UNIVERSITÀ
degli STUDI di MESSINA

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

BULLETIN
FUNDS FOR SCIENTIFIC RESEARCH
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a cura della dott.ssa Lucrezia Auditore
(Resp. U.Op. Ricerca BIOMORF)

HORIZON Europe Framework Program (HORIZON)

Call
EIC Transition 2022
(HORIZON-EIC-2022-TRANSITION-01)

EIC Transition Challenge: RNA-based therapies and diagnostics for complex or rare genetic diseases
Topic ID: HORIZON-EIC-2022-TRANSITIONCHALLENGES-03

Deadlines:
04 May 2022, 17 Brussels time
28 September 2022, 17 Brussels time

Expected Outcome: EIC Transition aims at maturing both your technology and business idea thus increasing its technology and market readiness. The expected outcomes of an EIC Transition project are a) a technology that is demonstrated to be effective for its intended application and b) a business model, its initial validation and a business plan for its development to market. It is also expected that the intellectual property generated by the EIC Transition project is formally protected in an adequate way.
Objective: Proposals submitted to this EIC Transition Challenge call should focus on one or more of the following specific objectives:
- advance, beyond the state-of-the-art, RNA delivery methods, including robust mRNA formulations, that would enable effective and safe delivery of mRNA into the cells;
- design, develop and preclinical validate of novel miRNAs (miRNA lncRNA, tRNA or siRNA-based) therapies for complex or rare genetic diseases;
- develop and validate novel RNA-based diagnostics and RNA-based predictive biomarkers that would allow for early and more accurate diagnosis and for favourable or non- post-treatment prognosis, respectively.
Scope: EIC Transition funds innovation activities that go beyond the experimental proof of principle in laboratory. It supports both the maturation and validation of a novel technology from the lab to the relevant application environments (by making use of prototyping, formulation, models, user testing or other validation tests) as well as explorations and development of a sustainable business case and business model towards commercialisation.
Expected Impact: The starting point in the project should be a preliminary technology or protocol of an RNA-based therapy for complex or rare genetic diseases with unmet medical needs that demonstrates, in a lab or preclinical context, the essential features that underpin the disruptive nature of the innovation (TRL 3-4). The endpoint in the project should be a completely functional version of the technology suitable for clinical validation (TRL5-6), supported by a sound and

implementable commercialisation/ exploitation strategy.
Proposals are expected to contribute to at least one of the following outcomes:
- novel technological solutions leading to more effective and safer RNA delivery methods applicable to a wide range of non-infectious diseases;
- utilisation of RNAs to molecularly classify sub-types of different solid tumours that would allow for stratification of patients leading to more effective and precise treatments in complex diseases with high-unmet medical needs;
- novel and sound ideas for the development and validation of RNA-based therapeutic platforms and drugs;
all the projects should lead to a sufficiently mature and sound data for being ready to be up taken to the (pre-) clinical trials.
Link

Next generation of scientific instrumentation, tools and methods (2022)
(HORIZON-INFRA-2022-TECH-01)
TOPIC ID: HORIZON-INFRA-2022-TECH-01-01

Deadline date: 20 April 2022, 17 Brussels time

Expected Outcome - Project results are expected to contribute to several of the following expected outcomes:
- enhanced scientific competitiveness of European research infrastructures foundations for the development of innovative companies;
- increase of the technological level of industries through the co-development of advanced technologies for research infrastructures and creation of potential new markets;
- integration of research infrastructures into local, regional and global innovation systems.
Scope: The aim of this topic is to deliver innovative scientific instrumentation, tools and methods, which advance the state-of-art of European RIs, and show transformative potential in RIs operation. The related developments, which underpin the provision of improved and advanced services, should lead research infrastructures to support new areas of research and/or a wider community of users, including industrial users.
Cutting-edge technologies will also enhance the potential of RIs to contribute addressing EU policy objectives and socio-economic challenges.
Proposals should address all following aspects:
- Research and development of new scientific instrumentation, tools and methods for research infrastructures taking into due account resource efficiency (e.g. energy consumption) and environmental (including climate-related) impacts;
- their technology validation and prototyping;
- training of RI staff for the operation and use of these new solutions;
- the innovative potential for industrial exploitation of the solutions and/or for the benefits of the society.
Consortia must be built around a leading core of at least 3 world-class research infrastructures, being ESFRI infrastructures, European Research Infrastructures Consortia (ERICs) and/or other world-class research infrastructures of European interest and can include a

