ONE Society

TURNING OPEN SCIENCE INTO PRACTICE: CAUSALITY AS A SHOWCASE

Summary

The birth of the open science movement resulted in the demand for transparent and accessible-to-all scientific processes. Scientific data should be findable, accessible, interoperable and re-usable, according to the FAIR guiding principles. Open science promotes and supports research collaboration and co-creation, including public participation in the scientific process via crowdsourcing data, methods, computational capacity and scientific knowledge. The adoption of a more participatory approach offers new opportunities to regulatory science organisations. It helps them extend the pool of data, expertise and knowledge from which to draw, thus accelerating their preparedness to address complex questions. It can also help in enhancing the public understanding of science, and in finally reducing citizens' scepticism. An open science approach also poses challenges, including the need to monitor the accuracy and reliability of open data as well as their possible misuse. The session will offer an opportunity for sharing experiences on obstacles, benefits and the feasibility of adopting open science approaches in the context of regulatory science. The showcase example will focus on causality, i.e. the relationship between a cause, such as the exposure to a substance/micro-organism/food ingredient, and an effect, such as an adverse/beneficial health outcome. With larger availability of open access data, including those gathered using high-throughput techniques, unprecedented options for deeper insights into causality have emerged. Using causality as an illustrative example, the session intends to advance the discussion on how the principles of open science can be routinely implemented in the scientific activities performed by the European institutions. The guiding question is: Can institutions benefit from open data and the open science movement, and if so, how? For instance, can participatory science accelerate finding solutions to quantitatively integrate heterogeneous sources to address causality?

Vision

In a rapidly changing world, an open science approach is vital. Regulatory science institutions need to embrace this opportunity if they want to remain relevant and prepared to address new challenges. Engaging with society and enhancing partnerships with stakeholders are also necessary to tackle increasingly complex questions of societal importance. Regulatory science must envisage a medium-term

Organiser: efsa European Food Safety Authority

Co-organisers: ecdc European Centre for Disease Prevention and Control; ECHA European Chemicals Agency; European Environment Agency; European Medicines Agency Science Medicines Health; European Commission Joint Research Centre

future in which scientific outputs will be routinely produced using a collaborative approach involving not only traditional scientific partnerships but also contributions from citizens. For this future to become a reality, a framework must be established that includes new processes and tools that allow greater collaboration and co-creation than is currently the case. In addition, the legal framework will need reviewing. This epochal transition from elitist to 'open to all' science has already started. For it to be achieved in the regulatory science community, a coordinated effort will be needed.

Background – Challenges and opportunities

Open science is one of the priorities of EU policy [1]. The open science movement calls for data and the results of research to be shared already at an early stage of the process, engaging citizens in the co-design and co-creation, making research more affordable, reducing duplication of work and increasing the relevance of the results for society. Open science also means making better use of the large variety of data – both structured and unstructured - from various sources, and increasing accessibility to human and computational resources. In this way, innovation will be accelerated, and societal trust increased due to wider public scrutiny. To achieve these ambitious goals, novel tools and collaborative ways of working are required. EU regulatory scientific institutions are already facing up to this challenge, which is pushing them to re-design their scientific processes. Some organizations have already started looking for ways to make the scientific process open to citizens' contributions. The Cochrane collaboration uses a crowdsource platform for screening papers [2]. In 2017, the European Food Safety Authority (EFSA) launched a crowdsourcing initiative to collect ideas on how to visualise uncertainty in geospatial data. Recently, a consortium of institutions created an open access database to gather data on people that tested positive to COVID-19 [3]. These examples illustrate how society can be engaged in the scientific process. Lessons must be learnt from past experiences about obstacles that must be overcome but also about solutions that have proven to be successful in making the best use of big open data and citizens' knowledge. In particular, the topic of causality, i.e. the potential for a causal association between the exposure to a substance, micro-organism or food ingredient and an adverse or beneficial effect, offers us an opportunity to showcase how to turn open science principles into practice. This scientific issue is extremely complex and is being addressed by several institutions. Open science tools and new initiatives could provide additional resources and new methodological approaches to address, for instance, the use of big data and the need to draw conclusions based on heterogeneous sources (Fedak 2015, EFSA, 2018). An open approach will also bring new challenges. We will need to set and assess standards to ensure the scientific

rigour of data and the methods used by a community whose scientific reputation may be unknown. Other important issues to address include the protection of personal data in an open environment and the intellectual property of open contributions.

