UNIVERSITÀ
degli STUDI di MESSINA

DIPARTIMENTO DI SCIENZE BIOMEDICHE,
ODONTOIATRICHE E DELLE IMMAGINI
MORFOLOGICHE E FUNZIONALI

BULLETIN
FUNDS FOR SCIENTIFIC RESEARCH
N.1 on 31.12.2019

a cura della dott.ssa Lucrezia Auditore
(Resp. U.Op. Ricerca BIOMORF)

Cari Colleghi,
questo è il primo Bollettino sulle opportunità di finanziamento della ricerca scientifica pubblicato dal nostro Dipartimento. Il presente Bollettino ha lo scopo, con cadenza periodica, di sottoporre alla vostra attenzione i bandi per il finanziamento della ricerca scientifica attualmente disponibili (e in alcuni casi, di prossima emanazione) nel panorama nazionale e internazionale.
In questa prima versione, ci siamo focalizzati soprattutto su finanziamenti dell'EU come le Research and Innovations Actions (RIA) e le Coordination and Support Actions (CSA) nell'ambito del programma HORIZON-2020 e sulle opportunità offerte dal European Research Council (ERC).
I bandi qui riportati sono stati selezionati in modo da coprire i vari settori della ricerca in cui il nostro Dipartimento è coinvolto.
Credo che questa iniziativa sia un piccolo passo per il nostro Dipartimento che possa aiutare a incrementare il numero di progetti di ricerca presentati dai nostri ricercatori nei bandi competitivi.

Il Direttore
Prof. Sergio Baldari

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HORIZON 2020 Framework Programme

Research and Innovation Action (RIA) & Coordination and Support Action (CSA)

Work programme:
Health, demographic change and wellbeing
Call name:
Better Health and care, economic growth and sustainable health systems
Call ID: H2020-SC1-BHC-2018-2020

Digital diagnostics – developing tools for supporting clinical decisions by integrating various diagnostic data

Grant ID: SC1-BHA-06-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 8 - 15 million

Specific Challenge: The availability of appropriate decision support tools for healthcare practitioners can promote uptake of personalised medicine in health care. There is a need to carry out research activities aiming to develop and validate such decision tools that would integrate available and/or emerging diagnostic means for the area concerned, enabling increased precision of diagnostics and clinical decision making. On-going progress in the fields of bioinformatics and biostatistics, advanced analytical tools (e.g.

machine learning) up to Artificial Intelligence (AI) solutions, should make possible the development of devices, platforms or novel approaches leading to highly personalised diagnosis, based on the integration of data available from various sources. The ultimate result would be a detailed health status assessment from a multitude of viewpoints, in a systemic way and easy to use for clinical purposes, leading to better diagnostic accuracy, increased effectiveness and efficiency of treatments. Novel hardware enabling truly innovative, integrative diagnostic platforms can also be considered.
Link

Advancing the safety assessment of chemicals without the use of animal testing

Grant ID: SC1-BHC-11-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 10 - 20 million

Specific Challenge: The reliability and relevance of animal studies to support chemical safety assessment are subject to increasing scrutiny from a scientific perspective and raises broader societal concerns. To address these challenges, the European Commission has been supporting the development and application of animal-free approaches to toxicological profiling of chemicals in support of chemical safety assessment. However, significant challenges remain regarding the provision of viable animal-free solutions to address systemic health effects in humans potentially linked to chronic exposure to chemicals across a variety of regulated sectors. Consequently, further efforts are needed to progress on the development, validation and translation of scientifically sound methods that not only decrease the reliance on animal testing but which also deliver more relevant, reliable and cost-effective means to facilitate decision-making to support regulation, innovation and competitiveness.
Link

Global Alliance for Chronic Diseases (GACD) - Prevention and/or early diagnosis of cancer

Grant ID: SC1-BHC-17-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 1 - 3 million

Specific Challenge: The Global Alliance for Chronic Diseases (GACD) call will focus on implementation research proposals for the prevention and/or early diagnosis of cancer in Low and Middle-Income Countries (LMIC) and/or in vulnerable populations in High- Income Countries (HIC).
The world is facing a critical healthcare problem due to ageing societies, unhealthy lifestyles, socio-economic inequalities, and a growing world population. Cancer is becoming one of the most important public health problems worldwide. In 2018, it is estimated that 181 million people have been diagnosed with cancer and 9.6 million have died from it. Predictions suggest that 30 million people will die from cancer each year by 2030, of which three-quarters in low- and middle-income countries (LMICs).

