

INTRODUCCIÓN HORIZONTE EUROPA OPORTUNIDADES EN SALUD

Jornada online - 29 de abril de 2021



EUROPEAN UNION

#HorizonEU

HORIZON EUROPE

THE EU RESEARCH & INNOVATION
PROGRAMME 2021 - 2027

Oportunidades de financiación del Clúster Salud

Juan E. Riese PhD MBA

Punto Nacional de Contacto – Clúster Salud de Horizonte Europa

Experto Nacional en el Comité de Programa

Oficina de Proyectos Europeos – SGPIIRI ISCIII





Presupuestos en Horizonte Europa

Pillar 1

Excellent Science

European Research Council

Marie Skłodowska-Curie
Actions

Research Infrastructures

Pillar 3

Innovative Europe

European Innovation Council

European innovation
ecosystems

European Institute of
Innovation
and Technology

Pillar I Excellent and Open science

European Research Council (ERC)

Marie Skłodowska-Curie actions

Research infrastructures

Pillar II 'Global Challenges and European Industrial Competitiveness'

1. Health

2a. Inclusive and Creative Society

2b. Secure Society

3. Digital, Industry and Space

4. Climate energy and mobility

5. Food, Natural Resources and Agriculture

6. Non-nuclear direct actions of the JRC

Pillar III Innovative Europe

European Innovation Council (EIC)

European Innovation Ecosystem

European Institute of Innovation &
Technology (EIT)

IV Strengthening the European research Area

Spreading excellence and widening

Reforming and enhancing European (Union)
R&I System

TOTAL (IN MILLION EURO)

25,011 M€

16,003

6,602

2,406

53,516 M€

8,246

2,280

1,596

15,349

15,123

8,952

1,970

13,598 M€

10,105

528

2,965

3,393 M€

2,955

438

95,519 M€

**7.472 M€
en H2020**

Pillar 2

Global Challenges and
European Industrial
Competitiveness

- Clusters
- Health
 - Culture, Creativity and Inclusive Society
 - Civil Security for Society
 - Digital, Industry and Space
 - Climate, Energy and Mobility
 - Food, Bioeconomy, Natural Resources, Agriculture and Environment

Joint Research Centre

Widening participation and spreading excellence

Reforming and Enhancing the European R&I system

Widening Participation and Strengthening the European Research Area

Clúster Salud – 6 “Destinations”



1. Staying healthy in a rapidly changing society.

2. Living and working in a health-promoting environment.



3. Tackling diseases & reducing disease burden.

4. Ensuring access to innovative, sustainable & high-quality Healthcare.



5. Unlocking the full potential of new tools, technologies and digital solutions for a healthy society.

6. Maintaining an innovative, sustainable & globally competitive health industry.



Estructura del texto de la convocatoria

Distribución (en el borrador actual):

1. Destinations (en total 6 “Destinos”).
 - 1.1. Impacto esperado según los KSOs (objetivos específicos clave) fijados en el Plan Estratégico de Horizonte Europa 2021-2024.
2. Convocatoria agrupada por año en cada “Destino”.
 - 2.1. Cuadro de presupuestos, nº de propuestas a financiar y condiciones (anexos relevantes).
 - 2.2. Título del topic.
 - 2.3. Cuadro con condiciones específicas: Tipo de acción (RIA, CSA, PCP, PPI, etc.).
 - 2.4. Topic.
 - 2.4.1. Expected outcomes.
 - 2.4.2. Scope.

Importantes las notas a pie de página.



Las convocatorias 2021-2022 del Clúster Salud (y DISCLAIMER)

- Toda la información a transmitir hoy es una síntesis de la información contenida de los topics para la convocatoria 2021.
- Por ello, se recomienda encarecidamente el análisis minucioso del topic completo de interés sobre el texto publicado por la CE.
- Los presupuestos globales son: 1.039,80 Mio. € (conv. 2021) y 936,30 (conv. 2022).
- **Convocatoria 2021:** La fecha de apertura está fijada para el 26 de mayo de 2021 y cierre el 21 septiembre de 2021.
- Los topics de la conv. 2021 serán de una sola etapa.
- **Convocatoria 2022:** La fecha de apertura está prevista para el 6 de octubre de 2021 y la de cierre el 21 de abril de 2022.
- Las cifras de presupuesto para los proyectos es siempre indicativa ('around').
- Importancia en la colaboración con otros proyectos financiados en el mismo topic y con los JRCs.
- Cáncer es elegible como área de I+D en los topics de 2021, pero no todos.
¡Comprobar en el texto!


Destination 1 – Staying healthy in a rapidly changing society

- To provide new evidences, methodologies and tools for understanding the transition from health to disease, preventing diseases and promoting health inclusive through social innovation approaches.
- Specific measures will be developed to educate and empower citizens of all ages and throughout their life.
- Key to achieving the expected impacts is the availability and accessibility of health data from multiple sources including real-world health data, requiring appropriate support by research and data infrastructures, AI-based solutions, and robust and transparent methodologies for analysis and reporting.

Expected impacts:

- Citizens adopt healthier lifestyles and behaviours, make healthier choices and maintain longer a healthy, independent and active life with a reduced disease burden, including at old ages or in other vulnerable stages of life.
- Citizens are able and empowered to manage better their own physical and mental health and well-being, monitor their health, and interact with their doctors and health care providers.
- Citizens' trust in knowledge-based health interventions and in guidance from health authorities is strengthened, including through improved health literacy (including at young ages).
- Health policies and actions for health promotion and disease prevention are knowledge-based, people-centred and thus targeted and tailored to citizens' needs, and designed to reduce health inequalities.

 **Call Identifier:** **HORIZON-HLTH-2021-STAYHLTH-01-02**

 **Name:** **Towards a molecular and neurobiological understanding of mental health and mental illness for the benefit of citizens and patients.**



Type of Action: Research and Innovation Action (RIA)



Call: Staying Healthy (2021)



Budget: ≈10 Mio. €/Project; Total: 60 Mio.€/topic


Expected outcomes (one or several):


1. Researchers, healthcare professionals and developers of medical interventions have a much better understanding of how genetic, epigenetic and environmental risk and resilience factors interact to drive or prevent the transition from mental health to mental illness throughout the life course.
2. Mental health professionals have access to different types of validated biomarkers for making more accurate diagnoses (beyond current symptom-based criteria) and for optimising and personalising preventive and therapeutic treatment decisions.
3. Citizens have the possibility to undergo laboratory testing for assessing their mental health and their predisposition to mental illnesses,
4. Public health authorities and policy makers have access to comprehensive clinical trial data on the effectiveness of different types of pharmacological and non-pharmacological strategies.


