COST Actions approved by the Committee of Senior Officials on 1í May 2025 Open Call - collection date 23 October 2024 (OC-2024-1)

# Selected actions relevant to IOCB (04/6/2024)

Action no.	Action title
CA24103	EUropean COllaborative Network on electroCatalysis for Efficient Renewable Technologies
CA24105	Enabling Translation of Retinal Disease Diagnosis and Therapies: A Roadmap for Future
CA24108	Oxidative stress at the CrossroAds of adverse outcome Pathways -peSTicides - ONe hEalth
CA24110	Resource-Inclusive Renewable Materials: Leveraging Global Biomass for Sustainable Innovations
CA24111	European Network for Valorizing Food Processing Waste into Sustainable Fibers
CA24116	Multidisciplinary consortium to accelerate plant cell wall knowledge
CA24117	Innate lymphoid cells – the European quest for innovative cancer prognosis and immunotherapy
CA24127	Action Pan European Commission on Photoantimicrobial Testing
CA24131	European Network for radiation-detection based Research and Innovation addressing increasing societal CHallenges
CA24140	One Health zoonotic Hepevirus Network
CA24162	Adaptive and acquired resistance in gastrointestinal cancers-contemporary and emerging resolutions
CA24166	Pan-European Network for Inflammaging: A Multi-omics Integration Approach



# CA24101 Testing Fundamental Physics with Seismology

(OC-2024-1-27085)

# SUMMARY

The FuSe Action tackles challenges in fundamental physics by exploring seismic phenomena and earthquake precursors, providing new opportunities for testing. It aims to bridge the gap between fundamental physicists and Earth scientists, leveraging advanced technologies such as Big Data, machine learning, and AI, and working with small technological enterprises to translate theoretical insights into practical applications.

At the heart of FuSe is the belief that **seismic phenomena** could reveal **new aspects of fundamental interactions** and lead to the discovery of new physics. By analysing seismic data and studying the underlying physical principles, FuSe aims to explore imprints of unknown physics that may be embedded in these natural processes. On the other hand, the study of fundamental physics can also improve our knowledge of the Earth. This effort draws on interdisciplinary expertise, with a focus on how seismic events could deepen our understanding of the fundamental forces that govern the universe.

FuSe's innovative approach combines diverse scientific fields to pursue both theoretical and practical advancements. This synergy has the potential to transform our knowledge of both fundamental physics and seismic activity, contributing to a broader understanding of Earth's interior and the cosmos.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Physical Sciences: Fundamental interactions and fields (theory)</li> <li>Earth and related Environmental sciences: Physics of earth's interior, seismology</li> <li>Earth and related Environmental sciences: Databases, data mining, data curation, computational modelling</li> </ol>	<ol> <li>Fundamental physics</li> <li>Seismology</li> <li>Geophysics</li> <li>Material science</li> <li>Big Data</li> </ol>

### **COST Members**

Main Proposer: Poland

Network of Proposers:

**Full Member:** Austria, Belgium, Croatia, Cyprus, Czech Republic, Estonia, France, Germany, Greece, Hungary, Italy, Lithuania, Malta, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Spain, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 44,7% YRI / 43,4% Women / 62,50% ITC

### International Cooperation

Near Neighbour Country: Egypt International Partner: Brazil, Chile, China, Japan

### **Specific Organisations**

**European RTD Organisation:** Istituto Nazionale di Geofisica e Vulcanologia; Consiglio Nazionale delle Ricerche - Istituto per le Applicazioni del Calcolo **International Organisation:** European Synchrotron Radiation Facility; European Synchrotron Radiation

International Organisation: European Synchrotron Radiation Facility; European Synchrotron Radiation Facility

### **Industrial Dimension**

SMEs: Czech Republic, Italy, North Macedonia, Poland



# CA24105 Enabling Translation of Retinal Disease Diagnosis and Therapies: A Roadmap for Future

(OC-2024-1-27160)

