



**Department of Biotechnology
Ministry of Science & Technology
Government of India**

CALL FOR PROPOSAL

**IN
NEUROSCIENCE**

For

**DEVELOPING NEUROLOGICAL TOOLS, TECHNIQUES & PROTOCOLS FOR
BRAIN DISORDERS & PATHOLOGICAL CONDITIONS**

Last Date of Submission

20th April'2021

India faces a challenge of managing about 30 million cases of brain disorders every year, excluding the neuro-infections and traumatic injuries. Currently, the situation is more serious in the younger generation and therefore, the diagnosis and treatment of the brain disorders arising out of genetics, psychology and pathological conditions is a huge task and extremely challenging.

Department of Biotechnology is announcing this Call for Proposal for developing the Neurological tools, techniques and protocols for benefitting the Indian population through biotechnology based innovations. This Call is open to Scientists/Faculties, Clinicians, Engineers, Computer scientists and Biotechnologists or a team involving some or all of them.

OBJECTIVES

The major goal is to start the novel & innovative biotechnology based ideas in the domain of Neuro-biotechnology for making available the affordable technology for diagnostic & therapeutic purpose and for routine examination by clinicians or for direct utilization by the patients. The objectives may be as follows -

1. To encourage the interdisciplinary approach for developing the world class neurotools, techniques and protocols
2. To encourage the showcasing of proof of concept and fostering the Start-up culture through encouraging the highly innovative solutions
3. To develop highly skilled & industry ready manpower in the cutting edge area of the neuro tools, protocols and techniques

PRIORITY AREAS

The development of neuro tools, techniques and protocols may be facilitated through the following mechanisms and their rigour can be enhanced through the development of relevant protocols and tools -

1. Improved understanding of directed motor movement and of cognitive function from neuronal activity and relating these to brain/neuronal pathology
2. Development of predictive neural models especially rehabilitation tools for cognitive impairment, artificial cognitive systems, computing platforms and neuromimetic computers
3. Creation of mobile based/assisted visualization tools and developing affordable, mobile & advanced imaging techniques for understanding the brain activities in general, as well as the sequence of events for brain disorders and pathological conditions
4. Development of implants and robotic devices for either mitigation or significant improvement of neurological disorders including peripheral nervous system disorders especially the motor neuron related disorders
5. Development of protocols techniques and tools for decoding signals received or sent by the brain and brain stimulants especially non-invasive in nature.

WHO CAN APPLY

Any Indian National holding a regular position in any Indian academic institution may apply.

CRITERIA FOR PROPOSAL SUBMISSION

The minimum requirement for proposal submission is as follows:

- a. A Proposal written in English language ONLY
- b. Investigator must hold a regular position in an academic institution
- c. Proposals of exceptional quality leading to advanced understanding of the neural mechanism – neurotool interface and resulting proof of concept for taking the outcomes to pre-commercialization stage or immediate clinical usage are encouraged. The proposals likely to deliver after the completion of the project will be preferred.
- d. The proposal should have clear objectives, rationale, clearly specified deliverables and a detailed & complimentary work plan.
- e. Any collaborative/network proposal must clearly define the role of each collaborator. The role of collaborator must be complementary in nature rather than repetitive/independent.
- f. Investigator(s) having a track record of research in neural mechanisms and / or their interface with technology development or transfer will be preferred
- g. The Indian principal investigator must have at least four years of the employment remaining in the institution at the time of proposal submission

FINANCIAL SUPPORT

Funding procedures and eligible costs are subject to National regulations. Apart from the terms and conditions of the grant, the additional condition for this call is as follows -

- a. DBT will provide the financial support
- b. The subsequent year funding depends upon timely submission of the annual progress report, financial documents as well as other documents desired and based on the performance appraisal of the project.

- c. The support will be provided only for a period of three years from the date of sanction of the project. An extension of one year may be provided based on the performance/outcome of the project.

MANDATORY REQUIREMENTS

Once the proposal is recommended for support the following documents must be submitted –

- a. Declaration/Certificate from the Head of the institution
- b. Applicable clearances of the Institutional Biosafety Committee, Certificate for Animal Ethics Committee, Institutional Ethics Committee etc.
- c. Project must be submitted through online project management utility i.e. ePromIS, via email along with a single duly signed hard copy of the original proposal.
- d. Each investigator has to follow the 'National Biodiversity Act (2002)'
- e. Applicant has to submit a declaration certificate duly endorsed by the Institution that to the best of their knowledge, their submission is original and does not violate or misappropriate any third party trade secret, "know-how," copyright, patent or other intellectual property right. Applicant also warrant and represent that there are no obligations of any nature, legal or otherwise, which would prohibit, restrict, or interfere with their participation in the call or submission of their design report, and agree to obtain any necessary clearances, authorizations and/or approvals prior to participation
- f. Any other clearance applicable in the process

MONITORING AND FOLLOW UP OF THE PROJECT EXECUTION

The Investigator is required to submit an annual progress report for evaluation by an expert committee as per DBT's guidelines or as and when required. The extension will be based purely on performance/outcome of the project.

PROPOSAL FORMAT & SUBMISSION

Electronic copy of a proposal needs to be submitted through DBT's online proposal submission system (<http://dbtepromis.nic.in/login.aspx>). Soft copies of a proposal submitted on or before 31st March'2021 will only be considered. Hard copy (1) of an online submitted proposal (with supporting supplementary material) duly endorsed by Head of the institution may reach to Dr. Rajneesh K. Gaur.

The following may be noted –

- a. Incomplete or wrongly filled up application format or application with lack of essential information/ documents will be summarily rejected.
- b. Proposal submitted through e-mail will not be entertained.

CONTACT DETAILS

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