

NutriBrain: Modulation of brain ageing through nutrition and healthy lifestyle

Type:	Funding programme
Submission deadline:	15-Jan-2024
Funded by:	ISCI & BMBF
Reach:	weltweit

The following text does not reflect the entire content of the announcement, but contains individual extracts from the guideline.

Aim of the call

The aim of the call is to support transnational research projects that focus on the improvement of cognitive brain ageing through nutrition and other lifestyle factors. Thereby it enables scientists from different countries to build a valuable collaboration on interdisciplinary research projects based on complementarities and sharing of expertise in the field of brain ageing, its related disorders, nutrition and lifestyle factors.

Research projects should gain further insights into the modulation of brain aging by lifestyle factors and/or pilot test interventions based on the existing evidence in the literature or upscale existing pilot interventions that will help to lower the risk of cognitive impairment manifestations related to a pathological brain ageing.

At least one of the following lifestyle factors should be investigated: nutrition (particularly improvements in dietary pattern), physical activity, sleep pattern (quantity, quality and timing), social interaction and stress.

Researchers should provide a public health approach for health promotion and disease prevention considering large population groups such as age cohorts or relevant subgroups.

Proposals shall include one of the following approaches, such as:

- Pilot test interventions that will help to lower the risk of cognitive impairment manifestations related to a pathological brain ageing
- Upscaling of existing pilot interventions that will help to lower the risk of cognitive impairment manifestations related to pathological brain ageing

Proposals may be supplemented by one of the following approaches, such as:

- Mechanistic / experimental research focusing on how specific lifestyle factors influence brain ageing
- Translational research that will establish proof of concept, in order to support the development of effective health-improvement strategies and/or solutions to promote a healthy brain.

In addition, the following points should be considered:

- Research proposals may focus on specific population groups, e.g., those living with obesity and/or sarcopenia or with specific phenotypes, who may benefit from particular dietary and/or physical activity and life-style interventions, but can also focus on broader populations groups.
 - For projects focussing on the prevention of cognitive impairment before the onset of clinical symptoms, the target group is not necessarily elderly, but may include also adults of other age groups.
 - Applicants should make use of existing biobanks and cohorts, if applicable. Otherwise, it should be explained why existing cohorts are not used.
 - Applicants need to define the standardized approach for sample collection, isolation and analysis methods and explain the tools they plan to use to measure nutritional status, dietary consumption, eating behavior, other lifestyle factors and cognitive decline as well as cognitive impairment through ageing in their proposals.
 - Where relevant, investigations should employ existing biomarkers/surrogate outcomes that relate strongly to the risk of cognitive impairment. These include biomarkers related with the gut-brain axis, neuroendocrine signalling, and microbiota, especially those easily, affordable and feasible to obtain. Furthermore, other more sophisticated biomarkers derived from cerebrospinal fluid and image should be considered. The development of new biomarkers is not within the scope of the call.
 - There may be opportunities to also use omics approaches, brain imaging, microbiota study linked, digital health data to get robust measures of diet, nutritional status, physical activity, sleep, social interaction, stress in well-characterised prospective cohort studies in adults and older people.
 - The project should be consumer-centred: the involvement of the target population in the research is strongly encouraged at all stages of research design, implementation, analysis and dissemination. Research proposals are encouraged to also apply participatory methods, participatory agenda settings, informal settings, crowdsourcing data collection.
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- Proposals should consider potential moderators of effects such as age, sex, gender and ethnic or other demographic features/differences in the respective research approaches.
 - Where relevant, emerging model systems should be preferred to animal models. Research may make use animal models only for investigations that are impractical or unethical in humans and they must be justified. In this case, it is important to have mechanistic studies combined with observational research emphasising humans and it's needed a clarification on how the observations of animal models translate to humans (back and forth translation).
 - The impact indicators shall be identified at the project proposal stage.
 - Applicants are encouraged to consider the gender balance in the composition of the consortia and to balance the responsibilities between them.
 - The proposed research shall not overlap with previous studies funded under the JPI HDHL and JPND calls or collaborations should be established.
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- Early Career Scientists (Master students, PhD students and post-docs) are encouraged to participate in the consortium.
 - Proposals that relate purely to the study of pathomechanisms are not eligible for funding in this call.

Please note that **additional conditions might apply at national level**

General conditions for application

Proposals must clearly demonstrate the potential health, economic, and/or policy impacts, as well as the added-value of transnational collaboration i.e. sharing of resources (models, registries, diagnosis, etc.), harmonisation of data, sharing of specific know-how and/or innovative technologies.

Proposals should follow the principles of Responsible Research and Innovation (RRI). All consortia should demonstrate a commitment for investigating and addressing social, ethical, political, environmental or cultural dimensions of the proposed research. The proposal template further elaborates on this and how RRI dimensions can be approached.

Research supported by ERA4Health must respect fundamental ethical principles. Applicants have to describe any potential ethical aspects of the work to be carried out, and how the project will fulfil applicable requirements in institutional, national and European Union legislation (including the ethical standards and guidelines of Horizon 2020/Europe[1]).

The individual project partners of the joint applications should be complementary and the proposed work should contain novel, innovative and ambitious ideas with a high application potential to benefit of patients and citizens.

Furthermore, additional elements need to be considered in the application:

- If appropriate: the design of the study (sample collection, statistical power, interpretation, relevant models for hypothesis validation) must be well justified and should be part of the proposal.
- In case of an exploratory animal/ interventional study, a detailed description is required as part of the full proposal application form (requirements are included in the Guidelines for Pre-clinical and small-scale clinical studies up to phase 2). The review panel will scrutinize this information as part of the formal evaluation criteria (1-Excellence) of full proposals. Assistance for provision of the information on experimental design can be found in the general ARRIVE guidelines.

Application eligibility criteria

Joint research proposals may be submitted by applicants belonging to one of the following categories (according to national/regional regulations certain categories may not be eligible for funding by a specific funding organisation, please see Annex I of the call text published on ERA4Health.eu):

- **Academia** – research teams working in public and private universities, other higher education institutions or research institutes.
- **Clinical/public health sector** – research teams working in hospitals/public health and/or other health care settings and health organisations, including primary health care.
- **Enterprises** – companies dedicated to communication, involved in health research and innovation.
- **Operational stakeholders** – e.g., patient advocacy organisations, municipalities and local governments, local/national NGO's. In line with the concept of Responsible Research and Innovation (RRI), operational stakeholders should provide useful knowledge to the consortium and ensure the consortium's research is useful and translatable to their (or other) organizational contexts. Furthermore, they could contribute by influencing decision making and creating changes within their organisations. Operational stakeholders should be engaged throughout the whole duration of the research project, from the conception of the study to dissemination.

Consortia submitting applications to this call are strongly encouraged to include partners from all the different categories (A, B, C, and D) in line with the crosscutting/multidisciplinary nature of the call, whose aim is to include partners along the entire supply chain value.

Only transnational projects will be funded.

Submission of joint proposals

The submission and evaluation procedure will be in two-steps for joint applications. The second step of the evaluation process will include a rebuttal stage. For both steps, proposals (in English) shall be prepared by the consortium partners following the ERA4Health template and must be submitted via the electronic submission system tool Pt-outline (link on ERA4Health.eu) by the project coordinator.

Deadline for pre-proposal submission: 15 January, 2024, 16h00 CET

Funding

04-Dec-2023

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