ADVANCING SUDEP RISK ASSESSMENT AND PREVENTION THROUGH COLLABORATIVE TEAM SCIENCE

The purpose of this funding opportunity is to enhance our understanding of the biological factors that contribute to an increased risk of sudden death in epilepsy (SUDEP). We are seeking proposals that build on the current knowledge of biological factors that increase the risk of SUDEP using existing clinical datasets. This funding opportunity aims to drive impactful discoveries that will ultimately improve the safety and quality of life for individuals living with epilepsy, reducing the incidence of SUDEP and leading to better long-term outcomes for this vulnerable population.

Principal Investigators and their teams chosen for this award will be expected to collaborate within a multi-team science framework. CURE Epilepsy has a strong track record of implementing team science with extensive experience facilitating collaborative, interdisciplinary research through structured team-building approaches, shared leadership models, and co-authored publications that reflect our commitment to epilepsy research (CURE Infantile Spasms Consortium et al., 2020, doi: 10.1002/epi4.12441; Iyengar et al., 2023, doi: 10.1002/epi4.12745). Investigators and their team members who are awarded grants in this funding opportunity will be expected to meet quarterly via videoconference with other teams to share methodologies including analytical approaches, data ecosystems, and study results and devise critical next steps to learn from each other and accelerate progress in understanding biological risk factors linked to SUDEP. These regular meetings will be facilitated by CURE Epilepsy staff and may include external peer advisors with expertise in SUDEP research.

This funding opportunity is not intended to fund preclinical work or clinical trials for SUDEP.

CURE Epilepsy's mission is to fund breakthrough research that will transform the lives of people with epilepsy as we lead the search for a cure.

Requests may be made for up to $250,000 for a two-year period.

CURE Epilepsy encourages applications from groups underrepresented in the biomedical, clinical, behavioral, and social sciences. These groups include individuals with disabilities, veterans, persons from underrepresented racial and ethnic groups and gender diverse groups, women in biomedical-related disciplines, or any legally protected characteristic.

U.S. citizenship is not required. Researchers outside the U.S. are also encouraged to apply.

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BACKGROUND

Sudden Death in Epilepsy (SUDEP) is a devastating outcome for individuals living with epilepsy, posing a significant burden both personally and within the broader public health landscape. Although rare, SUDEP can affect anyone with epilepsy, with certain individuals facing an elevated risk. Key risk factors include frequent generalized tonic-clonic seizures, non-adherence to prescribed medications, early onset of epilepsy, and uncontrolled or recurrent seizures. Despite an increased understanding of risk factors associated with SUDEP, there remains an urgent need to expand the current understanding of SUDEP risk factors to develop personalized risk assessment tools for individuals with epilepsy. A comprehensive, data-driven understanding of these risk factors is essential to help clinicians, individuals with epilepsy, and caregivers assess the risk of SUDEP in a more personalized and accurate manner and aid in developing individualized prevention strategies.

This ***grant opportunity*** is intended to meet this need by bringing together experts to further advance knowledge about SUDEP using analytical tools and data elements within existing clinical data sets in the community. Existing clinical datasets provide valuable opportunities to advance our understanding of SUDEP risk factors. Example datasets for this project include, ***but are not limited to***, those from the Center for SUDEP Research (CSR; https://sudepresearch.org), the North American SUDEP Registry (NASR; https://sudepregistry.org/), Sudden Death in the Young Registry (SDY; https://sdyregistry.org/), and appropriate national patient registry datasets from various countries.

PRIORITY AREAS

While some SUDEP risk factors are known and communication about SUDEP risk is increasing, there remains a critical need to expand our knowledge of SUDEP risk factors and integrate these findings into clinical care practices. We encourage applicants to utilize existing clinical SUDEP datasets to identify patterns, relationships, and correlations

that could lead to new hypotheses, enhance care for individuals with epilepsy, and support the development of SUDEP prevention strategies. Proposals from leaders in artificial intelligence, machine learning and other innovative methodologies working in collaboration with researchers with expertise in epilepsy are encouraged to apply.