Scope and objectives

This thematic session intends to advance the discussion on how the principles of open science can be routinely implemented in the scientific activities performed by the European Agencies/Institutions. Causality will be discussed as a case study topic. In fact, it is among the most challenging questions which EU institutions are required to answer.

To this scope the thematic session will discuss:

- Whether and how open data currently available in the food, feed, environmental, animal and human health can be used to address the assessment of causal association between an agent and an effect in the regulatory domain. What are possible benefits and challenges from their use.
- Concrete examples of citizen science initiatives to investigate causality issues and difficulties in implementing them along with benefits and achieved value from the perspective of both the organizers and the participants;
- How to guarantee that data and knowledge generated by an open science approach are accurate and reliable enough for use by regulatory science organisations;
- Which concrete actions need to be put in place to implement open science principles in the context of regulatory science;
- How to revise the legal framework to address new challenges related to personal data protection and intellectual property.

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[1] https://ec.europa.eu/info/research-and-innovation/strategy/goals-research-and-innovation-policy/open-science_en
[2] https://crowd.cochrane.org
[3] https://global.health/

People behind the session

Session Coordinator: Laura Martino, European Food Safety Authority (EFSA)
Chairpersons: Jean-François Dechamp, European Commission
Moderators: Anthony Smith, European Food Safety Authority (EFSA)
Rapporteurs: Federica Barrucci, European Food Safety Authority (EFSA); Claudia Maria Cascio, European Food Safety Authority (EFSA); Gorgias Garofalakis, European Food Safety Authority (EFSA); Laura Martino, European Food Safety Authority (EFSA)

ONE Society – Session affiliate profiles

TURNING OPEN SCIENCE INTO PRACTICE: CAUSALITY AS A SHOWCASE

Max Blanck, European Food Safety Authority (EFSA)
Speaker

Max Blanck is External Engagement Officer at EFSA. He has dedicated most of his professional career to building partnerships and fostering stakeholder engagement for international policy dialogue. His current thematic focus lies on designing strategies to foster the engagement of stakeholders and interested parties in a dialogue to advance EFSA's scientific cooperation and networking across the food safety ecosystem. Prior to joining EFSA Max worked 12 years for FAO, designing multi-stakeholder policy dialogue initiatives in the field of food security and nutrition. He developed and managed expert networks and engaged in partnership-building activities with projects, clients, multi-agency initiatives and stakeholder groups. In addition to global activities where he collaborated with bodies such as the Committee on World Food Security he focused in particular on policy dialogue in Africa and Central Asia. He holds Master degrees in Development Economics from the Università degli Studi Roma Tre and in Human Rights Law from the University of Malta.

Title of talk: Advancing engagement in an evolving food safety ecosystem: opportunities and challenges

Abstract of talk
The increase in scientific complexity, changing societal expectations, new policy and strategy initiatives, and new market trends create opportunities but also pose new challenges to the food safety ecosystem.
Based on the discussions taking place during the first One Society session, we will explore how all stakeholders in the food safety ecosystem can help to address the challenges outlined and contribute to reaching the overarching food and feed safety goals, while taking into account individual values and needs. We will then touch upon the roles that engagement, cooperation, and collaboration can play in facilitating such an approach.

Organiser Co-organisers
efsa European Food Safety Authority
ecdc European Centre for Disease Prevention and Control
ECHA European Chemicals Agency
European Environment Agency
European Medicines Agency Science Medicines Health
European Commission Joint Research Centre

Stephan Bronzwaer, European Food Safety Authority (EFSA)
Speaker

Stef Bronzwaer works at the European Food Safety Authority (EFSA), initially on the monitoring of antimicrobial resistance and food-borne outbreaks, later to lead the scientific cooperation with the Member States, and now as EFSA's Research Coordinator: informing research agendas, promoting food research priorities, and coordinating EFSA's research involvement. He graduated as medical doctor at the University of Amsterdam and completed his PhD at the University of Groningen (the Netherlands). As a medical doctor he worked shortly at the Social Medical Centre 'Bukas Palad' in a slum-area near Manila, the Philippines. He then moved to the Infectious disease unit of the Istituto Superiore di Sanità in Rome, Italy, where he worked as project manager of an EU-project on communicable diseases. From 1998 to 2002 he worked in the Dutch National Institute for Public Health and the Environment (RIVM), where he helped establish the European Antimicrobial Resistance Surveillance System (EARSS), as project leader. From 2002 to 2005 he worked at the European Commission in Luxembourg where he held responsibility for several European surveillance networks on communicable diseases and lead the implementation of the Community strategy against antimicrobial resistance.

