

SERGIEVSKY AWARD

Last Updated on July 15, 2024

BACKGROUND AND PURPOSE

The Sergievsky Award for Epilepsy Health Equity and Diversity ("Sergievsky Award") provides support for physicians and scientists who self-identify as <u>underrepresented populations</u> in the U.S. Biomedical, Clinical, Behavioral and Social Sciences research enterprise as defined by the NIH. The intention of this award is to facilitate the launch of individuals into a career of leadership in academic clinical research. Proposals are welcomed across the spectrum of epilepsy research, with preference for clinical research that addresses issues affecting medically underserved individuals with epilepsy or seizures or related aspects of health equity. The applicant should specify how the project addresses the main goals of the award.

The Sergievsky Award provides two years of support, \$75,000 per year (total award \$150,000), as well as two years of complimentary registration to the AES Annual Meeting and complimentary AES membership. The second year of funding and benefits is contingent on progress in the first year. The number of awards granted each year is contingent upon available funds.

The awardee will also be invited to engage with the AES community, with the objective of completing at least one of the identified activities during their award period. These may include: an opportunity to present scholarship at the annual meeting, consideration of a publication of commentary or results of research in *Epilepsy Currents*, and service within AES during the award term and beyond. AES service will be tailored to the candidate's goals and may include participation on the Early Career Grant Committee, Epilepsy Currents contributing editor, AES DEI Committee, or another AES committee aligned with career goals. The awardee will also be invited to participate in the annual AES leadership training program. Normal review and acceptance processes will be followed where applicable.

SERGIEVSKY AWARD- BACKGROUND INFORMATION

The Sergievsky family trust made a generous gift to the American Epilepsy Society to establish an early career award for an underrepresented minority, preferably Black or African American, who has an interest in working on issues affecting medically underserved people with epilepsy or seizures. The Sergievsky family estate made this gift in memory of Ms. Kira Sergievsky, who suffered from severe epilepsy and was a longtime librarian at the Gertrude H. Sergievsky Center, a neurology institute. Read more about the Sergievsky Research Fund for Epilepsy Health Equity and Diversity <a href="https://example.com/here-en/librarian-early-career-en/librarian-early-caree

APPLICATION DEADLINES AND AWARD DATES

- September 2024: Application submission opens through ProposalCentral
- January 16, 2025: Full proposals due
- By May 31, 2025: Award notifications sent out
- July 1, 2025: Earliest award start date. May be delayed up to 3 months
- June 30, 2026: Year 1 progress report due
- July 1, 2026: Year 2 start date
- June 30, 2027: Award end

ELIGIBILITY CRITERIA

<u>Ineligible proposals will not be reviewed.</u> If you have any questions regarding your eligibility, please contact AES Grants Staff at <u>grants@aesnet.org</u> before submitting a proposal.

Applicants must:

