

## EU Joint Programme - Neurodegenerative Disease Research (JPND): Mechanisms and measurement of disease progression in the early phase of neurodegenerative diseases

Type:	Funding programme
Submission deadline:	05-Mar-2024
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Reach:	Deutschland

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

Neurodegenerative diseases are debilitating conditions strongly linked with age. Worldwide, there are estimated to be more than 50 million people living with Alzheimer's disease and related disorders, the most common class of neurodegenerative diseases. This figure is expected to double every 20 years as the population ages. With very few causal treatments being available today, neurodegenerative diseases have high personal, societal and economic impact.

In this context, the EU Joint Programme - Neurodegenerative Disease Research (JPND) has been established to better coordinate research efforts across countries and disciplines to more rapidly find causes, develop cures and identify better ways to care for people with neurodegenerative diseases. To identify research priorities, the JPND Research and Innovation Strategy, published in 2019, provides a framework for future investment.

It is known that the onset of neurodegenerative diseases occurs years before the appearance of the first clinical symptoms. However, our current understanding on the biological, psychological and social mechanisms that determine early disease progression as well as our ability to precisely monitor the course of the disease at pre-symptomatic stages is very limited. Delayed detection of disease progression may be the reason for the multiple failures observed in clinical trials during the past years. In this context, improving our understanding of the crucial biological mechanisms and psychosocial factors determining risk and resilience for neurodegenerative diseases is needed along with an enhanced measurability of disease progression through the establishment of advanced biological and psychosocial markers. Respective advancements may allow a more accurate identification of pre-symptomatic disease stages and a reliable monitoring of disease progression, thereby enabling a better prediction of disease trajectories and paving the way for new therapeutic and preventive approaches.

### Aim of the call

JPND launches this joint transnational call for proposals with the aim of improving the understanding of disease mechanisms and advancing measurability of disease progression at early and pre-symptomatic stages of neurodegenerative diseases. Proposals submitted under this call may include, but are not limited to, the following types of research:

- Unraveling the influence of molecular, physiological, psychological and social factors and pathways on disease progression as well as discovering new factors and pathways;
- Defining key regulatory steps affecting the disease onset and progression;
- Combining molecular, psychological, social and physiological markers in order to increase the robustness of the diagnosis;
- Harmonization of the use of novel technologies and clinical measures to increase reliability and reproducibility of disease detection and monitoring;
- Identifying molecular, environmental, social and behavioral modulators of disease progression with the ultimate aim of determining risk, protective and resilience factors;
- Examining pathological processes related to neurodegeneration by using Artificial Intelligence and other cutting-edge technologies to understand the role of mechanistic pathways;
- Enhancing patient stratification by establishing measures and technologies to characterize clinical subgroups at pre-symptomatic stages, e.g. 'risk phenotypes' or 'at-risk' groups;
- Identifying compensatory mechanisms associated to early stages of neurodegenerative diseases;
- Systematically analyzing the influence of genetic, epigenetic and phenotypic variability underlying neurodegenerative diseases on disease progression

Proposals submitted to this call must focus on one or several of the following neurodegenerative diseases:

- Alzheimer's disease and other dementias
- Parkinson's disease and PD-related disorders
- Prion diseases
- Motor neuron diseases
- Huntington's disease
- Spinocerebellar ataxia (SCA)
- Spinal muscular atrophy (SMA).

#### Project:

Proposals should have novel, ambitious aims and ideas combined with well-structured work plans and clearly defined objectives deliverable within three years. Approaches should be integrative, combining relevant scientific approaches (e.g. clinical, epidemiological, experimental) and involve state-of-the art methodology and techniques. The potential of existing cohorts and data sets should be exploited. Proposals must be hypothesis-driven and should have a strong emphasis on reliable methodology. They should consider the diversity and differentiation of the target group, including gender, ethnic background, age, socioeconomic situation, level of education, cultural background, migration status and sexual orientation, where it is relevant for the implementation of the project.

#### Collaboration:

Each consortium should have the critical mass to achieve the identified scientific goals and should specify the benefit of working together. Applicants should demonstrate that they have the expertise and range of skills required to conduct the research project or that appropriate collaborations are in place. Utilizing expertise from areas outside of neurodegeneration research, which can bring innovation to the approach, is encouraged. The value that will be added to ongoing activities and the expected impact on research, medical application and well-being of patients should be explicitly stated. If a proposal is complementary to research already funded or submitted to other funding initiatives, it must be stated how JPND funding can supplement the ongoing activities.

## Eligibility

#### Institutions:

Under this scheme, joint transnational research proposals can be funded for a period of up to three years. Proposals may be submitted by research groups working in universities or other higher education institutions, non-university public or private research organisations, hospitals and other health and social care settings, as well as commercial companies, in particular small and medium-size enterprises (SMEs). Collaborations with companies from outside the traditional medical sector (e.g. computing, artificial intelligence) are welcome. With regard to the research setting and collaborations with companies, specific regulations of individual funding organisations as well as the EU State aid regulations must be considered when creating the consortium.

#### Consortium:

Consortia may consist of partners who receive funding for research by funding organisations participating in this joint call ("regular partners") as well as non-funded external collaborators. Regular partners are represented by the leaders of individual research groups (typically a principal investigator or a young academic group leader) within research institutions. If different research groups from the same research institution are requesting for funding, these groups must be treated as separate regular partners.

In addition, external collaborators (e.g., research groups from countries not participating in this call) may participate in proposals. External collaborators must secure their own funding. They must state in the proposal if these funds are already secured or how they plan to obtain funding.

#### Transnationality:

Each proposal must involve a minimum of three and a maximum of six regular partners, including the coordinator, from at least three different countries participating in this call (see section 3). However, if the proposal involves at least one regular partner from an EU-13 country (Hungary, Latvia and Poland) or from Turkey, the maximum number of regular partners is extended to seven. For reasons of transnational balance, no more than two regular partners from the same country are allowed to join a proposal.

## Application

There will be a two-stage procedure for applications: pre-proposals and full-proposals. At both stages, one joint proposal document shall be prepared by the consortium and submitted by the coordinator.

Pre-proposals must be submitted by the coordinator in electronic format no later than **12:00h (noon) C.E.T. on March 05, 2024**, via the JPND electronic submission system. No other means of submission will be accepted. A pre-proposal template is available at the JPND website. Adherence to this template is mandatory.

Full-proposals will be accepted only from those consortia explicitly invited to submit them by the Joint Call Secretariat. They must be submitted by the coordinator in electronic format no later than **12:00h (noon) CEST on June 25, 2024**. The Joint Call Secretariat will provide further information regarding the submission and a full-proposal template to the consortia. Adhering to this template is mandatory.

## Funding

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## Contact

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Contact details of the country-specific national representative can be found in the original call for proposals.

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## Further information

- [To the call for proposals \(JPND\)](#)