Title of talk: Making a difference: bridging EU research and policy

Abstract of talk
In support of the EU Green Deal, the ENVI Agencies (ECDC, ECHA, EEA, EFSA and EMA) contribute to a sustainable 'One Health' approach. In the coming decade, billions of euros will be dedicated to the research & innovation (R&I) needed to support a transition towards more sustainability. EU Agencies, individually and collectively, can make a difference in supporting the EU Research Agenda.
The thematic session 'Turning open science into practice: causality as a showcase' will include a short report of the discussion on bridging EU research and policy earlier that day (during the ONE Society morning session), talking about the peculiar role the Agencies play at the crossroads of the science-policy interface, and their current and expected involvement in research. The benefits of EU agency involvement in research will be presented briefly, as well as recommendations on how EU agencies could be involved further to generate additional value.

Anthony Smith, European Food Safety Authority (EFSA)
Moderator

Anthony Smith works in the Department of Partnership and Cooperation, at the European Food Safety Authority (EFSA). Anthony studied political science, economics and anthropology at university and has over 20 years of experience as a professional communicator in the public, private and non-profit sectors. He has an eclectic track record of communications management and operational content production involving print and online media, multilingual news copy and public information, audiovisual formats, web and social media channels; on topics ranging from sport, leisure and finance to policy analysis, scientific food safety risk assessment and communication methodologies. His current role at EFSA is risk communication scientist, in which he uses social research insights to develop communications approaches and to contribute to strategic communication planning and operations. Anthony's research and contributions to EFSA outputs deal with topics on food safety risk communication, communication of scientific uncertainty and, in the future, risk/benefit communication.

Federica Barrucci, European Food Safety Authority (EFSA)
Rapporteur

Since 2015 Federica Barrucci works at EFSA as scientific officer. From January 2022 she works in the newly created KNOW Unit, where she is involved in foresight, innovation and knowledge management. Before she worked in the Assessment and Methodological Support Unit where she was involved in development of models for animal disease introduction and spread and models for chemical exposure assessment, in supporting implementation of methodological guidance on protocol development, systematic literature review, uncertainty assessment, Expert Knowledge Elicitation, in performing data management and data analysis, in assessing the feasibility of using innovative methodologies such as artificial intelligence and crowdsourcing. Previously she worked at the Public Health and Risk Analysis Department of Istituto Zooprofilattico Sperimentale delle Venezie, where she was involved in microbiological risk assessments, chemical risk assessments, risk benefit assessments, source attribution, statistical data analysis and mathematical modelling in projects related to food safety, antimicrobial resistance and risk-based surveillance. Federica has more than 15 years of experience in working on multidisciplinary projects, involving food microbiologists, chemists, veterinarians, epidemiologists, mathematicians, communication scientists and many others. She has a Master's degree in statistics and economics and a PhD in statistics.

Laura Martino, European Food Safety Authority (EFSA)

Rapporteur

Laura Martino is coordinator of the session 'Turning open science into practice'. She is a senior statistician at ESFA where she led the Systematic Review and Experimental Design Team from 2014 to 2017. Before joining EFSA in 2011, she served for 4 years as detached national expert at the European Statistical Institute (Eurostat) in Luxembourg. Previously, she worked as a researcher at the National Statistical Institute in Rome (Italy) leading the Unit Crop, forestry and hunting statistics in the Department for Statistical production. During that period, she was the Italian representative in the LUCAS EEC working groups. She has extensive experience in the design of observational and experimental studies as well as in the food and feed risk assessment. Her research focuses on modelling association between food/feed intake and health outcomes, evidence integration (including NAMs) and uncertainty analysis. She has participated to several international conferences and workshops as a lecturer. Her methodological expertise led her to contribute to several methodological guidance documents. In 2018, she joined an expert WG of the US National Academy of Science and is currently a member of a WHO working group. She holds a PhD in methodological statistic for scientific research, having completed postgraduate training at the University of Bologna and a 6-month scholarship at the Texas A&M University at College Station (USA). She is a member of the International Biometric Society and of the Society for Risk Analysis.