- 1. Hold a MD, DO, PhD, PharmD, Doctor of Nursing, or, other professional degree within the appropriate track.
- 2. Have a job title of clinical fellow, research fellow, clinical instructor, or clinician investigator or assistant professor for clinicians, or equivalent levels of career for nonphysicians in neuropsychology, psychology, pharmacology, nursing, or research. Applicants who are in training at the time of submission (e.g., clinical fellows or similar) must have a position offered as an incoming faculty member. Applicants with appointments at the level of Adjunct Professor or Associate Professor are not eligible, nor are research assistants, graduate or medical students, postdoctoral research fellows, medical residents, permanent government employees, or employees of private industry.
- 3. Self-identify as an individual from groups that are underrepresented in medicine (URM).. For this award, URM is defined as those from underrepresented populations in the U.S. Biomedical, Clinical, Behavioral and Social Sciences research enterprise.:
 - a. Individuals from racial and ethnic groups that have been shown by the National Science Foundation to be underrepresented in health-related sciences on a national basis: Blacks or African Americans, Hispanics or Latinos, American Indians or Alaska Natives, Native Hawaiians and other Pacific Islanders.
 - b. Individuals with disabilities, who are defined as those with a physical or mental impairment that substantially limits one or more major life activities.
 - c. Individuals from disadvantaged backgrounds, defined as those who meet two or more of the NIH criteria listed on the NIH website.
- 4. Have a defined research plan and access to institutional resources to conduct the proposed project.
- 5. Preference will be given to clinical research that addresses issues affecting medically underserved people with epilepsy or seizures or related aspects of health equity.
- 6. Be able to devote at least 50% of their professional effort to research. If reduced protected time is deemed necessary by an early career clinical faculty applicant, such requests will be considered on a case-by-case manner and on a competitive basis, provided that such requests do not compromise the training experience and research goals of the applicant's project. Early career clinical faculty applicants who request reduced effort for this award must include in their application a justification and elaborate on their plans to ensure that the research and training goals of the award will be met.
- 7. Have a qualified mentor or mentoring team with expertise relevant to the scientific goals of the application and who has a focus on career development.
- 8. Other support: To qualify as an early career grant applicant, you must meet all of the other eligibility requirements AND be either a new investigator or an at-risk investigator (or both), defined as:
 - a. New investigator (you have received no more than \$100k total in extramural grant direct costs as PI in the last 2 years), and/or,
 - b. At-risk investigator (defined as follows: you have had prior research support as an investigator AND, unless successful in securing a new grant in the current fiscal year, you will have no funding in the following fiscal year).
 - c. If you have any questions on your eligibility, please email grants@aesnet.org to confirm.
- 9. Should not have previously received the Susan Spencer Fellowship or an AES Research and Training Fellowship for Clinicians.

In addition:

10. Applicants whose research will involve patient care or direct involvement with patients must have completed all relevant clinical training and be licensed to practice at their institution.

11. U.S. citizenship is not required; clinical work or catchment area may lie outside U.S. borders, but primary academic employment of the applicant must be within a U.S. institution.

APPLICATION POLICIES

- 1. Prior unfunded applicants are encouraged to reapply, but all applications will be treated as new submissions.
- 2. Only one application may be submitted from a given laboratory to the AES early career grant programs. Specifically, an individual may not serve as the primary mentor for more than one application across all mentored award programs. Similarly, an individual may not apply for the Sergievsky Award and also be listed as the primary mentor on a proposal for a mentored award. If more than one application is submitted from a single primary mentor or investigator across the early career programs (Predoctoral Research Fellowship, Postdoctoral Research Fellowship, Research & Training Fellowship for Clinicians, Junior Investigator Research Awards, Sergievsky Award, and Epilepsy Study Consortium Mini-Grants), only one of those proposals will be reviewed.
- 3. More than one application may be submitted from a single institution, but final funding decisions will take into account a preference to limit multiple awards to one institution.
- 4. Applicants may request a delay in the start date of up to 3 months.

EVALUATION CRITERIA

Applicant

- Does the applicant have the potential and commitment to develop as an independent and productive epilepsy researcher?
- Is the applicant's academic record and research experience of high quality?
- Do the proposal and applicant's goals align with the Sergievsky Award mechanism priorities?

Mentor

- Are the mentor's research qualifications and available resources appropriate?
- Is there (1) evidence of a match between the research interests of the applicant and the mentor (including an understanding of the applicant's research training needs) and (2) a demonstrated ability and commitment of the mentor to assist in meeting these needs?
- Is there evidence that the mentor will foster a successful research career outcome for this applicant?
- Is there evidence that the mentor has a focus on career development?

Research Plan

- Is the research and training plan feasible for a two-year award? How does that research and training plan fit into an overarching, longer-term research project and career trajectory?
- Does the research plan address health disparities, health equity, or other issues related to medically
 underserved people with epilepsy or seizures? While not a requirement, preference will be given to
 applicants who propose work on this topic.
- Does the research plan address a scientifically significant problem in epilepsy research, for example as
 framed by the <u>2021 NINDS Benchmarks for Epilepsy Research</u> or the <u>Institute of Medicine 2012 research</u>
 recommendations around public health for epilepsy research?
- Is the project well-conceived, with clear hypotheses, potential alternative outcomes, and a strong scientific premise? Please refer to NIH guidelines for more clarification on these definitions.
- Are the overall strategy, methodology, and analyses well-reasoned and appropriate to accomplish the specific aims of the project, with consideration of key variables as defined by the <u>NIH guidelines on rigor &</u> transparency?
- Are planned analyses and statistical approach appropriate for the proposed study design and methods?
- Does the proposed research include a data-sharing plan? While not required, it can provide added value to the work.