With an estimated 30-50% of avoidable cancers, it is a leading cause of premature death, reducing a country's productivity. Current cancer prevention and control do not fully reflect ethnic, cultural, environmental, socio-economic and resource differences. In particular, limited implementation research is conducted on cancers primarily found in LMICs and vulnerable populations in HIC. In order to achieve the United Nations' sustainable development goal 3.4, implementation research and healthcare efforts are needed to prevent and control cancers in these countries and populations.
Link

Addressing low vaccine uptake

Grant ID: SC1-BHC-33-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 2 - 3 million

Specific Challenge: Vaccines are one of the most important medical breakthroughs in the last 100 years. Every year vaccines save millions of people around the world from illness, disability and death, and they continue to be one of the most cost-effective ways to increase the health and wellbeing of their citizens. Despite this, vaccination uptake faces significant challenges across Europe, and these have increased in particular over the past 20 years. Recent studies have shown Europe to be the world region with the most negative views towards the safety and effectiveness of vaccines, and the importance of childhood vaccination.

Recent figures on collected by the World Health Organization (WHO) show that in 2016 only one vaccine had a coverage rate of over 95% in Europe. Seasonal influenza vaccination also remains significantly below the 75% coverage target for older age groups.
Thus, coverage for many vaccines is below the recommended limit. Due to the low vaccine coverage rates, several EU Member States have faced considerable outbreaks of vaccine-preventable diseases in recent years. For example, more than 14,000 cases of measles were reported across the EU in 2017, which is more than three times the number of cases reported in 2016. During the same period 50 people in the EU died due to measles.
These figures highlight the urgent need to get to grips with vaccine uptake issues, whether uptake of existing or new vaccines. Research has an essential role to play in understanding the underlying causes of poor vaccine uptake, including vaccine hesitancy, and to develop strategies and guidelines to help Member States and Associated countries increase vaccination coverage. A detailed understanding of the obstacles to, and drivers of, vaccination uptake in various settings is necessary to provide appropriate recommendations.
Link

New approaches for clinical management and prevention of resistant bacterial infections in high prevalence settings

Grant ID: SC1-BHC-34-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 10 - 15 million

Specific Challenge: Antimicrobial resistance represents a serious threat to public health in Europe and beyond. Within the last decades resistance has increased considerably in many clinically important pathogenic bacteria. Data collected by the European Centre for Disease Prevention and Control (ECDC) shows that nowadays in several European countries prevalence levels of infections that can no longer be treated with last-line classes of antibiotics have reached levels where isolation measures may no longer be feasible. In addition to this, prevalence levels of resistant infections are likely to increase in countries where currently such levels are relatively low. This may lead to an increasing number of outbreaks of resistant infections in these countries. The challenge is to address this threat via a multi-disciplinary approach by developing suitable clinical management and infection prevention plans detailing how to deal with resistant bacterial infections in high prevalence settings. The spread of AMR across borders has been recognised globally and improving knowledge on clinical management and infection prevention in high prevalence settings might also benefit other countries around the globe, including low and middle income countries and thereby diminish the spread of resistant bacteria. This topic will contribute to the implementation of the EU One Health Action Plan against Antimicrobial Resistance.
Link

Creation of a European wide sustainable network for harmonised large-scale clinical research studies for infectious diseases

