



# 2024 NETRF Request for Applications

## *Investigator Award Application Guidelines*

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*LOI Due: March 18, 2024*

*Application Due: June 24, 2024*



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## NETRF Summary

The Neuroendocrine Tumor Research Foundation (NETRF) is the largest private global funder of basic, translational and clinical neuroendocrine tumor (NET) research. Our mission is to accelerate scientific discovery that will help create new and more effective therapies for neuroendocrine cancers including gastrointestinal, pancreatic, lung, and adrenal-associated NETs. Since its founding, NETRF has awarded more than \$37 million in research grants to investigators whose work can help provide insight into the causes of NETs and/or lead to improved treatments for our patients. While we have made significant progress in the past few years, we still do not have a complete understanding of the unique characteristics of these tumors.

NETRF seeks investigators and teams of investigators from around the world to study neuroendocrine cancers in new ways. NETRF supports transformative basic, translational, and clinical research studies that address critical questions to advance our understanding of tumor biology, address roadblocks to therapeutic development, and/or exploit innovative technologies or strategies.

## NETRF Investigator Award Program

The Investigator Awards are in the amount of \$270,000 over two years (\$135,000/year). These proposals have two (or three smaller) aims that describe work requiring two years to complete. They typically have only one PI with or without collaborators. They are comparable to an NIH R21 grant.

## Application Timeline and Review

The NETRF request for applications process employs a two-step process. The first step is the submission of a competitive letter of intent (LOI). One LOI per applicant, per program, may be submitted. If selected for the second stage, a full application is required.

- An LOI must be submitted and all eligibility criteria met to be considered for the full application stage; otherwise, LOIs will be administratively rejected.
- If selected, a full application must be submitted that meets all guideline criteria; otherwise, applications will be administratively rejected.
- LOIs and full applications will be peer reviewed by an independent panel of scientific experts.

### APPLICATION TIMELINE

<b>LETTER OF INTENT DUE</b>	March 18, 2024 by 5PM ET
<b>INVITATION TO SUBMIT FULL PROPOSAL</b>	Early May 2024
<b>FULL PROPOSALS DUE</b>	June 24, 2024 by 5PM ET
<b>AWARD NOTIFICATION</b>	Oct/Nov 2024
<b>PROJECTED START DATE</b>	January 2025



## Applicant Eligibility

- Applicants must have an MD, PhD, MD/PhD or equivalent degree and be appointed as faculty at the Assistant Professor level or above (or equivalent position). Research track faculty are eligible to apply.
- Applicants must have the skills, knowledge, and resources necessary to carry out the proposed research.
- Eligible organizations include public or private institutions, such as universities, colleges, hospitals, and laboratories, both domestic and international. Applications from the biotech, pharmaceutical industry, or for-profit life sciences companies are **not** eligible.

## Grant Budget and Restrictions

The requested budget should be in proportion to the scope of the proposed project and should be at or under \$270,000 USD over two years. A maximum of \$135,000 in total costs may be requested per year. Awarded funds are directed to the institution.

- For Investigator Awards, up to 10% in indirect costs may be requested. Indirect costs are included in the total budget of \$270,000.
- NETRF adheres to the NIH salary cap for principal investigator(s) and personnel.
- Funds may be used for personnel salaries, supplies, small equipment, and/or research-related services only.
- Funds must not be used entirely for salaries and may not be applied to costs covered by other sources.
- Funds should be allocated to attend the Annual NETRF Research Symposium held in Boston, MA, USA.

## Scope

### Tumor types in scope

- **GEP-NETs:** Gastroenteropancreatic neuroendocrine tumors, including sites of metastasis.
- **Lung NETs:** Well-differentiated, low-grade typical carcinoids (TCs), well-differentiated, intermediate-grade atypical carcinoids (ACs), diffuse idiopathic pulmonary neuroendocrine cell hyperplasia (DIPNECH).
- **Adrenal-associated NETs:** Pheochromocytoma and paraganglioma.
- **Neuroendocrine Carcinomas (NECs):** Extrapulmonary, high-grade neuroendocrine carcinomas.
- The Foundation may consider supporting work on other NET types based on allotted funding availability as long as it is not specifically listed as out of scope.

### Tumor/tissue types out of scope

- Small-cell lung cancer (SCLC)
- Large-cell lung cancer (LCLC)
- Non-SCLC
- Squamous cell carcinomas
- Adenocarcinomas



- Mesotheliomas
- Poorly differentiated non–small cell lung carcinomas
- Neuroendocrine prostate cancer
- The Foundation does not support research using human embryonic or fetal tissue.

