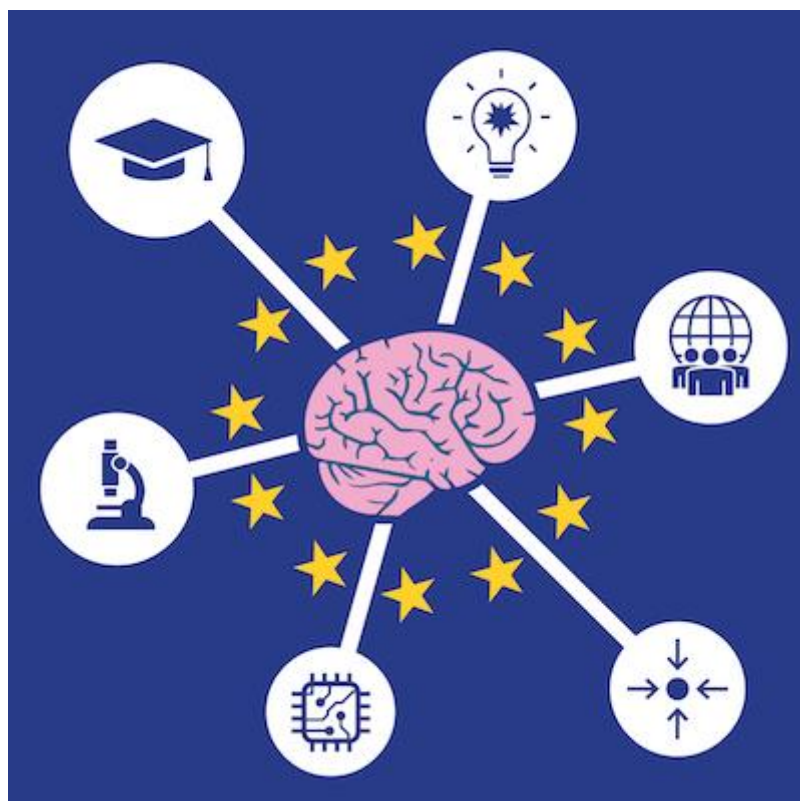


Neurotech^{EU}

The European University of Brain and Technology



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[Funding opportunities reports, 2]

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Executive summary

The European University of Brain and Technology (Neurotech^{EU}) aims to be the backbone of this new vision by bringing together eight leading universities, 250+ partner research institutions, companies, societal stakeholders, cities, and non-governmental organizations to shape education and training for all segments of society and in all regions of Europe.

To ensure the financing of the activities during the implementation period and the sustainability of Neurotech^{EU} beyond the pilot years, partners are committed to a continuous search for top-up funding sources.

In the first part, this document summarizes the actions already taken by the consortium in relation to funding. In the second part, the document outlines future funding opportunities.





1. Short summary of the Neurotech^{EU}

From health & healthcare to learning & education, Neuroscience has a key role in addressing some of the most pressing challenges that we face in Europe today.

Whether the challenge is the translation of fundamental research to advance state of the art in prevention, diagnosis, or treatment of brain disorders or explaining the complex interactions between the brain, individuals, and their environments to design novel practices in cities, schools, hospitals, or companies, brain research is already providing solutions for society at large.

There has never been a branch of study that is as inter-and multi-disciplinary as Neuroscience. From the humanities, social sciences, and law to natural sciences, engineering, and mathematics, all traditional disciplines in modern universities have an interest in brain and behaviour as a subject matter. Neuroscience has a great promise to become an applied science, to provide brain-centred or brain-inspired solutions that could benefit the society and kindle a new economy in Europe. The European University of Brain and Technology (Neurotech^{EU}) aims to be the backbone of this new vision by bringing together eight leading universities, 250+ partner research institutions, companies, societal stakeholders, cities, and non-governmental organizations to shape education and training for all segments of society and in all regions of Europe.

Innovation and societal impact will be instilled as integral parts of education and training. upon extensive consultation, including with 3500+ students, 200+ researchers, companies, and societal stakeholders, we have identified eight challenges that advancements in Neuroscience and Neurotechnology can help to solve problems facing the society in:

- (1) health & healthcare,
- (2) learning & education,
- (3) nutrition & cognition,
- (4) biological & artificial intelligence,
- (5) neurotechnology & big data,
- (6) public & ethics,
- (7) economy & ecology, and
- (8) smart cities.

We will coordinate our education and innovation efforts mainly, but not exclusively in these domains to ensure education, research, innovation, and societal impact collectively shape our joint efforts.

To ensure the financing of the activities during the implementation period and the sustainability of Neurotech^{EU} beyond the pilot years, partners are committed to a continuous search for top-up funding sources. The reports on the mapping of the funding opportunities will:

- summarize the proposals the Alliance applied for jointly and
- support the partners of the Alliance in the planning of their joint activities; in the strengthening of their multi- and interdisciplinary cooperation among each other and with the Associated Partners; and by the financial stability the active participation of the students, researchers, associated partners, innovators, scholars, and the administrative staff is ensured.

Not only the development of mobility and pedagogies, international cooperation, summer and winter schools, consortia funding, RISE exchange programme, other Erasmus+ funding programmes (e.g., Knowledge Alliance), Lifelong Learning activities can be in the interest of the consortia, but joint research and innovation projects and newly identified opportunities, too. All these resources will be used solely for the continuation of the European University of Brain and Technology.





This document is to be presented to the Board of Governors for general distribution and involvement of the relevant actors and for action planning.

A copy will be made available on the Neurotech^{EU} portal.