Grant ID: SC1-BHC-35-2020

Deadline: 07 April 2020, 17:00 Brussels time
Budget: EUR 25 - 30 million

Specific Challenge: Infectious diseases pose a serious threat to human health and there are many challenges and needs to efficiently protect citizens across Europe and beyond. There is still a need to understand how antibiotics and other interventions work on patients and how to better assess the effectiveness of vaccines. Innovation is needed to overcome the problem of antimicrobial resistance, and in case of emerging epidemics and pandemics, a timely response to a rapidly emerging infectious diseases is significantly challenging and often delayed. In this context there is a need to establish a pan-European clinical research network that has the capacity and capability to directly enrol patients with infectious diseases, and to increase efficiency for testing and developing new diagnostic, preventive and/or therapeutic strategies and therapies. Europe should also contribute to the G7 aim concerning the need to establish a global clinical studies network on drug resistance that provides access to a large clinical research

infrastructure for the design, coordination and conducting of clinical trials and studies. It should also respond to the Council Recommendation on strengthened cooperation against vaccine preventable diseases, which calls for the reinforcement and establishment of novel infrastructures to increase the effectiveness and efficiency of EU and national vaccine R&D funding.
Link

Micro- and nano-plastics in our environment: Understanding exposures and impacts on human health

Grant ID: SC1-BHC-36-2020

Deadline: 07 April 2020, 17:00 Brussels time
Budget: EUR 4 - 6 million

Specific Challenge: Global plastic production has increased exponentially over the past decades. A significant proportion of the plastic produced is not disposed of properly and persists in the environment, especially the marine environment. Plastic products can be slowly degraded into smaller pieces (micro- or even nanoplastics). Furthermore, micro-plastics are intentionally added to, for example, toothpaste and beauty products (referred to as microbeads) or are a secondary by-product of rubber from, e.g. textiles, tyre wear or artificial turf.
Plastic debris is associated with a "cocktail of contaminants" made up of chemical ingredients present originally in the plastic and chemical pollutants adsorbed to the plastic from the environment, including metals and other persistent contaminants such as polychlorinated biphenyls (PCBs) and flame retardants. The debris is filtered into marine species' gastrointestinal tract mechanically or it may look like food to some species, thus entering the food chain, with unknown effects.
Risk assessments and reviews carried out in recent years have concluded that there is evidence that humans are exposed to micro- and nano-plastics through their diet, drinking water or inhalation. However, our understanding of the fate and toxicity of these plastic particles in humans constitutes a major knowledge gap, rendering it difficult to carry out proper science-based risk assessment and management.
Link

Towards the new generation of clinical trials – trials methodology research

Grant ID: SC1-BHC-37-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 4 - 6 million

Specific Challenge: Efficient and effective clinical trials are the primary means to provide scientific evidence to ensure optimal health interventions. Although the randomized controlled trial (RTC) design is regarded as the gold standard for evaluating the effectiveness of intervention in clinical research, there is a need for new trial methodologies that address current challenges such as:

- Globalization of clinical research;
- Use of emerging health technologies;
- Defining patient populations and patient enrolment strategies;

– Data management.

Given that all clinical research relies on voluntary contribution of patients, new designs may reduce the operational complexity, assure transparency and build trust, meeting all ethics standards and protecting the individuals' personal identity and privacy. Additionally, non-commercial trials often show suboptimal performance as compared to large commercial trials in terms of data collection, management and processing, good clinical practice compliance, and pharmacovigilance, there is a need of a new methodology that improves their legislative compliance and encourage clinical trials conducted by non-commercial sponsors.

Link

Use of Real-World Data to advance research on the management of complex chronic conditions

Grant ID: SC1-DTH-12-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 4 - 6 million

Specific Challenge: The number of people with chronic illness is growing and almost half of them have multiple chronic conditions. Patients with complex chronic conditions (CCCs) have chronic multi-morbidities or chronic disease complications that require the attention of multiple health care providers or facilities as well as home-based care. A patient with CCC presents to the health care system with unique constellation of needs, disabilities, or functional limitations.

Managing patients with complex chronic conditions therefore needs approaches that ensure multi-disciplinary, personalised and well accepted by the patient ways of care and monitoring.

The controlled randomised clinical trials on chronic diseases provide important information that can be translated in the daily clinical practice, but they often do not comprise sufficient breadth and depth commensurate to the complexity of diseases, and to the degree of personalisation of treatment needed.