wider set of RIs. Other technological partners, including industry and SMEs, should also be involved, thus promoting innovation and knowledge sharing through co-development of new technical solutions for research infrastructures.
Proposals may include PCP subcontracting activities as described in part H of the General Annexes of the Work Programme. This option encourages the use of public procurements for the competitive development of new specific solutions, whilst opening market opportunities for industry and researchers active in Europe. By establishing the procurement process in consecutive phases, the PCP activity can support the development of competing designs, prototypes, and solution testing. This ensures that investment risks do not prevent tackling specific scientific and technological issues, and allows to approach a problem from different angles and to test different solutions.
In this topic the integration of the gender dimension (sex and gender analysis) in research and innovation content is not a mandatory requirement.
Proposals for topics under this destination should set out a credible pathway to contributing to one or several of the following impacts:
- Enhanced global competitiveness and technological excellence of Europe in an extremely fast-moving environment through investments into the development, of forward-looking technical instruments and tools for European RIs.
- Enhanced competitiveness of European industry through co-development with industrial actors of advanced RI technologies and technology transfer;
- Opening up of new areas of research and development of new industrial applications/products;
- Development of skills of RI staff aligned with the advancements of the RI technologies;
- Transdisciplinarity, cross-fertilisation and a wider sharing of knowledge and technologies between academia and industry;
- Wider use of AI in research and enhanced data-based research across Europe.
Link

Call
Digital and emerging technologies for competitiveness and fit for the green deal
(HORIZON-CL4-2022-DIGITAL-EMERGING-02)

2D materials-based devices and systems for biomedical applications (RIA)
TOPIC ID: HORIZON-CL4-2022-DIGITAL-EMERGING-02-19

Planned opening date: 16 June 2022
Deadline date: 16 November 2022, 17 Brussels time

Expected Outcome: Proposal results are expected to contribute to the following expected outcomes:
- New technology solutions exploiting the unique properties of 2D materials (2DM) that would reduce cost and increase the efficacy of diagnostics or therapies, or provide new diagnostics or therapies for which there is currently no solution. It would strengthen Europe's industrial position in, early diagnostics, disease prediction and prevention, disease

monitoring and reducing hospitalization time.
Scope: Proposals should build on the multi-functionality allowed by 2DMs and demonstrate the advantages of combining e.g. biocompatibility, chemical stability, (bio-)sensing and actuating, and integration with flexible electronic technologies, in addition to versatile surface chemistry (for interface with biology) to allow continuous health monitoring and built-in pharmacological interventions.
Emphasis of the proposals should have a translational perspective, addressing how the devices and systems will reach the clinic, preferably led by European industry. Furthermore, the proposals should bring together multidisciplinary teams including engineers, material scientists, pharmacologists, biologists, clinicians, patients, and ethics experts. Potential application areas include: engineering & bioengineering of biochemical or bioelectronic diagnostics or therapeutic devices and platforms; sensors for digital health; electronics for brain-computer interfaces, taking advantage of flexible devices; medical imaging in combination with implantable devices (e.g. MRI); graphene for drug delivery of therapeutics (e.g. for neurological disorders). The safety aspects of the proposed technologies should be given proper consideration.
Proposals should include activities aiming at facilitating future exploitation of results.
Proposals should aim at demonstrating by the end of the project fully functional prototypes operating in relevant environment conditions.
The proposal should also cover the contribution to the governance and overall coordination of the Graphene Flagship initiative.
Link

Call
EU Prize for Women Innovators
(HORIZON-EIC-2022-WomenInnovatorsPrize)
TOPIC ID: HORIZON-EIC-2022-RisingInnovatorsPrize

Deadline: 18 August 2022, 17 Brussels time

Budget: 50000,00 EUR

Scope: The opportunities created by novel technologies and disruptive innovations promise to deliver the fair and sustainable recovery Europe needs. But Europe risks missing out on these opportunities if half its population is overlooked as a source of innovation and creative talent.
The EU Prize for Women Innovators celebrates the women entrepreneurs behind game-changing innovations. In doing so, the EU seeks to raise awareness of the need for more women innovators and create role models for women and girls everywhere.
The Prize is awarded to the women who have created the largest impact on the EU innovation ecosystem by transforming ideas into new and advanced products and services to benefit people and planet.
The Prize is launched and managed by the Agency, and the winners are chosen by an independent expert jury.
There are two prize categories: Women Innovators and Rising Innovators. In the first category, three prizes of EUR 100 000 each are awarded to the three highest-ranked applications. In the second

category, three prizes of EUR 50 000 are awarded to the three highest-ranked applications from promising 'Rising Innovators' under the age of 35.
Expected Impact: The prize will boost public awareness of the potential, importance and contribution of women to the EU innovation ecosystem and create strong role models, inspiring more women to become innovators themselves.
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Marie Skłodowska-Curie Actions (MSCA)