2. Actions taken by the partnership

After (moreover, even before) the official start of the project, the partners were active in scouting the proposals to top up the possibilities served by the Neurotech^{EU}.

Up to now, the Neurotech^{EU} Alliance or some members of it were supported for the Neurotech^{RI}, the CoLEARN, DREAM, and the ERA-NET Neurodevelopmental Disorders.

The short summaries give more information on these projects.

2.1. CoLEARN (BOUN, RU, UBO)

The COVID-19 global pandemic has dramatically changed and created significant challenges for higher education. Most notably, higher education faculty members were expected to transition their face-to-face classes to a remote/online modality almost overnight. This urgency highlighted the need for faculty to develop a more sophisticated set of digital competencies to adapt to the changing demands of teaching at the universities. The typical /traditional approach to support faculty members in developing such digital competencies has been with training programs focusing primarily on developing technological skills or sharing digital resources created by experts. While such means of professional support are essential, they are not sufficient for developing advanced levels of digital competencies outlined by the EU's digital competence for educators (DigCompEdu) framework. It is necessary to have educators work on significant design problems and provide appropriate technological and pedagogical scaffolding to support their continuous professional development, especially given the rapidly changing nature of digital technologies (Koehler, Mishra, & Yahya; 2007; Putnam & Borko, 2000).

Professional learning communities, which afford the co-construction of professional knowledge, are considered very important for professional development and growth (Stoll & Louis, 2007). Online collaborative learning communities allow educators to focus on mutually significant professional problems and develop collaborative solutions irrespective of location and physical distance (Schlager & Fusco, 2003). More specifically, collaborative professional spaces can facilitate developing adaptive responses to the emerging educational needs in the COVID-19 and post-COVID era and developing digital competencies as a by-product of collaboration. However, it is essential to provide the necessary technological and pedagogical support to faculty to establish and sustain such collaborative communities. The primary purpose of this project is to develop higher education faculty's digital competencies by supporting the collaborative design of online courses (or course modules) utilizing and testing the DREAM digital environment.

The project brings together three of the founding universities of Neurotech^{EU}, Bogazici University (CoLEARN; lead applicant), Radboud University (Beneficiary), and the University of Bonn (Beneficiary). The partners will recruit faculty as participants in their universities, inviting a range of disciplines. The project team will design and utilize the pedagogical and technological support necessary to create and sustain collaboration among faculty for collaborative course design and establishing professional networks. The pedagogical support will be based on the EU DigCompEdu digital competence framework. The technological space that will allow collaboration and course management will be implemented as part of the digital university infrastructure of the Neurotech^{EU}. The courses jointly created by the faculty will be offered to their students, whose learning is the ultimate goal for all educational projects. All the digital resources and course materials will become open educational resources at the end of the project and be translated into local languages for broader impact.



After the test case of an integrated platform for collaboration, course design, and management, this project may open up new possibilities for offering joint classes or degrees among universities. Once cooperation agreements are made, as suggested by the European Commission, universities may begin to co-design whole study programs whose coursework is distributed across different nations' HEIs.

The proposal was submitted to the Erasmus+ Digital Education Readiness Call on Oct 29, 2020, the application was supported, but the implementation was terminated in Nov 2021.

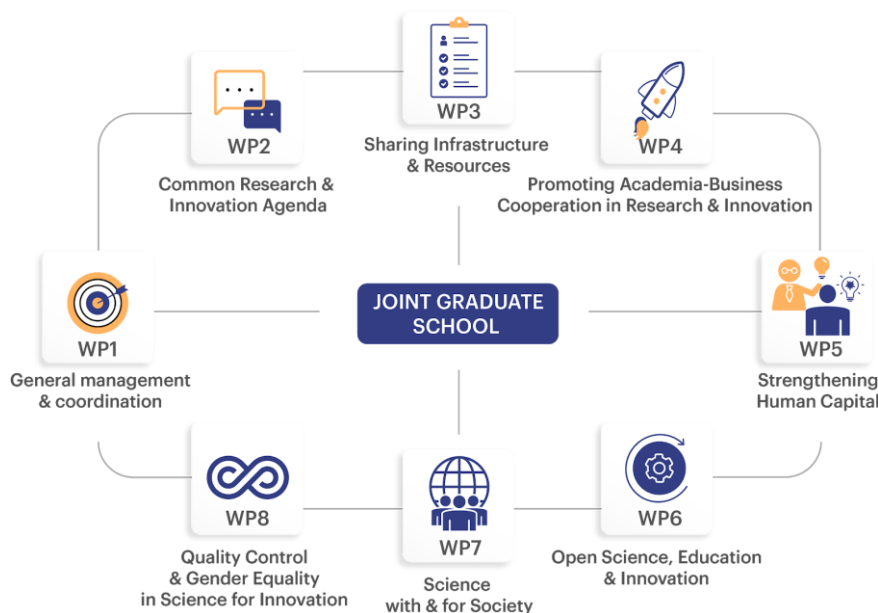
2.2. Neurotech Research and Innovation (Neurotech^{RI})

Neurotech^{RI} will develop an actionable strategy and a sustainable plan for multi-institutional research, development, and innovation. We propose a test-bed for implementation and measurable impact.

Neuroscience has a great promise to become an applied science, to provide brain-centred or brain-inspired technologies and products that could benefit the masses and kindle a new economy in Europe. Neurotech^{RI}, an initiative of the founding universities of the European University of Brain and Technology (Neurotech^{EU}), aims to be the backbone of this new vision by developing an actionable, integrated, and long-term joint strategy for research and innovation. The two initiatives, Neurotech^{EU} and Neurotech^{RI}, collectively offer a transformative framework for education, research, and innovation by network universities and the universities of the future.