Novel research that furthers our understanding of the causes and ultimate elimination of SUDEP is a high priority for CURE Epilepsy. Key focus areas for this funding opportunity include the identification and analysis of novel risk factors linked to SUDEP, such as:

- **Genetic relationship(s)**
- **Cardiac abnormalities**
- **Neurophysiological markers**
- **Sleep-related factors**
- **Respiratory indicators**

Lower priority will be given to areas that include the following:

- Research on risk factors that have been **previously identified and extensively published** such as tonic-clonic seizures, nocturnal seizures, lack of medication adherence, lifestyle factors such as sleeping alone, and mental health comorbidities, will not be considered
- Research involving neuroanatomical imaging endpoints in SUDEP

ELIGIBILITY REQUIREMENTS

All materials must be submitted in English. International applicants are welcome.

This award is open to both established and early-career investigators. Early-career investigators are typically university faculty at the assistant professor level (or in equivalent roles at non-university research organizations). They must submit a letter of support from their department head or chair, confirming their appointment and institutional

commitment, including salary and data infrastructure if funded. Established investigators are faculty at the associate professor level or higher. Investigators in non-university or non-tenure-track positions must demonstrate seniority through evidence of independent grant funding, senior authorship on at least one publication, and active participation in review committees, advisory boards, or professional societies.

Exclusions:

Researchers who serve on CURE Epilepsy's Scientific Advisory Council or the SUDEP Risk Assessment and Prevention Steering Committee are ineligible to apply for or sponsor a grant for the duration of their term. Post-doctoral fellows may not apply for this award.

FUNDING CYCLE DETAILS

ACTIVITY	KEY DATES
Request for Proposals	June 2, 2025
Letter of Intent Deadline	July 7, 2025
Full Application Invitations	August 20, 2025
Full Application Deadline	September 23, 2025
Anticipated Award Notification	February 2026
Anticipated Project Start Date	April 2026

BUDGET INFORMATION

CURE Epilepsy will commit up to $250,000 over a 2-year period for each proposal selected for funding. Funding requests may include salary support for the Principal Investigator (PI), co-PIs, technical staff, data infrastructure (e.g., access to databases, analysis software), publication fees and travel to an epilepsy-related conference if the PI is presenting his/her CURE Epilepsy-funded research.

Limited equipment purchases that are required to achieve goals will be considered. **Indirect costs are not supported**. Funds cannot be used to cover institutional expenses such as network charges, computer maintenance and services, insurance dues or other miscellaneous expenses not directly related to performing the project.

LETTER OF INTENT INSTRUCTIONS

All applicants must submit a Letter of Intent (LOI). The LOI should clearly and succinctly outline the hypothesis to be tested, the specific aims, and provide a brief description of the research plan according to the guidelines in this announcement. Below are instructions for the required **scientific summary** and **future directions** sections, which together can be no longer than two pages in length. LOIs exceeding two pages of text will not be reviewed.

1. **Scientific Summary:** Clearly and succinctly outline the hypothesis and specific aims and provide a brief description of how the proposed research plan aligns with the goals of the funding opportunity and CURE Epilepsy's mission to push epilepsy research forward by leaps rather than by incremental steps (one and one-half page maximum). This summary should also include a description and justification for the dataset(s) that will be investigated.
2. **Future Directions:** Explain the actions that will be taken after the goals of your proposed project are achieved. (one-half page maximum).

Key things to remember:

- It is important to keep in mind that a key factor that reviewers consider when assessing applications is feasibility, including access to clinical datasets. Lower scores will be given to proposals that are not realistically achievable within a two-year timeframe.
- Graphs and charts do not count towards the two-page text description of your project.

- References are not required at the LOI phase. However, if you decide to include references, they do not count towards the page limitation.

LETTER OF INTENT PROPOSALCENTRAL INSTRUCTIONS

LOIs must be submitted through ProposalCentral (https://proposalcentral.altum.com). To begin an application, applicants will need to create a professional profile, if one does not exist.