### SUMMARY

**Retinal diseases** are significant contributors to visual impairment, imposing a substantial global economic and well-being burden. Once retinal degeneration occurs, there are currently no therapeutic solutions that can completely cure retinal diseases. It is imperative to prioritize efforts aimed at accelerating European research translation in the field of retinal disease therapies. This includes improving early diagnosis, enhancing retinal imaging tools and functional diagnostics, and identifying new structural, functional, and molecular biomarkers for disease and its progression. Additionally, it is crucial to develop innovative therapeutic approaches for the early stages of these diseases to prevent their progression into severe forms that could compromise vision. These developments have the potential to control the progression of retinal diseases before they adversely affect vision.

The primary objective of *Retina4Future* is to **expedite the translation of European vision research into novel biomarkers and advanced therapies for retinal diseases**. This will be achieved by establishing a research and innovation network and promoting interdisciplinary research. To accomplish this, the network will encompass a diverse group of contributors, including **basic and clinical researchers, clinicians, small and medium- sized enterprises (SMEs), patient organizations, ethics experts and policymakers.** 

The ultimate goal is to improve the quality of life and healthcare for patients and their families while also fostering the career development of young researchers and innovators. This COST will benefit clinical, social, and economic sectors in Europe.

### SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Basic medicine: Sensory systems (e.g. visual system, auditory system)</li> <li>Clinical medicine: Ophthalmology</li> <li>Medical biotechnology: Gene therapy, stem cell therapy, regenerative medicine for medical biotechnology</li> <li>Basic medicine: Pharmacology, pharmacogenomics, drug discovery and design, drug therapy</li> </ol>	<ol> <li>Retinal diseases</li> <li>Vision</li> <li>Advanced Therapies</li> <li>Early diagnosis</li> <li>Patient-oriented research</li> </ol>

### **COST Members**

Main Proposer: Portugal

Network of Proposers:

**Full Member:** Austria, Belgium, Bulgaria, Croatia, Czech Republic, Estonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Netherlands, Poland, Portugal, Romania, Serbia, Spain, Switzerland, Türkiye, United Kingdom

Main and secondary proposers: 31,3% YRI / 47,8% Women / 52,17% ITC

### International Cooperation

International Partner: Canada, India, United States

### **Specific Organisations**

International Organisation: Retina International; University of Alberta

#### Industrial Dimension

SMEs: Greece, Italy, Netherlands, Portugal, Spain, Switzerland



# CA24108 Oxidative stress at the CrossroAds of adverse outcome Pathways peSTicides - ONe hEalth

(OC-2024-1-27173)

### SUMMARY

**Oxidative stress** plays a central role in ecosystem disturbance and human pathologies. Some pesticides have already been banned due to their pro-oxidative properties which are linked to their adverse effects in both humans or in off-target organisms in ecosystem.

However, several classes of pesticides are still authorized and could lead to oxidative stress, particularly those that target mitochondria, the main site for reactive oxygen species generation in all living organisms. There is an increasing scientific, societal, and politic concern about pesticides within the One Health framework.

In this context, the challenge of the Action is to identify pesticides' adverse effects linked to oxidative stress that are relevant for both humans and ecosystems, and to describe the Key Events involved in these effects. This Pan-European network will develop a new research strategy based on Adverse Outcome Pathways (AOPs).

The Action will work within the One Health concept, **promoting interdisciplinary breakthroughs** between ecotoxicology, toxicology, bioinformatics, epidemiology and risk assessment. It will include scientists from academia, industry, regulatory agencies, a National Social Protection Scheme in charge of agricultural workers and operators, and Non-Governmental Organizations.

This Action will work in **collaboration with other international initiatives** (AOP-Wiki, PARC project) to implement science without duplication.