By bringing together eight leading universities across the four corners of Europe, 30+ cross-sectoral associates in Neurotech^{RI} and 250+ in Neurotech^{EU} and working together in a structured way, we aim to transform cooperation in research and innovation across the Alliance, establish, coordinate and support joint initiatives and empower researchers across borders, disciplines, and sectors. Pushing the boundaries of fundamental research and applied science will mobilize innovation ecosystems, including the Neurotech^{EU} ecosystem we are forming, while engaging active citizens to transform how we innovate, educate and impact the society at large.

The proposal was submitted to the call H2020-IBA-SwafS-Support-2-2020 (Support for the Research and Innovation Dimension of European Universities (Part II)) on 10 November 2020.





WP1: General management & coordination

- T1.1: Setting up a governance structure
- T1.2: Developing the R&I strategic plan
- T1.3: Establishing a joint graduate school
- T1.4: Setting up a joint sustainability R&I strategy
- T1.5: Promoting and encouraging the use of fair and transparent best practices
- T1.6: Coordination of comm. and dissemination

Lead: RU M1 – M36

WP8: Quality control & gender equality in Science for Innovation

- T8.1 Developing the Neurotech^{RI} NRIQI Structure
- T8.2 Acting as models of good practices with GEPs
- T8.3.1 Gender equality assessments
- T8.3.2 Developing a Gender Equality Strategy
- T8.3.3 Developing Gender Equality Manifesto

Lead: UMH M1 – M36

Plan, organize, command, coordinate and control the actions to ensure organizational success

WP2: Common research & innovation agenda

- T2.1.1 Developing of a common R&I agenda
- T2.1.2 Implementing and promoting the agenda
- T2.2.1 Developing a common R&I action plan
- T2.2.2 Developing the best practices agreement
- T2.2.3 Setting up a shared platform
- T2.3.1 Communicating R&I action plan and activities
- T2.3.2 Disseminating the results

Lead: KI M1 – M36

WP4: Promoting academia-business cooperation in research & innovation

- T4.1.1 The cross-sectoral Innovation Strategy
- T4.1.2 Exploiting interface services
- T4.2.1 Developing an industrial cooperation and integration action plan
- T4.2.2 Innovation detection scheme
- T4.4.1 Establishing a personalized approach tailored to the needs
- T4.4.2 Creating the Neurotech^{RI} Hub

Lead: BOUN M1 – M36

WP5: Strengthening human capital

- T5.1.1 Mapping out the HRS4R
- T5.1.2 Promotion of DORA
- T5.2 Strategize to counteract brain drain
- T5.3.1 Develop the graduate school as a venue for international and multisectoral training
- T5.3.2 Use the graduate school to promote talent (skills and competences), for career-long professionalization of staff members

Lead: UBO M1 – M36

WP7: Science with and for Society

- T7.1: Engaging with citizen (scientists)
- T7.2: Setting up an online experiential museum
- T7.3: Engaging with schools
- T7.4: Mainstreaming sustainable practices for Alliance activities
- T7.5 Developing recommendations to public authorities

Lead: UOXF M1 – M36

Deliver a scalable, future-proof and an actionable plan for cross-sectoral, multi-institutional research, innovation and engagement

Share infrastructures and resources across the Alliance to realize the consortium's objectives while implementing and promoting Open R&I practices

WP3: Sharing infrastructure & resources

- T3.1.1 Identifying the legal and regulatory barriers
- T3.1.2 Identifying the specific requirements
- T3.1.3 Developing and establishing a strategy for sharing
- T3.1.4 Implementing a joint infrastructure utilization plan
- T3.2.1 Structured collaboration w/ European universities
- T3.2.2 Expert collaboration with universities across Europe

Lead: UD M1 – M36

WP6: Open Science, Education and Innovation

- T6.1.1 Developing an Open Science strategy
- T6.1.2 Gaps and needs in Open Science skills
- T6.2 Developing Open Science skills trainings
- T6.3 Developing academic career systems supporting researchers engaging with society
- T6.4 Recruiting local Open Science ambassadors

Lead: UMF M1 – M36

Neurotech^{RI} work packages (WP). The strategy and action plan that will be developed across the 8 WPs will be tested via a joint graduate school. This approach will ensure that integrated research and innovation activities can be started without delay while the graduate school can be used as a test-bed for implementation and iterative improvement of the joint strategy and action plan. Tasks of each WP and the interaction between WPs are shown on the PERT chart below.

2.3. ERA-NET NEURON (UMH, UD)

Patient-centered Targeting of Epigenetic Vulnerabilities in Neurodevelopmental Disorders: A Cross-disciplinary Platform for Druggable Disease Models

Intellectual disability disorders (IDDs) represent a spectrum of neurodevelopmental disorders characterized by early childhood onset of learning impairment behavior defects. IDDs are linked to detrimental factors that affect cortical development. Many mutations that cause IDDs have been identified. They represent pathways linked to synaptic function and epigenetic gene-expression control. Since epigenetic gene expression is a key process controlling neuronal function in the developing and adult brain targeting the epigenome could be a promising strategy to treat IDDs. Our overarching aim is to better understand the epigenetic vulnerabilities in neurodevelopmental diseases with a specific focus on IDDs that share the genetic and epigenetic de-regulation of H3K4 methylation. We will perform, for the first time, a truly systematic analysis of H3K4-related processes across the spectrum of IDDs, ranging from epigenetic gene-expression changes to the corresponding functional consequences. Our consortium is in a perfect position for this task as it combines the unique expertise in epigenetics, brain development, neuronal structural and functional plasticity with ample experience in modelling IDDs in mouse models, iPSC derived human brain organoids in xenograft models. Our results will provide a blueprint for translation research in neurodevelopmental diseases and could have an immediate clinical impact.