## Research Areas of Interest

*Areas not exclusive or in order of preference:*

- **Uncovering the molecular and genetic basis of NETs:** Elucidation of processes underlying NET initiation, progression, monitoring of NET stages. Understanding the mechanistic rules for treatments to overcome therapeutic resistance and toxicity.
- **New/optimized experimental models:** Cell lines, mouse models, optimized spheroids/organoids, patient-derived xenografts, and others. Strategies to modify model proliferation and improve experimental utility.
- **Application of existing or new technologies to target NETs:** Designer or nano-based drugs to create targeted therapies/treatments, drug/biologic-targeted delivery to tumors, new tumor-specific targets, oncolytic viruses/cancer vaccines, nanoparticles that promote efficient drug delivery, AI-based strategies and novel therapeutic development.
- **Cancer metabolism:** Understand and manipulate the way neuroendocrine cancer cells process energy in order to survive.
- **Cell invasion and metastasis:** Drivers of metastasis, anti-metastasis targets, small non-coding RNAs, adhesion molecules and epithelial-to-mesenchymal transition, metastasis-initiating or cancer stem cells, metastatic organotropism, triggers that stimulate invasive behavior in an indolent tumor.
- **Tumor microenvironment:** Understanding a tumor’s interaction with its environment, immune effector functions and the metabolic landscape of the tumor microenvironment, contributing angiogenic processes, effect of microenvironment on progression, metastasis, and treatment response.
- **Immunotherapy:** Immunologically “cold” versus “hot” NETs, novel types of CAR T-cell therapy for solid tumors, adaptation or creation of methodologies to reprogram and activate the immune system, immune-engineering, antibody-drug conjugates.
- **Diagnostics/Biomarkers:** Predictive/prognostic clinical markers, biomarkers for metastasis, imaging biomarkers, new approaches to the early diagnosis of NETs, circulating tumor cells/cell free DNA/exosomes.
- **Big data:** Development of novel methods and use of large-scale data collections (e.g., “omics” data) to interrogate NET genetics and molecular underpinnings.
- **Clinical research:** Exceptional clinical and correlative studies that may build upon existing clinical trials, proof-of-concept Phase I clinical trials, innovative combination therapies, adaptive and sequencing studies.



- **Nuclear medicine, Theranostics, Imaging:** Non-incremental, innovative studies of novel imaging agents or therapies, new delivery/targeting systems, computational strategies.

## Resource and Data Sharing

Grant recipients who create unique research resources, including but not limited to model organisms, cell lines, plasmids, protocols, software, and data using NETRF funds, are required to share such resources within the scientific community. NETRF expects that, where available, resources will be deposited and archived in standard repositories (e.g., Addgene for plasmids). Resources should be shared openly with the research community no later than the date of publication or within twelve months after the end of the grant funding, whichever comes first.

NETRF is committed to sharing research information to ensure research transparency and enable unrestricted access to research results. Recipients must submit all publications, excluding non-research articles such as review articles, that were in part or fully funded by NETRF as a preprint to bioRxiv, medRxiv, or a similar preprint sharing service prior to or at the time of initial journal submission.

Applicants must provide a resource sharing plan in the full application. To demonstrate a commitment to sharing that will be actualized, applicants should provide information in their sharing plan that clearly states the type of resource that will be shared, the method, characterization, and timing of such sharing, and the anticipated resources (budget, personnel, etc.) required by the applicant and the resource user. Reviewers will consider the extent to which the dissemination of resources produced under the award will enhance or diminish the impact of the proposed work.

## Grant Reporting and Other Requirements

- Collaborative efforts are encouraged; however, a single principal investigator and institution must be selected to receive an award.
- Progress and financial reports are required at 6-month intervals throughout the duration of the grant. The progress reports track milestones, research progress, and use of the funds. Future funding is contingent upon review and approval of progress and will be paid in six-month installments in US dollars. A final report is required at the conclusion of the project detailing study findings and project expenditures.
- Post-award outcomes of the funded research are required to be reported at one, three and five years following the completion of funding.
- It is mandatory for Awardees to attend and present at the annual NETRF Research Symposium whether in person, or virtual, for the duration of their grant and upon completion. NETRF grant funds may be used to pay for NETRF conferences travel, if held in person.



## Letter of Intent (LOI) Instructions

The purpose of the LOI is to ensure that the proposed research is within the scope of the Investigator Award and merits a full application. LOIs should outline research with the potential to transform our understanding of NETs and/or lead to improved treatments for patients. LOIs may focus on basic, translational, or clinical research. All LOIs are peer-reviewed by NETRF's Scientific Advisory Board and other leaders in the field, and a limited number of applicants whose LOIs are deemed most meritorious will be invited to submit a full proposal.