INSTRUCTIONS FOR EACH SECTION OF THE APPLICATION IN PROPOSALCENTRAL

1. *Title Page: Enter* proposal title (maximum 150 characters, including spaces).
2. *Download Templates and Instructions:* Download LOI guidelines and other available instructions (if provided) as needed.
3. *Enable Other Users to Access this Proposal:* Use this optional section to grant access to a collaborator or co-investigator.
4. *Applicant/PI:* This section should auto-populate from the applicant's professional profile. Double-check that the information is complete and correct. If it is not, click "Edit Professional Profile" to update the information. Indicate whether you are an early career or established investigator.
5. *Institution and Contacts:* Information should auto-populate from applicant's profile.
6. *Co-Principal Investigator/Collaborators:* Please enter information for any co-investigators or collaborators, if applicable.
7. *Keywords:* Select at least three keywords from the list that best describe the specific focus of your research proposal: **SUDEP, genetics, sleep, cardiac, respiratory, EEG, clinical, clinical data analysis, data harmonization, electronic health records, Artificial intelligence and machine learning.**
8. *Current and Pending Support*: List all current and pending support for you and any co-investigators. Pending support includes any grant applications that you have

submitted, but for which decisions have not yet been communicated. Current and pending support is required for the PI and co-PI but is not required for collaborators.

9. *Attach LOI and Biosketch:* Once the LOI is finalized, attach it by uploading the PDF into this section of ProposalCentral.
10. **Early-career investigators** must submit a letter of support from the department head or chair confirming their appointment and institutional support for their position in terms of salary, laboratory space, and available infrastructure to carry out the work if funded.
11. **Biosketch for PI:** You may use the NIH biosketch format if preferred over template provided.
12. Optional
    a. Applicants are encouraged to provide statements regarding their commitment to fostering diversity, equity, and inclusion in their research environment (one hundred words or less).
    b. Applicants may include within their biosketch a one-half page section describing any life events or circumstances that contributed to delays or gaps in their career trajectory. This may include information that may not otherwise be apparent to reviewers and can help provide context as they evaluate your professional trajectory and achievements. Examples include but are not limited to: being a member of a community underrepresented in biomedical research, having experienced a life event that impacted career trajectory (such as parenthood, family, or medical leave), COVID-19 pandemic-related effects, having a learning or other disability, coming from a low-income family, and being the first in your family to go to college.
13. *Validate:* The system will verify if any required components are missing. Applicants will not be able to submit until all necessary components are completed.
14. *Submit:* Click "Submit" after your application has been successfully validated.

FULL PROPOSAL NARRATIVE INSTRUCTIONS (10-PAGE LIMIT*)

**The 10-page limit of the Proposal Narrative is inclusive of any figures, tables, graphs, photographs, diagrams, pictures, pictorials, cartoons, and other relevant information needed to judge the proposal.*

Following review of LOIs, selected applicants will be invited to submit full proposals and will be asked for the following:

- **Hypothesis and Specific Aims**: Investigators will describe in detail their study hypotheses and aims.
- **Background**: Describe the project background and relevance to expanding SUDEP risk factors for better prediction and preventative strategies for people at risk for SUDEP.
- **Preliminary Data**: Provide preliminary data available at the time of submission.
- **Research Plan**: Detail the research that will be done to address each specific aim, details of research design, analysis methods, the expected outcomes, potential pitfalls, and how results will be interpreted. In addition, researchers must describe the datasets they plan to investigate in their work including details of the cohort(s) with clear clinical characteristics, sample types, and endpoints to be analyzed. If this is a collaborative proposal, briefly describe how the collaboration adds value to the application.
- **Use of CDEs in SUDEP Research:** CURE Epilepsy strongly encourages the use of Common Data Elements (CDEs) in your research. Use of CDEs increases rigor, data standardization, and transparency across research studies. Please include a statement in your grant application that describes the incorporation of CDEs and data-sharing.
    i. **Guidance for Integration in Grant Proposals:** Researchers are strongly urged to state in their grant applications, where applicable, the procedure specific CDEs that will be used in their clinical studies. Epilepsy specific CDEs can be

found here (Epilepsy | NINDS CDE).