Description	Stage I: Pre-proposal	Stage II: Full proposal	Funded projects
No. of proposals	124	53	18
Principal investigators involved	529	232	80
Overall funding requested	112.9 m€	51.9 m€	19.2 m€
Proposal success rate	0,15	0,34	

ERA-NET Neuron Statistics Call 2021 (Source: ERA NET Neuron webpage)



2. Target programs of the future

Application deadlines in 2022

Call	Title	Deadline	Note
HORIZON-INFRA-2022-SERV-01-01	Implementing digital services to empower neuroscience research for health and brain-inspired technology via EBRAINS	21 September 2022 17:00:00 Brussels time	single stage
HORIZON-WIDERA-2022-TALENTS-04-01	Fostering balanced brain circulation – ERA Fellowships	14 September 2022 17:00:00 Brussels time	single stage
EU4H-2022-PJ-03	Call for proposals on promoting mental health	24 May 2022 17:00:00 Brussels time	single stage
HORIZON-CL3-2022-DRS-01-04	Better understanding of citizens' behavioural and psychological reactions in the event of a disaster or crisis situation	23 November 2022 17:00:00 Brussels time	single stage
HORIZON-CL4-2022-DIGITAL-EMERGING-02-07	Increased robotics capabilities demonstrated in key sectors (AI, Data and Robotics Partnership) (IA)	16 November 2022 17:00:00 Brussels time	single stage
ERA-NET NEURON	2022 „Cerebrovascular Diseases“	8.3.2022	
COST Action		20 October 2022 at 12:00 noon (CET)	
Erasmus+	Alliances for innovation	probably September	
Call of the National Research, Development and Innovation Office of Hungary	Supporting the use of international and domestic research infrastructures	30 April / 31 August	single-stage

3.1. Implementing digital services to empower neuroscience research for health and brain-inspired technology via EBRAINS

Topics under this call bring together several complementary and interdisciplinary research infrastructures to provide trans-national access (in-person, when the user visits the infrastructure to make use of it or remote access) and/or virtual access to integrated and customised research infrastructures services for challenge-driven research and innovation or advancing frontier knowledge. Access also includes ad hoc users' training and scientific and technical support. Harmonisation, customisation, and virtualisation of research infrastructure services will also be supported.

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-infra-2021-serv-01-01>

3.2. Fostering balanced brain circulation – ERA Fellowships

In line with the strategic priority of “Deepening the ERA” this part will support further progress on the free circulation of knowledge in an upgraded, efficient and effective R&I system. The destination will be pursued both at the level of individual researchers, e.g., helping to develop the skills that researchers





need for excellent science and connecting all actors across Europe, and at the level of institutions and smaller research teams around future ERA Chair holders.

ERA Chairs will support universities or research organisations from eligible countries to attract and maintain high-quality human resources under the direction of an outstanding researcher and research manager (the 'ERA Chair holder') and to implement structural changes to achieve excellence on a sustainable basis.

The institutional dimension will be complemented by opportunities for brain circulation for research and innovation talents across the ERA and across sectors, aiming at reverting the brain drain from widening countries. It will focus support to early career and experienced talents to explore unknown personal territories for professional development and training by being mobile in the European Research Area in other sectors and less obvious knowledge hubs across Europe, notably in widening countries. It will put emphasis on intersectoral mobility for early career researchers and innovators and foster better exploitation of existing (and possibly jointly managed) research infrastructures in the targeted countries through the mobility of researchers and innovators, reinforcing and strengthening the interaction between education and research, such as through the research and innovation dimension of European Universities, training, and mobility. Furthermore, specific attention will be paid to promoting gender balance among the supported talents.

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-widera-2022-talents-04-01>

3.3. Call for proposals on promoting mental health

Objectives pursued

The aim of the action is to increase awareness, knowledge generation and sharing, and capacity building in the area of mental health. Activities will include the transfer of best practices, as it was indicated by the SGPP, on children's and adolescents' mental health and well-being.

Description of the activities to be funded under this topic

Specifically, the actions will support interested stakeholder organisations, to come together to discuss and exchange mental health practices and knowledge to implement validated best practices and evidence-based projects. The activities should focus on the needs of specific and/or vulnerable groups, in particular children and adolescents.

The actions developed by civil society and health professionals' organisations to improve mental health, namely by exchanging and implementing best practices and implementing activities that will increase awareness, knowledge sharing, and support for health professionals' training, including the development of necessary guidance and/or training material, such as video tutorials, manuals, etc.

- subtopic 1: implementing the best practice (Iceheart) to improve life skills and social, psychological, and emotional resources among socially vulnerable children and adolescents (DP-g-22-07.01).
- subtopic 2: implementing the best practice (Let's Talk about Children) to support the mental health and wellbeing of young people and their families in vulnerable groups (DP-g-22-07.3).

Expected results and impact

The action will implement the best practices 'Icehearts' and 'Let's Talk about Children' to address the mental health and well-being of children and adolescents (e.g., in schools and through sports programmes).



The short-term impact would be achieved through an increased number of interventions being scaled up in the Member States, providing long-term professional support for vulnerable young people to prevent social exclusion, promote psychosocial well-being and enhance social skills. The long-term impact would be to identify solutions to tackle specific mental health issues, both at a personal and societal level. Networking between experts and additional cross-learning other than via practice transfer per se will also provide benefits for developing and improving public health and social inclusion policies.