### LOI Section Descriptions

Letters of intent must be submitted through the [Proposal Central](#) platform. Once you create or log into your account, click on the "Grant Opportunities" tab and search for the Neuroendocrine Tumor Research Foundation. Click on the "Apply Now" button to begin.

The LOI content will be entered directly into Proposal Central. You will be asked for the following information:

1. Title Page
2. Enable Other Users to Access This Proposal – Optional. Enter an email address for an individual if you would like to grant them access to your LOI.
3. Applicant/PI Information
4. Organization/Institution Information
5. Co-Investigators and Collaborators
6. Abstract & Keywords
  - a. Scientific/Clinical Impact Statement (1,500 characters max)
  - b. Scientific Abstract (3,000 characters max)
  - c. Lay Summary (2,000 characters max)

**The LOI Submission Deadline is Monday, March 18, 2024, at 5PM ET.**

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## Full Application Instructions

Full applications are by invitation only. Full applications are due by **Monday, June 24, 2024, by 5PM ET**. All of the information submitted for the LOI will be copied to the full application and available for editing. To access the full application, log in to [Proposal Central](#), click on your proposals tab to find the full application, and click edit to begin.

The full application content will be entered directly into Proposal Central. You will be asked for the following information:

1. **Title Page**



2. **Download Templates and Instructions** – download instructions and templates for required uploads. Use the Research Proposal Template to create your proposal.
3. **Enable Other Users to Access this Proposal** – optional. Enter an email address for an individual if you would like to grant them access to your proposal.
4. **Applicant/PI Information**
5. **PI Data Sheet**
6. **Organization/Institution**
7. **Key Personnel**
8. **Milestones and LOI Recommendations**
9. **Abstract & Keywords**
  - a. Scientific/Clinical Impact Statement (1,500 characters max)
  - b. Scientific Abstract (3,000 characters max)
  - c. Lay Summary (2,000 characters max)
10. **Budget Period Detail**
11. **Budget Summary**
12. **Organization Assurances** – human subjects and vertebrate animal approvals
13. **Upload Attachments** – these items will be uploaded directly to Proposal Central
  - a. **Research Proposal.** *Download and use the Research Proposal Template in “Download Templates and Instructions” for this.* The proposal sections include:
    - i. **Title**
    - ii. **Proposal Narrative (limit six pages)**
      1. Introductory Statement – include objectives as they relate to the NETRF mission
      2. Background and Preliminary Data
      3. Rationale and Hypothesis
      4. Specific Aims
      5. Research Design and Methods
      6. Potential Problems and Contingencies
    - iii. **Significance (limit one page)**
      1. Significance: Describe the key question or therapeutic roadblock being addressed by your proposal and why it is important to our understanding of NETs and/or its treatment.
      2. Statement of Innovation: describe how the proposed study employs a new idea and/or innovative approach.
      3. Potential for translational application and patient benefit.
    - iv. **Facilities (limit two pages)**
    - v. **Plan for Sharing Research Data and Resources**
    - vi. **Plan for Access to Patient Tumor Samples, if applicable**
    - vii. **References Cited** – use Vancouver or NIH style (numbered citations within text) format
  - b. **PI Biosketch(es)** – limited to five pages, including references





- c. **Collaboration Letter(s) and Biosketches** – if applicable
  - d. **Letter of Institutional Commitment** – the letter(s) must be written by the department head, dean, or other senior member of the institution on behalf of the applicant, on institution letterhead. The letter(s) should confirm that the institution has the infrastructure required to support the project. The letter(s) must critically address the scientific merit and novelty of the proposed research, the requisite scientific expertise demonstrated by the applicant in previous work, and the dedication of the applicant to NET research.
  - e. **Other Support** – list other sources of support and amounts, including funds that may be contributed by the Sponsoring Institution.
14. **Signature** – the PI and an institutional signing official must sign before the application can be submitted.

## Formatting Instructions

Applicants must adhere to the following instructions for the research proposal:

- Must use 12-point Times New Roman for the text, and no smaller than 9-point type for figures, legends, and tables.
- Single-spacing is acceptable, and space between paragraphs is recommended.
- The page margins must be no less than 0.75 inches on each side.
- The Research Proposal must be numbered consecutively.

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## Contact

If you have any questions regarding this grant mechanism, contact Anna Greene, PhD, Director of Research at [grants@netrf.org](mailto:grants@netrf.org).