Scope: Proposed research is expected to deliver on **several** of the following (**depending on the selected outcomes**):

- Significantly advance the molecular and neurobiological understanding.
- Develop relevant predictive models.
- Identify, validate and document different types or combinations of (bio)markers for all of the described purposes.
- Discover new disease pathways and drug targets.
- Establish the molecular and neurobiological effects, as well as cognitive and psychological consequences of both pharmacological and non-pharmacological prevention strategies.

 **Call Identifier:** **HORIZON-HLTH-2021-STAYHLTH-01-03**

 **Name:** **Healthy citizens - 2.0 Supporting digital empowerment and health literacy**

 **Type of Action:** Coordination and Support Action (**CSA**)

 **Call:** Staying Healthy (2021)

 **Budget:** ≈3 Mio. €/Project; Total: 3 Mio.€/topic

Expected Outcome (all):

1. European citizens are educated, motivated and empowered to use digital tools for monitoring and managing their own physical, mental and social health and well-being.
2. Member States actively contribute to health literacy efforts, monitor and evaluate them.
3. Healthcare and social services are better integrated, affordable, open to diversity and inclusion.
4. Health promotion and disease prevention are enhanced by the awareness of healthier lifestyle behaviours, and overall there are better health outcomes throughout the life-course.

Scope:

The proposed activities should address **all** of the following (**selection**):

- Map health literacy research in the EU (and beyond).
- Develop a comprehensive and inclusive European strategy in improving digital health literacy for the benefit of all citizens,
- Help patients navigate the health care systems, interact with their doctors and carers as well as better manage their own health at home, in the community and at work.
- Create a network of champions in digital health literacy champions across the EU (and beyond).
- Set concrete targets as well as areas for improvement on health literacy levels across Europe.
- Develop monitoring mechanisms and indicators to assess health literacy levels and their evolution across MS.
- Include stakeholders from all the relevant sectors (including but not limited to education, social innovation, health care, Medtech, medial and involve also citizens in the co-creation, design, planning, implementation and evaluation of the strategy.

Call Identifier: HORIZON-HLTH-2021-STAYHLTH-01-04

Type of Action: Coordination and Support Action (CSA)

Call: Staying Healthy (2021)

Name: A roadmap for personalised prevention.

Budget: ≈ 3 Mio. €/Project; Total: 3 Mio.€/topic

Contribute to **all** of the following expected outcomes:

- Researchers, research funders and policy-makers implement a Strategic Research and Innovation Agenda.
- Policy makers, public health services, industrial stakeholders and citizen associations across Europe work together with a coordinated, harmonised and comprehensive research approach towards personalised prevention for all.
- Public health services, health systems, and citizen associations are aware and adopt personalised prevention strategies for all.
- Insurers and public authorities take evidence-based policy decisions for implementing personalised prevention strategies for all.

Scope:

Applicants should propose activities that address **all** the following areas:

- Identification and networking of key stakeholders for the co-creation of strategies for personalised prevention.
- Literature mapping and research gap analysis, in Europe and beyond.
- Identification of the existing bottlenecks and analysis of evidences and examples of successful implementation of personalised prevention approaches and assessment of their transferability.
- Analysis of how personalised prevention can be delivered most effectively and efficiently and cost effective.
- Robust, professional communication strategy to maximise the impact of the findings and the uptake of personalised prevention strategies.
- A Strategic Research and Innovation Agenda on personalised prevention throughout the life course.

Call Identifier: HORIZON-HLTH-2021-STAYHLTH-01-05

Type of Action: Coordination and Support Action (CSA)

Name: Mobilising the network of National Contact Points in the Health Cluster.

Call: Staying Healthy (2021)

Budget: ≈3 Mio. €/Project; Total: 3 Mio.€/topic

Contribute to **all** of the following expected outcomes:

- An improved and professionalised NCP service across Europe,
- A more consistent level of NCP support services across Europe.
- The network of National Focal Points (NFPs) supporting the implementation of the EU Health programmes and the EEN will be closely collaborating with the network of NCPs for the Health Cluster.
- Proposals should include a work package to implement matchmaking activities to link up potential participants from widening countries with emerging consortia in the domain of the Health Cluster.
- NCPs representing third countries, in particular those neighbouring the European Research Area should benefit from dense collaboration with the NCP Health network.

Scope:

- Proposals should aim to facilitate trans-national co-operation between National Contact Points (NCPs) with a view to identifying and sharing good practices and raising the general standard of support to programme applicants.
- The network will organise NCP Information Days, NCP trainings, brokerage events for potential participants and provide appropriate tools and instruments to support NCPs and researchers.

Call: Staying Healthy (**Two Stage** - 2022)

Opening: 06 October 2021

Deadline(s): 01 February 2022 (First Stage), 06 September 2022 (Second Stage)

HORIZON-HLTH-2022-STAYHLTH-01-01-two-stage: Boosting mental health in Europe in times of change (RIA).

HORIZON-HLTH-2022-STAYHLTH-01-04-two-stage: Trustworthy artificial intelligence (AI) tools to predict the risk of chronic non-communicable diseases and/or their progression (RIA).

HORIZON-HLTH-2022-STAYHLTH-01-05-two-stage: Prevention of obesity throughout the life course (RIA).

Call: Staying healthy (**Single stage** - 2022)

Opening: October 2021

Deadline : April 2022

HORIZON-HLTH-2022-STAYHLTH-02-01: Personalised blue print of chronic inflammation in Health-to-disease transition (RIA).

Destination 2 – Living & working in a health-promoting environment

The environment we live and work in is a major determinant of our health and well-being, estimated to account for almost 20% of all deaths in Europe.

The impacting factors on both physical and mental health and well-being are not all identified nor their effects comprehensively understood.

Understanding of the environmental, occupational and socio-economic risk factors for health and well-being and improving economic assessments.