As there is an increasing interest of **New Alternative Methods** such as AOPs that has been identified as **keys areas of regulatory challenges**, the Action will **provide scientific input to the pesticide industry and regulatory agencies**, **disseminating science to a broad audience that include pesticide consumers**, **civil society**, **and policy makers**.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Health Sciences: Environment and health risks including radiation</li> <li>Biological sciences: General biochemistry and metabolism</li> <li>Biological sciences: Systems biology</li> <li>Biological sciences: Metabolomics</li> <li>Biological sciences: Biodiversity, comparative biology</li> </ol>	<ol> <li>pesticide</li> <li>oxidative stress</li> <li>AOP (Adverse Outcome Pathways)</li> <li>ecotoxicology</li> <li>toxicology</li> </ol>

# COST Members

Main Proposer: France

Network of Proposers:

**Full Member:** Croatia, Czech Republic, Denmark, France, Italy, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden

Main and secondary proposers: 30,8% YRI / 60,3% Women / 53.33% ITC

International Cooperation Near Neighbour Country: Kosovo\* International Partner: United States

Industrial Dimension SMEs: France



# CA24110

# Resource-Inclusive Renewable Materials: Leveraging Global Biomass for Sustainable Innovations

(OC-2024-1-27201)

### SUMMARY

Modern society still relies heavily on fossil-based feedstocks for materials production, driving additional carbon emissions. Harvesting atmospheric carbon, so as to close the carbon-cycle, is of the utmost importance. Given the abundance of biologically sequestered carbon as a byproduct of our society, e.g. agricultural and forestry residues, pathways to their use in future materials production are sought.

The advancement of biomass deconstruction techniques has resulted in the production of more uniform and well characterised biomass-derived chemical and material streams, which are being used to develop sustainable bio-based products. However, to this day biorefinery processes which are able to operate on a feedstock-agnostic basis are not the norm, and the difficulty of predicting how the isolated fractions and building blocks will affect material properties make the whole value chain extremely expensive, causing a bottleneck in the development of novel products from laboratory to industrial scale.

Our ReInvent COST Action will convene European and international competence, aligning scattered research efforts from across the globe to leverage various expertise for trans- and multidisciplinary science and realise our vision of resource inclusive renewable materials. We will bring together experts in chemistry, engineering, agriculture and forestry, biomass deconstruction, chemical analytics, separation, and materials science to focus on feedstocks-agnostic processes and the early-stage prediction of material properties, as well as techno-economic and environmental feasibility of the whole value chain. Ultimately, we will push society beyond the status quo, accelerating the transition towards truly sustainable and inclusive solutions.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Chemical engineering: Characterization methods of materials</li> <li>Chemical sciences: Colloid chemistry, macromolecular chemistry, polymer chemistry</li> <li>Environmental engineering: Sustainable engineering</li> <li>Chemical engineering: Green chemistry</li> <li>Materials engineering: Structural properties of materials</li> </ol>	<ol> <li>Resource agnostic biomass</li> <li>Evaluation of materials properties</li> <li>Early stage evaluation</li> <li>Sustainability evaluation</li> <li>Chemistry, biorefinery and materials</li> </ol>

# **COST Members**

Main Proposer: Sweden

#### Network of Proposers:

**Full Member:** Austria, Belgium, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Italy, Latvia, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 25,00% YRI / 50,00% Women / 50,00% ITC

#### International Cooperation

International Partner: Canada, Indonesia, South Korea, United States

### Specific Organisations

EU Institutions, Bodies, Offices and Agencies (EC/EU): Åbo Akademi University

Industrial Dimension SMEs: Cyprus, Finland, Greece, Sweden Large companies: Sweden



# CA24111 European Network for Valorizing Food Processing Waste into Sustainable Fibers

(OC-2024-1-27213)

# SUMMARY

The **ENFiber** COST Action addresses the challenge of food processing waste by transforming it into highvalue fibers using innovative and sustainable methods. This initiative meets the environmental and societal demand for waste reduction and circular bio- economy solutions. With food by-products often discarded or underutilized, **ENFiber** unlocks their potential by promoting scalable green extraction technologies and implementing advanced characterization techniques.

