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**4<sup>th</sup> targeted report to  
Key EU Stakeholders**  
**WP5 Science to  
policy translation  
to stakeholders**

Responsible Partner: BfR, SSI

Contributing partners:

PMT members, JRP and JIP project leaders



## GENERAL INFORMATION

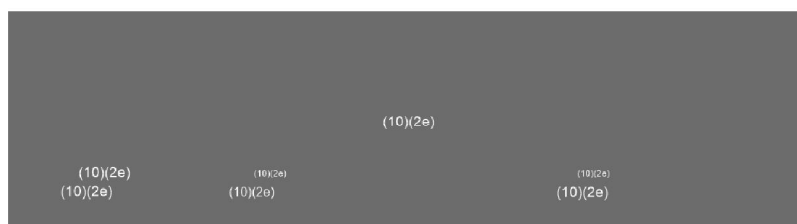
European Joint Programme full title	Promoting One Health in Europe through joint actions on foodborne zoonoses, antimicrobial resistance and emerging microbiological hazards
European Joint Programme acronym	One Health EJP
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	Other	international	stakeholder(s):
	.....		
	Social Media: .....		
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## 4<sup>TH</sup> TARGETED REPORT TO KEY EU STAKEHOLDERS



### Newsletters and social media

Highlights: <https://onehealthejp.eu/latest-news/>  
 Scientific and integrative output: [Outcome Inventory](#)  
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### New Stakeholders

The One Health EJP has expanded its Stakeholders Committee. As new additions to the composition including Key EU Stakeholders ECDC and EFSA, and the EU funded projects EFFORT, EU-JAMRAI, COMPARE and JPIAMR, we recently welcomed the European Environment Agency (EEA), the European Medicines Agency (EMA), the Food and Agriculture Organization (FAO), the World Organisation for Animal Health (OIE) and the World Health Organization – Regional Office for Europe (WHO-EURO).

To address an identified common interest, WP5 has compiled a thematic report on antimicrobial resistance (AMR), summarising the key output from the ongoing One Health EJP projects in this field. Another interaction has been a global survey on One Health Networks and workforce response to COVID-19, in collaboration with the WHO Global Outbreak Alert and Response Network and the One Health Commission.

### 6<sup>th</sup> Stakeholders Committee meeting and POC/PMC meeting

We are looking forward to the next One Health EJP Stakeholders Committee meeting, which will be organized on the 12<sup>th</sup> of October by German Federal Institute for Risk Assessment (BfR).

The next day, 13<sup>th</sup> of October 2020, the Programme Owners Committee (POC) and the Programme Managers Committee (PMC) will meet jointly with the managers of the One Health EJP. Representatives from European and international organizations from our Stakeholder Committee are welcomed to take part in this meeting.

### Enlargement progress

WP5 is collaborating with the Programme Management Team to enlarge the One Health EJP; Currently, 17 EU Member States (MSs) out of 27 are represented in the One Health EJP. Up to now, 7 additional MSs have indicated interest to join.

### The Annual Scientific Meeting of One Health EJP 2021

The Annual Scientific Meeting of One Health EJP 2021 #OHEJFASGM2021 will be hosted by SSI and DTU-FOOD. Stay tuned for more information!



## Selected updates from ongoing projects



**ORION** (Project Leader: (10)(2e), EFSA contact: Marios Georgiadis). **Objective:** The ORION project focuses on the semantic and technical interoperability between sectors, with focus on surveillance information, aimed at supporting harmonization. **Results and ongoing work:** Coverage and quality of AMR and antimicrobial usage related terms was improved in the [OHEJP Glossary](#) (a tool developed together with the One Health EJP projects [COHESIVE](#) and [NOVA](#)) in collaboration with the One Health EJP project [ARDIG](#) and the [German One Health Initiative](#) (GOHI). **Text mining** now allows to find matches between a document and the OHEJP Glossary. ORION partners also improved the [Consensus Report Annotation Checklist](#) (OH-CRAC) with AMR surveillance data reports provided by [ARDIG](#) and [GOHI](#). This resource is available as web-base interactive annotating [tool](#) for functional meta-information extraction. The [OH Surveillance Knowledge Base](#) has recently been updated with input from ECDC and EFSA, with focus on sustainability. Pilot studies are ongoing to test the Knowledge Base in the frame of the surveillance of a number of pathogens (e.g., *Toxoplasma gondii*, [Steizer et al., 2019](#)) as well as AMR. The supra-national pilot with ECDC and EFSA is evaluating the applicability of the [OH Surveillance Codex](#), [OHEJP Glossary](#), [OH-CRAC](#) and [Health Surveillance Ontology](#). In addition, ORION is in contact with representatives of the Tripartite (FAO-OIE-WHO) and contribute to their Surveillance and Information-sharing Operational Tool (SISOT) in collaboration with the One Health EJP projects [MATRIX](#) and [COHESIVE](#).