Expected impacts (one or several):

- Policy-makers and regulators are aware and well informed about environmental, socio-economic and occupational risk factors as well as health-promoting factors across society.
- The upstream determinants of disease are known, understood and reduced.
- The health threats and burden are reduced.
- Living and working environments are healthier, more inclusive, safer, resilient and sustainable.
- The adaptive capacity and resilience of populations and health systems are strengthened;
- Citizens' health and well-being are protected and promoted, and premature deaths and diseases are prevented.
- Citizens understand better complex environment and health issues.

Call Identifier: HORIZON-HLTH-2021-ENVHLTH-02-01

Name: Exposure to electromagnetic fields (EMF) and health

Type of Action: Research and Innovation Action (RIA)

Call: Environment and health (2021)

Budget: ≈8 Mio. €/Project; Total: 30 Mio.€/topic

Expected Outcomes (all):

Scientific evidence to implement the Council Recommendation 1999/519/EC as well as Directive 2013/35/EU as well as the most recent ICNIRP guidelines for limiting exposure to electromagnetic fields.

Public authorities improve their risk assessment, management and communication on the exposure to EMF.

Public authorities and the scientific community take advantage from novel and robust methodologies, including models.

Stakeholders consistently use quality criteria and standards (CEN/ISO) for the analytical methodologies in the assessment of exposure to EMF, including 5G.

Public authorities, employers and citizens rely on practical guidelines for exposure prevention and reduction.

Citizens are effectively engaged and informed about the health impact of EMF exposures and risk-preventing behaviours.

Scope (all) (selection):

Scope (all)

- Monitoring of exposures of the general population and specific groups at risk.
- Establishment of potentially new exposure patterns and comparison with existing patterns.
- Investigating evidence of local and systemic biological effects and health impacts across the lifecycle.
- Proposing new quality criteria and standards (CEN/ISO) for the analytical methodologies.
- Delivering FAIR data on the causal links between level and duration of exposures and potential health (biological) effects, including potential mechanisms.
- Undertaking case studies on solutions for exposure reduction based on acquired evidence.
- Proposing and testing efficient communication methods and tools for engaging citizens in preventive actions

 **Call Identifier:** **HORIZON-HLTH-2021-ENVHLTH-02-02**

 **Name:** **Indoor air quality and health.**



Type of Action: Research and Innovation Action (RIA)



Call: Environment and health (2021)



Budget: ≈8 Mio. €/Project; Total: 40 Mio.€/topic

Expected Outcome (all):


- Access to FAIR data on air pollutants, including both chemical and microbiological determinants.
- Society has access to user-friendly solutions to monitor indoor air quality and knowledge on risk factors.
- Policy-makers are provided with proposals for revised indoor air quality standards for the main determinants identified.
- The Zero-Pollution Action Plan of the European Green Deal is supported by science-based evidence.


Scope (all):

- Identification and characterization of sources and routes of exposure and dispersion of chemical and biological indoor air pollution.
- Identification of differences and modes of interaction between indoor and outdoor air quality.
- Development and deployment of technologies for monitoring of indoor air quality, and effect-based test systems for the detection of synergistic effects of different biogenic particles and substances.
- Investigation of body burdens resulting from multipollutant (real life scenario) exposures and pathways indoors and associated health effects.
- Conducting dose-response studies to facilitate the setting of purposeful quality standards.
- Development of cost-effective, environment-friendly and scalable technologies to improve indoor air quality to reduce disease burdens.
- Preparation of guidelines.
- Delivery of FAIR data and databases.

 **Call Identifier:** **HORIZON-HLTH-2021-ENVHLTH-02-03**

 **Name:** **Health impacts of climate change, costs and benefits of action and inaction**

 **Type of Action:** Research and Innovation Action (RIA)

 **Call:** Environment and health (2021)

 **Budget:** ≈10 Mio. €/Project; Total: 60 Mio.€/topic

Expected Outcomes (all):


- Global and EU climate policies, the EU Observatory for Climate and Health, and the Green Deal activities are supported with up-to-date scientific evidence.
- Public authorities and surveillance organisations will have access to predictive and early warning systems.
- Public authorities, employers and risk managers draw benefit from user-friendly tools for integrated risk assessments and cost-benefit analysis.
- Public and private health authorities and care providers use guidelines and training materials produced to adapt and innovate health systems and practices.

Proposals must choose and addresss **one of the following areas of research:**

1. Research on the relationships between changes in environmental hazards caused by climate change, the impacts on interrelated ecosystems and their influence on human health;
2. Climate induced emergence and transmission of pathogens and spread of zoonotic pathogens using Eco-health and One Health approaches;

 **Call Identifier:** **HORIZON-HLTH-2021-ENVHLTH-02-03**

 **Name:** **Health impacts of climate change, costs and benefits of action and inaction**

 **Type of Action:** Research and Innovation Action (RIA)

 **Call:** Environment and health (2021)

 **Budget:** ≈10 Mio. €/Project; Total: 60 Mio.€/topic

Scope (all):

- Development of suitable indicators and backward-looking monitoring mechanisms
- Development of predictive models and early warning systems for health impacts
- Development of tools for health impact and cost-benefit assessment of climate-change adaptation and mitigation measures;
- Investigation of health co-benefits of adaptation and mitigation policy measures outside the health sector;
- Demonstration of the validity of tools and methods developed in the above-listed activities in policy-relevant case studies;
- Determination of the societal implications of climate change on health systems,
- Development of training materials and guidelines to educate relevant actors in citizen's daily life on climate change health impacts and to facilitate adaptation of health systems and practices;
- Delivery of FAIR data on positive and negative health impacts of climate change, including impact on groups at higher risk or vulnerability.

Call – Partnerships in health (2021)

HORIZON-HLTH-2021-ENVHLTH-03-01: European Partnership for Assessment from Risk of Chemicals (PARC) -

Call - Environment and health (Single Stage - 2022)

Opening: 06 Oct 2021

Deadline(s): 21 Apr 2022

HORIZON-HLTH-2022-ENVHLTH-04-01: Methods for assessing health-related costs to environmental stressors (RIA).

Destination 3 – Tackling diseases and reducing disease burden

- It will focus on major societal challenges linked to the Commission's political priorities such as the fight against cancer and other non-communicable diseases, better diagnosis and treatment of rare diseases, preparedness and response to and surveillance of health threats and epidemics, reduction of the number of antimicrobial-resistant infections, improving vaccination rates, demographic change, mental health and digital empowerment in health literacy.
- Some research and innovation actions should deliver relevant complementary inputs to the announced "Europe's Beating Cancer Plan", contributing to actions covering the entire cancer care pathway, including prevention, early detection, diagnosis, treatment, cancer data monitoring, as well as quality of life of cancer patients and survivors.

