The Jane Petty Translational Science Catalyst Award
supported by the Lymphatic Education & Research Network

Program Overview

The **Jane Petty Translational Science Catalyst Award** was established to address a persistent and critical gap in lymphatic disease research: the bridge between basic discovery and clinical application. While foundational science continues to deepen our understanding of lymphatic biology, too few discoveries make the transition into meaningful clinical advances, largely because translational research remains underfunded and structurally unsupported.

This award is specifically designed to change that. It supports early-stage, innovative research that focuses on translating scientific insights into strategies that improve diagnosis, treatment, prevention, or overall care for individuals living with lymphatic diseases. With up to USD **$60,000** over two years, the award enables investigators to generate preliminary data or proof-of-concept findings that can serve as the basis for larger studies or future externally funded clinical programs.

This award aims not only to fund science, but to catalyze a mindset shift—one that begins to shape a robust and forward-looking translational lymphatic research field. Although we recognize that the current state of lymphatic science is predominantly rooted in basic research, this award encourages investigators to think differently. We are asking applicants to clearly articulate the potential impact and translatability of their findings, and to consider how their work might ultimately improve the lives of patients.

The program prioritizes **translational and use-inspired research** with clear potential for clinical relevance and near-term impact. In addition to laboratory-based investigations, **translational epidemiology** (the application of epidemiologic methods to accelerate the translation of findings into clinical or public health practice) is encouraged. Studies that characterize patient populations, identify risk factors, assess real-world disease burden, or evaluate care patterns are critical to shaping effective, targeted interventions.

By supporting this specific phase of research, LE&RN aims to accelerate the development of actionable solutions and close the persistent gap between promising science and improved patient outcomes in lymphatic diseases.

This award is not intended to fund clinical trials, but may support research that complements ongoing clinical studies, including:

- Biobanking and biomarker discovery
- Bioinformatic analyses
- Correlative science
- Diagnostic and device development
- Patient-centered or population-based research
- Translational epidemiology

Key characteristics of successful proposals include:

- Strong potential for clinical or public health applicability
- Innovative approaches that address unmet needs in lymphatic biology, care, or prevention
- Research that leverages existing basic or population-level findings toward practical solutions
- Clear justification of how the pilot data will position investigators for future external funding
- Refinement of mature concepts into translatable models or platforms.
- Potential to influence policy, payer decisions, or regulatory frameworks — research that generates the evidence base needed to expand access to care, reduce regulatory barriers, or drive systemic change in lymphatic disease management.

Preliminary data is not required, but a well-justified rationale and sound research plan are essential. The intent of this program is to catalyze translational lymphatic research—whether in the lab, clinic, or population—and to build capacity within the field for high-impact innovation that improves patient lives.

Funding Level and Period of Performance

The Jane Petty Translational Science Catalyst Award provides up to USD **$60,000 in direct costs** to be distributed over a two-year period to the performing organization (academic institutions, for-profits, non-profits). The award is made to the applicant's institution (or equivalent), not to the individual investigator.

Awards are intended to support focused, hypothesis-driven pilot projects that require sufficient time to generate meaningful data and demonstrate feasibility. They may also serve as gap funding or as foundational/complementary support for a larger application to other funding institutions. Funding will be allocated in two equal installments of **$30,000 per year**, contingent on satisfactory progress and submission of an interim progress report at the end of Year 1. No indirect costs will be provided under this mechanism.

Key Dates and Program Timeline

- LOI submission deadline: October 27th, 2025
- Invitations to submit a full proposal: On submission of LOI
- Full proposal submission due date: November 10th, 2025
- Review meeting: December 2025
- Notification of award: January 2026

Scientific Focus Areas

Proposed research must address key unmet needs in lymphatic biology, diagnostics, or treatment, and should align with at least one of the following thematic areas. Projects should be positioned within the translational research spectrum and should aim to move discoveries from the laboratory, computational models, or population studies toward clinically applicable knowledge or tools.