**COHESIVE** (Project Leader: (10)(2e), EFSA contact: Valentina Rizzi). **Objective:** The COHESIVE project focuses on the ability to pick up, share and communicate (potential) zoonotic signals across sectors as well as to conduct risk assessments and response in a One Health approach. **Results and ongoing work:** The project is further expanding guidelines for the practical implementation of national One Health structures in Europe, in line with the Tripartite Zoonoses Guide and is in contact with Tripartite representatives. COHESIVE is exploring current ways for exchanging signals between countries and across disciplines, and has collected information on barriers and facilitators to share (low threshold-) signals from six European countries. A number of national and multinational pilot studies and feasibility studies are being performed. The project is also unifying in one platform several modules (either developed by COHESIVE or already existing) for data collection, cleaning, visualisation and reporting, i.e. a data collection module, an interactive analysis module, a WGS-data integration module, a reporting module, and a synchronization module with the desktop version of [FoodChain-Lab](#).



**NOVA** (Project Leader: [Jenny Frössling](#); EFSA contact: Ana Afonso). **Objective:** The NOVA project strives to develop new surveillance tools and methods, and to harmonise and optimise the use of existing surveillance system data. **Results and ongoing work:** The project is analysing barriers and opportunities for surveillance across the food chain gathered through interviewing experts from six European countries. The project is exploring the use of food purchase data for outbreak investigation and for detecting risk factors for sporadic diseases. Syndromic surveillance systems have been developed for AMR and foodborne pathogens (e.g. *Salmonella* in poultry, [Alvarez et al., 2019](#)), and they are being integrated with signals (e.g. outbreak data) and environmental data. A number of One-Health-driven computational models have also been developed, taking into account, for example, environmental drivers, cost effectiveness of surveillance programmes, and use of metagenomic in surveillance.



**ARDIG** (Project Leader: [Muna Anjum](#); EFSA contact: Ernesto Liebana). **Objective:** The ARDIG project examines the dynamics of AMR from a One Health prospective in six European countries. **Results and ongoing work:** AMR and antimicrobial usage data was collected from national surveillance programmes, and project members are using a harmonised method to analyse AMR trends across countries, enabling comparisons.



between clinical and non-clinical datasets. These analyses will result in developing recommendations for improved One Health surveillance strategies. The project has collected a number of whole genome sequences of isolates collected within national surveillance programmes and is matching AMR genotypes with the corresponding phenotypes (MIC data). The data are used for example for harmonising *in silico* AMR gene prediction systems. In addition, work is ongoing to assess similarities and differences in methodologies commonly used for AMR genotyping in the animal and human sector, and the effect on AMR gene predictions. These comparisons are of importance to ECDC and EFSA as the reporting of AMR is moving to genotyping data.



[MAD-Vir](#) (Project Leader: (10)(2e)).

[text drafted in separate file]



[CARE](#) - Cross-sectoral framework for quality Assurance Resources for countries in the European Union (Project Leader: (10)(2e); (10)(2e); EFSA contact: Gabrielle Zancanaro). **Objective:** The CARE project focuses on developing new One Health concepts for proficiency testing (PT), reference materials (RM) and quality/availability of demographic data. The project had its Kick-off Meeting on the 12<sup>th</sup> and 13<sup>th</sup> of

February 2020.



[OH-HARMONY-CAP](#) - One Health Harmonisation of Protocols for the Detection of Foodborne Pathogens and AMR Determinants (Project Leader: (10)(2e); EFSA contact: Frank Boelaert). **Objective:** The OH-Harmony-CAP project aims to collect information on current capabilities, capacities and interoperability at both the National Reference Laboratory (NRL) and the primary diagnostic level. The ongoing quantitative

description of current and best practices and the development of harmonised protocols will identify and possibly close the gaps and suggest approaches to detect and characterise foodborne pathogens across the One Health sectors. The project had its Kick-off Meeting on the 22<sup>nd</sup> and 23<sup>rd</sup> of January 2020.



[MATRIX](#) - Connecting dimensions in One-Health surveillance (Project Leader: (10)(2e); (10)(2e); EFSA contact: Marios Georgiadis). **Objective:** The MATRIX project 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. The project had its Kick-off on the 6<sup>th</sup> and 7<sup>th</sup> of February 2020.