Expected impacts (consider several):

- Health burden of diseases in the EU and worldwide is reduced through effective disease management.
- Premature mortality from non-communicable diseases is reduced by one third (by 2030), mental health and well-being is promoted, and the voluntary targets of the WHO Global Action Plan for the Prevention and Control of NCDs 2013-2020 are attained (by 2025), with an immediate impact on the related disease burden (DALYs).
- Health care systems benefit from strengthened research and innovation expertise.
- Citizens benefit from reduced (cross-border) health threat of epidemics and AMR pathogens.
- Patients + citizens knowledgeable of disease threats, involved empowered to make and shape decisions for their health.
- The EU benefits from high visibility, leadership and standing in international fora on global health and global health security, especially in partnership with Africa.

Call Identifier: HORIZON-HLTH-2021-DISEASE-04-01

Type of Action: Research and Innovation Action (RIA)

Name: Improved supportive, palliative, survivorship and end-of-life care of cancer patients.

Call: Tackling diseases (2021)

Budget: ≈6 Mio. €/Project; Total: 50 Mio.€/topic

Expected outcomes (all):

- Reduced health-related suffering and improved well-being and quality of life for cancer patients in need of supportive, palliative, survivorship or end-of-life care as well as for their professional and family caregivers.
- Cancer patients (independently of their age) have early and better access to supportive, palliative, survivorship or end-of-life care services of higher quality and (cost)effectiveness.
- Reduced societal, healthcare and economic burden associated with increasing demands of supportive, palliative, survivorship or end-of-life care services .
- Health care providers and health policy makers access to and use the improved clinical guidelines and policies with respect to pain management, psychological and/or spiritual support, supportive, palliative or end-of-life care for cancer patients.
- Cancer patients and their professional and family caregivers use the improved evidence-based and information-driven palliative care decision-making process.

Scope (all):

- Demonstrate the effectiveness and cost-effectiveness of newly proposed or specifically adapted pharmacological and/or non-pharmacological interventions.
- Prove the feasibility of integrating the proposed interventions in current pain management, palliative, supportive, survivorship and/or end-of-life care regimes and healthcare systems across Europe.
- Identify and analyse relationships between sex, gender, age, disabilities and socio-economic factors in health and any other relevant factors.
- Analyse the barriers and opportunities to re-invigorating and enhancing timely social inclusion and active engagement of cancer patients in need of supportive, palliative, survivorship and end-of-life care and their caregivers.
- Guidelines for patient-centred communication and standards for evidence-based communication trainings for caregivers.

Call Identifier: HORIZON-HLTH-2021-DISEASE-04-02

Name: Building a European innovation platform for the repurposing of medicinal products.

Type of Action: Research and Innovation Action (RIA)

Call: Tackling diseases (2021)

Budget: ≈25 Mio. €/Project; Total: 50 Mio.€/topic

Expected Outcomes (all):

- Researchers continue to use the platform as an effective and sustained approach to coordinate and manage their efforts on the repurposing of medicines
- Patients have new and effective therapeutic options addressing unmet medical needs,
- Health care systems and payers have available more cost-effective treatments.
- The public sector and the pharmaceutical industry can engage in new models of sustainable collaboration.
- Policy makers adjust the EU's regulatory landscape for pharmaceuticals towards further harmonization.

Scope (all):

- Set up a platform supporting an innovative repurposing model with a harmonized and sustainable dimension in the EU.
- Provide robust selection mechanisms for prioritising already approved medicinal products or investigational products for repurposing.
- Leverage and pool existing high quality data assets in the EU repurposing landscape by using pharmacogenomics, in silico, artificial intelligence (AI) approaches and innovative preclinical human in vitro cellular/multi-organ validation models.
- Resolve the fragmentation and lack of ownership of the repurposing approach.
- Devise and test a European innovation platform to enhance the collaboration among relevant European stakeholders.



Call Identifier: **HORIZON-2021-HLTH-DISEASE-04-03**



Name: **Innovative approaches to enhance poverty-related diseases research in sub-Saharan Africa**



Type of Action: Research and Innovation Action (RIA)



Call: Tackling diseases (2021)



Budget: ≈8 Mio. €/Project; Total: 40 Mio.€/topic

Expected outcomes (all):

- Health care providers and professionals in sub-Saharan Africa have a better understanding of poverty related infectious diseases affecting these countries and use new evidences and advance innovative technologies or concepts.
- Health authorities and health care systems have access to health data and evidences to better develop and implement informed health policies and improved clinical guidelines in sub-Saharan Africa.
- Health care systems, clinicians and researchers have access to improved clinical research capacities and strengthened infrastructures for clinical research, development and implementation in sub-Saharan Africa.
- More researchers at early stages of their career able to develop their own scientific career in sub-Saharan Africa.
- More clinicians and researchers in sub-Saharan Africa have the capacity to develop and design large-scale studies.

Scope (all):

- Any or group of PRD diseases affecting sub-Saharan Africa (within the scope of EDCTP2 or the SRIA of EDCTP3).
- Combine health medical and pharmaceutical technologies with other scientific areas such as mHealth and eHealth and big data processing, and other emerging technologies.
- Implement one or more medium-scale clinical trials and/or clinical research studies that can deliver the proof-of-concept or validate smart, highly innovative health technologies or concepts to prevent, treat or diagnose PRDs in sub-Saharan Africa, drawing lessons from the COVID-19 experience.
- Increase collaboration with investors in development cooperation and international partnerships to create solutions for improved development or delivery of medical interventions for vulnerable populations in low resource settings.
- Proposals involving pharmaceutical companies and small- or medium-sized enterprises (SMEs) are encouraged.
- Develop solutions that are easily integrated or linked to existing electronic or digital systems that are used in the implementation of clinical research and health systems' patient management.
- Include activities that promote collaboration with ongoing and future EDCTP projects.



Call Identifier: **HORIZON-HLTH-DISEASE-2021-04-04**



Name: **Clinical validation of artificial Intelligence (AI) for treatment and care**



Type of Action: Research and Innovation Action (RIA)



Call: Tackling diseases (2021)



Budget: ≈6 Mio. €/Project; Total: 60 Mio.€/topic

Expected outcomes (all):

- Health care professionals employ safer and evidence-based clinical decision support systems for affordable treatment including home-based care.
- Health care professionals better predict patients' (long-term) response, including adverse side effects of a specific personalised specific treatment.
- Patients and carers will have access to disease-specific communication packages informing about a disease and the proposed treatment.
- Clinical guidelines are enhanced thanks to novel, clinically validated and (cost-) effective AI solutions.

