in close contact to confirmed human COVID-19 cases, or in situations where animals tested SARS-CoV-2 positive in absence of information on the infection status of in-contact humans.	<input checked="" type="checkbox"/> Surveillance and control of animal diseases <input 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
OIE CC on Epidemiology Emerging Avian Diseases	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	Implementation of a standard for the collection and sharing of zone geographic component (GeoZone)
Multiple partners within the OHEJP coordinated by the Statens Serum Institut (SSI)	Denmark	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Collaboration within the MATRIX project, which 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.

**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
OIE CC on Reduction of the Risk of Disasters in Animal Health	Cuba	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East	Collaboration in the framework of the OIE Collaborating Centre network on Veterinary Emergencies (OIE EmVetNet)
OIE Collaborating Centre on Biological Threat Reduction	United States of America	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East	Collaboration in the framework of the OIE Collaborating Centre network on Veterinary Emergencies (OIE EmVetNet)
OIE CC on Animal Production Food Safety	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	Development of risk assessment models in food safety
OIE CC on Veterinary Training and Capacity Building	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	Collaboration on international training initiatives with particular focus on the development of e-learning contents on epidemiology, surveillance and risk analysis
Institut Pasteur	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	Project H2020 "One Health network for the prevention of vector-borne diseases around the Mediterranean and Black Sea regions" (MediLabSecure).
ERFAN - Enhancing Research for Africa Network	Italy	<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 with training initiatives and project activities.
Anses - Agence nationale de sécurité sanitaire de l'alimentation	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	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

Istituto Superiore di Sanità	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	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
Istituto Zooprofilattico Sperimentale delle Venezie	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	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
Istituto Zooprofilattico Sperimentale della Lombardia e dell'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	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: 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
Paolo Calistri	Training activities	Planning and delivering training activities for OIE ERFAN
Annamaria Conte	Training activities	Planning and delivering training activities for OIE ERFAN
Paolo Calistri	Technical and scientific consultancy	Collaboration in design of EmVetNet survey to create a list of experts for facilitating exchange of good practices on Veterinary Emergency management and risk reduction in relation to animal health and welfare, food security and Veterinary Public Health in the framework of the mandate assigned to EmVetNet by the OIE.
Maria Luisa Danzetta	Technical and scientific consultancy	Collaboration in design of EmVetNet survey to create a list of experts for facilitating exchange of good practices on Veterinary Emergency management and risk reduction in relation to animal health and welfare, food security and Veterinary Public Health in the framework of the mandate assigned to EmVetNet by the OIE.

**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: 39  
 c) Hands-on training courses: 81  
 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
b	EFSA/IZSAM Animal Health Crisis Preparedness Exercise with Mediterranean Countries	Albania, Croatia, France, Greece, Italy, Montenegro, Portugal, Spain, Turkey	39
c	Rift Valley fever online course Organised by ERFAN (Enhancing Research For Africa Network)	Algeria, Angola, Italy, Libya, Morocco, Mozambique, Namibia, South Africa, Sudan, Tanzania, Tunisia, Zambia	73
c	Training course on "Methods and approaches for risk assessment in Animal Health"	Italy	8

**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: 16  
 1. 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, 1944. <https://doi.org/10.3390/foods10081944>