Applicant Statement & Training Plan

- Does the applicant clearly indicate plans to devote at least 50% effort to research? If less than 50% time is intended for the award, do the plans ensure a competitive and productive award term as outlined in their aims and deliverables?
- Will the proposed research project and training plan benefit the applicant's career development in terms of scientific knowledge, research, and professional skills?
- If appropriate based on the existing qualifications of the trainee and their career goals, is there a plan for the applicant to obtain training through courses, seminars, workshops, or national scientific meetings?
- Does the applicant demonstrate commitment to engage in the additional AES offerings supported through the grant?

Environment

- Are the research facilities, resources, and training opportunities adequate and appropriate, including faculty capable of productive collaboration with the candidate?
- Is the environment for scientific and professional development of the candidate of high quality?

Budget

Are the proposed costs reasonable and appropriate for the goals of the applicant?

AWARD POLICIES

Funding Support

Successful applicants receive \$75,000/year for two years, for a total of \$150,000, and must devote at least 50% of their time to the award. Support includes two years of complimentary AES meeting registration and two years of complimentary AES membership. Second-year award benefits are contingent on progress in the first year as assessed by the Research & Training Council. Annual payments are made to the institution for direct expense of the awardee (salary and benefits). No indirect costs are provided. Submission of an interim progress report by June 30 of the first year and final scientific and financial reports, no later than 90 days after completion of the project, is a requirement.

Applicants should propose a budget for how the funds would be used to advance their training. Allowable research costs will include salary/benefits, time for a clinical research coordinator/lab technician, research study supplies, and education/training (including registration for courses, attendance at workshops, travel to relevant conferences, or other needs related to the applicant's training and development). The proposal should also include indication of support from their institution and their mentor for anticipated costs above the provided funds.

Budget modifications to the above will be considered on a case-by-case manner, evaluating if that modification is necessary to advance the goals of the training and research of the applicant.

Support from Other Sources

Supplementation of the award with other grants or by the applicant's institution is permissible, but awardees may not accept other fellowships or similar awards from AES during the Sergievsky Award term. Exceptions may be considered but not guaranteed if the combined total of the awards does not exceed the standard support level for the institution and the awardee will have protected time to complete the training and research proposed to AES. If similar awards are obtained during the review or tenure of the Sergievsky Award, the applicant/recipient must inform AES in writing so that a decision can be made about continuation of the award.

Use of Human Subjects/Tissues in Research

When human subjects or tissues are to be used in a research project, it is the responsibility of the grantee to ensure that the project receives approval from his/her Institutional Review Board. A copy of that Board's current approval notice and a copy of the patient informed consent form should be submitted with the application if

they are available. If not submitted with an application selected for an award, these documents must be submitted at least two weeks before the award start-date. If the research plan has already been approved or exempted by an IRB, because the grantee's proposed workplan is encompassed by an existing research project grant, then this documentation will be sufficient provided that the IRB concludes that the participation of the grantee does not lead to a substantial modification of the research plan.

Use of Animals in Research

When animals and/or animal tissues will be used, it is the responsibility of the grantee to ensure that the project receives approval from the Institutional Animal Care and Use Committee. If available, a copy of these documents should be submitted with the application. If not submitted with an application selected for an award, these documents must be submitted at least two weeks before the award start-date. If the research plan has already been approved or exempted by an IACUC, because the grantee's proposed workplan is encompassed by an existing research project grant, then this documentation will be sufficient provided that the IACUC concludes that the participation of the grantee does not lead to a substantial modification of the research plan.