- **Statement of Relevance to CURE Epilepsy's mission**: Include one paragraph detailing how the proposed research addresses CURE Epilepsy's goal of transforming epilepsy research and ultimately transforming patient care, and specifically how the proposed research will lead to a better understanding of SUDEP for interventional and preventive strategies.
- **References:** Please list all the literature cited within the proposal. References do not count toward the page limit.

FORMATTING GUIDELINES

ITEM	DETAILS
Font	Use an Arial, Helvetica, Palatino Linotype or Georgia typeface, a black font color, and a font size of 11 points or larger.
Figures, Tables, and Graphs	You may use a smaller type size, but it must be in a black font color, readily legible, and follow the font typeface requirement. Color can be used in figures, but all text must be in black font.
Spacing	Single-spaced between lines of text, no more than five lines of type within a vertical inch. Margins: Minimum of 0.5-inch top, bottom, right and 1-inch left.

FULL PROPOSAL INSTRUCTIONS FOR PROSPOSAL CENTRAL

Full proposals must be submitted through **ProposalCentral** (https://proposalcentral.altum.com).

To access your application, log in to ProposalCentral and go to the Manage Proposals tab. If you click on "edit" next to your approved LOI, you will be taken into the full proposal application. Below are instructions for each section on the online application:

1. ***Title Page:*** Enter proposal title (maximum 150 characters, including spaces).
2. ***Download Templates and Instructions:*** Access a copy of these guidelines and

download a biosketch template if you do not already have one completed.

3. ***Enable Other Users to Access this Proposal:*** Use this optional section to grant access to co- investigators or collaborators so they may review or enter into the application.
4. ***Applicant/PI:*** This section should auto-populate from professional profile. Double-check that the information is complete and correct. If it is not, click "Edit Professional Profile" to update the information. Indicate whether you are an early career or established investigator. CURE Epilepsy now requires an ORCID ID with all full proposal submissions. If your ORCID ID is not already provided on this page, enter an ORCID identifier in your Professional Profile by clicking "Edit Professional Profile." Detailed instructions may be accessed in Section 2 of the online application – Download Templates and Instructions.
5. ***Institution and Contacts:*** Information should auto-populate from your profile.
6. ***Co-investigators/Collaborators:*** Enter contact information for co-PIs and/or collaborators. Typically, co-investigators are co-funded by the grant, collaborators are not.
7. ***Letters of Recommendation:*** Submit up to three letters of recommendation from mentors, department heads, or collaborators. **Letters of recommendation are only required for early career investigators.** Early-career investigators must submit a letter of support from the department head or chair confirming their appointment and institutional support for their position in terms of salary, laboratory space, and available infrastructure to carry out the work if funded. Letters from collaborators can be requested here or uploaded in the attachments section.
8. ***Abstract:*** Answer the questions in each box according to the instructions below:
    a. **Lay Summary:** The lay summary will be reviewed by a person with lived experience of SUDEP. Please take special care to describe the proposed work and its potential to increase knowledge on SUDEP risk factors to predict and prevent SUDEP, in language appropriate for a non-scientific audience. Your summary MUST include each of the following sections.

Background and Rationale

a. **Goals**: include any overarching or long-term goals.
b. **Methods**: briefly explain how the project will be performed avoiding excessive technical details, for example, which public dataset(s) will be used and analysis strategy.
c. **Deliverables:** explain what output is expected at the successful completion of the project.
d. **Potential Impact:** briefly explain how the work, if successful, will improve the lives of those with or at risk for SUDEP. In this section, you may also explain the next steps in your research plan once the goals of your proposed project have been achieved.
e. **Scientific Summary:** Please provide a scientific abstract for your project.