Real World Data (referring specifically to any type of data not collected in a randomised clinical trial) can complement these to fill the knowledge gap between controlled clinical trials results and clinical practice needs in real environments. They can provide new insights into disease patterns and help improve the safety and effectiveness of health interventions.

Tapping into this rich resource of 'real world data' issued from daily clinical practice, either collected on a permanent/regular basis by public bodies or through devices and mobile applications, , and smartly assembled in combination with clinical studies, should boost both output and relevance of controlled clinical research results.

Link

Towards a Health research and innovation Cloud: Capitalising on data sharing initiatives in health research

Grant ID: SC1-HCC-10-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 2 - 3 million

Specific Challenge: Technological innovation has triggered an unprecedented increase in data production in health research and healthcare. The need to make EU health research data FAIR (i.e., Findable, Accessible, Interoperable and Re-usable) becomes more pressing than ever before if European health research is to reap the full benefits of this valuable resource. The stakes are high because making optimal use of this health data is expected to both accelerate research discoveries and bring them closer to clinical application for the benefit of EU citizens.

A wide range of challenges needs to be overcome before this vision becomes a reality. To be able to seamlessly integrate and analyse health data coming from different sources and different health sub-disciplines, individual research institutes and/or hospitals would need a potent IT infrastructure and interoperability solutions as well as powerful data analytics tools. Services in the Internet Cloud (i.e., Cloud Services) are a promising starting point to build these systems.

Properly addressing the security and privacy of health research data, and the compliance with various levels of legislations, in particular the General Data Protection Regulation (GDPR) together with the applicable National legislations in the EU Member States/Associated Countries and with different jurisdictions is a critical step for the design of a Health Research and Innovation Cloud (HRIC). These aspects need to be an integral part of the proposal so that the collection, governance, sharing, analysis and curation of health research data across different application domains can be achieved in ways that are technologically robust, scientifically reliable, and ethically and legally sound.

Link

Actions in support of the International Consortium for Personalised Medicine

Grant ID: SC1-HCO-01-2018-2019-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 1.5 - 2 million

Specific Challenge: Personalised Medicine is a very broad and multifaceted area where success relies on a well-functioning collaboration between several disciplines and different actors. While great advances have been made in some fields of medicine, in particular in stratification of cancer patients and in addressing rare diseases, most of today's healthcare protocols do not include personalised approaches apart from occasional division into broad age groups (children/adults/elderly), sex or ethnicity. Furthermore the prevention aspect of personalised medicine, i.e. identifying individuals prone to develop certain diseases, is largely isolated from treatment options. As is the case for a relatively nascent field there is a need for standardisation of approaches, including for sampling, data storage, interpretation and data exchange and also for clinical trials design and reimbursement models. European countries with their social model of healthcare along with (in several cases) centralised cost reimbursement, are ideally placed to lead the way for an integrated health management system. Many needs for coordination and support activities have been identified by ICPerMed, an EU

Member States led initiative which includes representatives from most EU countries along with several other European countries, Brazil and Canada. The EC currently supports ICPerMed with a grant to operate its secretariat until October 2020. Wider internationalisation of ICPerMed can be underpinned by coordinating networking activities with third countries.
Link

Bridging the divide in health research and innovation – boosting return on investment

Grant ID: SC1-HCO-03-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 1.5 - 2 million

Specific Challenge: The Innovation Union Scoreboard reveals significant disparities in terms of research and innovation performance among the different member states and regions within the European Union. The disparities are equally present in health research and innovation which unfortunately also translates into lower participation in the Union's research and innovation framework programme, Horizon 2020.
There are serious efforts deployed at national and European level to help to close the R&I divide. Many instruments provide direct investment to organisations from lagging regions and countries, such as the European Structural and Investment Funds, national grants, the Spreading Excellence and Widening Participation programme of Horizon2020 while others encourage networking such as the COST actions.
These European and national investments yield the most when beneficiaries have the necessary capabilities, adequate governance structure, and suitable science and HR policies. This call aims providing support in the health R&I domain to organisations from lower performing regions that are willing to carry out structural reforms to improve their R&I performance. The call builds on past efforts of the European Commission (especially the HCO-14 2014 and the HCO-08 2017 calls in H2020 SC1).
Link