All entities that receive funding from the American Epilepsy Society must adhere to the following principles:

- 1. Animals shall be used in biomedical research only when no other means of obtaining scientifically sound, valid, and useful results are available.
- 2. The minimum number of appropriate animals required to obtain and validate results shall be used.
- 3. The acquisition, care, and use of animals must be in accordance with all applicable federal, state and local laws and regulations.
- 4. Certifications must be received from research facilities prior to being approved for this award that the facility(ies), its researchers, and employees adhere to the Animal Welfare Act and the National Research Council *Guide for the Care and Use of Laboratory Animals*; and any appropriate U.S. Department of Agriculture or National Institutes of Health regulations and standards must be followed.
- 5. In cases requiring the death of an animal, only the most appropriate and humane form of euthanasia shall be used consistent with the purpose of the research.

APPLICATION INSTRUCTIONS

Full proposals: due by January 16, 2025, at 5:00 PM Eastern Time

Proposals must be submitted through ProposalCentral (https://ProposalCentral.altum.com/).

- Applicants who do not yet have an account with ProposalCentral will need to register as a new user and provide the requested professional profile information before proceeding.
- Once logged in as a user, go to the *Grant Opportunities* tab, and filter the list to display American Epilepsy Society Awards.
- Locate SERGIEVSKY AWARD FOR EPILEPSY HEALTH EQUITY AND DIVERSITY click on Apply Now to begin an application.

Please read these full instructions carefully and plan in advance to ensure all components will be complete at the time you submit your proposal. Required components of the application include the following sections to be completed as online forms or submitted as individual proposal attachments in PDF format. Additional instructions will be available on screen in ProposalCentral and within downloadable templates for proposal attachments. No applications, nor any parts of or updates to the application, will be accepted if submitted after the deadline or if sent directly to AES offices by electronic or U.S. mail.

Questions?

• For technical difficulties with ProposalCentral, please contact their help desk at pcsupport@altum.com or 1-800-875-2562 (toll-free US & Canada).

• For questions about your application, eligibility, or the review process, contact Michelle Norton at grants@aesnet.org.

1. Title Page:

- a. Enter the title of your proposal (max 75 characters)
- b. **Enter the start and end date requested for your project**. In general, the award term should be July 1, 2025-June 30, 2027. However, a delay of up to 3 months (beginning no later than October 1, 2025) in the start date is permitted if necessary.
- c. Categorize your research type, classification, and the type of epilepsy/seizure under investigation. The categories that you select will not influence your eligibility for funding. They will be used to help select appropriate reviewers for your proposal and, in the long term, for AES to evaluate our review and funding processes. Definitions for most categories are available at the end of these instructions.

Research Type (basic, translational, or clinical). Please select the primary type of research that best fits your proposal. Because multiple categories can apply to a given research proposal, please also estimate what percentage of your proposed work would fit each category.

Research classification. Please select the classification that best fits your proposal. If multiple classifications apply to your research, select a secondary classification.

Type of epilepsy or seizure under investigation. Please select the category that best fits your proposal. If multiple categories apply to your research, select a secondary category.

- **2. Download Templates and Instructions:** All proposal attachment templates, and this application guideline document can be downloaded here from ProposalCentral.
- 3. Enable Other Users to Access This Proposal: This screen allows you to give other users viewing, editing, or administrative access to your grant application, if necessary, such as your mentor or financial officers at your institution. Please inquire internally in your department and your institution's office of sponsored projects (or corresponding office) to understand who should be able to access your proposal.
- **4. Applicant/PI:** Applicant information is pre-loaded 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. This information is pre-loaded 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.
 - a. **ORCID ID (optional):** Please provide your ORCID ID through your Professional Profile (within Personal Data for Applications). If you do not already have an ORCID ID, you may create one through the provided link in the bottom of the Personal Data for Applications file. The ORCID ID is a persistent digital identifier that distinguishes you from other researchers, helping to ensure that your professional activities over time are linked to your identity. Learn more at https://orcid.org/