Marc Chadeau-Hyam, Imperial College London

Speaker

Professor Chadeau-Hyam holds a chair in Computational Epidemiology and Biostatistics at the School of Public Health, Imperial College, and an honorary position at Utrecht University. He obtained a PhD from Paris University, and while his background was in disease modelling, he has gained expertise over the last 14 years in devising, applying and adapting computationally efficient methods to analyse and integrate multiple OMICs data. He has been involved in numerous large-scale projects as lead statistician, responsible for the analysis and integration of OMICs data. As an active member of the European exposome initiative, he has expertise in the development and application of statistical methods to screen and integrate OMICs profiles and explore the stressor- triggered molecular mechanisms involved in the determination of individual risk profiles. Alongside this applied work, he has focused on the development of dynamic disease models including OMIC variable selection methods to study the dynamics of cancer natural history. Professor

Chadeau-Hyam is the director of the MSc in Health Data Analytics at ICL, and leads a series of two Exposome short courses. His team currently includes more than 15 members with a unique diversity of profiles, including medical, biological, and statistical backgrounds, all collaborating for the in-depth analysis of large-scale data from mega-sized and/or deeply phenotypes cohort studies.

Title of talk: Exposome Analytics: Composite Scores, Embodiment, and Health Risk: Evidence for the UK Biobank Study

Abstract of talk

The concept of embodiment postulates that the human environment, through its physical, chemical and psychosocial stresses, solicits several adaptative processes and leaves a sustainable biological mark. There is limited evidence on the extent to which social factors, measures of its embodiment, socially patterned exposures and behaviours may contribute to these associations, and in particular in relation to incident chronic diseases. We first used a composite score to measure the physiological wear-and-tear of three key systems (inflammatory, metabolic and cardiovascular) and the functioning of two organs (kidney and liver) based on the measurement of 13 biomarkers in 366 748 UK-Biobank participants who were free of cancer and cardiovascular disease (CVD) when they enrolled. Descriptive analyses showed a strong education gradient in the score that was not fully explained by later-in-life socially patterned behaviours and exposures. We found that the BHS was associated with increased all-cause, cancer and CVD mortality, and cancer and CVD incidence. Despite strong gradients in the BHS across education groups, these associations were only mildly attenuated upon adjustment for education, though larger attenuations were observed while adjusting for other factors, in particular BMI. Our results suggest that composite scores such as ours may act as markers of biological ageing which capture features of social embodiment, as well as biological effects of more proximal behaviours and health risk factors. Our results suggest that biological age complements health behaviours to improve predictions of CVD incidence. Complementary work focused on quantifying the relative contribution of the different domains of the exposome and its internal signature to the prediction of CVD incidence in the same population. Ongoing research aims to identify the possible mediating roles these biomarkers may play in the association between biological ageing markers, behaviours, social determinants and CVD outcomes. Overall, our work highlights the importance of having publicly-available resources to identify the sparse and complementary set of factors involved in the development of chronic conditions and to investigate their interplay.

Sven Schade, Joint Research Centre (JRC)
Panellist

Sven Schade is a geospatial information scientist by training, with research interests covering digital transformation of governance, multi-disciplinary interoperability, and public participation in science for policy, always with a view to improve inclusive and sustainable transitions. He works as a scientific officer for the European Commission's Joint Research Centre (JRC). Previously, he was employed by the European Environment Agency (EEA) as project manager for the Shared Environmental Information System (SEIS). In his early career, Sven spent ten years with the Institute for Geoinformatics (IfGI) of the University of Muenster - where he completed his diploma and PhD studies and contributed to numerous national and European-level research projects in the area of semantic interoperability. Sven has co-authored more than 100 publications in the fields of geospatial semantics, observation web and next-generation knowledge infrastructures. He is Advisory Board member of the European Citizen Science Association (ECSA) and the Geo for All initiative.