The main challenge is to scale fiber production from food processing waste, making it both commercially viable and environmentally sustainable. To achieve this, **ENFiber** will identify fiber-rich waste streams, explore non-destructive analytical methods, develop extraction methodologies to maximize yields, assess the environmental impact of the processes, and pursue product development opportunities. Collaboration between researchers, industry, and policymakers will ensure alignment with regulatory frameworks and market demands.

**ENFiber** is organized into Working Groups focused on extraction, characterization, product development, sustainability, and dissemination. The network will promote capacity building through training schools, Short-Term Scientific Missions (STSMs), Virtual Mobility (VM) grants, and industry-academic partnerships, providing opportunities for early-career researchers to develop expertise and expand their networks.

Aligned with the EU's circular economy and Green Deal objectives, **ENFiber** promotes sustainable waste management and aims to contribute to the reduction of greenhouse gas emissions. It also supports global environmental goals by creating value-added products for the food, pharmaceutical, and packaging industries. **ENFiber** aims to deliver tangible outcomes such as new fiber-based products, market-ready technologies, and regulatory recommendations, contributing to sustainable food systems and reducing the environmental impact of waste.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Other agricultural sciences: Sustainable production</li> </ol>	1. Fibers 2. Waste
<ol> <li>Materials engineering: Sustainable engineering</li> </ol>	3. Food Processing 4. Scale-Up
<ol> <li>Chemical engineering: Chemical engineering: processes and products (others)</li> </ol>	5. Characterisaton
<ol> <li>Chemical engineering: Characterization methods of materials</li> </ol>	

# COST Members

Main Proposer: Türkiye

Network of Proposers:

**Full Member:** Albania, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Malta, Moldova, Montenegro, Netherlands, North Macedonia, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Türkiye, United Kingdom **Partner Member:** South Africa

Main and secondary proposers: 41,53% YRI / 52,3% Women / 64,52% ITC

International Cooperation Near Neighbour Country: Egypt, Lebanon

**Specific Organisations** 

EU Institutions, Bodies, Offices and Agencies (EC/EU): Kaunas University of Technology

#### Industrial Dimension SMEs: Egypt, Germany, Greece, Malta, Netherlands, Romania, Spain Large companies: Belgium, Italy



# CA24116 Multidisciplinary consortium to accelerate plant cell wall knowledge

(OC-2024-1-27350)

# SUMMARY

The plant cell wall was one of the first biological objects observed under the microscope in the 17th century. While the knowledge of this complex and dynamic structure has come a long way, current gaps in the understanding prevent people from achieving the full potential of this important resource in agriculture, food, feed, bioenergy, and material science. This Action aims to bring together scientists from distant disciplines to overcome barriers in the understanding of the complex nature of cell walls. More than ever, holistic and collaborative approaches are required to gain a deeper knowledge of cell wall composition, structure, biomechanics, and orchestration with other cellular activities.

Multidisciplinary cooperation can help to identify and overcome current research bottlenecks, as well as improve research methods in cell wall visualization, analysis, computation and modelling. The aim of this Action is to propose strategies to address gaps in the knowledge, start building data and knowledge-based infrastructure on the topic, and enhance multidisciplinary research efforts through effective networking and collaboration. Plant cell wall research will be defragmented through cooperation, mobility, and the formation of a common language to form a modern research community. This Action will provide COST Member States with a competitive advantage, helping the EU to achieve the objectives set out in the Green Deal and European Research Area.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Biological sciences: Plant biology, Botany</li> <li>Biological sciences: Biological systems analysis, modelling and simulation</li> <li>Biological sciences: Biophysics</li> <li>Computer and Information Sciences: Machine learning algorithms</li> </ol>	<ol> <li>plant cell wall</li> <li>mechanobiology</li> <li>microscopy</li> <li>modelling</li> <li>multidisciplinarity</li> </ol>

