Career Development Grants Overview and Guidance

The Pediatric Epilepsy Research Foundation® (PERF®) in partnership with the Child Neurology Society (CNS) supports two opportunities for early-stage investigators (ESI) who are a legal resident of the United States or Canada and a Junior or Active member of the Child Neurology Society. These are the **PERF®-CNS Elterman Research Grant** and **PERF®-CNS Shields Research Grant**. An ESI is an individual who is within 10 years of completing their terminal degree or end of post-graduate clinical training, whichever date is later, and as a Principal Investigator has not received an independent grant, such as an R01 from the National Institutes of Health (NIH) or equivalent major support from another funding organization.

1) **PERF®-CNS ELTERMAN RESEARCH GRANT** This research grant supports **clinical or basic science** research by a child neurologist or developmental pediatrician early in his/her academic career. The selected investigator will receive a $150,000 grant of $75,000 per year for two years.

   Eligibility Criteria
   1. The applicant completed training in child neurology or neurodevelopment disabilities in an ACGME-approved program no more than ten (10) years prior to application.
   2. There are no citizenship requirements however the research must be conducted in the United States or Canada.
   3. The applicant is a Junior or Active member of the Child Neurology Society.
   4. Currently funded research is disqualified except for an NIH K12, T32, or R25 grant.
   5. Research does not need to focus on epilepsy.

2) **PERF®-CNS SHIELDS RESEARCH GRANT** This research grant supports **translational or clinical research** by a child neurologist or developmental pediatrician early in his/her academic career. The selected investigator will receive a $150,000 grant of $75,000 per year for two years.

   Eligibility Criteria
   1. The applicant completed training in child neurology or neurodevelopment disabilities in an ACGME-approved program no more than ten (10) years prior to application.
   2. The **PERF® Shields Grant** must have a clinical research/patient care component.
   3. There are no citizenship requirements however the research must be conducted in the United States or Canada.
   4. The applicant is a Junior or Active member of the Child Neurology Society.
   5. Currently funded research is disqualified except for an NIH K12, T32, or R25 grant.
   6. Research does not need to focus on epilepsy.

THE RESEARCH GRANT REVIEW

The CNS grant review committee consists of both clinicians and physician-scientists with a wide variety of backgrounds. Applicants should therefore write succinctly and clearly

describe all scientific terms and experiments. Abbreviations should be identified in their first instance and can then be used throughout the proposal. The Applicant should consider that multiple abbreviations can become confusing.

The reviewers will consider the following and provide constructive feedback to the applicant, when indicated: significance, investigator, innovation, approach, environment, and other score influences, including references, human subjects, animal welfare, etc.

Significance. Does the project address an important problem or a critical barrier to progress in the field? If the aims of the project are achieved, how will scientific knowledge, technical capability, and/or clinical practice be improved? How will successful completion of the aims change the concepts, methods, technologies, treatments, services, or preventative interventions that drive this field?

Investigator. Is the investigator well suited to the project? Do they have appropriate experience and training? If the project is collaborative, do the investigators have complementary and integrated expertise; are their leadership approach, governance, and organizational structure appropriate for the project?

Innovation. Does the application challenge and seek to shift current research or clinical practice paradigms by utilizing novel theoretical concepts, approaches or methodologies, instrumentation, or interventions? Is a refinement, improvement, or new application of theoretical concepts, approaches or methodologies, instrumentation, or interventions proposed?

Approach: Is the overall strategy, methodology, and analysis well-reasoned and appropriate to accomplish the specific aims of the project? Are potential problems, alternative strategies, and benchmarks for success presented? If the project is in the early stages of development, will the strategy establish feasibility? Will particularly risky aspects be managed effectively?
If the project involves human subjects and/or NIH-defined clinical research, are the plans to address 1) the protection of human subjects from research risks, and 2) the inclusion (or exclusion) of individuals on the basis of sex/gender, race, and ethnicity, as well as the inclusion (exclusion) of children, justified in terms of the scientific goals and research strategy proposed?

Environment: Will the scientific environment in which the work will be done contribute to the probability of success? Is the institutional support, protected time for research endeavors, equipment and other physical resources available to the investigators adequate for the project proposed? Will the project benefit from unique features of the scientific environment, subject populations, or collaborative arrangements?

Budget: Will the proposed research be completed with the funds and within the proposed time frame?

Continue to the next page for the grant application instructions

Career Development Grant Application Instructions

Procedure for All Grants
Submit a single electronic copy of a research proposal to PERFCDG@gmail.com. The grant review committee appointed by the Child Neurology Society (CNS) will be impressed with clarity of expression and succinctness of style and a Research Plan that **can be accomplished within two years.**

Formatting Requirement
- Single-spaced
- ½" margins
- 11-point Arial font

Prepare the proposal with the following format and word/page limitation.

Core Section	Document	Limitation
1	Face Page	Two pages
2	Table of Contents	One page
3	Abstract	Maximum 300 words
4	Specific Aims	One page (single-spaced acceptable)
5	Work by Others	Two pages
6	Work by Investigator	Two pages
7	Research Plan	Four pages
8	References	Two pages
9	Investigator Biosketch	Five pages
10	Letters of Recommendation	None
Appendix Section	**Document**	**Limitation**
i	Human subjects	
ii.	Vertebrate animal	
iii.	Budget, period of support, justification	
iv.	Resources	
v.	Performance sites and key personnel	
vi.	NIH Biosketch for any other additional key personnel	Not to exceed 5 pages per key personnel
vii.	PERF® Terms and Conditions of Award	

CORE SECTIONS

1. **Face Page.** This is pages 1-2 of the application. Please the investigator's post-nominal degree(s) after the name.