5. Institution and Contacts:

- a. Institution information is pre-loaded from the applicant's INSTITUTIONAL PROFILE. Double-check that the information is complete and correct. If it is not, click Edit Institutional Profile to update. The institution listed should be the institution where your project will be completed.
- b. Enter the requested contacts in the table provided. Select the appropriate Signing Official and financial officer from the drop-down list or enter the email address of a new official and click on ADD. Complete the information form, and click on the SAVE or CLOSE WINDOW link, and the added official will be listed as the assigned signing official or financial/fiscal officer. Enter the correct contact and address to which award payments should be sent if this proposal is selected for funding.

i. Note: The name you enter as the Signing Official will be asked to provide the e-signature for your submission in Step 16 (see below).

IMPORTANT: Please confirm with your institution that all information and contacts listed on this page are correct. If the application is selected for funding, this contact information will be used for grants administration correspondence and to issue payments.

- **6. Key Personnel:** Indicate key personnel other than the applicant/PI who will contribute significantly to the execution of the proposal, including your mentor and/or co-mentor. This may also include collaborators, consultants, postdocs, students, and others.
- 7. Letters of Reference: Use this section to request blind submission of a letter from a reference who is familiar with your research and training. Please start this process early to ensure submission by the application deadline. (One letter of reference is required; an additional letter is optional.) Do not use this section to submit the required letter from your mentor(s) for this application. The letter from the mentor must be submitted as a Proposal Attachment (see below).

8. Abstracts and Keywords:

- a. Describe the proposed research project for both general (lay) and scientific audiences (1500 characters maximum for each abstract).
- b. Please select keywords that describe the specific focus of your research. At least two keywords are required, and up to five are allowed. Please select keywords carefully, as they will aid in matching your application to appropriate reviewers.
- c. Please select the Benchmarks for Epilepsy Research that best fits your proposed project. If your proposal is selected for funding, your award will be publicly shown in the iCARE database with such categorizations. You must select one and can select up to two. More information on the Benchmarks is available here.

9. Fit for Program:

- a. Describe how your proposal and your career goals align with the Sergievsky Award mechanism (250 words).
- **10. (Optional) Budget Period Detail:** Use this section to provide a detailed budget by listing costs under the headings provided, up to a maximum of \$75,000/year, for two years (\$150,000 total). Allowable costs include salary/benefits, research supplies, time for a clinical research coordinator, and education/training (including tuition fees for training courses and/or travel, if aligned with the training goals).
 - a. If your proposed budget includes expenses other than your salary and benefits, list costs under the applicable headings provided. The goal of additional allowable costs is to advance the training and research of the applicant and they include:
 - i. Research expenses
 - ii. Technician / clinical research coordinator support
 - iii. Education/training
- 11. (Optional) Budget Summary: This page summarizes the information provided in the Budget Detail.
- **12. Organization Assurances:** Use this section to indicate use of human subjects, human tissue, or vertebrate animals, and to confirm institutional assurances. All assurances should be provided at the time of the application if available, and documentation must be provided before funding can begin for awarded proposals. See Award Policies above for more information.