# **COST Members**

Main Proposer: Czech Republic

Network of Proposers:

**Full Member:** Czech Republic, Denmark, France, Germany, Netherlands, Poland, Portugal, Slovakia, Sweden, Ukraine

Main and secondary proposers: 33,33% YRI / 46,7% Women / 50,00% ITC



# CA24117 Innate lymphoid cells – the European quest for innovative cancer prognosis and immunotherapy

(OC-2024-1-27351)

# SUMMARY

Since their discovery in the early 2010s, innate lymphoid cells (ILC) have been increasingly recognized for their roles in cancer pathogenesis, exhibiting both pro- and anti- cancer activities. However, the inconsistent use of phenotypic markers for their identification has hindered progress in utilizing ILC for cancer prognosis and therapy.

ILCquest aims to overcome this obstacle by standardizing methodologies for the identification, isolation, and cultivation of ILC, thus enabling accurate and reproducible quantitative and qualitative assessment of ILC during cancer pathogenesis, and design of novel ILC-targeting drugs.

Leveraging a comprehensive pan-European network of experts in basic and clinical immunology, systems biology, synthetic chemistry, biochemistry, computational modelling, medical biotechnology and clinical oncology, this initiative will create a unique collaborative platform - the European ILC Network. This network will facilitate consortia creation for joint research proposal applications and serve as a hub for training and capacity-building, promoting best practice, and elevating ILC research quality and reproducibility, that way ensuring sustained impact beyond the project's lifespan. Through close communication and dissemination of ILCquest results to policymakers, R&D professionals, and biotechnology and pharmaceutical companies, the use of ILC in cancer prognosis and therapy will be significantly advanced.

By integrating diverse expertise and embracing the fresh perspectives of early-career investigators and innovators, ILCquest aims to deepen our understanding of ILC in cancer. This systemic approach will pave the way for future clinical trials and support the development for novel cancer diagnostic tools and immunotherapies, addressing a critical and growing global health challenge.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Basic medicine: Innate immunity</li> <li>Basic medicine: Cell differentiation, physiology and dynamics</li> <li>Clinical medicine: Oncology</li> <li>Basic medicine: Systems biology</li> <li>Basic medicine: Biological basis of immunity related disorders</li> </ol>	<ol> <li>Innate lymphoid cells</li> <li>Cancer</li> <li>Immunotherapy</li> <li>Prognostic markers</li> <li>Tumor organoids</li> </ol>

# **COST Members**

<u>Main Proposer:</u> Serbia <u>Network of Proposers:</u> **Full Member:** Albania, Belgium, Croatia, Czech Republic, France, Germany, Greece, Hungary, Ireland, Italy, North Macedonia, Poland, Serbia, Slovenia, Spain, Sweden, Türkiye, United Kingdom

Main and secondary proposers: 26,47% YRI / 41,2% Women / 55,56% ITC

International Cooperation International Partner: China, Japan

Industrial Dimension SMEs: Belgium



# CA24127 Action Pan European Commission on Photoantimicrobial Testing

(OC-2024-1-27509)

# SUMMARY

Drug discovery, followed by preclinical and clinical testing, is a prerequisite for any new medicine. Approximately 15,000 new chemical entities are tested for each marketed drug. In vitro and in vivo drug discovery screens are therefore essential to provide robust, internationally standardised, and comparable data that can be used in hit-to-lead approaches.

Currently, novel antimicrobial strategies are needed, as newly approved antibacterial drugs have limited innovation and thus restricted clinical benefit over existing treatments. Photodynamic inhibition (PDI) therapy -utilizing the synergistic effect of drugs and light- is such an innovative broad-spectrum approach according to WHO criteria. Promising in vitro and in vivo studies show the potential, but PDI treatments are not recognised by pharmaceutical companies and are rarely part of university curricula. As a result, PDIs suffer from low awareness and high levels of scepticism. In addition, preclinical results from the community are difficult to compare due to a lack of standardised protocols.