Coordinating and supporting research on the human microbiome in Europe and beyond

Grant ID: SC1-HCO-17-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 1.5 - 2 million

Specific Challenge: Integration and application of metagenomics data from the human microbiome has shown large potential for personalised medicine approaches, although causal relationships and confounders are still largely unknown. Comparable information and details about microbiome composition and functionality in healthy citizen and patients are very valuable to complete the picture i.e. to better understand the healthy microbiome and to predict its development.
The number of European and international projects and initiatives is increasing but their results and data cannot be properly compared as they have different

underlying methods, standards and operating procedures. The International Human Microbiome Consortium (IHMC) as well as other current initiatives aim to strengthen international cooperation, to increase data comparability and to agree common standards, procedures and methods. There is a need to avoid having the same research carried out multiple times at different places and to better agree at European and at international level. This collaboration should increase coherence and data comparability to better exploit existing microbiome data and clinical information in a standardised way.
Link

Developing methodological approaches for improved clinical investigation and evaluation of high-risk medical devices

Grant ID: SC1-HCO-18-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 1 - 2 million

Specific Challenge:

- In May 2017, a new Regulation on medical devices, Regulation (EU) 2017/745 entered into force that will come into effect in spring 2020. This new Regulation sets forth reinforced rules for the generation of clinical evidence: for instance, clinical investigations for high-risk devices will be compulsory and the requirements regarding the clinical evaluation throughout the product lifetime are more stringent.
- Medical devices have particularities that make the conduct of clinical investigations difficult. Taking into account these particularities, there is a need for methodologies that enable to generate improved clinical evidence. New developments in medical technologies such as mHealth, artificial intelligence, and combination products, pose additional challenges and opportunities for developers to generate high-quality clinical evidence.
- Owing to rapid scientific progress and lack of knowledge on the regulatory frameworks among the scientific community, there is a need to raise awareness on new regulatory requirements in terms of clinical evidence. It is important to ensure a smooth transition from the former directive to the new regulatory framework, especially with regard to clinical evidence, by informing stakeholders involved in the clinical evaluation of high-risk medical devices (e.g. academic researchers, clinicians, manufacturers, notified bodies, contract research organisations).

These challenges can be addressed by developing and promoting methodological approaches, including alternative statistical methodologies, adapted to the specificities of high-risk medical devices. These methodological approaches will improve the robustness of clinical data needed at different phases of the product's lifetime, such as conformity assessment, post-market clinical follow-up, continuous clinical evaluation, post-market surveillance, and potentially relative effectiveness assessment.
Link

Reliable and accessible information on cell and gene-based therapies

Grant ID: SC1-HCO-19-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 1.5 - 2 million

Specific Challenge: Cell and gene-based therapies have the potential to treat many debilitating diseases and conditions. However, the pace of their clinical development does not meet public expectations. They face difficulties reaching patients because inter alia the complexity and costs of product development, regulatory hurdles and the non-harmonized procedures for reimbursements. In addition, there are concerns over patient safety due to the use of unproven treatments

Link

Coordination of clinical research activities of the European Reference Networks

Grant ID: SC1-HCO-20-2020

Deadline: 07 April 2020, 17:00 Brussels time

Budget: EUR 1.5 - 2 million

Specific Challenge: European Reference Networks (ERNs) have been established under the Directive on Patients' rights in cross-border health care in view of tackling complex or rare diseases and conditions that require highly specialised diagnostic tools and treatments. ERNs in collaboration with other European initiatives will gain major research potential due to their network structure bringing together highly specialised multidisciplinary expertise across Europe and access to patient populations of rare diseases and complex conditions that require highly specialised treatments. Realisation of this potential requires highly organised coordination among the 24 ERNs, which operate in 26 countries, over 300 hospitals and more than 900 health care units, and also with other Europe-led research collaborations beyond the networks, with all the other actors in the field of rare diseases research, especially the European Joint Programme on Rare Diseases. Support for coordination of the research aspects of ERNs is currently limited.