Scope (all):

- Supporting the clinical development, testing and validation of AI-assisted treatment and care options.
- Timely end-user inclusion (e.g. patient, caregiver and health care professional) along the clinical development of AI-based solutions and the clinical validation process.
- Enhancing accurate prognosis for, and response to, a specific personalised treatment.
- Inclusion of sex and gender aspects, age, socio-economic, lifestyle and behavioural factors and other social determinants of health, considering also early stage/phases of development.
- Assessing potential manual or automated biases for large uptake.
- Integration of an extensive information and communication package about AI-assisted treatment options, highlighting their relevance for the patients and carers.
- Measuring the (cost-)effectiveness of AI-assisted development of therapeutic strategies and its implementation in clinical practice.

Call Identifier: HORIZON-HLTH-2021-DISEASE-04-07

Type of Action: Research and Innovation Action (RIA)

Name: Personalised medicine and infectious diseases:
understanding the individual host response to viruses
(e.g., SARS-CoV-2)

Call: Tackling diseases (2021)

Budget: 7 Mio. €/Project; Total: 60 Mio.€/topic

Expected outcomes (some):

- Enhanced knowledge of risk factors, symptoms expression, disease progression and clinical outcomes in relation to host and viral characteristics, and host-pathogen interaction.
- Clinicians, regulators and other stakeholders have access to decision support based on characterized diversity of host response at the level of genetic patterns, molecular pathways and physiological mechanisms.
- Clinicians and researchers use information on the deep characterization of the dynamics of the immune responses to the chosen virus(es), identifying factors critical for viral control and immune protection.
- Clinicians can use biomarkers in the broad sense for personalised patient management.
- Clinicians and other stakeholders along the healthcare value chain have access to and use guidance on preventive measures and for the early identification of patients at risk of developing severe symptoms.

Scope (all):

- To characterize the host response and host-pathogen interaction to a virus (or viruses) at the level of genetic patterns, physiological mechanisms and molecular pathways involving different organs and systems.
- Include patient follow-up to identify conditions (including long-term ones) after the patient has recovered.
- Deep immunological phenotyping of the host response, including the use of animal models if relevant
- Effect of differences in age, sex, gender, ethnicity, chronic conditions, co-morbidities, treatments offered and other relevant characteristics. The sample should be geographically representative for Europe but where relevant, the sample could also include data of subjects from outside Europe.
- Proposals on COVID-19 should build links with the project "ORCHESTRA" and the COVID-19 data-sharing platform and collaborate with the network on H2020 COVID-19 projects.

New Partnerships (One Stage - 2021)

Opening: April 2021

Deadline: September 2021

HORIZON-HLTH-2021-DISEASE-04-05: A roadmap towards the creation of the European One Health antimicrobial resistance partnership (OH AMR) ([CSA](#))

HORIZON-HLTH-2021-DISEASE-04-06: Building a European research and Innovation Partnership for Pandemic Preparedness ([CSA](#))

Call - Tackling diseases (Two Stage - 2022)

Opening: Oct 2021

Deadline(s): Feb 2022 (First Stage), Sep 2022 (Second Stage)

HORIZON-HLTH-2022-DISEASE-06-02-two-stage: Pre-clinical development of the next generation immunotherapies for diseases or disorders with unmet clinical need ([RIA](#))

HORIZON-HLTH-2022-DISEASE-06-03-two-stage: Vaccines 2.0 - developing the next generation of vaccines ([RIA](#))

HORIZON-HLTH-2022-DISEASE-2022-06-04-two stage: Development of new effective therapies for rare diseases ([RIA](#))

Call - Tackling diseases (One Stage - 2022)

Opening: Oct 2021

Deadline(s): Apr 2022

HORIZON-HLTH-2022-DISEASE-07-02: Pandemic Preparedness ([Placeholder](#))

HORIZON-HLTH-2022-DISEASE-07-03: Non-communicable diseases risk reduction in adolescence and youth (Global Alliance for Chronic Diseases – GACD) ([RIA](#))

HORIZON-HLTH-DISEASE-2022-03-01: European Partnership Fostering an ERA for Health Research ([Placeholder](#))

HORIZON-HLTH-DISEASE-2022-07-01: GloPID-R secretariat ([Placeholder](#))

Destination 4. Ensuring access to innovative, sustainable and high-quality health care

Main foci:

1. Modernising health care systems in the EU, especially through a European public-public partnership on transforming health and care systems;
2. Improving the quality of health care along the entire health care continuum and being people-centred;
3. Supporting evidence-based health care decisions both for health care providers and policy-makers, fostering improved foresight and enabling sound planning of health care resources;
4. Enhancing development and uptake of innovative health care services and solutions, including environmentally sustainable ones that contribute to the European Green Deal.

Destination 4. Ensuring access to innovative, sustainable and high-quality health care

Expected impacts (one or several):

- Health and social care services and systems have improved governance mechanisms and are more effective, efficient, accessible, resilient, trusted and sustainable, both fiscally and environmentally.
- Health care providers are trained and equipped with the skills and competences suited for the future needs of health care systems that are modernised, digitally transformed and equipped with innovative tools, technologies and digital solutions for health care.
- Citizens are supported to play a key role in managing their own health care, informal carers are fully supported and specific needs of more vulnerable groups are recognised and addressed.
- Health policy and systems adopt a holistic approach (individuals, communities, organisations, society) for the evaluation of health outcomes.
- The actions resulting from the calls under this destination will also create strong opportunities for synergies with the EU4Health.



Call Identifier: **HORIZON-HLTH-2021-CARE-05-01**



Name: **Enhancing quality of care and patient safety**



Type of Action: Research and Innovation Action (RIA)



Call: Ensuring access to innovative, sustainable and high-quality health care (2021)



Budget: ≈5 Mio. €/Project; Total: 25 Mio.€/topic

Expected outcomes (some):


1. Health policy-makers use context specific knowledge and evidence to develop inclusive, effective and affordable interventions ensuring patient safety;
2. Health care professionals know how to prevent, identify, evaluate and address risks for patient safety, and use harmonised or standardised patient-centred procedures and practice guidelines;
3. Health care providers integrate harmonised and standardised practices with personalised treatment schemes;
4. Health care providers use quality assured processes to bridge inter-sectorial gaps in the clinical pathways of patients to improve patient safety;
5. An increased number of health care professionals and patients/citizens accept and adhere to recommendations for improved patient safety.