- **13. Proposal Attachments:** Attachments must be uploaded as PDFs. Where noted, templates will be available for download on ProposalCentral. Select the appropriate attachment type and upload as instructed onscreen.
 - a. **Applicant and mentor biosketches:** Provide using the <u>NIH-style format(s)</u> that is appropriate to career stage. If co-mentors are proposed, include a biosketch for each co-mentor (template available if needed).
 - b. **Research Plan:** Please use the template provided and include the following elements: specific aims, background and significance, previous work directly related to this research (if available), research plan and methods, and data-sharing plan (if any). Refer to p2-3 of these application guidelines to view the evaluation criteria for this section. Use at least 11 pt font and at least ½ inch margins (maximum 6 pages, not including references).
 - c. **Applicant Statement and Training Goals:** Please use the template provided and include the following elements. Use at least 11 pt font and at least ½ inch margins. Maximum 2 pages.
 - i. Describe your long-term career goals and your reason for choosing epilepsy as an area of specialized clinical and/or research training.
 - ii. Describe the clinical and/or research training you will receive during the award term and how this training will contribute to your career goals.
 - iii. In the table provided, indicate the percentage of time you will spend in the activities identified. The total should not exceed 100%.
 - iv. Describe your plans beyond the proposed award period and how you imagine your training and research in the epilepsy field will continue. Address as applicable how your future plans may advance the goals of the Sergievsky award. As applicable, discuss how the proposed project and training will facilitate your transition to the next career stage. This should include how you plan to engage with the AES offerings supported through the grant.
 - d. **Other Support:** Please use the templates provided to list all other past (last 3 years), current, and pending support for the applicant's research and/or research training, and for the primary mentor's research. For the applicant's other support, please use the template provided to select if you qualify as a new investigator or as an at-risk investigator, and, to list all other past, current and pending support.
 - i. Please select if you qualify as a new investigator (you have received no more than \$100k total in extramural grant direct costs as PI in the last 2 years), and/or, at-risk investigator (defined as follows: you have had prior research support as a new investigator AND, unless successful in securing a new grant in the current fiscal year, you will have no funding in the following fiscal year).
 - ii. List all other past (last 3 years), current, and pending support for the applicant's research. Other Support includes: all financial resources available in direct support of an individual's research and/or research training, including but not limited to research grants, research training fellowship awards, cooperative agreements, contracts, and/or institutional awards. Recognition awards, prizes, or gifts do not need to be included.
 - iii. If you selected that you qualify as an at-risk investigator, please submit a brief (200 words) explanation of your barriers to continuous funding in the space provided at the bottom of the template. The 200-word statement will be used by AES staff to evaluate your eligibility.
 - e. **Facilities Available:** Provide a profile of the institutional environment and the facilities available. Use at least 11 pt font and at least ½ inch margins (no page limit, template available)
 - f. **Letter of support from the project mentor:** The mentor letter should <u>describe the research training plan</u> developed for the applicant, including the skills and techniques the applicant will learn as well

as any classes, seminars, professional development activities, and opportunities to participate in conferences and other interactions with the research community. In addition, the letter should describe the applicant's qualifications and confirm eligibility for this award. The letter should also show how the mentor's expertise and mentorship experience will contribute to their future success as a researcher and should clearly demonstrate dedication to the career development of the applicant.

If one or more co-mentors are proposed, the letter from the primary mentor should clearly describe their respective roles in the applicant's training. IMPORTANT: It is the applicant's responsibility to provide these instructions to the mentor(s) for the proposed award.

- g. **Letter of support from department chair:** This letter should confirm that the applicant has at least 50 percent protected time for research.
- h. **Other proposal attachments (optional):** Examples of additional optional attachments (if applicable) include letters of support from collaborators or consultants, or documentation related to approval for the use of vertebrate animals or human subjects. (See Policies and Procedures; IRB/IACUC documentation will be required prior to funding if selected for an award).
- **14.** Demographic Information: Due to the requirements of this award, demographic information on race and ethnicity is required. All demographic information can be updated in your ProposalCentral Professional Profile. Applicant information is pre-loaded from the applicant's PROFESSIONAL PROFILE and can be updated directly on this page. AES is committed to supporting a strong, diverse, and inclusive research workforce. Information on race and ethnicity will be used to determine eligibility for this award. If you choose to provide additional demographic information such as gender, or disability status, it will only be used to help AES understand our granting programs through analysis of de-identified aggregated data. Such demographic information will not be available to the reviewers of your research proposal.
- **15. Validate:** Click the VALIDATE button to check for any missing REQUIRED information or files. All missing required information will be listed on the screen. Please correct any missing information before submitting your application.
- **16. Signature Pages:** The Applicant/PI and the Signing Official must e-sign the application prior to submission in order for the application to pass validation. All signatories must log in to ProposalCentral to sign the application. Signatures needed are:
 - a. Applicant/PI: Please type your full name and hit sign. This will trigger an email to your designated Signing Official asking them to log in and sign.
 - b. Signing Official: The Signing Official you listed in Section 5 (Institution and Contacts) will be listed here. After you complete your e-signature, the Signing Official will receive an email asking them to log in and complete their e-signature. They need a ProposalCentral account in order to complete their signature, and can access the application through the "Proposals" tab. The Signing Official's signature is required for you to submit your application.
 - If needed, you can go back to Section 5 and edit the signing official.
- **17. Submit:** You will be unable to submit if you have not provided all the required information. Any missing information will be listed on the screen. If your submission is successful, you will receive a confirmation message on the screen and a confirmation will be sent to the applicant.