Link

AI for Genomics and Personalised Medicine

Grant ID: SC1-TDS-04-2020

Deadline: 22 April 2020, 17:00 Brussels time

Budget: up to **EUR 10 million**

Specific Challenge: Several national and regional initiatives already support the pooling of genomic and other health data to advance research and personalised medicine. The next step is to make use of the existing infrastructures and initiatives for the successful exploitation of genomic data to facilitate personalised medicine.
The challenge is to demonstrate the potential and benefits of AI technologies

for identifying new knowledge, support clinical research and decision making by linking Europe's relevant genomic repositories, while ensuring full compliance with data protection legislation and ethical principles.
Link

Personalised early risk prediction, prevention and intervention based on Artificial Intelligence and Big Data technologies

Grant ID: SC1-DTH-02-2020

Deadline: 22 April 2020, 17:00 Brussels time

Budget: EUR 4 - 6 million

Specific Challenge: The ageing of the population together with the rising burden of chronic conditions (incl. mental diseases) and multi-morbidity bring an ever increasing demand to strengthen disease prevention and integrate service delivery around people's needs for health and social care.
It is widely recognised that health systems must put more emphasis on prevention and adopt a person-centred rather than a disease-centred approach. The goal must be to overcome service fragmentation and to move towards integration and coordination of interventions along the continuum of care.
Personalised early risk prediction models, estimating the probability that a specific event occurs in a given individual over a predefined time, can enable earlier and better intervention, prevent negative consequences on a person's quality of life and thus result in improved individual health outcomes.
The challenge is to develop and validate these comprehensive models based on AI or other state of the art technologies for prediction, prevention and intervention using multiple available data resources and to integrate them in personalised health and care pathways that empower individuals to actively contribute to risk mitigation, prevention and targeted intervention.
Link

International cooperation in smart living environments for ageing people

Grant ID: SC1-DTH-04-2020

Deadline: 22 April 2020, 17:00 Brussels time

Budget: EUR 2 - 4 million

Specific Challenge: Demographic change and the ageing of the population create new heterogeneous challenges for society and, in particular, for ageing people. On top of the health-related age impairments such as poor health, cognitive impairment and frailty, ageing people are at risk of facing situations leading to potential social exclusion with considerable negative consequences for their independence, quality of life, those who care for them, and for the sustainability of health and care systems.
Digital solutions can play a key role when addressing these challenges and, especially those aimed at creating smart living environments for ageing people. For these to be successful, one necessary condition is to ensure users' acceptance, which in turns

requires bringing the users to the centre of the design. Moreover, these environments need to provide innovative user-friendly user interfaces such as voice-based interaction.
These challenges are shared by ageing populations beyond the EU and other countries are also looking into the potential of digital solutions to address them. In this context, there is a need to explore collaboration and cooperation with international efforts in this domain.
This action aims to address these challenges by developing smart living environments for ageing people, while strengthening relevant international collaboration in the area.
Link

Accelerating the uptake of computer simulations for testing medicines and medical devices

Grant ID: SC1-DTH-06-2020

Deadline: 22 April 2020, 17:00 Brussels time

Budget: EUR 6 - 8 million

Specific challenge: The development of medical devices and pharmaceutical products are associated with high costs. A new pharmaceutical product and its introduction into the market is estimated to cost today over 2 billion EUR, from which nearly 75% is spent at the late stages of the drug development process in the various phases of the clinical trials.
As biomedical knowledge increases and bioinformatics capability likewise grows, there is hope that greater predictive power may be obtained from individualised computer simulations used in in-silico medicine research, such as predictive toxicology and pharmacokinetics.
The adoption of individualised computer models and simulations to develop and assess drugs and devices , their translation into the clinic and penetration on the market of ICT solutions, depend on the trust of users (healthcare professionals and patients), the industry and investors and the competent authorities and regulatory bodies. The users need proofs of validation in the real clinical contexts.
The specific challenge of this call is accelerating the uptake of individualised computer simulations in the regulatory evaluation of medicines and/or medical devices to become closer to the market., Applicants will provide proofs of validation of computer modelling solutions that gain the trust of regulatory bodies for innovation, in order to, in collaboration with academic and industrial experts, develop the framework of standards, protocols and shared resources required to evaluate the safety and the efficacy of medical devices and/or medicines at the end of the drug development process.
Link