Scope: (consider **already existing EU-funded initiatives** in this area, and **at least 3 of the following items, or others**)

- Fill knowledge and practice gaps in quality of care and patient safety.
- Development and piloting of harmonised evidence-based interventions in a uniform and structured way in health care institutions of different EU regions and countries.
- Research on translation of international standards and clinical guidelines into national practice for improved quality of care and patient safety.
- Provide context-specific evidence on facilitators + barriers for transferring good practices across regions and countries.
- Comprehensive comparison of practices related to clinical guidelines in European Union and Associated Countries.
- Development of innovative approaches for the integration of harmonised and standardised practices with personalised treatment plans.

Proposals should consider a patient-centred approach that empowers patients/citizens, promotes a culture of dialogue and openness between health professionals and citizens/ patients, and unleashes the potential for social innovation.

 **Call Identifier:** **HORIZON-HLTH-2021-CARE-05-02**

 **Name:** **Data-driven decision-support tools for better health care delivery and policy-making with a focus on cancer**



Type of Action: Research and Innovation Action (RIA)

Call: Ensuring access to innovative, sustainable and high-quality health care (2021)

Budget: ≈10 Mio. €/Project; Total: 40 Mio.€/topic


Expected outcomes (some):

1. Health care organisations and policymakers adopt robust and transparent modelling (including data collection, storage and analysis), planning algorithms and artificial intelligence (AI) solutions in support of health and care decision-making processes;
2. Healthcare providers, caregivers (formal and informal), citizens, and other relevant stakeholders take better informed decisions about their health or the health of persons they are responsible for and/or about the organisation of the health care service or system they are involved in or in charge of;
3. Policymakers get access to evidence-based decision support tools for public health policy-making and health care delivery;

Scope: (one or more)

- The development of data-driven, interactive policy and visualisation tools (i.e. through creation of digital twins /virtual models) bringing novel insights on populations, systems and services as a whole, to help policymakers make data-driven decisions.
- The development of data-driven solutions (i.e. scenario-building tools and models) helping health care organisations take evidence-informed decisions on cancer care delivery processes such as logistics planning and management, capacity, utilisation of health services and allocation of resources and infrastructures and availability of and access to health and care technologies and interventions;
- The development of data-driven solutions empowering citizens and cancer patients interaction with the health and care systems;
- The development of digital toolkits and indicators to improve the reporting and assessment of outputs from end-user involvements including of patient-reported outcomes measures (PROMs) and patient-reported experience measures (PREMs);

 **Call Identifier:** **HORIZON-HLTH-2021-CARE-05-02**

 **Name:** **Data-driven decision-support tools for better health and care delivery and policy-making with a focus on cancer**



Type of Action: Research and Innovation Action (RIA)

Call: Ensuring access to innovative, sustainable and high-quality health care (2021)

Budget: ≈10 Mio. €/Project; Total: 40 Mio.€/topic

Scope: (cont.)

Applicants are encouraged to establish dynamic relations and synergies with the following areas, where applicable:

- Decision-making processes and tools, including social innovation;
- Monitoring and evaluating budgetary impact of health and care interventions (i.e. innovative solutions, digital services and health and care models);
- Health technology assessment and cost-effectiveness analysis;
- Artificial intelligence/deep learning tools in social medicine to determine causal factors of disease/conditions and develop interventions;
- Data sharing between different institutions;
- European Health Data Space (EHDS);
- Open source and/or common building blocks used in Connecting Europe Facility (CEF) (e.g. eDelivery, eID);
- Standards and mechanisms to allow for interoperability between primary and secondary use of data;
- Privacy-preserving protocols for secondary use of data for public health policy-making and research;
- Federated/distributed access or data processing protocols for data-driven decision-support tools for better health and care delivery and policy-making.

Proposals should adopt a patient-centred approach that empowers patients, promotes a culture of dialogue and openness between citizens/patients, caregivers, health care providers and other relevant stakeholders, and unleashes the potential for social innovation.

Call Identifier: HORIZON-HLTH-2021-CARE-05-04

Type of Action: Coordination and Support (CSA)

Name: Health and Care procurement innovation network

Call: Ensuring access to innovative, sustainable and high-quality health care (2021)

Budget: 5 Mio. €/Project; Total: 5 Mio.€/topic

Expected Outcomes (all):

- Stakeholders involved in the demand side of health and social care innovations reach a common understanding reflecting their key clinical, procurement/supply, organisational and coordination priorities.
- Public/private procurers and decision makers at a local, regional, national and EU level collectively develop and adopt optimal, cost-efficient and flexible innovation procurement strategies taking into account the ongoing changes in the organisational procedures of health care structures caused by the COVID-19 pandemic.
- Procurers and decision makers in procurement organisations mainstream health and care-related Innovation Procurement best practices in their respective policy and investment strategies.
- Health and care procurers from participating Member States and associated countries scale up cross-border collaborations in research and deployment of innovative solutions, thereby minimising investment risks.

Scope (all):

- Hold an open market consultation with the industry across Europe on the current state of the art;
- Develop capacity and cooperation models for implementing Innovation Procurement in the form of Innovation Partnerships, PCP/PPI or other relevant instruments
- Conduct a user analysis of Innovation Procurer and propose solutions to overcome barriers and facilitate uptake of such solutions;
- Plan for procurement(s) based on identified common needs;
- Take measures ensuring the sustainability of outcomes beyond the lifespan of the proposed project and their integration into the procurement strategies of participating organisations;

Call - Ensuring access to innovative, sustainable and high-quality health care (Single Stage - 2022)

Opening: 06 Oct 2021

Deadline(s): 21 Apr 2022

HORIZON-HLTH-2022-CARE-08-02: Pre-commercial research and innovation procurement (PCP) for building the resilience of health and care systems in the context of recovery ([PCP](#)).

HORIZON-HLTH-2022-CARE-08-03: Innovation procurement (PPI) for building the resilience of health and care systems in the context of recovery ([PPI](#)).

