

Masonic Institute for the Developing Brain (MIDB) Intellectual and Developmental Disabilities Research Project Grant Applications Now Open

The Masonic Institute for the Developing Brain (MIDB) is pleased to announce a funding opportunity for research in intellectual and developmental disabilities (IDD). **The primary objective of this funding competition is to identify a research proposal to be included as the *signature project* as part of an NICHD P50 application** for a highly competitive [Intellectual and Developmental Disability Research Center](#) (IDDRC) to be submitted in Spring of 2024. We anticipate 3-4 awards will be made in two phases. 2-3 awardees from the first phase of competition will receive \$25K of funding each. These 2-3 awardees will use this support over **2 months** (see timeline below) to generate a full 12-page research strategy to compete in Phase 2 to be included as the signature research project for the P50 application. We are operating on a compressed timeline as the P50 application will be submitted in the spring of 2024. The team/project selected for phase 2 funding will be included as the signature project in the P50 application and will receive an additional ~\$350K to seed/augment their proposed research activities. Projects that leverage the services of one or more MIDB hubs are highly encouraged. This grant application process is designed to integrate with a planned P50 application that is being crafted by MIDB/CEHD researchers. The principal investigators of the P50 application are Frank Symons, Jason Wolff, and Jed Ellison.

About IDDRCs

[For 50 years](#), discoveries made by IDDRC investigators have significantly informed basic understanding of IDD and moved the field forward appreciably. The goals of the IDDRC program include the promotion of collaborative, multidisciplinary and interdisciplinary research programs that will not only provide core facilities and support for research in IDD, but will also advance the development of therapeutics and interventions for these conditions.

About the Proposed UMN IDDRC

The focus areas of the planned UMN IDDRC represent key strengths at UMN/MIDB that differentiate us from the existing 15 IDDRCs. The first key theme represents **a focus on ontogenetic processes, or within-individual development**. While we see value in the “precision medicine” approach – the right intervention, at the right dose, for the right child, at the right time – it is inherently reactive. We are well poised conceptually, methodologically, and computationally to tackle the complexity inherent to development and corresponding phenotypic heterogeneity (e.g., work of the MIDB Measurement and Human Phenotyping Hub) to usher in an era of proactive precision medicine. **Identifying incipient features that increase the likelihood of a maladaptive outcome, prior to a consolidated maladaptive phenotype**, requires a developmental framework. It is precisely this type of framework that will allow us to innovate with pre-emptive interventions. The second existing strength that differentiates UMN/MIDB from other IDDRCs is our deep and broad **expertise in neuroinformatics** (synthesizing expertise across the CMRR, MIDB neuroimaging hub, MIDB analytics hub, and the MIDB informatics hub).

Research Projects

Proposals that leverage the UMN/MIDB strengths identified above (i.e., neuroinformatics, longitudinal study designs, precision phenotyping) are strongly encouraged. Additionally, IDD research projects must address one or more of the focus themes, listed below, identified as an area of research need. These are recognized as potentially exploratory, discovery-based, and/or high-risk projects, with the

goal of yielding interpretable results that will either prove or disprove the proposed hypothesis. The project can address a broad array of intellectual disorders and disabilities, including new, recently characterized, or under-researched areas such as comorbid mental health conditions in IDD. The focus areas are as follows, in no order of priority:

Comprehensive –omics Approaches

Development of Biomarkers or Assessment Measures in More than one IDD Condition

Outcome Measures or Biomarkers for Interventions or Treatments

Multi-modal Treatment Approaches

Preventing and Mitigating the Impact of Exposures that Can Cause IDD

Interventions and Management of Co-morbid Mental Health Conditions

Innovative Technologies to Improve Assessments, Interventions, and Outcomes for Those with IDD

Phase 1 Application Instructions

The Phase 1 application should include the following materials:

1. A cover letter from the PI or MPI team that includes the title of the project, list of collaborators, and brief introduction to the project theme/aims/objectives (not more than 2 pages).
2. An NIH style Project Summary (not more than 500 words)
3. NIH formatted Biosketches for all key personnel
4. 1 page Specific Aims¹
5. 4 page Research Strategy (1 page of Background, 3 pages of Approach)
6. References/Bibliography
7. Budget Justification for \$250K in direct costs per year (for 5 years). This is your R01 budget.
8. Budget Justification Addendum #1 for ~\$350K total of MIDB **seed/augmentation** funds to be spent over 2-6 years.

¹NOTE – The Specific Aims should clearly state the overall objective of the project and indicate which of the focus themes it addresses, as well as the relevance of the project to the focus theme chosen.

²NOTE – This award will be made in Phase 2. It is no guarantee that we will receive the P50 and we will not know whether it will be funded until Fall of 2024. That said, investigators are encouraged to make a plan to optimally utilize these funds whether the P50 is awarded or not. Funds can be used for research activities and personnel including investigator salary support.

³NOTE – Phase 1 funding can be used for personnel including investigator salary support or to augment current research activities that align with the themes of the application. If an awardee is not selected for Phase 2 funding, these funds should be spent over the course of 1 year on activities related to IDD or IDD-adjacent research.

Phase 2 Application Instructions

Phase 1 award winners will compete in Phase 2 and will submit all of the materials above with the following amendments/additions.

1. A cover letter from the PI or MPI team that includes the title of the project, list of collaborators, and brief introduction to the project theme/aims/objectives (not more than 2 pages).

2. An NIH style Project Summary (not more than 500 words)
3. NIH formatted Biosketches for all key personnel (**updated if necessary**)
4. 1 page Specific Aims (**updated if necessary**)
5. **12 page Research Strategy following NIH guidelines**
6. References/Bibliography
7. **Itemized Budget** & Budget Justification for \$250K in direct costs per year (for 5 years). This is your R01 budget.
8. Budget Justification Addendum #1 for ~\$350K total of MIDB **seed/augmentation** funds to be spent over 2-6 years.
9. **NIH Study Record materials (e.g., human subject protections) including all clinical trial documentation if study meets criteria for a clinical trial**

Selection Criteria

Applications will be evaluated based on fit with P50 themes, and significance and impact as per NIH criteria. Applications will be scored using NIH scoring criteria. Frank Symons, Jason Wolff, and Jed Elison will consult with internal and external experts to make the awards.

Timeline

Phase 1 application materials due Friday September 15th, 2023.

Phase 1 awards announced Friday September 29th, 2023.

Phase 2 application materials due December 1st, 2023

Phase 2 award announced Friday, December 15th, 2023.

Please send all application materials to Monica Luciana and Jed Elison at midbresearch@umn.edu. If you have questions as you are preparing your application, please direct them to Jed Elison at jtelison@umn.edu.