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/eu4h-2022-pj-03;callCode=null;freeTextSearchKeyword=;matchWholeText=true;typeCodes=0,1,2,8;statusCodes=31094502;programmePeriod=null;programCcm2Id=43332642;programDivisionCode=null;focusAreaCode=null;destination=null;mission=null;geographicalZonesCode=null;programmeDivisionProspect=null;startDateLte=null;startDateGte=null;crossCuttingPriorityCode=null;cpvCode=null;performanceOfDelivery=null;sortQuery=sortStatus;orderBy=asc;onlyTenders=false;topicListKey=topicSearchTablePageState>

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

Among others:

- Analyses of human behaviour as triggering or cascading factors of disasters or crisis situations, and transformation of qualitative data into quantitative information to improve vulnerability and exposure analyses.
- Analyses of the nature and scope of mental health issues of the affected populations and of first-responders arising during and following natural or man-made disasters or crisis situations and their implications for response and recovery, and options to address these issues, including through social and health services such as emergency psycho-social support.
- Analyses of mechanisms and factors that can lead to false alarms and misdirected actions and of the direct consequences on both population and decision-makers.

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl3-2022-drs-01-04>

3.5. Increased robotics capabilities demonstrated in key sectors (AI, Data and Robotics Partnership) (IA)

Proposals results are expected to contribute to at least one of the following expected outcomes:

- Demonstrators able to show the added value of robotics and their performances in addressing challenges in major application sectors, or in dangerous, dull, dirty tasks or those strenuous for humans or in extreme environments.
- Systems able to demonstrate beyond human performance in complex tasks, with high impact in key sectors, that show extended levels of adaptation and flexibility.
- Systems able to show high levels of reactivity and responsiveness, and intelligibility when performing human-robot and robot-robot interactions in major application sectors.

<https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/opportunities/topic-details/horizon-cl4-2022-digital-emerging-02-07>

3.6. COST Action

The European Cooperation in Science and Technology (COST) is a funding organisation for the creation of research networks called COST Actions. These networks offer an open space for collaboration among scientists across Europe (and beyond) and thereby give impetus to research advancements and innovation.





COST is bottom-up, this means that researchers can create a network – based on their own research interests and ideas – by submitting a proposal to the COST Open Call. The proposal can be in any science field. COST Actions are highly interdisciplinary and open. It is possible to join ongoing Actions, which therefore keep expanding over the funding period of four years. They are multi-stakeholders, often involving the private sector, policymakers as well as civil society.

Information is from: <https://www.cost.eu/who-we-are/about-cost/>

Call opening and deadline: the call is already open; the deadline will be on **October 29th**.

Funding available: typical contribution is EUR 600 000 for a project duration of up to 4 years.

Other relevant programs in planning

3.7. Supporting the use of international and domestic research infrastructures 2021-4.1.2-NEMZ_KI

The call for proposals from the National Research, Development and Innovation Fund aims to support researchers in exploiting the research and measurement opportunities offered by research infrastructures (RIs):

Sub-program “A”: Supporting the utilization of research and measurement opportunities by Hungarian researchers, especially in the case of infrastructures to which Hungary has joined as a full member.

Sub-program “B”: Supporting the utilization of significant domestic research infrastructures by international researchers, thus facilitating their integration into the international circulation and the flow of knowledge. Preference will be given to domestic research infrastructures that are organically connected to an international research infrastructure (eg Node) in which Hungary participates as a full member.

3.8. Interesting information from partners of the Neurotech^{EU}

Neurotech^{EU} brings together 170,000 students and 70,000 staff from the four geographical regions of Europe. The founding partners of Neurotech^{EU} have a long tradition of university-wide cooperation, as evidenced by student and staff exchange, joint grant applications, and collaborative research projects, resulting in joint publications.

We are sure that it is useful; therefore, we are ready to track the development of the partners' cooperation and development in the fields covered by the Neurotech^{EU}.

Nevertheless, we must also keep partners informed about the projects any of the partners are implementing and which are connected to the Neurotech^{EU} objectives. In this report, 3 partners present their current projects connecting to the topics of the Neurotech^{EU}.





UMH Proposals in the field of neuroscience					
Ministerio de Ciencia e Innovación - Fondo Europeo de Desarrollo regional Investigación Sanitaria del Instituto de Salud Carlos III	Red de investigación en atención primaria de adicciones. RIAPAd.	Health	SIGNED	01/01/2022	
Generalitat Valenciana PROMETEO early-Life diseases, resilience and flailty	PROMETEO early-Life diseases, resilience and flailty	Health	SIGNED	2021.11.01	
Ministerio de Sanidad - Plan Nacional sobre Drogas – Proyectos de investigación sobre adicciones 2021	Conexión Hígado-Cerebro en el Consumo Crónico de Alcohol y la Abstinencia	Health	SIGNED	2022.01.01	
PROMETEO/2019 Programa Prometeo de Excelencia, Generalitat Valenciana	Beyond the synapse: juvenile NMDARs in the configuration of neural circuits and dissection of underlying mechanisms	Health	SIGNED	2019.01.01	
H2020-MSCA-IF-2019	DEcipherring mechanisms of presynaptic refinement	Health	SIGNED	2020.01.01	
Agencia Española de Investigación / PID2019-111112RB-I00	Juvenile NMDA receptors: a cellular and circuit perspective	Health	SIGNED	2020.01.01	
PN2019 - PROY I+D GENERACION CONOC. - SEGC	Structure-function of synaptophysin family synaptic vesicle proteins	Health	SIGNED	2020.07.01	
CIDEGENT/2018/035 - Programa Talento GENT-T Ref. Ayuda: CIDEGENT/2018/035	From sensory detection to behavioral output: a study of the mechanisms involved in decision-making.	Health	SIGNED	2019.01.01	