2. Maggio F, Rossi C, Chiaverini A, Ruolo A, Orsini M, Centorame P, Acciari VA, Chaves López C, Salini R, Torresi M, Serio A, Pomilio F, Paparella A. (2021). Genetic relationships and biofilm formation of *Listeria monocytogenes* isolated from the smoked salmon industry. *International Journal of Food Microbiology* Volume 356, 16 October 2021, 109353. <https://doi.org/10.1016/j.ijfoodmicro.2021.109353>
3. Guidi F, Orsini M, Chiaverini A, Torresi M, Centorame P, Acciari VA, Salini R, Palombo B, Brandi G, Amagliani G, Schiavano GF, Massacci FR, Fisichella S, Domenico MD, Ancora M, Pasquale AD, Duranti A, Cammà C, Pomilio F, Blasi G. (2021). Hypo- and Hyper-Virulent *Listeria monocytogenes* Clones Persisting in Two Different Food Processing Plants of Central Italy. *Microorganisms* 2021, 9, 376. <https://doi.org/10.3390/microorganisms9020376>
4. Centorotola G, Sperandii AF, Tucci P, D'Alterio N, Ricci L, Goffredo M, Mancini M, Iannetti L, Salini R, Migliorati G, Pomilio F, Valiani A, Ortenzi R, Lanni L. (2021). Survival rate of *Escherichia coli* O157 in artificially contaminated raw and thermized ewe milk in different Pecorino cheese production processes. *International Journal of Food Microbiology - Volume 347*, 2 June 2021, 109175. <https://doi.org/10.1016/j.ijfoodmicro.2021.109175>
5. Zaccaria G, Malatesta D, Jurisic L, Marcacci M, Di Teodoro G, Conte A, Teodori L, Monaco F, Marini V, Casaccia C, Savini G, Di Gennaro A, Rossi E, D'Innocenzo V, D'Alterio N, Lorusso A. (2021). The envelope protein of Usutu virus attenuates West Nile virus virulence in immunocompetent mice, *Veterinary Microbiology*, Volume 263, 2021, 109262, ISSN 0378-1135, <https://doi.org/10.1016/j.vetmic.2021.109262>
6. Compagni ED, Jurisic L, Caporale M, Bacà F, Scialabba S, Fani S, Perullo A, Toro M, Marchegiano A, Martino M, Di Giacomo D, Romualdi T, Verzulli S, Ciarrocchi E, Secondini B, Di Giuseppe M, Irelli R, Di Lorenzo A, Valleriani F, Berjaoui S, Puglia I, Curini V, Mangone I, Lorusso A. (2021). Genome sequences of three SARS-CoV-2 P.1 strains identified from patients returning from Brazil to Italy (2021) *Microbiology Resource Announcements*, 10 (12), doi: <https://doi-org.bibliosan.clas.cineca.it/10.1128/MRA.00177-21>
7. Sorgentone S, Busani L, Calistri P, Robuffo G, Bellino S, Acciari V, Ferri M, Graziani C, Antoci S, Lodi F, Alfonsi V, Cammà C, Fazii P, Andrianou X, Cito F, Lombardi G, Centorotola G, D'amaro M, D'alterio N, Savini V, De Massis F, Pelatti A, Di Domenico M, Di Donato G, Di Giannatale E, Di Marcantonio L, Di Marzio V, Di Serafino G, Janowicz A, Marfoggia C, Marotta F, Morelli D, Migliorati G, Neri D, Pomilio F, Scattolini S, Rezza G, Caponetti A, Pezzotti P, Garofolo G. (2021). A large foodborne outbreak of campylobacteriosis in kindergartens and primary schools in Pescara, Italy, May-June 2018. *J Med Microbiol.* 2021 Mar;70(3). doi: 10.1099/jmm.0.001262. Epub 2021 Jan 20. PMID: 33475480
8. Mahmoud A, Danzetta ML, di Sabatino D, Spedicato M, Alkhatal Z, Dayhum A, Tolari F, Forzan M, Mazzei M, Savini G. (2021). First seroprevalence investigation of epizootic haemorrhagic disease virus in Libya. *Open Vet J.* 2021 Apr-Jun;11(2):301-308. doi: 10.5455/OVJ.2021.v11.i2.15. Epub 2021 Jun 21.
9. Tamba M, Pallante I, Petrini S, Feliziani F, Iscaro C, Arrigoni N, Di Sabatino D, Barberio A, Cibin V, Santi A, Ianniello M, Ruocco L, Pozzato N. (2021). Overview of Control Programs for EU Non-regulated Cattle Diseases in Italy. *Front Vet Sci.* 2021 Apr 26;8:665607. doi: 10.3389/fvets.2021.665607. eCollection 2021.
10. Calistri P, Danzetta ML, Amato L, Cito F, Di Giuseppe A, Zenobio V, Morelli D, Puglia I, Caporale M, Scialabba S, Savini G, Migliorati G, D'Alterio N, Lorusso A. (2021). Epidemiological Significance of SARS-CoV-2 RNA Dynamic in Naso-Pharyngeal Swabs. *Microorganisms* 2021, 9, 1264. <https://doi.org/10.3390/microorganisms9061264>
11. Amato L, Jurisica L, Puglia I, Di Lollo V, Curini V, Torzi G, Di Girolamo A, Mangone I, Mancinelli A, Decaro N, Calistri P, Di Giallonardo F, Lorusso A, D'Alterio N. (2021). Multiple detection and spread of novel strains of the SARS-CoV-2 B.1.177 (B.1.177.75) lineage that test negative by a commercially available nucleocapsid gene real-time RT-PCR. *Emerging Microbes & Infections*, Vol 10. <https://doi.org/10.1080/22221751.2021.1933609>
12. Calistri P, Decaro N, Lorusso A. (2021). SARS-CoV-2 Pandemic: Not the First, Not the Last. *Microorganisms*, 9(2), 433. <https://doi.org/10.3390/microorganisms9020433>
13. Di Giallonardo F, Puglia I, Curini V, Cammà C, Mangone I, Calistri P, Cobbin JCA, Holmes EC, Lorusso A. (2021). Emergence and Spread of SARS-CoV-2 Lineages B.1.1.7 and P.1 in Italy. *Viruses*, 13, 794. <https://doi.org/10.3390/v13050794>
14. Lorusso A, Calistri P, Savini G, Morelli D, Ambrosij L, Migliorati G, D'Alterio N. (2021). Novel SARS-CoV-2 Variants in Italy: The Role of Veterinary Public Health Institutes. *Viruses* 2021, 13, 549. <https://doi.org/10.3390/v13040549>
15. Di Teodoro G, Valleriani F, Puglia I, Monaco F, Di Pancrazio C, Luciani M, Krasteva I, Petrini A, Marcacci M, D'Alterio N, Curini V, Iorio M, Migliorati G, Di Domenico M, Morelli D, Calistri P, Savini G, Decaro N, Holmes E C, Lorusso A. (2021). SARS-CoV-2 replicates in respiratory ex vivo organ cultures of domestic ruminant species. *Veterinary microbiology*, 252, 108933. <https://doi.org/10.1016/j.vetmic.2020.108933>
16. Calistri P., Amato L., Puglia I., Cito F., Di Giuseppe A., Danzetta M.L., Morelli D., Di Domenico M., Caporale M., Scialabba S., Portanti O., Curini V., Perletta F., Cammà C., Ancora M., Savini G., Migliorati G., D'Alterio N., Lorusso A. (2021). Infection sustained by lineage B.1.1.7 of SARS-CoV-2 is characterised by longer persistence and higher viral RNA loads in nasopharyngeal swabs. *International Journal of Infectious Diseases*, 2021. DOI: <https://doi.org/10.1016/j.ijid.2021.03.005>