PanEuCOPT, as a pan-European initiative, aims to bring together the leading European photobiologist with their medical colleagues and pharmaceutical as well as technical companies to generate a united force allowing the implementation of photodynamic inhibition. The COST action PanEuCOPT is planned over four years and is based on four pillars. PanEuCOPT will realize in an agile manner i) standardized testing protocols, ii) irritation device guidelines, iii) education, and iv) terminology. The vision of PanEuCOPT is pushing the PDI towards clinical studies/ EMA approvements so that a functional alternative to the prescription of classic antibiotics can be established.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Chemical engineering: Pulp and paper</li> <li>Medical engineering: Medical laboratory technology (including laboratory samples analysis diagnostic technologies)</li> <li>Health Sciences: Infectious diseases</li> <li>Biological sciences: Microbiology</li> <li>Chemical sciences: Photochemistry</li> </ol>	<ol> <li>Photoantimicrobial</li> <li>Testguideline</li> <li>Photodynamic inhibition</li> <li>antibacterial photodynamic therapy</li> </ol>

# **COST Members**

<u>Main Proposer:</u> Austria <u>Network of Proposers:</u> **Full Member:** Austria, Croatia, Italy, Lithuania, Poland, Portugal, Slovakia, Spain, United Kingdom

Main and secondary proposers: 34,61% YRI / 61,5% Women / 55,56% ITC

International Cooperation International Partner: Argentina, Chile

Industrial Dimension SMEs: United Kingdom



# CA24131

# European Network for radiation-detection based Research and Innovation addressing increasing societal CHallenges

(OC-2024-1-27525)

### SUMMARY

The ENRICH (European Network for radiation-detection based Research and Innovation addressing increasing societal CHallenges) COST Action aims to build a **European network of researchers and stakeholders working on radiation-detection based experiments and applications.** 

Numerous researchers work with photon detection daily, applying it in astrophysics, nuclear and atomic physics, material science, data analysis, simulations, detectors, electronics, optics, medicine, cultural heritage, food safety, fraud detection and others. However, **the community remains fragmented**, with sub-communities (e.g., nuclear physics, synchrotron users) often working in silos. This **lack of cross-disciplinary collaboration limits knowledge exchange** and the transfer of technologies from large- scale facilities to smaller labs and industries.

ENRICH seeks to unite these diverse communities, allowing **collaboration across sectors and disciplines** to accelerate scientific and technological advances in radiation detection.

Such a collaboration will, first of all, focus on **pressing scientific questions** related to radiation detection in research fields like fundamental physics, nuclear and astrophysics, data analysis, and X- and Gamma-ray spectroscopy or imaging.

In addition, the scientific outcomes of ENRICH's activities will enhance **Europe's industrial competitiveness** by contributing to tackling key societal and technological challenges Europe faces, such as energy autonomy, food security, faster medical diagnostics, and more. These challenges require, indeed, **advances in analytical sciences**, with radiation-based technologies playing a crucial role across various sectors of science and society.

ENRICH will be **grounded on inclusiveness**, and special attention will be paid to young researchers, those with caregiving responsibilities, and participants from ITC countries, through mentoring programs, training in proposal submissions, and special initiatives.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Physical Sciences: Instrumentation - telescopes, detectors and techniques</li> </ol>	<ol> <li>Radiation Detection based applications</li> <li>X-ray and Gamma-ray detectors and electronics</li> </ol>
	<ol> <li>Imaging and spectroscopic applications</li> <li>Medical and societal applications</li> <li>Optics, photon sources and MC simulations</li> </ol>

### **COST Members**

<u>Main Proposer:</u> Italy <u>Network of Proposers:</u> **Full Member:** Albania, Belgium, Croatia, Cyprus, Czech Republic, France, Germany, Greece, Italy, Latvia, Lithuania, Netherlands, North Macedonia, Poland, Portugal, Romania, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom **Partner Member:** South Africa