CONTACT INFORMATION

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If questions arise about your application and the review process, contact Michelle Norton at grants@aesnet.org.

CATEGORY LISTS & DEFINITIONS, FOR FIELDS COMPLETED ON THE TITLE PAGE

Research Type	Definitions
Basic	Basic research is the systematic study of the fundamental aspects of phenomena and of observable facts without specific development of processes, products or clinical applications. Projects typically include studies of the mechanisms of normal or disease related processes at the molecular, cellular, systems or organ level.
Translational	Translational research is defined here as research to actively develop and/or refine specific processes, products, clinical applications, and implementation practices that can ultimately be used by patients or healthcare providers.
Clinical	Patient-oriented research, possibly with basic or translational goals, that is conducted with human subjects or on material of human origin (e.g. tissues, specimens and cognitive phenomena) for which an investigator directly interacts with human subjects. Excluded from this definition are in vitro studies that utilize human tissues but cannot be linked to a living individual. Patient-oriented research can encompass physical or behavioral aspects of epilepsy, therapeutic interventions, applications of new technologies, clinical trials, epidemiologic studies, outcomes research, public health, and health services research.

Epilepsy or Seizure Type. This listing has been revised from previous years in response to the <u>2017</u> Classification of Seizures Types by ILAE.

- Seizures Focal or localization-related
- Seizures Generalized
- Seizures combined generalized & focal
- Seizures unknown type
- Seizures catamenial
- Seizures early life
- Seizures febrile
- Seizures neonatal
- Seizures Status Epilepticus
- Seizures other
- Seizures in childhood
- Seizures in pregnant women
- Seizures in geriatric populations
- Seizures in other disorders (e.g. Alzheimer's, Autism, alcohol abuse, addiction, renal failure, hepatic encephalopathy, Fragile X)
- Epilepsy Autosomal Dominant Epilepsy w Auditory Features (ADEAF)
- Epilepsy Autosomal-Dominant Nocturnal Frontal Lobe Epilepsy (ADNFLE)
- Epilepsy Childhood Absence Epilepsy (CAE)
- Epilepsy Childhood Epilepsy with Centrotemporal Spikes (formerly BECTS)

- Epilepsy Dravet Syndrome
- Epilepsy Early Myoclonic Encephalopathy (EME)
- Epilepsy Epileptic Encephalopathies
- Epilepsy Genetic Epilepsy with Febrile Seizures plus (GEFS+)
- Epilepsy Hemiconvulsion–Hemiplegia– Epilepsy
- Epilepsy Infantile Spasms (IS)
- Epilepsy Juvenile Absence Epilepsy (JAE)
- Epilepsy Juvenile Myoclonic Epilepsy (JME)
- Epilepsy KCNQ2 Encephalopathy
- Epilepsy Landau-Kleffner syndrome (LKS)
- Epilepsy Lennox-Gastaut Syndrome (LGS)
- Epilepsy Ohtahara Syndrome
- Epilepsy Polyhydramnios, Megalencephaly and Symptomatic Epilepsy Structural Syndrome (PMSE)
- Epilepsy Progressive Myoclonus Epilepsies (PME)
- Epilepsy Reflex Epilepsies
- Epilepsy Self-limited neonatal seizures or familial neonatal epilepsy (formerly BFNE)
- Epilepsy Temporal Lobe Epilepsy (TLE)