A. Early Diagnosis, Detection & Imaging Innovation

- Development or optimization of imaging technologies to visualize lymphatic structure or function.
- New molecular tracers, contrast agents, or non-invasive tools to enhance sensitivity and resolution.
- Validation studies comparing emerging imaging techniques to existing clinical standards.
- Development of screening strategies for early-stage lymphedema or other lymphatic pathologies.

B. Mechanisms of Disease & Translational Therapeutics

- Identification and functional analysis of molecular drivers of lymphatic disease (e.g., lymphangiogenesis, inflammation, fibrosis).
- Translational studies of candidate therapeutics (e.g., targeted small molecules, biologics, viral or gene therapy approaches).
- Development or validation of preclinical models to evaluate therapeutic efficacy or safety.
- Studies assessing mechanisms of therapeutic resistance or predictors of treatment response.

C. Translational Epidemiology & Health Disparities

- Studies leveraging population-based data to quantify incidence, prevalence, or disease burden.
- Identification of sociodemographic or geographic disparities in diagnosis, access to care, or outcomes.
- Epidemiologic investigations of comorbidities, risk factors, or delayed diagnosis.
- Research that informs prevention, risk stratification, or tailored outreach strategies.

D. Biomarker & Digital Tool Development

- Identification and validation of molecular, imaging, wearable technologies, or digital biomarkers for early detection, monitoring, or prognosis.
- Use of artificial intelligence or machine learning to integrate omics, imaging, or clinical data.
- Development of clinical decision tools or companion diagnostics for personalized lymphatic care.

E. Lymphatic Flow, Vessel Biology & Cross-System Integration

- Investigation of how low-flow or no-flow conditions affect endothelial cell signaling and vessel remodeling.
- Studies on mechanobiology and the impact of lymphatic dysfunction on cardiovascular, immune, or metabolic, neurological and other organ systems.
- Translational studies examining lymphatic involvement in systemic diseases (e.g., obesity, cancer, autoimmune disease, and neurodegenerative diseases).

Cross-Cutting Priorities

Projects that incorporate the following elements will be viewed favorably:

- **Use of patient-derived data or biospecimens,** including leveraging large-scale databases and registries such as *All of Us* or the UK Biobank, as well as innovative sources like Kaiser Permanente or other payer databases, CMS data, or datasets from other disease areas (e.g., heart failure, transplantation) to generate novel insights.
- **Multi-disciplinary collaborations** (e.g., clinicians, engineers, epidemiologists, data scientists)
- **Clinically actionable project** or particularly those that can be rapidly implemented in practice or pave the way for new diagnostics, therapeutics, or interventions.

Eligibility

The Jane Petty Translational Science Catalyst Award is intended to support **early- to mid-career investigators (Post-doctoral and Assistant Professors)** who are positioned to launch or expand translational research efforts in lymphatic diseases. Eligible applicants must meet the following criteria at the time of application:

- Hold a doctoral degree (e.g., PhD, MD, DO, DVM, or equivalent).
- Demonstrate a commitment to advancing translational science, with a track record of research productivity and a defined research trajectory.
- Be affiliated with an academic institution, medical center, research institute, small business, or other nonprofit organization.
- Non-U.S. citizens and international organizations are eligible to apply.

Senior investigators (Associate and Full Professors or equivalent) are **not** eligible to apply as Principal Investigators (PI) but may be included as collaborators or mentors if appropriate to the research project and the applicant's development.

Applications from **a broad range of disciplines** (e.g., basic science, clinical research, bioengineering, epidemiology, health disparities, computational biology) are encouraged, provided the project is clearly focused on translational goals relevant to lymphatic dysfunction.

How to Apply

Interested applicants must submit a **Letter of Intent (LOI)** followed by a **Full Application** in accordance with LE&RN guidelines through ProposalCentral. Complete instructions for submitting the LOI and full application, including formatting and required documents, are outlined in the sections below.