9. ***Specific Aims and Milestones:*** Each Specific Aim should have one clearly defined outcome or Milestone. For example, a Specific Aim *train an AI model using validation dataset "X" might have a Milestone such as: AI model achieves ≥90% accuracy on validation dataset "X" after 2 months of AI Training and Performance Assessment. For each Aim and associated Milestone, applicants must provide both a short and a long description.*
10. ***Aims and Milestones Schedule:*** For each Specific Aim and its associated Milestone, enter the budget, start date, and end date. Each Specific Aim should be associated with only one Milestone; do not enter multiple Milestones per Aim. Dates for different Milestones may overlap.
11. ***Budget Period Detail:*** Provide a detailed budget. The maximum budget for this program is $250,000 USD over two years. Include an itemized list of how funds will be used. Applicants may include costs for data acquisition (e.g., purchase or subscription fees), software and analytical tools (e.g., licensing for data analysis platforms), and data storage or management (e.g., cloud services or database software). Additional expenses may include computational resources (e.g., cloud computing), technical assistance (e.g., consulting or IT support), and personnel costs (e.g., salaries for research assistants or data scientists). Travel expenses for attending relevant conferences and publication fees for disseminating findings

may also be necessary.

a. While stipend support can be provided for graduate students, tuition is not an allowable expense. **Please note that indirect costs and institutional overhead are not allowed.** Funds cannot be used to cover institutional expenses such as network charges, computer maintenance and services, insurance dues or other miscellaneous expenses not directly related to performing the project. All expenses must be converted to U.S. dollars (USD).
b. Note that there is a travel cap of $1,500 USD for international applicants and $1,000 USD for U.S. applicants per year, which can be budgeted for a maximum of two investigators (the PI and Co-PI). If awarded funds, CURE Epilepsy encourages all grantees to attend the annual Partners Against Mortality in Epilepsy (PAME) and American Epilepsy Society (AES) meetings.

12. ***Budget Summary and Justification**:* Review the summarized budget to make sure that details have been entered correctly. Provide budget justification statement. The budget justification should clearly detail how and where the funds will be used and why this expenditure is critical to the success of the proposed research.
13. ***Current and Pending Support:*** Enter current and pending support for all PIs on the proposal. Please indicate if there is any overlap with the proposed work.
14. ***Organization Assurances:*** Answer the questions regarding use of human subjects, animals, recombinant DNA, and the possession of a Schedule 1 license, if appropriate for the proposal.
15. ***Proposal Narrative and Other Attachments**:* Upload the following documents:
    a. Proposal Narrative.
    b. Description of facilities available at the PI's institution. Facilities/Institutional Assurances (do not exceed one-half page): If an institution does not have an official assurance document, please provide, in writing, assurances from the department chairperson or practice colleagues confirming the applicant's time, facilities, and future position if research is funded. Include a description of the facilities available. Please submit facilities/institutional

assurances for each PI.

c. Biosketch for PI: You may use the NIH biosketch format if preferred over the template provided.

16. Optional:

a. Applicants are encouraged to provide statements regarding their commitment to fostering ***diversity, equity, and inclusion*** in their research environment (one hundred words or less).

b. Applicants may include within their biosketch a one-half page section describing any life events or circumstances that contributed to delays or gaps in their career trajectory. This may include information that may not otherwise be apparent to reviewers and can help provide context as they evaluate your professional trajectory and achievements. Examples include but are not limited to: being a member of a community underrepresented in biomedical research, having experienced a life event that impacted career trajectory (such as parenthood, family, or medical leave), COVID-19 pandemic-related effects, having a learning or other disability, coming from a low-income family, and being the first in your family to go to college.

17. ***Co-Investigator Biosketch:*** Upload biosketch for each co-investigator, if applicable.
18. ***Collaborator Letters of Support:*** Upload letters from collaborators indicating their support of the proposed work, if applicable.
19. Please include any additional attachments related to the following information:

a. Letter of access and technical support for named datasets. Upload documents(s) that confirm(s) access to the named dataset/database you will be studying as part of this research grant. If technical assistance is required for the dataset(s), applicants should confirm access to ongoing support, such as data science or database manager.

i. The letter of access may contain the following statements:

1. Dataset(s) are open and accessible for use with no restrictions.

2. If appropriate, collaborators or multiple users can access the dataset(s).
3. Data are associated with study protocol(s) that provide clear descriptions of the research study design, and how data were collected and curated using common data elements (CDEs), e.g., Epilepsy | NINDS CDE.
4. Dataset(s) align with data dictionaries that describe comprehensive information about the data endpoints.