Main and secondary proposers: 20,37% YRI / 40,70% Women / 59,09% ITC

### **Specific Organisations**

**European RTD Organisation:** Charles University, Faculty of Mathematics and Physics **International Organisation:** European Synchrotron Radiation Facility

#### **Industrial Dimension**

**SMEs:** Germany, Sweden, Switzerland, United Kingdom Large companies: Czech Republic, Germany



# CA24140 One Health zoonotic Hepevirus Network

(OC-2024-1-27616)

# SUMMARY

Zoonotic Hepeviruses, such as Paslahepevirus (HEV) and Rocahepevirus (RVHE) are a major health threat in Europe. Despite HEV is the main cause of viral acute hepatitis in the continent, most countries lack standard procedures since control is not supervised at either EU or governmental levels, not recognized as notifiable disease at the animal and human level. Furthermore, there is currently no common European scheme for efficient surveillance in animals and humans, harmonized molecular diagnostic protocols, or specific drugs or approved vaccines for HEV and RVHE. Consequently, the main challenge is to control the spread of zoonotic Hepeviruses to protect human health. The main objective of ONWARD is to create an interdisciplinary expert network to develop a comprehensive view of Hepevirus and its impact on human health to better manage and prevent the disease in Europe. The Action network will i) adopt a One Health approach for the comprehensive study of zoonotic Hepeviruses, ii) increase and promote HEV and RVHE virological and epidemiological data sharing, iii) promote the implementation of the screening and surveillance of zoonotic Hepeviruses, iv) foster the evaluation of clinical and therapeutic approaches, v) favour the implementation of control measures at the farm and food chain levels, and vi) establish the network as a counterpart of European health policy- makers. Because of the One Health integrative approach, the network integrates multidisciplinary experts on Hepeviruses covering the following fields: virologists, clinical microbiologists, animal health and food-safety researchers, veterinary practitioners, epidemiology and public health experts, medical doctors, and innovative tool designers.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Health Sciences: Infectious diseases</li> <li>Health Sciences: Epidemiology</li> <li>Veterinary science: Veterinary medicine (miscellaneous)</li> <li>Animal and dairy science: Virology</li> <li>Basic medicine: Virology</li> </ol>	<ol> <li>Hepevirus</li> <li>Zoonoses</li> <li>One Health</li> <li>Hepatitis E</li> <li>Rocahepevirus</li> </ol>

# **COST Members**

Main Proposer: Spain

Network of Proposers:

**Full Member:** Belgium, Bulgaria, Croatia, Finland, France, Germany, Hungary, Italy, Lithuania, Montenegro, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Türkiye, Ukraine, United Kingdom

Main and secondary proposers: 30,88% YRI / 52,90% Women / 59,09% ITC

Industrial Dimension SMEs: United Kingdom



# CA24163 Modelling cross-sectoral cascading climate impacts on Europe to design coherent policy reponses

(OC-2024-1-28070)

# SUMMARY

Traditional climate impact studies have focused on biophysical impacts emerging in one place, e.g. drought affecting crop yields in one region. However, climate impacts can also spread from their origin across borders into other countries through trade and supply chains, financial flows or migration. To understand these cascading climate impacts on Europe and to develop coherent response policies, the chains through which impacts are transmitted need to be considered, e.g., changing crop yields affecting exports and prices which in turn affect security and migration in importing countries. Research on such cascading climate impacts is fragmented since the individual research communities related to impact transmission chains such as trade or migration have historically been separated and only recently started including biophysical climate impact data and models. Therefore, CROSS-CASCADE aims to develop common protocols, harmonised datasets and a joint understanding of how to conduct cross-sectoral, multi-model climate impact studies at regional and global scales that cover both initial biophysical impacts and impact transmission chains to foster projections of cascading climate impacts affecting Europe and to develop coherent policies for adapting to them. The Action will focus on key interactions of climate impacts, especially extreme events such as droughts or floods, across sectors and their propagation through trade, finance, migration and other impact transmission chains. CROSS-CASCADE will use COST networking instruments to train young researchers to conduct cross-sectoral cascading climate impact simulations, use novel methods for analysing them and to disseminate the data, code and results to scientists and stakeholders.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Earth and related Environmental sciences: Climatology and climate change</li> <li>Economics and business: Macroeconomics, business cycles</li> <li>Political Science: Public administration, public policy</li> <li>Earth and related Environmental sciences: Hydrology, water resources</li> <li>Agriculture, Forestry, and Fisheries: Sustainable forest management</li> </ol>	<ol> <li>Climate Impacts</li> <li>Climate Impact Transmission</li> <li>Adaptation</li> <li>Systemic Risk</li> <li>Modellling</li> </ol>

