

## Funding Opportunity Announcement: Seed Funding for GRI-Related Disorders (GRIN, GRIA, GRIK & GRID)

The CureGRIN Foundation is announcing an opportunity for 2022 Seed Funding to support several critical components of basic, clinical and translational research on disorders associated with genetic mutations in ionotropic glutamate receptors (iGluRs) including GRIN, GRIA, GRIK and GRID genes (GRI-Related Disorders).

The Funding Topics outlined below were framed by the [CureGRIN Research Roadmap](#) that outlines the 10 Essential Questions to address to develop cures and treatments for individuals with GRI-Related Disorders. Applications must address at least one of these essential research questions, preferably with a focus on Funding Topics outlined below. The award may support laboratory supplies, personnel costs, services, or the purchase of equipment necessary to conduct the proposed research.

### 10 Essential Questions

CureGRIN is looking to fund research that helps answer the 10 questions identified in our research roadmap:

1. What are the right outcome measures? (How do we measure symptoms pre- and post-treatment?)
2. Can we find biomarkers? (Are there ways that GRIN Disorder changes blood or another biological functions that will be reversed with treatments / cures?)
3. Is a cure possible at any age? (Only for young children or teens and adults too?)
4. What's the best delivery route for gene therapy? (e.g., Spinal Cord? Specific region of brain?)
5. How can we deliver gene therapies for larger genes? (Larger genes can be more difficult for gene therapy.)
6. What are optimal drugs and molecules targeting NMDARs and related ion receptors? (Can drugs bring GRIN-related receptors into balance?)
7. Are there approved or late-stage drugs that could be repurposed for GRIN and related GRI Disorders? (Could there be drugs out there already that will help?)
8. Which symptoms are due to receptors outside of the brain? (GRIN genes are expressed in gut, lungs, nervous system, etc.)
9. Can we improve symptoms by targeting downstream / upstream? (e.g., oxidative stress, neuroinflammation, nutrient sensing, etc.)
10. What are the functional and phenotypic details for each variant? (Functional analysis and natural history by gene and variant)

## Funding Topics

We particularly interested in funding the following:

- Development of a conceptual model for GRI-Related Disorders based upon semi-structured interviews with caregivers, families and key opinion leaders;
- Biomarker discovery (molecular or physiologic) for *in vivo* GRI models and/or patient populations;
- Validation of standardized neurodevelopmental assessment measures in GRI patients;
- Investigation of GRI variant effects on symptoms outside of the Central Nervous System in GRI-related disorders;
- Evaluation of developmental time windows during which expression of wild-type GRI genes could compensate for neurological deficits associated with null or missense variants (rescue window);
- Development of tools to predict the functional impact of GRI variants;
- Investigation of the cellular consequences of GRI variants to identify / validate novel disease-modifying therapies;
- Platform development that enables integration of natural history data, electronic medical records and activities of daily living;
- Investigations into strategies to stabilize mutant mRNAs and increase functional iGluR protein production (i.e. mechanisms to inhibit nonsense mediated decay);
- High-throughput screen of all FDA-approved medications or other small-molecule libraries to identify novel therapeutics in GRI model systems;

If you would like to address any of these funding topics but do not require seed funding to do so, please contact [keith@curegrin.org](mailto:keith@curegrin.org)

## Duration and Budget

- Expected duration is 12-24 months. The period can be longer or shorter if appropriate for the project;
- Maximum total costs of \$100,000 per year;
- CureGRIN Foundation does not pay indirect costs

## Requirements and Eligibility

- To best benefit our patient community, data generated as a result of CureGRIN seed funding must be made accessible to the CureGRIN Foundation. Data can be embargoed for a period of time to be defined in a Material Transfer Agreement to provide time to publish, protect intellectual property, etc.
- Resources generated as a result of CureGRIN Foundation funding (development of cell or rodent models) must be made available to other interested researchers;
- Any publications or presentations using data generated as a result of CureGRIN funding must acknowledge support from CureGRIN Foundation
- Submission of a formal progress report every 6 months
- This opportunity is open to all investigators at established academic and research institutions worldwide. Researchers at start-up pharmaceutical or biotech companies are eligible if they can demonstrate a lack of necessary funding.
- We welcome applications from tenure-track faculty or equivalent, non-tenure-track faculty and postdoctoral (PhD or MD) fellows.

## Application

Compile all components of the [Application](#) into a single PDF file and send as an email attachment to [keith@curegrin.org](mailto:keith@curegrin.org). Applications will be considered, and funding awarded, on a rolling basis with Scientific Reviews starting **July 15, 2022**.

## Evaluation Criteria

Criteria used to evaluate and prioritize applications for seed funding will include, but are not necessarily limited to:

- Relevance to CureGRIN and GRI-Related Disorders. Successful applicants do not need a research history with GRI Disorders, but rather, an expertise in basic research mechanisms or clinical symptoms similar to those observed in GRI Disorders.
- Overall impact on the GRI-Related Disorder community; Priority will be given to proposals that demonstrate a clear impact on the development of treatments and/or cures for GRI-Related Disorders.
- Leveraging of existing resources (cell models, rodent models, natural history data)
- Experimental design, interpretation of results, and impact of the study.

Please contact [keith@curegrin.org](mailto:keith@curegrin.org) with any questions.