XVIII Concurso Nacional de la Fundación RAMON Y ARECES para Investigación en Ciencias de la Vida.	Mecanismos Moleculares de la Holoprosencefalia asociada a Zic2.	Health	SIGNED	2019.04.03	
H2020-EU.1.3.1. 860635 NEUcrest	Fostering new skills by means of excellent initial training of researchers	Health	SIGNED	2019.11.01	https://cordis.europa.eu/project/id/860635
H2020-EU.1.3.1. 861423 ENTRAIN VISION	Fostering new skills by means of excellent initial training of researchers	Health	SIGNED	2020.04.01	https://cordis.europa.eu/project/id/861423
ERC-2020-STG - ERC STARTING GRANTS 950013 CERCODE		Health	SIGNED	2021.01.01	https://cordis.europa.eu/project/id/950013
H2020-EU.1.3.1. 956477 PIANO	Fostering new skills by means of excellent initial training of researchers	Health	SIGNED	2021.03.01	https://cordis.europa.eu/project/id/956477
PROMETEO/2021	'Revealing Early Circuits Dynamics in the Developing and Sensory Injured Brain'	Health	SIGNED	2022.01.01	





UBO						
Title of the proposal	Acronym	Call	Coordinator	Contact person		Short description
				Name	E-mail	
Novel Strategies for Cell-based Neural Reconstruction	NSC-Reconstruct	H2020-SC1-2019-Single-Stage-RTD	UNIVERSITA DEGLI STUDI DI MILANO	Prof. Oliver Brüstle	R.Neuro@uni-bonn.de	Science has made tremendous progress in understanding the neuronal circuitry of the brain in both health and disease, as well as in terms of its structure and function. Our knowledge of local and distant brain circuitry seen in neurodegenerative diseases, combined with the potential of human embryonic stem cells for cell and tissue regeneration, can advance the treatment of debilitating diseases like Parkinson's and Huntington's. The EU-funded NSC-Reconstruct project is pushing the frontiers in research on stem cells for single cell types. In an ambitious effort, the team plans to reconstruct local networks through the incorporation of numerous cell types and to restore complex networks and cortical projections for truly functional and effective repair in complicated conditions like neurodegenerative diseases and stroke
Tracing the capabilities of pharmacogenetics in psychiatric treatment	PSY-PGx	H2020-SC1-BHC-2018-2020	UNIVERSITEIT MAASTRICHT	Prof. Dr. Nöthen / Prof. Dr. Alexandra Philippsen	susann.stangier@uni-bonn.de / sekretariat.psychiatrie@ukbonn.de	Plastic nanoparticles, detected in a variety of ecosystems, can translocate from the gut to the lymph and circulatory systems and cross the blood-brain barrier in mammals. However, the long-term effects of nanoplastics in the brain are unknown. Microglia are neuroimmune cells that sense and respond to environmental changes. They are essential for neuronal homeostasis and may be activated by nanoplastics reaching the brain. The EU-funded NanoGlia project will use rodent animal models to investigate behavioural, cellular, and molecular changes in the brain following ingestion of nanoplastics. The project will study nanoplastics-induced developmental reprogramming events in fetal microglia that may influence brain organogenesis and function. NanoGlia seeks to understand how nanoplastics cause microglial activation during embryogenesis and postnatal stages and whether this immune activation might lead to permanent changes in brain development and function.
Intermediate AMD: development of novel clinical endpoints for clinical trials in	MACUSTAR	IMI2 - Call 7	Universitätsklinikum Bonn	Prof. Frank Holz	frank.holz@ukbonn.de	People with dry age-related macular degeneration (AMD) gradually lose their central vision, usually in both eyes. It is already a leading cause of blindness worldwide, and as the population ages, the number of cases is likely to rise. There is currently no effective treatment for dry AMD. One barrier to the development of new treatments is the lack of tests capable of determining the





patients with a regulatory and patient access intention						<p>effectiveness of treatments under development. Put simply, current tests do not detect all of the sight problems experienced by people with earlier stages of the disease (e.g., intermediate AMD). The goal of the MACUSTAR project is to develop and validate tests that are capable of accurately detecting subtle changes in the disease over time. The project will follow more than 700 AMD patients over 3 years through tests including state-of-the-art imaging techniques and vision testing, as well as patient-reported outcome measures that capture the impact of the disease on patients' quality of life. The hope is that these methods will prove capable of detecting changes in the patients' disease. The team also hopes to shed new light on visual impairment in intermediate AMD and its progression, as well as the risk factors that cause the disease to progress faster in some patients than others. By developing and validating new methods to study disease progression in dry AMD, the overall goal of MACUSTAR is to help drug development and make clinical trials of potential treatments more efficient.</p>
modelling and pRedicting Human decision-making Using Measures of subconscious Brain processes through mixed reality interfaces and biOmetric signals	RHUMBO	H2020-MSCA-ITN-2018	UNIVERSITA T POLITECNIC A DE VALENCIA	Diana Shih	d.shih@outlook.com	<p>Recent breakthroughs in neuroeconomics are helping to understand how the human decision-making process takes place. Although latest advances have revealed that most of the brain processes that regulate our emotions, attitudes, and decisions are beyond our consciousness (implicit processes), many companies are still making strategic decisions relying upon explicit measures such as questionnaires and focus groups. However, the consumer neuroscience market is rapidly growing and demands new knowledge, new skills, and new approaches to adapt to the technological evolution of the sector but also for comprehending and communicating with consumers. These requests only find a partial match in existing doctoral programmes. RHUMBO addresses this challenge by delivering an innovative multinational, multi-sectorial, and multidisciplinary research and training programme in cognitive neuroscience, transparently immersive experiences, and artificial intelligence with a focus on neuro-business. From the research point of view, RHUMBO will produce tools and models to predict human decision-making in business environments. RHUMBO will use mixed reality technologies (MRT) together with different biometric signals (fMRI, fNIRS, eye tracking, EEG, etc.), supported by artificial intelligence processing techniques, to examine consumer behavioural patterns during dynamic, complex, and realistic situations for a deeper understanding of internal consumer psychological states. With this purpose, RHUMBO's partnership aggregates relevant scientific</p>