Leonie Dendler, German Federal Institute for Risk Assessment (BfR)
Panellist

Leonie Dendler is a senior researcher within the risk communication department of the German Federal Institute for Risk Assessment leading a research group on the construction of trust in the context of regulatory science. Her projects focus on reputation management, stakeholder management and public engagement. She has previously worked for the Manchester Institute of Innovation Research, the Sustainable Consumption Institute and the Tyndall Centre for Climate Change Research at the University of Manchester (UK) and Fudan University (China). An environmental scientist by training with a PhD from Manchester Business School (UK), her wider research interest lies in understanding institutional processes across international consumption and production systems with a particular focus on food. She has been board member of several international research networks and has written, reviewed and edited for various peer-reviewed journals, including the Journal of Cleaner Production, Science, Technology and Human Values and the British Food Journal.

Léa Maitre, ISGlobal
Speaker

Léa Maitre is Assistant Research Professor and director of the at ISGlobal in Barcelona, Spain. During her Ph.D. at Imperial College London (UK), she developed novel predictive biomarkers in population studies using metabolomics. Her current research focuses on the application of interdisciplinary research (omics, environmental epidemiology, toxicology) to understand environmental influences on mother and child health. Taking a holistic approach to the discovery of etiological factors for disease, the Exposome is a new paradigm to encompass the totality of human environmental (meaning all non-genetic) exposures from conception onwards, complementing the genome. Her participation in large European projects on this topic included the scientific coordination of the HELIX exposome project (2013-2018) and now participating in H2020 ATHLETE (2020-2024). She has co-authored 45 original peer-reviewed publications since first publication in 2014 (37 in first quartile, 31 in first decile), plus two book chapters and a h-index of 20. In 2020, she started the Exposome hub at ISGlobal, initiating a new way to collaborate and communicate about this research through monthly seminars and working groups. As part of the hub activities, she organized a 3-day online conference (May 28th-30th, 2021), the Exposome Data Challenge, with more than 308 registered participants from the five continents and 27 presentations from leading universities, promoting open science and collaboration.

Title of talk: Open science and causality in the Exposome era

Abstract of talk

The exposome recognises that individuals are exposed simultaneously to a multitude of different environmental factors and takes a holistic approach to the discovery of etiological factors for disease. However, challenges arise when trying to quantify the health effects of complex exposure mixtures. Analytical challenges include dealing with high dimensionality, studying the combined effects of these exposures and their interactions, integrating causal pathways, and integrating high-throughput omics layers. To tackle these challenges, the Barcelona Institute for Global Health (ISGlobal) held a data challenge event open to researchers from all over the world and from all fields of expertise. Analysts had a chance to compete and apply state-of-the-art methods on a common partially simulated exposome dataset (based on real case data from the HELIX project) with multiple correlated exposure variables (P>100 exposure variables) arising from general and personal environments at different time points, biological molecular data (multi-omics: DNA methylation, gene expression, proteins, metabolomics) and multiple clinical phenotypes in 1301 mother-child pairs.

Most of the methods presented included feature selection or feature reduction to deal with the high dimensionality of the exposome dataset. Several approaches explicitly searched for combined effects of exposures and/or their interactions using linear index models or response surface methods, including Bayesian methods. Other methods dealt with the multi-omics dataset in mediation analyses using multiple-step approaches. Here we discuss features of the statistical models used and provide the data and codes used, so that analysts have examples of implementation and can learn how to use these methods.
Overall, the exposome data challenge presented a unique opportunity for researchers from different disciplines to create and share state-of-the-art analytical methods, setting a new standard for open science in the exposome and environmental health field.

Michelle Patel, Food Standards Agency
Speaker

Michelle Patel is the Deputy Director of Analysis and Insight within the Science team at the Food Standards Agency. With twenty years in Government and a background in communications she remains an endlessly curious scholar of public attitudes and behaviours. Her personal academic interest is in how the citizen perspective is brought into food regulation. In 2018 she started work to transform how the Food Standards Agency approaches its social science, combining skill sets from the communications insight team with more traditional social science disciplines, and establishing a strategic foresight function to increase the organisation's capability in horizon scanning. She now leads a fine team of over forty analysts including social researchers, economists, statisticians, operational researchers and intelligence analysts and has access to leading experts and a wide range of research tools to understand how and why people do what they do and what the future holds when it comes to food, seeking to provide better evidence so we can make better decisions.