20. ***Signed signature pages:*** Upload signed signature pages which are generated in Section 15 of the application.
21. ***Validate:*** The system will check for required components that have not been completed. You will not be able to submit until all required components are completed.
22. ***Signature Pages:*** Click "Print Signature Page" to obtain a PDF of the document that needs to be signed by you (the submitting PI) and an institutional representative. After signatures have been collected, scan and upload to Section 13.
23. ***Submit:*** Please **be sure to click "Submit"** once your application has been validated by the system.

NOTE: CURE Epilepsy may occasionally share your full proposal with prospective donors or other advocacy groups who may be interested in co-funding the award. A non-disclosure agreement will be signed by each person who is given access to the full proposal.

APPLICANT FAQS

Answers to a series of frequently asked questions may be found below. If after reviewing additional clarification is needed, please reach out to the Research Team at Research@CUREepilepsy.org.

Are international applicants eligible to apply?

Yes, international applicants are eligible to apply for this grant. All application materials must be submitted in English and should be written with a clear hypothesis and specific aims as is consistent with the U.S. grant-making system.

Are multiple researchers from the same institution allowed to apply for the same grant?

Yes. There is no limit to the number of researchers from the same institution who can apply for the same grant.

I'm interested in submitting a LOI for an open CURE Epilepsy award with a scientist who is currently funded by CURE Epilepsy. Is this allowed?

Yes, you can apply for an open award with a Co-PI currently funded by CURE Epilepsy.

I received a CURE Epilepsy grant in the past. May I apply again?

Yes. You are welcome to apply for a grant as a current/former CURE Epilepsy grantee.

May I apply for an award if I am an active reviewer for CURE Epilepsy?

Yes. If you are an active reviewer, you can still apply for an award. We will ensure that you are not assigned to applications in the award category for which you applied.

May I submit more than one application in the same cycle or to different award mechanisms, if running concurrently?

Yes, if the two applications have completely different hypotheses and specific aims.

Does CURE Epilepsy only fund academic laboratories?

Cure Epilepsy funds research from academic and non-academic laboratories. We fund researchers working at universities, small companies, and non-profit research institutions.

If I am submitting alongside another researcher, do we both need to apply?

CURE Epilepsy welcomes collaborative proposals with more than one principal investigator. However, one application must be submitted on behalf of the collaboration, under one PI's account in ProposalCentral.

May multidisciplinary funding be split between two institutions?

Yes, funding can be split among multiple institutions. However, CURE Epilepsy will only contract with the primary institution, which will be responsible for negotiating subcontracts with the institutions of any co-PIs/collaborators involved with the project. CURE Epilepsy requires detailed budgets outlining the allocation of funds to each institution.

Who can receive a salary from the grant?

Grant funds can be allocated to cover the salaries of investigators, postdocs, and graduate students in relation to the percentage of effort spent on the project, as well as research supplies and some travel expenses (see below). Indirect costs are not allowed.

May grant funds be used for travel expenses?

Yes. There is a travel cap of $1,500 USD for international applicants and $1,000 USD for U.S. and Canadian applicants per year, which can be budgeted for a maximum of two investigators (the PI and Co-PI). If awarded funds, CURE Epilepsy encourages all grantees to attend the annual PAME and American Epilepsy Society Meeting in December. Additional funds outside of the award will not be given to attend this event.

If I cannot submit by the deadline, may I request an extension?

No, CURE Epilepsy does not provide deadline extensions.

REFERENCES

CURE Infantile Spasms Consortium, CURE Staff; Lubbers L, Iyengar SS. A team science approach to discover novel targets for infantile spasms (IS). Epilepsia Open. 2020 Dec 22;6(1):49-61. doi: 10.1002/epi4.12441. PMID: 33681648; PMCID: PMC7918303.

Iyengar SS, Lubbers LS, Harte-Hargrove L; CURE Epilepsy Post-Traumatic Initiative Advisors, and Investigators. A team science approach for preclinical and clinical characterization and biomarker development for post-traumatic epilepsy. Epilepsia Open. 2023 May 10;8(3):820–33. doi: 10.1002/epi4.12745. PMCID: PMC10472380.