Scaling up innovation for active and healthy ageing

Grant ID: SC1-HCC-08-2020

Deadline: 22 April 2020, 17:00 Brussels time

Budget: EUR 1.5 - 2 million

Specific challenge: The European Commission has promoted scaling up of digital innovation for active and healthy

ageing both with research and innovation funding under Horizon 2020 and previous Framework Programmes and with its support for stakeholder partnerships like the European Innovation Partnership on Active and Healthy Ageing with its Regional Reference Sites.
In its Communication on "enabling the digital transformation of health and care in the Digital Single Market, empowering citizens and building a healthier society" (COM/2018/233 final) the Commission sets out a number of measures for the large-scale use of digital tools for citizen empowerment and person-centred care which are of high relevance for active and healthy ageing. These measures depend on active contributions from local and regional ecosystems, stakeholder groups and organisations including industry, civil society, academia and public administration.
The specific challenge is to facilitate active contributions (in the form of institutional, technological and behavioural change) from all stakeholders to continue on a path towards large-scale deployment of innovative solutions for active and healthy ageing
Link

Supporting deployment of eHealth in low and lower middle income countries in Africa for better health outcomes

Grant ID: SC1-HCC-09-2020

Deadline: 22 April 2020, 17:00 Brussels time

Budget: EUR 1.5 - 2 million

Specific challenge: E-Health can contribute to better, more accessible and more efficient health and care services, in particular to remote populations and underserved communities. E-Health and mHealth technologies can only be successful, if they are supported by national governments, who have established e-Health policies and strategies and demonstrate strong ownership of the national e-Health programme. E-Health programmes will only achieve their objectives, if they are adapted to country needs, are citizen-centered and sustainable through sound public finance management. These pre-requisites will impact on the quality and accessibility of such e-Health services and their sustainability, usability, data security and interoperability, privacy and ethics issues.
Access to one's own health data and high-quality mHealth services in real-life environment are still a challenge because of a lack of government ownership, e-Health policies including enabling regulations, a sustainable and trustable infrastructure, and digital literacy.
Coordination and support is needed for taking stock of and further developing strategic partnerships on E-Health deployment together with low and middle income countries and regions in Africa with the aim to improve the health of the citizens.
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European Research Council (ERC)

"Scientific excellence is the sole criterion on the basis of which ERC frontier research grants are awarded"

Consolidator Grant (ERC-2020-CoG)

Deadline: 04 February 2020

Budget: up to EUR 2 million for 5 years

Researchers with 7-12 years of experience since completion of PhD, a scientific track record showing great promise and an excellent research proposal in **any field of research**.
Applications for an ERC grant must be submitted by a single Principal Investigator (PI) in conjunction with and on behalf of their Host Institution. Grants are awarded to the Host Institution with the explicit commitment that this institution offers appropriate conditions for the Principal Investigator independently to direct the research and manage its funding for the duration of the project.
ERC grants support projects carried out by an individual researcher who can employ researchers of any nationality as team members.
Link

Proof of Concept (ERC-2020-PoC)

Deadline: 21 January 2020

The ERC Proof of Concept funding is made available only to those who already have an ERC award to establish proof of concept of an idea that was generated in the course of their ERC-funded projects.

The activities to be funded shall draw substantially on this scientifically excellent ERC-funded research. However the additional funding is not aimed at extending the original research or predominantly concerned with overcoming obstacles to practical application.
The funding will cover activities at the very early stage of turning research outputs into a commercial or socially valuable proposition, i.e. the initial steps of pre-competitive development.
Link

Starting Grant (ERC-2020-StG)

Upcoming (probably July 2020)

Budget: up to EUR 1.5 million for 5 years

Researchers of any nationality with 2-7 years of experience since completion of PhD, a scientific track record showing great promise and an excellent research proposal in **any field of research**.
Applications for an ERC grant must be submitted by a single Principal Investigator (PI) in conjunction with and on behalf of their Host Institution (HI). Grants are awarded to the HI with the explicit commitment that this HI offers appropriate conditions for the PI independently to direct the research and manage its funding for the duration of the project.
ERC grants support projects carried out by an individual researcher who can employ researchers of any nationality as team members.
Link