Title of talk: Putting science into context: the future of social science in risk analysis

Claudia Maria Cascio, European Food Safety Authority (EFSA)
Rapporteur

Claudia Cascio is a scientific officer at the Methodology and Scientific Support Unit of EFSA. Since 2017, Claudia works in performing dietary exposure assessments to chemicals in the remit of different EFSA Panels. Before joining EFSA, Claudia was a postdoctoral researcher in nano-analytics for the German Federal Institute for Risk

Assessment, RIKILT-Institute of Food Safety of the Wageningen University and Institute for the Health and Consumer Protection of the Joint Research Centre. From 2007 till 2010, Claudia was a Marie Curie Actions Early Stage researcher working on biomonitoring studies to assess human exposure to arsenic and other trace elements in EU. She worked as research assistant at the Faculty of Health and Life Sciences of the De Montfort University of Leicester and as honorary research assistant at the Institute of Biological and Environmental Sciences of the University of Aberdeen. Before 2007, she worked as junior researcher in characterisation of surfaces and nanomaterials in Catania (IT). She has a Master's degree in biology and a supplementary degree in economics of cultural heritage both from the University of Catania, and holds a PhD in biochemistry from De Montfort University of Leicester.

Anastasija Nikiforova, University of Tartu

Panellist

Anastasija Nikiforova is a researcher (PhD in Computer Science and Data Processing Systems and Data Networking), whose research interests include, but are not limited to, data management with a particular focus on data quality, open (government) data, Smart city, Society 5.0, sustainable development and digitization. She is part of the European Open Science Cloud (EOSC) Task Force FAIR Metrics and Data Quality, assistant professor of Information Systems at University of Tartu and visiting researcher at Delft University of Technology, Faculty of Technology Policy and Management. Her previous experience includes the role of assistant professor and researcher in the Innovation Laboratory at the University of Latvia, IT-expert at the Latvian Biomedical Research and Study Centre, BBMRI-ERIC Latvian National Node and advisor for the Institute for Social and Political Studies (University of Latvia), where she was involved in six ERDF and Horizon 2020 projects with a focus on data management and software engineering. She is an expert at the Latvian Council of Sciences in 1) Computer Science and Informatics, 2) Electrical Engineering, Electronics, ICT, 3) Social Sciences Economics and Business, and European Cooperation in Science & Technology (COST). For promotion of open data and technologies, the Latvian Open Technologies Association has recognized her as person of the of the year in 2021. She serves as a PC for over 10 international conferences and invited reviewer for over 10 high-quality journals.

Shani Evenstein Sigalov, Tel Aviv University

Speaker

Shani Evenstein Sigalov is an educator, lecturer, researcher and Free Knowledge advocate, focusing on the intersection between Education, Technology, Innovation and Openness. For the past decade, she served as an EdTech Innovation Strategist at the School of Medicine, utilizing technology to support pedagogy that improves the way we teach and learn, inspiring and long-lasting learning experience. She is also interested in integrating elements from the Open Knowledge and Open Access movements into the academic curriculum, and she is constantly looking for new ways through which academic work can have a positive social impact. In this capacity, Shani designed and direct the first, for-credit, elective courses in the world to integrate Wikipedia & Wikidata into higher education.
As of 2017, she is pursuing a PhD at the School of Education (Technology & Learning program), where she researches the Semantic Web as a learning platform. For over 20 years, she has been a passionate advocate for Free and Open Knowledge as a basic human right, initiating & supporting Open Education and Culture, Open & FAIR Science and Open Data initiatives, specifically focusing on projects that highlight gender equality and equity. She serves as Vice Chair of the Wikimedia Foundation's Board of Trustees, the non-profit that supports Wikipedia globally, and Chief Editor at Project Ben-Yehuda, the biggest, open & free online library for Hebrew writings.