Letter of Intent (LOI) (*one-page limit*):
The applicants are required to create their profile on ProposalCentral to submit the LOI. The LOI submission requires including the name of the applicant, institutional affiliation, additional applicants / individuals on the application, institute details and contact detail. Applicants can choose one or more of the scientific focus areas (research categories) outlined in this announcement. The LOI should also provide a brief description of the proposed research, outlining the scientific question, translational relevance, and intended impact. LOIs are used for program planning purposes only and will not be reviewed as part of the formal evaluation process. An invitation to submit a full application will be issued upon successful submission of LOI (in most cases on same day); applicants can proceed to submit a full proposal using the invitation according to the instructions provided.

Full Application
Full Proposal submission must follow the detailed guidelines below. All components must be submitted electronically through ProposalCentral by the deadline indicated in the program timeline. Submissions that are incomplete or that include unrequested materials may be administratively withdrawn.

Formatting Requirements:

- Use Arial or Times New Roman, 11-point font.
- Margins: 0.5 inches minimum.
- Single-spaced with clear section heading.
- Upload all the attachments in ProposalCentral under their individual section heading and description
- **All attachments should be in PDF format** unless otherwise specified.

1. Cover Page
Will be generated by ProposalCentral upon successful uploading of all documents. Applicants should check for the accuracy of the document generated.

2. Signature Page
Separate signature page is not required to be uploaded. Use electronic signature on the signature page in ProposalCentral.

3. Abstract (250 words or less)
Provide a non-technical summary of the proposed project in the space provided on ProposalCentral. Include the central hypothesis, translational relevance, and overall goal. If selected for funding, the abstract may be posted publicly on the LE&RN website.

4. Project Narrative (5-page, including figures)
Upload the project narrative in attachment section. Proposal Central accepts **PDF format only.** The Project Narrative should include the following sections:

- **Specific Aims:** Clearly state the objectives of the project.
- **Background & Significance:** Provide scientific rationale and establish the project's importance, translational relevance, and alignment with the program's scientific focus areas.
- **Preliminary Data*:** Include published or unpublished results supporting feasibility.
- **Figures:** All figures and tables supporting the application should be included with in the 5-page limit.
- **Research Design & Methods:**
    - Describe the study design, methodology, rationale, and approach.
    - Address feasibility, potential pitfalls, and alternative strategies.
    - Detail statistical analysis plans.
    - If applicable, describe the use of animals or human specimens, including recruitment plans and ethical approvals.
    - Clinical trials are not permitted under this award.

*Please Note: While preliminary data are not required, applications that include robust supporting data will be evaluated in the same pool as those that do not. Highly innovative proposals without preliminary data may still be submitted; however, in these cases, the scientific rationale must be exceptionally well established and clearly articulated. Innovation will be viewed favorably, but the absence of supporting data must be justified with a strong conceptual foundation and rigorous methodological design.

5. Impact Statement (250 words or less)
Describe how the proposed research addresses a critical gap in lymphatic science or clinical care and has the potential to meaningfully advance the field in the near and long term in the section. Your statement should:

- Explain how the research tackles an urgent question relevant to lymphatic diseases, aligning with LE&RN's mission and strategic priorities.
- Detail anticipated near-term outcomes (e.g., knowledge, methods, tools) and how they could influence current practices or improve patient care.
- Describe long-term implications for advancing scientific understanding or developing new interventions.

6. Translational Statement (250 words or less)

Explain how the proposed research moves beyond discovery science and toward real-world application. This statement should:

- Position the project along the research-to-practice continuum (e.g., late discovery, preclinical validation, clinical implementation).
- Describe how the research leverages use-inspired knowledge from clinical or community settings.
- Highlight design features that enhance translational feasibility (e.g., relevant models, endpoints, patient-derived data).
- Demonstrate how the research bridges the gap between laboratory conditions and real-world impact, laying a clear pathway toward clinical or implementation outcomes.