Advanced Grant (ERC-2020-AdG)

Upcoming (probably May 2020)

Budget: up to EUR 2.5 million for 5 years

Applicants for the ERC Advanced Grants are expected to be **active researchers** who have **a track-record of significant research achievements in the last 10 years** and an excellent research proposal in **any field of research**.
The Principal Investigators **should be exceptional leaders in terms of originality and significance of their research contributions**. No specific eligibility criteria with respect to the academic requirements are foreseen.
Applications for an ERC grant must be submitted by a single Principal Investigator (PI) in conjunction with and on behalf of their Host Institution. Grants are awarded to the Host Institution with the explicit commitment that this institution offers appropriate conditions for the Principal Investigator independently to direct the research and manage its funding for the duration of the project.
ERC grants support projects carried out by an individual researcher who can employ researchers of any nationality as team members.
Link

Synergy Grant (ERC-2020-SyG)

Upcoming (probably July 2020)

Budget: up to EUR 10 million for 6 years

A **group of two to maximum four Principal Investigators (PIs)** – of which one will be designated as the corresponding PI (cPI) – working together and **bringing different skills and resources to tackle ambitious research problems**. PIs must present an **early achievement track-record or a ten-year track-record**, whichever is most appropriate.
Proposals will be evaluated on the sole criterion of scientific excellence which, in the case the ERC Synergy Grants, takes on the additional meaning of outstanding intrinsic synergetic effect.
Link

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Human Frontier Science Program (HFSP)

Research Grant

Deadlines:
Compulsory initiation of a letter of Intent by obtaining a LIXXXX/2021 reference number by March 19th, 2020

March 30th, 2020 for submission of the Letter of Intent

Budget: up to USD 450000 per year
(3 years support for 2-4 member teams)

HFSP Research Grants support innovative basic research into fundamental biological problems with emphasis placed on novel and interdisciplinary approaches that involve scientific exchanges across national and disciplinary boundaries.
Projects are expected to be at the frontiers of knowledge and therefore entail risk. Participation of scientists from disciplines outside the traditional life sciences such as biophysics, chemistry, computational biology, computer science, engineering,

mathematics, nanoscience or physics is recommended because their contributions have made biological research increasingly quantitative and because such collaborations have opened up new approaches for understanding the complex structures and regulatory networks that characterize living organisms, their evolution and interactions.
Research grants are provided for teams of scientists from different countries who wish to combine their expertise in innovative approaches to questions that could not be answered by individual laboratories. Preliminary results are not required and applicants are expected to develop new lines of research through the research collaboration.
Applied applications, including medical research typically funded by national medical research bodies, will be deemed ineligible.
Two types of Research Grant are available:
Young Investigators' Grants: Awarded to teams of researchers, all of whom are within the first five years after obtaining an independent laboratory (e.g. Assistant Professor, Lecturer or equivalent). Applications for Young Investigators' Grants will be reviewed in competition with each other independently of applications for Program Grants;
Program Grants: Awarded to teams of independent researchers at any stage of their careers. The research team is expected to develop new lines of research through the collaboration. Up to $450,000 per grant per year may be applied for. Applications including independent investigators early in their careers are encouraged.
Link

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Ministero degli Affari Esteri e delle Cooperazione Internazionale

Italy-Brazil
Joint Science and Technology Cooperation
Call for Joint Project Proposal

Deadline: January 24th, 2020

The present call concerns joint research projects of "Particular Relevance", where research activities are co-founded by both Parties. In Italy, this scheme requires about 50% co-funding by the proposing research institution.
Projects may be submitted in one of the following priority research areas:
1. Artificial Intelligence
2. Basic Sciences (Chemistry, Physics and Mathematics)
3. Communicable diseases
4. Distributed power generation from renewable sources
5. Nutrition and metabolic diseases
6. Precision Agriculture
7. Space science
8. Sustainable production and use of strategic minerals.

Link