2. **Table of Contents.** This is page 3 of the application with the format as below:

Table of Contents

3. **Abstract**. Include a brief (300 words maximum) background with preliminary data (published and unpublished), hypotheses, goal, aims, and anticipated outcomes.

4. **Specific Aims**. Include a succinct background. Include the hypotheses, methods, and anticipated outcome(s) for each Aim.

5. **Work by Others.** Includes background of the disease and data that applies to your question/hypothesis. This includes work done outside of the applicant's laboratory or clinical research program.

6. **Work by Investigator.** Includes any preliminary scientific data and/or data that shows the feasibility of the proposed experiments.

7. **Research plan.** The proposed research should be feasible, and experiments should be completed by the time funding ends.

8. **References.** Two-page limit.

9. **Investigator Biographical Sketch.** Use the standard NIH Biosketch template, https://grants.nih.gov/grants/forms/biosketch.htm , not to exceed 5 pages.

10. **Letters of Recommendation.**
    (a) Submit one letter of recommendation from the director of the applicant's child neurology division and one letter from his/her scientific advisor. Two additional optional letters of recommendation or support may be included.

    (b) At least one reference letter should include a yellow highlighted statement of the applicant's eligibility for the Award and should document the willingness of the institution to accept the award without indirect costs and provision of sufficient protected time to perform the research described in the application. These highlighted statements are often included in a letter from the applicant's Section Chief or Department Chair.

APPENDIX SECTIONS

All applicants are required to include this section in their application. There are no page limitations for appendix materials such as Human Subjects, Budget and justification, etc. However, these sections should be succinct and MUST NOT contain unrelated information such as Research plan, figures, data, etc.

i. **Human Subjects.** If applicable, IRB approval and IRB-approved informed consent forms will be required before funds are released. This section should provide a description of the proposed involvement of human subjects and may contain as applicable the following information. Type N/A if no human subjects are used in the proposed experiments.

- **Protections for Human Subjects**. For research that involves human subjects but does not involve one of the six categories of research that are exempt under 45 CFR Part 46, the committee will evaluate the justification for involvement of human subjects and the proposed protections from research risk relating to their participation according to the following five review criteria: 1) risk to subjects, 2) adequacy of protection against risks, 3) potential benefits to the subjects and others, 4) importance of the knowledge to be gained, and 5) data and safety monitoring for clinical trials. For research that involves human subjects and meets the criteria for one or more of the six categories of research that are exempt under 45 CFR Part 46, the committee will evaluate: 1) the justification for the exemption, 2) human subjects involvement and characteristics, and 3) sources of materials.
- **Inclusion of Women, Minorities, and Children**. When the proposed project involves human subjects and/or NIH-defined clinical research, the committee will evaluate the proposed plans for the inclusion (or exclusion) of individuals on the basis of sex/gender, race, and ethnicity, as well as the inclusion (or exclusion) of children to determine if it is justified in terms of the scientific goals and research strategy proposed.

ii. **Vertebrate animals**: If applicable, the Awardee's institutional IACUC approval will be required before funds are released. This section should provide a description of the proposed involvement of vertebrate animals and may contain as applicable the following information: The committee will evaluate the involvement of live vertebrate animals as part of the scientific assessment according to the following five points: 1) proposed use of the animals, and species, strains, ages, sex, and numbers to be used; 2) justifications for the use of animals and for the appropriateness of the species and numbers proposed; 3) adequacy of veterinary care; 4) procedures for limiting discomfort, distress, pain and injury to that which is unavoidable in the conduct of scientifically sound research including the use of analgesic, anesthetic, and tranquilizing drugs and/or comfortable restraining devices; and 5) methods of euthanasia and reason for selection if not consistent with the AVMA Guidelines on Euthanasia. Type N/A if no vertebrate animals are used in the proposed experiments.

iii. **Budget, Period of Support, Justification**. Reviewers will consider whether the budget and the requested period of support are fully justified and reasonable in relation to the proposed research.

iv. **Resources**. Specify the facilities to be used for the conduct of the proposed

research. Indicate the performance sites and describe capacities, pertinent capabilities, relative proximity and extent of availability to the project. List the most important equipment items already available for this project, noting the location and pertinent capabilities of each.

v. **Performance Sites and Key Personnel**. Detail where the experiments will be performed. List the names and institutions of any study investigators and collaborators and their role in the project.

vi. **NIH Biographical Sketches for Any Other Additional Key Personnel.** The NIH Biosketch for any Key Personnel/Mentors should not exceed 5 pages.

vii. **PERF® Terms and Conditions of Award for Potential Grantee.** This document will require institutional signature as part of the research grant agreement, if the grant application is selected for funding.

APPLICATION SUBMISSION DEADLINE

- The complete proposal must be received **by 5:00 pm Central Time on April 11, 2025**. The abstract may also be submitted to the CNS Scientific Selection Committee for consideration as a Poster or Platform Presentation.
- Convert the entire proposal to a **PDF format** and send copies to PERFCDG@gmail.com
- Applications that do not adhere to the sanctioned procedure will be returned without review.
- The applicant will be informed of the Committee's decision by June 30, 2025.

CONTACT INFORMATION

Email: PERFCDG@gmail.com and copy Jo Anne Nakagawa, Director, Grants Review Liaison at Nakaj.PERF@gmail.com