HORIZON-HLTH-2022-CARE-08-04: Better financing models for health systems ([RIA](#)).

HORIZON-HLTH-2022-CARE-2022-10-01: European Partnership on Transforming Health and Care Systems ([Cofund Actions](#)).

Destination 5. Unlocking the full potential of new tools, technologies and digital solutions for a healthy society

Aim: to promote the development of tools, technologies and digital solutions for treatments, medicines, medical devices and improved health outcomes

Expected impacts (several):

- Europe's scientific and technological expertise and know-how, its capabilities for innovation in new tools, technologies and digital solutions, and its ability to take-up, scale-up and integrate innovation in health and care is world-class.
- Citizens benefit from targeted and faster research resulting in safer, more efficient, cost-effective and affordable tools, technologies and digital solutions.
- The EU gains high visibility and establishes leadership in terms of technology development.
- The burden of diseases in the EU and worldwide is reduced through the development and integration of innovative diagnostic and therapeutic approaches, personalised medicine approaches, digital, etc.
- Both the productivity of health research and innovation, and the quality and outcome of health care is improved thanks to the use of health data and innovative analytical tools, such as artificial intelligence (AI) supported decision-making.

Call Identifier: **HORIZON-HLTH-2021-TOOL-06-01**

Name: **Smart medical devices and their surgical implantation for use in resource-constrained settings**

Type of Action: (Research &) Innovation Action (IA)

Call: Tools and technologies for a healthy society (2021)

Budget: 6 Mio. €/Project; Total: 25 Mio.€/topic

Expected Outcomes (all):

- Medical device developers provide sustainable and affordable smart active implants validated in the operational environment.
- Medical professionals in resource-constrained clinical settings have at their disposal sustainable and affordable surgical procedures for smart active implants.
- Patients have access to sustainable and affordable smart medical devices suitable for minimally invasive surgical implantation through further clinical studies.

Scope (all):

- The device targeted and its intended use is open for applicants to choose (e.g. orthopaedic, neural, cardiovascular, metabolic, etc.), but should at the start of the proposed work be at **TRL 4** (min.) and will necessitate appropriate tailored surgical procedures and interventions.
- R&I activities should comprise medical device design, regulatory work, clinical stages and developmental iterations, reaching a **TRL of at least 7**, and involve key medical specialists (e.g. surgeons) and/or other health care professionals, developers, patients and relevant regulatory bodies as appropriate.
- The work proposed should take into account the new EU legal framework on medical devices with the targeted implants meeting all the essential requirements as defined therein.

Call Identifier: HORIZON-HLTH-2021-TOOL-06-02

Type of Action: (Research &) Innovation Action (RIA)

Name: Next generation advanced therapies to treat prevalent and high burden diseases with unmet medical needs

Call: Tools and technologies for a healthy society (2021)

Budget: 6 Mio. €/Project; Total: 60 Mio.€/topic

Expected outcomes (all):

- Competent authorities, researchers and developers have use assays for the valorisation and/or assessment of efficiency, delivery, safety, potency or mode of action of novel advanced therapeutic interventions based on either pluripotent stem cells, genome editing or RNA, that are aligned with regulatory standards.
- Clinicians, researchers and developers test several new advanced therapies based on pluripotent stem cells, gene editing or RNA ready through clinical trials meeting the regulatory requirements.


Scope (one or several):

- Method development for the production and differentiation of pluripotent stem cells. Complimentary activities to assess mode of action, safety, in vivo validation or upscaling procedures could be considered.
- Development and validation of biological assays and methods that can demonstrate efficacy, delivery, specificity, and safety (including off-target effects) of genome editing products in the targeted cells and tissues (e.g. base editing, prime editing, transcription activator-like effector nucleases, zinc-finger nucleases, clustered regularly interspaced short palindromic repeats). Complementary activities to assess in vivo validation or upscaling procedures could be considered.
- Development and validation of novel RNA-based therapeutics targeting non-communicable diseases. Complimentary activities to assess mode of action, delivery, safety in vivo validation or upscaling procedures could be considered.
- Study, analysis and tackling of different immune responses, taking into account factors like sex and age, generated by any of the above-mentioned advanced therapies in vivo, facilitating regulatory approval for next phase of research and development.

 **Call Identifier:** **HORIZON-2021-HLTH-TOOL-06-03**



Type of Action: Research and Innovation Action (RIA)

 **Name:** Innovative tools for use and re-use of health data (in particular of electronic health records and/or patient registries)



Call: Tools and technologies for a healthy society (2021)



Budget: ≈8 Mio. €/Project; Total: 30 Mio.€/topic

Expected outcomes (all):

- Novel solutions improve quality, ensure interoperability and enable re-use of health data, data analytics and metadata from different repositories across countries.
- Health professionals, researchers and health authorities make effective use of tools enabling them to exploit unstructured and heterogeneous data from different sources to improve the delivery of care and advance health research.
- Increased use and valorisation of health data by patients, researchers and clinicians thanks to better data portability due to the standardization of meta knowledge and clinical data, especially health data coming from different clinical services and sites, and/or from multiple countries.
- Health care professionals use more efficient and cost-effective health care procedures and workflows

Scope (all):

- Developing robust novel solutions compliant with legal requirements that will improve the quality, interoperability, machine-readability and re-use of health data and metadata in compliance with FAIR data management principles, making these data more accessible to clinicians, researchers and citizens. The focus should be on data in electronic health records (EHRs) and/or patient registries, taking into account the Commission Recommendation on a European Electronic Health Record exchange format .
- Developing innovative natural language processing tools, including computational semantics, ontologies, text mining, associated machine learning and deep learning, to improve accessibility, interoperability, translation, transcription, and analysis of health data (e.g. to predict risks).
- Developing and piloting AI-powered virtual assistants that will utilize the tools and solutions developed (as mentioned above) in order to demonstrate improved usability of health data for end-users.

Call - Tools and technologies for a healthy society (Single Stage - 2022)

Opening: Oct 2021

Deadline(s): Apr 2022

HORIZON-HLTH-2022-TOOL-11-01: Optimising effectiveness in patients of existing prescription drugs for major diseases (except cancer) with the use of biomarkers [\(RIA\)](#).

HORIZON-HLTH-2022-TOOL-11-02: New methods for the effective use of real-world data and/or synthetic data in regulatory decision-making and/or in health technology assessment [\(RIA\)](#).