MSCA Postdoctoral Fellowships 2022
TOPIC ID: HORIZON-MSCA-2022-PF-01-01

Opening date: 14 April 2022
Deadline: 14 September 2022, 17 Brussels time

The goal of MSCA Postdoctoral Fellowships is to enhance the creative and innovative potential of researchers holding a PhD and who wish to acquire new skills through advanced training, international, interdisciplinary and inter-sectoral mobility. MSCA Postdoctoral Fellowships will be open to excellent researchers of any nationality. The scheme also encourages researchers to work on research and innovation projects in the non-academic sector and is open to researchers wishing to reintegrate in Europe, to those who are displaced by conflict, as well as to researchers with high potential who are seeking to restart their careers in research.
Through the implementation of an original and personalised research project, MSCA Postdoctoral Fellowships aim to foster excellence through training and mobility and to equip researchers with new skills and competences in order to identify solutions to current and future challenges. Postdoctoral researchers are encouraged to reach out to society at large to make the results of their research visible to citizens.
Expected impact - Proposals under this Action should contribute to the following expected impacts:
- Enhance the creative and innovative potential of researchers holding a PhD and wishing to diversify their individual competences and skills through advanced training, international, interdisciplinary and inter-sectoral mobility while implementing excellent research projects across all sectors of research;
- Strengthen Europe's human capital base in R&I with better trained, innovative and entrepreneurial researchers;
- Enhance the quality of R&I contributing to Europe's competitiveness and growth;
- Contribute to Europe's attractiveness as a leading destination for R&I and for good working conditions of researchers;
- Facilitate knowledge transfer and brain circulation across the ERA;
- Foster the culture of open science, innovation and entrepreneurship.
Project results are expected to contribute to the following outcomes:
For supported postdoctoral fellows:
- Increased set of research and transferable skills and competences, leading to improved employability and career prospects of MSCA postdoctoral fellows within academia and beyond;
- New mind-sets and approaches to R&I work forged through interdisciplinary, inter-sectoral and international experience;
- Enhanced networking and communication capacities with scientific

peers, as well as with the general public that will increase and broaden the research and innovation impact.
For participating organisations:
- Increased alignment of working conditions for researchers in accordance with the principles set out in the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers;
- Enhanced quality and sustainability of research training and supervision;
- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I capacity and output among participating organisations; better transfer of knowledge;
- Regular feedback of research results into teaching and education at participating organisations.
Scope: Fellowships will be provided to excellent researchers, undertaking international mobility either to or between EU Member States or Horizon Europe Associated Countries, as well as to non-associated Third Countries. Applications will be made jointly by the researcher and a beneficiary in the academic or non-academic sector.
Postdoctoral Fellowships either can take place in Europe (i.e. in an EU Member State or a Horizon Europe Associated Country) or in a Third Country not associated to Horizon Europe:
- European Postdoctoral Fellowships are open to researchers of any nationality who wish to engage in R&I projects by either coming to Europe from any country in the world or moving within Europe. The standard duration of these fellowships must be between 12 and 24 months.
- Global Postdoctoral Fellowships are open to European nationals or long-term residents[1] who wish to engage in R&I projects with organisations outside EU Member States and Horizon Europe Associated Countries. These fellowships require an outgoing phase of minimum 12 and maximum 24 months in a non-associated Third Country, and a mandatory 12-month return phase to a host organisation based in an EU Member State or a Horizon Europe Associated Country.
Link

MSCA Doctoral Networks 2022
TOPIC ID: HORIZON-MSCA-2022-DN-01-01

Opening date: 03 May 2022
Deadline: 15 November 2022, 17 Brussels time

The MSCA Doctoral Networks aim to train creative, entrepreneurial, innovative and resilient doctoral candidates, able to face current and future challenges and to convert knowledge and ideas into products and services for economic and social benefit.
The MSCA Doctoral Networks will raise the attractiveness and excellence of doctoral training in Europe. They will equip researchers with the right combination of research-related and transferable competences and provide them with enhanced career perspectives in both the academic and non-academic sectors through international, interdisciplinary and inter-sectoral mobility combined with an innovation-oriented mind-set.
Expected impact - Proposals under this Action should contribute to the following expected impacts:

- Strengthen Europe's human capital base in R&I by training highly-skilled doctoral candidates;
- Improve the attractiveness of researchers' careers notably through better working and employment conditions of doctoral candidates in Europe;
- Enhance talent and knowledge circulation across the R&I landscape, through inter-sectoral, interdisciplinary and international mobility;
- Increase Europe's attractiveness as a leading research destination;
- Enhance the quality of R&I contributing to Europe's sustainable competitiveness;
- Establish sustainable collaboration between academic and non-academic organisations;
- Foster the culture of open science, innovation and entrepreneurship.

Link

MSCA Staff Exchanges 2022
(HORIZON-MSCA-2022-SE-01)
TOPIC ID: HORIZON-MSCA-2022-SE-01-01

Planned opening date: 06 October 2022
Deadline date: 08 March 2023, 17 Brussels time

Expected Outcome - Project results are expected to contribute to the following outcomes:
For staff members
- Increased set of research and transferable skills and competences, leading to improved employability and career prospects within and outside academia;
- More knowledge and innovative ideas converted into products, processes and services;
- More entrepreneurial mind-sets, testing new and innovative ideas;
- Increased international exposure leading to extended networks and opportunities;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.

For participating organisations
- Innovative ways of cooperation and transfer of knowledge between sectors and disciplines;
- Strengthened and broader international, interdisciplinary and inter-sectoral collaborative networks;
- Boosted R&I capacity.

Scope: MSCA Staff Exchanges involve organisations from the academic and non-academic sectors (including SMEs) from across the globe.
Support is provided for international, inter-sectoral and interdisciplinary mobility of R&I staff leading to knowledge transfer between participating organisations.
Mobility through secondments - The organisations constituting the partnership contribute directly to the implementation of a joint R&I project by seconding and/or hosting eligible staff members. Such a project must explore activities that can be based on previous work but should go beyond and generate or strengthen long-term collaborations. Secondments must always take place between legal entities independent from each other.
MSCA Staff Exchanges can address three dimensions of mobility: inter-sectoral, international and interdisciplinary. While exchanges between organisations within EU Member States and Horizon Europe Associated Countries should mainly be inter-sectoral, same-sector exchanges are

also possible under the condition that they are interdisciplinary. Interdisciplinarity is not required for same-sector exchanges with non-associated Third Countries.
Secondments between institutions established in non-associated Third Countries or within the same EU Member State or Horizon Europe Associated Country are not eligible.
The collaborative approach of MSCA Staff Exchanges should exploit complementary competences of the participating organisations and create synergies between them. The secondments should be essential to achieve the joint project's R&I activities. The project should inter alia enable networking activities and the organisation of workshops and conferences, to facilitate sharing of knowledge and testing of innovative approaches for specific R&I topics.
Skills' development - For participating staff members, the project should offer new skills acquisition and career development perspectives. Participating organisations must ensure that the seconded staff are adequately mentored.
Link

MSCA COFUND 2022
(HORIZON-MSCA-2022-COFUND-01)
TOPIC ID: HORIZON-MSCA-2022-COFUND-01-01

Planned opening date: 11 October 2022
Deadline date: 09 February 2023, 17 Brussels time

Expected Outcome - Projects results are expected to contribute to the following outcomes:
For supported doctoral candidates or postdoctoral researchers
- Deeper and more diverse set of research-related and transferable skills and competences;
- Improved employability and career prospects both within academia and beyond;
- New mind-sets and approaches to R&I work forged through interdisciplinary and inter-sectoral experience;
- Enhanced networking and communication capacities with scientific peers, as well as with the general public that will increase and broaden the research and innovation impact.
For participating organisations
- Enhanced quality and sustainability of research training;
- Increased global attractiveness, visibility and reputation of the participating organisation(s);
- Stronger R&I capacity and output among participating organisations;
- Increased contribution of the participating organisations to the local, regional and/or national socio-economic ecosystems;
- Regular feedback of research results into teaching and education at participating organisations.
Scope: Applicants submit proposals for new or existing doctoral or postdoctoral programmes with an impact on the enhancement of human resources in R&I at regional, national or international level. These programmes will be co-funded by MSCA COFUND.
Proposed programmes can cover any research disciplines ("bottom-up"), but exceptionally can also focus on specific disciplines, notably when they are based on national or regional Research and Innovation Strategies for Smart Specialisation (RIS3 strategies). In this