						<p>staff from the academic and corporate worlds, which will be involved in a high-level personalised training programme that will guarantee ESRs and future Ph.D. students outstanding Career Opportunities in the consumer behaviour sector and beyond. RHUMBO will disseminate results to a wide spectrum of stakeholders, create awareness in the general public about neuroscience and encourage neuroscience vocational careers among young students.</p>
<p>Training, Research and Raising of Public Awareness in Cell Biology and Pathology of Neuroglia</p>	<p>EU-GliaPhD</p>	<p>MSCA-ITN-2016 - Innovative Training Networks</p>	<p>UNIVERSITÄT DES SAARLANDES</p>	<p>Christian Steinhäuser</p>	<p>cste@uni-bonn.de</p>	<p>The research in which the young scientists of the EU-GliaPhD consortium will be trained is centred on the role of neuron-glia interactions in brain function and pathology. Prompted by exciting discoveries of recent years, many academic research groups are currently focussing their research on the field of neuron-glia interactions for a better understanding of brain function. Also, the private sector, such as the pharmaceutical industry, pays more and more attention to the role of neuroglia in various neuropathologies. These research activities create an increasing demand for outstanding young neuroscientists to join academia or industry. To address this need for neuroscientists with strong knowledge in neuron-glia interactions, the EU-GliaPhD consortium of recognized European neuroscientists decided to initiate a training network in which young scientists, the EU-GliaPhD fellows, will be educated in collaborative research projects to study neuron-glia interactions at the molecular, cellular and systems-level in the healthy and the diseased brain. A strong emphasis will lie on epilepsy, a multi-faceted, chronic neurological disorder characterized by the frequent recurrence of seizures. The EU-GliaPhD consortium will focus on five important educational and training objectives:</p> <ol style="list-style-type: none"> 1. Broad training in several current state-of-art technologies that are highly relevant for brain research 2. Teaching an in-depth understanding of molecular and cellular neurobiology and -pathology 3. Focused specialization in defined research projects 4. Training in dissemination of modern neuroscience research to expert and lay audiences 5. Education in soft skills such as article writing, oral presentations, or research ethics. <p>By studying epilepsy, fundamental questions on the cellular and molecular aspects of neuron-glia interaction can be addressed. Novel insight delivered by EU-GliaPhD may serve as basis for the development of novel strategies in treating brain disorders.</p>





<p>Digital Research, Education and Applied training Medium</p>	<p>DREAM</p>	<p>KA226 - Partnerships for Digital Education Readiness</p>	<p>Stichting Katholieke Universiteit</p>	<p>Prof. Christian Henneberger</p>	<p>christian.henneberger@uni-bonn.de</p>	<p>The ongoing pandemic has accelerated the evolution of higher education. As universities rushed to transfer their teaching and training online, research and innovation activities had to be put on hold in many academic fields. Even though the educational content continues to be successfully transferred to the world wide web, novel pedagogical approaches are yet to be developed to reach all learning objectives in an online world. The emergence of novel online education platforms, new forms of degree (certification) programs, and new global actors that provide specialized education contribute to a rapidly changing ecosystem and necessitate an expeditious look into the transformation of our universities. An urgent and unmet need in this process is the digitization of universities (see, e.g., the Digital University: reinventing the academy, edited by Hazemi, Hailes & Wilbur, 2012; Henderson et al., 2017, Studies in Higher Education). To meet this challenge, here we propose to develop DREAM (Digital Research, Education & Applied training Medium), which is an online platform that provides any educational and research institute an open-source and free platform to create a "digital, paperless (green) university". Going beyond the platform development, we will introduce quality control and assurance procedures for online education & develop a teacher training program to disseminate this information. These will be tested with end-users, students, lifelong learners, teachers, educators, and staff members. In cooperation with the European University for Brain and Technology (Neurotech^{EU}; a European University Alliance), we will perform the beta testing of the platform over the next two years and offer a content catalogue that is freely accessible to all.</p>
<p>Europäische Hochschulnetzwerke (EUN)</p>	<p>na</p>	<p>nationale Initiative</p>	<p>na</p>	<p>Dr. Kai Sicks</p>	<p>ksicks@uni-bonn.de</p>	<p>Application for Top-Up funding to the DAAD (German Academic Exchange Council), applied for the equivalent of three full-time positions.</p>
<p>Understanding the impact of nanoplastics on the development of neurological disorders</p>	<p>NanoGlia</p>	<p>ERC-2019-STG</p>	<p>na</p>	<p>Prof. Elvira Mass</p>	<p>elvira.mass@uni-bonn.de</p>	<p>Plastic nanoparticles, detected in a variety of ecosystems, can translocate from the gut to the lymph and circulatory systems and cross the blood-brain barrier in mammals. However, the long-term effects of nanoplastics in the brain are unknown. Microglia are neuroimmune cells that sense and respond to environmental changes. They are essential for neuronal homeostasis and may be activated by nanoplastics reaching the brain. The EU-funded NanoGlia project will use rodent animal models to investigate behavioural, cellular, and molecular changes in the brain following ingestion of nanoplastics. The project will study nanoplastics-</p>