Call - Tools and technologies for a healthy society (Two Stages - 2022)

Opening: Oct 2021

Deadline(s): Apr 2022

HORIZON-HLTH-2022-TOOL-12-01-two-stage: Computational models for new patient stratification strategies [\(RIA\)](#).

Destination 6. Maintaining an innovative, sustainable and globally competitive health industry

- Production of pharmaceuticals in compliance with the objectives of the European Green Deal.
- Methodologies, guidelines and standards, assessment studies, and structuring activities adapted to digital solutions and interventions for GDPR compliant translation into health care practice, including inter-operability, cyber-security and data confidentiality.
- Public authorities supported with better methodologies and interdisciplinary approaches to assess and value new health technologies and interventions.
- Development of pharmaceutical products meeting unmet medical needs in the context of market failures.

Expected impacts (one or several):

1. Health industry in the EU is more competitive and sustainable and growing, it contributes to job creation and economic growth, in particular with SMEs.
2. Health industry is working more efficiently along the value chain from the identification of needs to the scale-up and take-up of solutions at national, regional or local level.
3. European standards, including for operations involving health data, ensure patient safety and quality of healthcare services as well as effectiveness and interoperability of health innovation and productivity of innovators.
4. Citizens, health care providers and health systems benefit from a swift uptake of innovative health technologies and services offering significant improvements in health outcomes.
5. Health security in the EU benefits from reliable access to key manufacturing capacity.

Call Identifier: HORIZON-HLTH-2020-IND-07-01

Name: Green pharmaceuticals

Type of Action: Research and Innovation Action (RIA)

Call: A competitive health-related industry (2021)

Budget: 8 Mio. €/Project; Total: 40 Mio.€/topic

Expected outcomes (some):

- Researchers and regulators understand the environmental impact of pharmaceuticals.
- Public authorities inform pharmaceutical strategies and policies based on scientific evidences.
- Researchers, innovators and pharmaceutical industries develop and produce greener pharmaceuticals that are either greener by design, intrinsically less harmful for the environment, and/or use greener and economically more sustainable manufacturing processes for the production of pharmaceuticals.

Scope (several):

- Research and innovation to support the development of “greener” pharmaceuticals that degrade more readily to harmless substances in waste water treatment plants and the environment;
- Research on the eco-toxicity and environmental fate of pharmaceuticals, in particular those that are not yet subject to environmental risk assessment.
- Propose innovative manufacturing technology that are greener, low in energy consumption and emissions, using less solvent or recycling solvents;
- Propose methods for eliminating carcinogenic impurities in pharmaceuticals (e.g. nitrosamines) process and medicinal products, in particular as complementary technologies to the manufacturing methods relying on recycled solvents;
- Explore innovative uses of digital transformation or robotic for competitive and scalable methods of production;

Call Identifier: HORIZON-HLTH-2021-IND-07-02

Type of Action: Research and Innovation Action (CSA)

Name: Development procurement and responsible management of new antimicrobials

Call: A competitive health-related industry (2021)

Budget: 2 Mio. €/Project; Total: 2 Mio.€/topic

Expected outcomes (all):

- Health authorities and healthcare providers have identified the needs and potential procurers
- Potential procurers are ready to establishing an innovation partnership for the development and the procurement of new antimicrobials;
- Potential procurers are able to engage and commit financially in view of the establishment of an innovation partnership.

Scope (all):

The aim of this topic is to prepare for the establishment of a pull incentive for new antimicrobials where there is an unmet public health need and a market failure. Thus, proposals are expected to address all of the following:

- Design of a feasible option for a pull incentive that combines EU support for late stage development of antimicrobials with procurement by Member States and Associated Countries (implementation of the pull incentive will be beyond the scope of this CSA).
- Readiness and interest of potential developers/suppliers of antimicrobials
- Market failures and the challenges of availability and accessibility of therapeutics.
- Conditions for development and purchase of new antimicrobials.
- Requirements for financing.
- Conditions for prudent use of new antimicrobials.

Call Identifier: HORIZON-HLTH-IND-2021-07-03

Type of Action: Coordination And Support Action (CSA)

Name: Promoting a trusted mHealth label in Europe: uptake of technical specifications for quality and reliability of health and wellness apps

Call: A competitive health-related industry (2021)

Budget: 2 Mio. €/Project; Total: 2 Mio.€/topic

Expected outcomes (all):

- European suppliers of health technology and services benefit from enhanced single market conditions for mHealth that facilitate economies of scale.
- Health care systems and authorities are able to integrate mHealth solutions more rapidly thanks to a European 'mHealth label'.
- Citizens, patients and health and care professionals make more use of trusted mHealth solutions for promoting their health and self-managing their health care needs.
- European mHealth stakeholders can build upon a digital ecosystem around a trusted mHealth label.
- Health systems and citizens benefit from the supply and use of health innovations facilitated by the promotion of common pan-European principles for validation and certification.

Scope (all):

- Set up a structured dialogue on the uptake of the technical specifications among all stakeholders.
- Co-create, develop and implement an action plan on the promotion of the mHealth label in the health and care system.
- Implement concrete actions on the integration and use of secure and qualitative health and wellness apps, using the new label, in specific health and care settings, covering the entire EU.
- Ensure that the promoted health and wellness apps are bias-free and adequately address the needs of different social groups, considering gender, age, ability and ethnicity, where relevant.
- Support and set-up an inclusive dissemination strategy to promote the use of the health app quality label taking into account the different levels of digital health literacy among the actors involved .

Call - A competitive health-related industry (2022)

Opening: Oct 2021

Deadline: Apr 2022

HORIZON-HLTH-2022-IND-13-01: Enhancing Cybersecurity of connected Medical Devices ([RIA](#)).

HORIZON-HLTH-2022-IND-13-02: Scaling up multi-party computation, data anonymization techniques and synthetic data generation ([RIA](#)).

HORIZON-HLTH-2022-IND-13-03: New payment models for cost-effective and affordable health innovations/new models of pricing ([RIA](#)).

HORIZON-HLTH-2022-IND-13-04: Setting up a European Smart Health Innovation Hub ([CSA](#)).

HORIZON-HLTH-2022-IND-13-05: Setting up a European Electronic Health Record Exchange Format Ecosystem ([CSA](#)).

¡Muchas gracias por su atención!



Juan E. Riese

jriese@eu-isicii.es

Tel. +34 91 822 21 81