Title of talk: Expert interview by Tony Smith: Open science – how it can change regulatory science

Abstract of talk

The open science session is intended to showcase how knowledge can be contributed to by a 'crowd', which can include the scientific community but also ordinary citizens. A particular challenge would be to tailor the open science approach to make it applicable to the regulatory context. The case of Wikipedia and Wikidata is an example of sustainable community-based knowledge curation and creation, which allows continuous updating and a transparent system to ensure reliability.
The main questions we will discuss is whether lessons learnt in this context can be applied to science performed by regulatory agencies such as EFSA. The expert interview will help us to dive deep into the world of Open Science and its future, thinking about how Open and FAIR science could be a real alternative to engaging the public in the curation of scientific data, via platforms such as Wikipedia and Wikidata.
The following topics will be discussed:

- what Open and FAIR science might imply for regulatory organisations: benefits and challenges;

- the issues related to the reliability of information / knowledge delivered by citizen's science and the possible mechanism to guarantee quality standards;
- concrete examples from hands-on experience of the feasibility of having shared data curation, large data re-use, improved accessibility;
- how to motivate potential Open Science contributors to engage in scientific tasks;
- how can each and every person in the audience participate?

The interviewee will be drawing from her experience both as an academic and as a free knowledge advocate. In the past decade, Evenstein Sigalov has been heavily involved in governance, strategic design and implementation in complex environments with multiple and diverse stakeholders. She has worked on fundraising and advocacy, as well as focusing on partnership building, volunteer mobilisation and community capacity-building in the Global North & South. She frequently speaks at and leads workshops around the world on topics such as EdTech innovation, integrating openness / open access practices, governance and strategic planning and the semantic web, also collaborating with Wikipedia, Wikidata and Project Ben-Yehuda, examples of open Innovation involving the 'wisdom of the crowd'.

Jean-François Dechamp, European Commission
Chair/Co-chair

Jean-François Dechamp (him/his) is a policy officer in the Unit 'Open Science' of the European Commission's Directorate-General for Research and Innovation. Since 2008, he has been actively involved in the developments of the rights and obligations for open access in the EU Research and Innovation Framework Programmes (FP7, Horizon 2020 and Horizon Europe), and in the promotion and implementation of Open Science in the European Research Area and worldwide.
Before joining the European Commission, Jean-François Dechamp held various positions in Bologna, Italy (Laboratoires Boiron), in Amsterdam, the Netherlands and in Beijing, China (Médecins Sans Frontières), and in Brussels, Belgium (the Association of the European Self-Care Industry, the Plasma Protein Therapeutics Association, and the European AIDS Treatment Group), focusing on regulatory affairs in the pharmaceutical area, humanitarian aid, and health advocacy.
Jean-François Dechamp holds a Doctor of Pharmacy Degree from the University of Strasbourg, France.

Gorgias Garofalakis, European Food Safety Authority (EFSA)
Rapporteur

Gorgias Garofalakis is a Chemical Engineer with a PhD in Food Science. He joined EFSA in 2020, where he works in the Knowledge, Innovation and Partnership Unit. His work focuses on advancing the framework for scientific cooperation and on building partnership initiatives that can benefit the Risk Assessment community. Before joining EFSA, between 2011 and 2020, he served as an Officer in the Directorate for Nutrition Policy and Research of the Hellenic Food Authority. There, among others, he worked on the development of cross-actor cooperation actions in the area of food safety, risk assessment and science communication. He was member of the Greek EFSA Focal Point team. Between 2016 and 2018, he was a member of the advisory platform of the Greek General Secretariat for Research and Technology, which provided support in the identification of national research priorities in the areas of agri-food and nutrition. Prior to that, he worked in the Food Industrial Research and Technological Development Company – initially as a consultant and later on as Director of the Department of Consulting services – providing support to the food industry on matters of regulatory compliance, technological innovation, training, knowledge management and research.

Thomas Margoni, KU Leuven
Panellist

Prof. Dr. Thomas Margoni is Research Professor of Intellectual Property Law at the Faculty of Law and Criminology KU Leuven, and a member of the Board of Directors at the Centre for IT & IP Law (CiTiP). His research concentrates on the relationship between law, data and technology from a international, comparative and European copyright law perspective. In particular, he has been focusing on the changes in the creation, access, transformation, and distribution of information brought by the Internet and AI. Within this framework, Thomas has been working on Open Science (especially, Open Access, FAIR and Open Data, and Open Licenses) for two decades, as reflected in his publications and research projects (which can be consulted here: https://www.law.kuleuven.be/citip/en/managing-board/boards). Relevant in this area is his role as PI of the Legal WP of the Skills4EOSC project, a new Horizon Europe project starting in September 2022 which will focus on the development of (legal) skills for open science professionals.