- Epilepsy Unknown or other
- Epilepsy West Syndrome
- Etiology celiac disease, epilepsy, and cerebral calcification syndrome
- Etiology Encephalitis
- Etiology genetic
- Etiology –Alpers Syndrome
- Etiology –Angelman Syndrome
- Etiology –Lafora disease
- Etiology –other
- Etiology –PCDH19 Epilepsy
- Etiology –SCN8A
- Etiology immune
- Etiology –anti- AMPA receptor antibody
- Etiology –anti- LGI antibody
- Etiology –antibody-mediated
- Etiology –anti-GABA-B receptor antibody
- Etiology –anti-GAD65 antibody
- Etiology –anti-NMDA receptor encephalitis
- Etiology –Rasmussen encephalitis
- Etiology –voltage-gated potassium channel antibody
- Etiology infectious
- Etiology –Bacterial meningitis / meningoencephalitis
- Etiology –Cerebral malaria
- Etiology –cerebral toxoplasmosis
- Etiology –CMV
- Etiology –HIV
- Etiology –Neurocysticercosis
- Etiology –Nodding Syndrome
- Etiology –other/unknown
- Etiology –Tuberculosis
- Etiology metabolic
- Etiology –Biotinidase and holocarboxylase synthase deficiency

- Etiology –central folate deficiency
- Etiology –creatine disorders
- Etiology folinic acid responsive seizures
- Etiology –glucose transporter 1 (GLUT1) deficiency
- Etiology –mitochondrial disorders
- Etiology –peroxisomal disorders
- Etiology –pyridoxine dependent epilepsy/PNPO deficiency
- Etiology –Succinic Semialdehyde Dehydrogenase Deficiency
- Etiology steroid responsive encephalopathy with autoimmune thyroiditis (Hashimoto disease)
- Etiology structural
- Etiology Hypothalamic Hamartoma with Gelastic Seizures
- Etiology –Malformations of Cortical Development
- Etiology –other/unknown
- Etiology –Sturge-Weber Syndrome
- Etiology –Tuberous Sclerosis Syndrome
- Etiology Post-traumatic epilepsy (PTE)
- Etiology hypoxia-ischemia
- Comorbidity or consequence
- Comorbidity or consequence behavioral, psychosocial, or cognitive co-occurring condition
- Comorbidity or consequence SUDEP
- Epilepsy imitator headache
- Epilepsy imitator movement disorders
- Epilepsy imitator Non-Epileptic Events
- Epilepsy imitator paroxysmal nonepileptic event

Research Classification	Definitions
Etiology	Research included in this category aims to identify the causes or origins of epilepsy and its co-occurring conditions- genetic, infectious, metabolic, environmental, or other factors, and the interactions between these factors
Mechanism of Disease	Research included in this category looks at the biology of how epilepsy/seizures starts and progresses as well as normal biology relevant to these processes. Research may also look at the biology of co-occurring conditions as they relate to epilepsy patients, such as depression, anxiety, autism, Alzheimer's, and traumatic brain injury.
Prevention	Research included in this category looks at identifying interventions which reduce the risk of developing epilepsy or its co-occurring conditions by reducing exposure to risk factors and/or increasing protective factors. Interventions may target lifestyle or behavioral changes and may involve drugs, devices, or vaccines.
Detection/Diagnosis/Prognosis	Research included in this category focuses on identifying and testing biomarkers, technology methods or predictive models that are helpful in detecting and/or diagnosing as well as predicting the outcome or chance of recurrence of seizures and/or co-occurring conditions
Treatment Development or Evaluation	Research included in this category focuses on developing and testing treatments, such as novel therapeutics, devices or other interventions to target seizures and co-occurring conditions.
Outcomes	Research included in this category includes a broad range of areas: surveillance and epidemiology; ethics, education and communication approaches for health care professionals, patients and families, and community members; patient care and health care services research; self-management interventions, effectiveness research and phase 4 trials
Model Systems	Research included in this category looks at the development of new animal models, cell cultures and computer simulations and their application to other studies across the spectrum of epilepsy research
New Technology and Methodology	Research included in this category is primarily focused on developing new technologies and methodologies for use in epilepsy research, clinical care, or self-management.