case, the range of covered disciplines should allow reasonable flexibility for the researchers to define their topic.
Funding synergies with Cohesion policy funds and the Recovery and Resilience Facility (RRF) are strongly encouraged.
A Career Development Plan must be jointly established by the supervisor and each recruited researcher upon recruitment. In addition to research objectives, this Plan comprises the researcher's training and career needs, including training on transferable skills, teaching, planning for publications and participation in conferences and events aimed at opening science and research to citizens. The Plan must be established at the beginning of the recruitment and should be revised (and updated where needed) within 18 months.
COFUND takes the form of:
A) Doctoral programmes
Doctoral programmes offer research training activities to allow doctoral candidates to develop and broaden their skills and competences. They will lead to the award of a doctoral degree in at least one EU Member State or Horizon Europe Associated Country. The training activities should be based on the EU Principles on Innovative Doctoral Training.
Substantial training modules, including digital ones, addressing key transferable skills and competences common to all fields and fostering the culture of Open Science, innovation and entrepreneurship will be supported. They will include, inter alia, training on the use of collaborative tools, opening access to publications and to research data, FAIR data management, public engagement and citizen science.
On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Collaboration with a wider set of associated partners, including from the non-academic sector, will be positively taken into account during the evaluation. These organisations may provide hosting or secondment opportunities or training modules in research or transferable skills.
Particular attention is paid to the quality of supervision and mentoring arrangements as well as career guidance. The selection procedure for doctoral candidates must be open, transparent and merit-based, in line with the Code of Conduct for the Recruitment of Researchers. The vacancy notice (to be widely advertised internationally, including on the EURAXESS website) must include the minimum gross salary (not including employer's social contributions) offered to the researcher.
B) Postdoctoral Programmes
Postdoctoral Programmes fund individual advanced research training and career development fellowships for postdoctoral researchers. The programmes should offer training to develop key transferable skills and competences common to all fields, foster innovation and entrepreneurship and promote and (where appropriate) reward Open Science practices (open access to publications and to research data, FAIR data management, public engagement and citizen science, etc.).
Postdoctoral Programmes should have regular selection rounds following fixed deadlines or regular cut-off dates, allowing fair competition between researchers. The selections should be open, widely advertised (including on the EURAXESS website), competitive, merit-based and with a transparent international peer review, in line with the Code of Conduct for the Recruitment of Researchers. The

vacancy notice must include the minimum gross salary (not including employer's social contributions) offered to the postdoctoral researcher.
On top of compulsory international mobility, applicants are encouraged to include elements of cross-sectoral mobility and interdisciplinarity into their programmes. Researchers will be able to freely choose a research topic and the appropriate organisation to host them, fitting their individual needs.
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European Commission Funding and Tenders Opportunities

Call for proposals on promoting mental health
EU4H-2022-PJ-03

Deadline date: 24 May 2022 17:00:00 Brussels time
Link

Better understanding of the impact of risk factors and health determinants on the development and progression of cancer
HORIZON-MISS-2021-CANCER-02-03

Deadline date: 26 April 2022 17:00:00 Brussels time

Link

Develop new methods and technologies for cancer screening and early detection
HORIZON-MISS-2021-CANCER-02-01

Deadline date: 26 April 2022 17:00:00 Brussels time
Link

Federated European infrastructure for cancer images data
DIGITAL-2022-CLOUD-AI-02-CANCER-IMAGE

Deadline date: 17 May 2022 17:00:00 Brussels time
Link

Scaling up multi-party computation, data anonymisation techniques, and synthetic data generation
HORIZON-HLTH-2022-IND-13-02

Deadline date: 21 April 2022 17:00:00 Brussels time
Link

Optimising effectiveness in patients of existing prescription drugs for major diseases (except cancer) with the use of biomarkers
HORIZON-HLTH-2022-TOOL-11-01

Deadline date: 21 April 2022 17:00:00 Brussels time
Link

Implementing digital services to empower neuroscience research for health and brain inspired technology via EBRAINS
HORIZON-INFRA-2022-SERV-01-01

Opening date: 01 June 2022
Deadline date: 21 September 2022 17:00:00 Brussels time
Link

Better understanding of citizens' behavioural and psychological reactions in the event of a disaster or crisis situation

HORIZON-CL3-2022-DRS-01-04

Opening date: 30 June 2022
Deadline date: 23 November 2022 17:00:00 Brussels time

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