[BeOne](#) - Building Integrative Tools for One Health Surveillance (Project Leader: (10)(2e); EFSA contact: Mirko Rossi). **Objective:** The BeONE project aims to develop an integrated surveillance dashboard in which molecular and epidemiological data for foodborne pathogens can be interactively analysed, visualised and interpreted by the relevant experts across disciplines and sectors. The dashboard aims at meeting

the needs of the national institutions for communication with the EU-wide systems, e.g. TESSy and the future ECDC/EFSA joint database of genomic data, and to address the needs of partners at different levels of experience to assist the transition to a WGS-based and integrated surveillance across Europe. The project had its Kick-off at Meeting in January 16<sup>th</sup> 2020.



[DiSCoVer](#) - Discovering the sources of Salmonella, Campylobacter, VTEC and antimicrobial resistance (Project Leader: (10)(2e)). **Objective:** The DiSCoVer project aims to fill important knowledge, methodological and data gaps for source attribution of zoonotic pathogens and AMR determinants and make recommendations on how

source attribution estimates can be translated to policy action.



COVRIN - SARS-CoV2 Research Integration and Preparedness (Project Leader: (10)(2e)).  
The preparation of the COVRIN project has progressed, carefully aligned to stakeholders' needs. The project aims at the development and harmonisation of detection and characterization methods for SARS-CoV2 in different matrices.



### Recent scientific publications

All scientific publications from One Health EJP are listed in the [Publications](#) section of the One Health EJP website. Only those not mentioned in earlier targeted reports are displayed.

#### ***Toxoplasma gondii* infection and toxoplasmosis in farm animals: Risk factors and economic impact**

Stelzer et al., *Food and Waterborne Parasitology* (2019). DOI: <https://doi.org/10.1016/j.fawpar.2019.e00037>  
Project: [ORION](#)

#### **Identifying emerging trends in antimicrobial resistance using *Salmonella* surveillance data in poultry in Spain**

Alvarez et al., *Transboundary and Emerging Diseases* (2019). DOI: <https://doi.org/10.1111/tbed.13346>  
Project: [NOVA](#)

#### **Evaluation of a commercial exogenous internal process control for diagnostic RNA virus metagenomics from different animal clinical samples**

Van Borm et al., *Journal of Virological Methods* (2020). DOI: <https://doi.org/10.1016/j.jviromet.2020.113916>  
Project: [METASTAVA](#)

#### **Broad-Spectrum Cephalosporin-Resistant *Klebsiella* spp. Isolated from Diseased Horses in Austria**

Loncaric et al., *Animals* (2020). DOI: <https://doi.org/10.3390/ani10020332>  
Project: [MedVetKlebs](#)

#### **Effects on Intestinal Mucosal Morphology, Productive Parameters and Microbiota Composition after Supplementation with Fermented Defatted Alperujo (FDA) in Laying Hens**

Rebollada-Merino et al., *Antibiotics* (2020). DOI: <https://doi.org/10.3390/antibiotics8040215>  
Project: [MedVetKlebs](#)

#### ***Klebsiella pneumoniae* carriage in low-income countries: antimicrobial resistance, genomic diversity and risk factors**

Huynh et al., *Gut Microbes* (2020). DOI: <https://doi.org/10.1080/19490976.2020.1748257>  
Project: [MedVetKlebs](#)

#### **Fluorescent bead-based serological detection of *Toxoplasma gondii* infection in chickens**

Fabian, et al., *Parasites & Vectors* (2020). DOI: <https://doi.org/10.1186/s13071-020-04244-6>  
Project: [TOXOSOURCES](#)

#### **Isolation and genetic characterization of *Toxoplasma gondii* in Spanish sheep flocks**

Fernández-Escobar et al., *Parasites & Vectors* (2020). DOI: <https://doi.org/10.1186/s13071-020-04275-z>  
Project: [TOXOSOURCES](#)

#### **Microsatellite Investigations of Multiple *Echinococcus granulosus* Sensu Stricto Cysts in Single Hosts Reveal Different Patterns of Infection Events between Livestock and Humans**

M'rad et al., *Pathogens* (2020). DOI: <https://doi.org/10.3390/pathogens9060444>  
Project: [MeME](#)

#### **The One Health European Joint Programme (OHEJP), 2018–2022: an exemplary One Health initiative**

Brown et al., *Journal of Medical Microbiology* (2020). DOI: <https://doi.org/10.1099/jmm.0.001228>  
One Health EJP [WP6: Education and Training](#)