# **COST Members**

<u>Main Proposer:</u> Germany <u>Network of Proposers:</u> **Full Member:** Belgium, Croatia, Czech Republic, Estonia, Finland, Germany, Greece, Italy, Latvia, Lithuania, Moldova, Netherlands, Poland, Romania, Slovakia, Sweden, Switzerland, United Kingdom

Main and secondary proposers: 39,28% YRI / 50,00% Women / 55,56% ITC

#### **Specific Organisations**

European RTD Organisation: Institut de Recherche pour le Développement



# CA24167

# Disruptive Innovation and Exponential HRM: Crafting Next-Gen Employee Experience, Workplace, Job Market

(OC-2024-1-28170)

# SUMMARY

An array of unprecedented socio-technical transformations is generating a major shift in the governance of human capital within organizations. In particular, exponential digital technologies and complex societal challenges require to craft a new approach to the design and governance of the employee experience and the workplace, as well as to address structural changes arising in the global job market. In such endeavor, HUMAN-IT has the ambition to advance cross-disciplinary scholarly and practitioner knowledge in the field of Human Resource Management (HRM), with the vision to contribute to the EU polices on employment, inclusions and societal progress (UN SDGs 8 and 9). The Action will leverage a large network of experts gathered into 3 distinguished Working Groups (WGs): 1) WG1, exploring and systematizing the disruptive advancements related to the adoption of digital technologies into the management of HR, with a specific focus on AI and advanced analytics; 2) WG2, studying the major transformations within organizational forms triggered by the technological singularity, and with the vision to investigate the paradigms shift into the concept and process of employee experience and organizational well-being; 3) WG3. investigating the societal and macro implications of the transforming HRM scenario, with the proposition of policy guidelines for decision makers engaged to redesign the job market. HUMAN-IT has the ambition to generate a stronger EU and cross-national human capital valorization capability, and outcomes include dissemination of scientific knowledge and practitioner tools, career support for young scientists, and an increased societal and managerial capacity to address the future of the workplace and HRM.

# SCIENTIFIC SCOPE

Areas of Expertise	Keywords
<ol> <li>Economics and business: Human resource management</li> <li>Economics and business: Management of Technology and Innovation</li> <li>Political Science: Social policies, welfare state</li> <li>Other engineering and technologies: Databases, data mining, data curation, computational modelling for other engineering and technologies</li> <li>Sociology: Work and professions</li> </ol>	<ol> <li>Digital Innovation</li> <li>Employee Experience</li> <li>Human Resource Management</li> <li>Job Market</li> <li>Workplace Transformation</li> </ol>

# **COST Members**

<u>Main Proposer:</u> Albania <u>Network of Proposers:</u> **Full Member:** Albania, Bulgaria, Croatia, Greece, Hungary, Italy, Netherlands, North Macedonia, Poland, Portugal, Romania, Serbia, Slovenia, Spain, United Kingdom **Cooperating Member:** Israel

Main and secondary proposers: 30,43% YRI / 60,90% Women / 68,75% ITC

#### International Cooperation Near Neighbour Country: Kosovo\*, Morocco

**Industrial Dimension** 

SMEs: Italy, Portugal