						<p>induced developmental reprogramming events in fetal microglia that may influence brain organogenesis and function. NanoGlia seeks to understand how nanoplastics cause microglial activation during embryogenesis and postnatal stages and whether this immune activation might lead to permanent changes in brain development and function.</p>
<p>MULTIPLAYERS' PARTNERSHIPS TO ENSURE MEANINGFUL ENGAGEMENT WITH SCIENCE AND RESEARCH</p>	<p>MULTIPLIER S</p>	<p>H2020-SwafS-2018-2020</p>	<p>RHEINISCHE FRIEDRICH-WILHELMS-UNIVERSITÄT BONN</p>	<p>Prof. Annette Scheerso</p>	<p>a.scheerso@uni-bonn.de</p>	<p>The main aim of MULTIPLIERS is to expand opportunities for science learning by fostering cooperation between students, schools, families, local communities, civil society organisations, informal learning providers, universities, the media, policymakers, and industry. To achieve this aim, the project will establish novel partnerships ("Open Science Communities" – OSCs), initially in each of the following project countries: Germany, Cyprus, Spain, Slovenia, Sweden, and Italy. Each OSC will involve all the diverse stakeholders mentioned above so as to innovatively engage different societal actors in the science learning process. During the project implementation and also after its completion, the consortium will support the creation of new OSCs in the partner countries but also in other EU countries. These will be guided in their start-up phase and in their consolidation by the 6 initial OSCs, which will act as innovation hubs guiding and supporting these scale-up initiatives, capitalising on the project's results, including guidelines and international workshops/webinars specifically intended for this purpose.</p>
<p>Clinical trial readiness for SCA1 and SCA3</p>	<p>READISCA</p>	<p>NIH Research Project-- Cooperative Agreements (U01)</p>	<p>Houston Methodist Research Institute</p>	<p>Prof. Dr. Thomas Klockgether</p>	<p>thomas.klockgether@dzne.de</p>	<p>Spinocerebellar ataxia types 1 (SCA1) and 3 (SCA3) are rare, inherited neurodegenerative disorders that relentlessly progress to total disability and death. SCA1 is the fastest progressing SCA, while SCA3 is the most common SCA in the US and Europe. Expanded (CAG)_n repeats encoding polyglutamines (polyQ) in the respective genes, ATXN1 and ATXN3, cause SCA1 and SCA3. Disease-modifying therapies that target the pathway upstream of the complex pathogenic cascade will offer ultimate treatment. Scientific premise and preclinical animal data strongly support MSK1 inhibitors for SCA1, citalopram for SCA3, and nucleotide-based gene silencing for both SCAs as drugs to be examined in clinical trials in five years.</p> <p>However, the challenge that we face in our current clinical trial readiness for such disease-modifying therapies is that the modest effect size of candidate drugs as measured by the Scale for the Assessment and Rating of Ataxia (SARA; the most robust and well-validated clinical outcome assessment measure) requires</p>

					<p>large cohorts of study subjects to achieve sufficient statistical power.</p> <p>To accomplish our goal of establishing clinical trial readiness, we propose to launch an international, multi-site effort focusing on premanifest mutation carriers and patients in an early disease stage, who are likely responders to the disease-modifying interventions prior to irreversible brain damage. Based on our studies funded by NIH and the National Ataxia Foundation (NAF), the US ataxia consortium has developed an unprecedented opportunity for tight collaborations with the European Ataxia Study Group to jointly address this challenge and establish clinical trial readiness for SCA1 and SCA3.</p> <p>To achieve our goal, we propose the following specific aims:</p> <p>Aim 1. Establish the world's largest cohorts of premanifest/early SCA1 and SCA3 by combining cohorts, clinical outcome assessment data, and biofluid samples (blood, cerebrospinal fluid) from the US and Europe.</p> <p>Aim 2. Validate MR morphological, biochemical, and functional biomarkers in premanifest and early SCA1 and SCA3</p> <p>Aim 3. Adapt recent developments in statistical design and analysis of small population trials to SCAs.</p> <p>We will fill the gap between the current state of clinical trial readiness and the optimal one for SCA1 and SCA3, which are fatal rare diseases with no treatments. Through US-European collaborations, we will establish the world's largest cohorts of subjects at the earliest disease stages, who will benefit most from treatments, validate an ability to detect disease onset and early progression by imaging markers, even prior to ataxia onset, and identify clinical trial designs that will generate the most conclusive results on treatment efficacy with small populations of patients.</p>
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Title of the proposal	Acronym	Call	Coordinator	Contact person (name)
The role of metal ions in the neurodegenerative diseases		2019-2.1.11-TÉT-2019-00055	CNR Institute of Biostructures and Bioimaging UOS of Catania	Várnagy, Katalin
Role of neuroimmune communication in human cutaneous immunological (patho)physiology		FK_20 (National programme for young researchers)	na	Szöllősi, Attila Gábor
Novel insight into the development of inflammatory heat hyperalgesia: Role of the mitogen- and stress-activated kinase 2 signalling in primary sensory neurons		ANN_20		Nagy, István
NSDNeuro - Implementation of new standards and technologies for surgical treatment of central nervous system diseases in cross-border region	NSDNeuro	HUSKROUA	National University of Uzghorod	Novák, László
Participation in the American Society for Neurochemistry Annual Meeting (ASN 2022)		Mecenatúra - MEC_21 (national call)	na	Dócs, Klaudia