b) International conferences: 6

• MedilabSecure Virtual Workshop. Monitoring COVID-19 Pandemic: Epidemiological and Sequencing Data for Decision-Making. December 16, 2021



- MedilabSecure Network virtual Meeting. June 15-19, 2021
- One Health EJP End Symposium of COHESIVE project. Hybrid meeting: virtual and live in Bilthoven, The Netherlands. November 8-10, 2021
- FAO-OIE-WHO Global Technical Meeting on MERS CoV and Other Emerging Zoonotic Coronaviruses. Virtual meeting. November 15-16, 2021
- Inter-Regional workshop on Vector Borne Diseases: surveillance and early warning. November 8-9, 2021
- ERFAN Dialogue: COVID pandemic: the importance of veterinary cooperation. December 6 and 9, 2021

c) National conferences: 5

- Ministry of Health – University of Milan – Focal Point EFSA: Risk assessment: from training to job. Lodi (Milan), November 11, 2021
- Annual Workshop of National Reference Centre for Foreign Diseases of Animals (CESME). Webinar, April 27, 2021
- Annual Workshop of National Reference Centre for Brucellosis. Webinar, October 25, 2021
- New approaches for collection of Animal Health data in Europe. December 14, 2021
- Scrapie: state of art, updates and future strategies. November 26, 2021

d) Other

(Provide website address or link to appropriate information): 18

<https://www.vetinfo.it/>  
[https://demo.izs.it/gis\\_tdf\\_risultati/](https://demo.izs.it/gis_tdf_risultati/)  
<http://brucellosi.izs.it/brucellosi/>  
<http://bluetongue.izs.it/>  
[http://zoonosi.izs.it/pls/izs\\_zoo/zoo\\_gestmenu.zoo\\_index](http://zoonosi.izs.it/pls/izs_zoo/zoo_gestmenu.zoo_index)  
<https://sorveglianza.izs.it/alimenti>  
<http://sorveglianza.izs.it/seap>  
<https://netmed.izs.it/networkMediterraneo/index.jsp>  
[https://pub.epiexplorer.izs.it/app\\_direct/epi01pub/](https://pub.epiexplorer.izs.it/app_direct/epi01pub/)  
<http://www.caps2.eu/>  
[https://www.izs.it/BENV\\_NEW/index\\_en.html](https://www.izs.it/BENV_NEW/index_en.html)  
[http://mapserver.izs.it/gis\\_ecosea/](http://mapserver.izs.it/gis_ecosea/)  
[https://demo.izs.it/gis\\_aqua/](https://demo.izs.it/gis_aqua/)  
[http://mapserver.izs.it/gis\\_fauna/](http://mapserver.izs.it/gis_fauna/)  
<https://izsam-statgis.github.io/COVID19-Dashboard-AB/dist/index.html>  
<https://sarscov2.izs.it>  
[https://demo.izs.it/gis\\_zanzare](https://demo.izs.it/gis_zanzare)  
[http://mapserver.izs.it/gis\\_wn\\_predictions/#](http://mapserver.izs.it/gis_wn_predictions/#)

## 9. Additional comments regarding your report:

Several activities originally planned in presence have been postponed or diverted on-line due to COVID-19 travel restrictions