7. Supporting Documentation

The following materials may be included as part of your full proposal package and should be uploaded in the attachment section on ProposalCentral. These items provide important context and evidence of feasibility, commitment, and potential impact of the proposed work.

- **References Cited:** References may be formatted in any consistent citation style and may include URLs. Limit to one page.
- **Supplemental data:** if applicable
- **Letters of support:** From collaborators, institutions, or stakeholders confirming their role, resources, or commitment to the project.
- **Resource Sharing Plan:** Describe how data, materials, tools, or other resources developed with LE&RN funds will be made available to the scientific community.
- **List of Abbreviations, Acronyms, and Symbols:** Include a consolidated list of all abbreviations used throughout the application to ensure clarity during peer review.
- **Facilities, Equipment, and Other Resources:** Describe the physical and technical resources available to support the project. Include institutional facilities, core lab access, and any specialized equipment.

8. Budget

Use the ProposalCentral budget period details page to add budgetary details (e.g., personnel cost, supplies, data analysis cost and others) as needed. Clearly itemize all projected costs associated with the proposed research project under each section and provide appropriate descriptions. Please ensure the following:

- All costs are **direct costs** only. Indirect costs (i.e., institutional overhead) are not permitted and should not be included.
- The budget should align with the scope, timeline, and objectives of the proposal.
- The total amount requested must not exceed USD $30,000.00 per year.
- Funds should be used to directly support research activities (e.g., personnel, supplies, data analysis) and may not be used for travel or conference attendance.

9. Budget Justification

Provide a detailed justification for each budget line item included in the form in the section. The justification should demonstrate that the budget is reasonable and essential for achieving the project's translational objectives.

10. Timeline

Applicants must submit a detailed timeline for the project. The timeline should outline key activities and milestones for each specific aim over the two-year project period. For each aim, please describe the planned approach, the estimated timeframe for each task in months (e.g., Months 1–3), and the performance site(s) where the work will take place. This timeline will help reviewers and program staff assess the feasibility and organization of the proposed work. The timeline document should be uploaded in the attachment section of application along with other supporting documents.

11. NIH-Formatted Biosketch

Applicants must submit an NIH-formatted biographical sketch for the PI and any key personnel listed in the application. The biosketch should follow the latest NIH guidelines and include: (1) Personal Statement, (2) Positions and Honors, (3) Contributions to Science, and (4) Research Support. The research support section must detail current and pending funding, including the project title, funding source, total award amount, role of the investigator, period of performance, and level of effort. Clearly distinguish pending support by noting applications under review or awaiting a funding decision. The biosketch should demonstrate how the PI's background and expertise align with the proposed project's goals and translational relevance.

12. Institutional IRB/IACUC Approval

For studies involving human subjects, human-derived materials (including tissues, cells, or data), or animal research, applicants must provide documentation of Institutional Review Board (IRB) and/or Institutional Animal Care and Use Committee (IACUC) approval. Clearly state the date of approval, the IRB/IACUC protocol number assigned to the project or indicate "pending" if approval has not yet been granted at the time of submission. Projects requiring IRB or IACUC approval must obtain all necessary institutional and regulatory approvals prior to the release of funds. Investigators are responsible for ensuring full compliance with applicable federal, institutional, and ethical regulations governing research with human or animal subjects.

Application Review and Selection Process

Submitted LOIs will be used for administrative planning purposes only, such as assembling an appropriate peer review panel, and will not be formally evaluated. Full proposals will undergo a single-tier peer review process conducted by a panel of independent experts, including scientists and clinicians. Each application will be evaluated based on the criteria outlined in this Program Announcement and judged on its individual scientific and translational merit. LE&RN's Scientific Affairs Division will make final funding decisions and will consider peer review scores, portfolio balance, alignment with LE&RN's mission, and responsiveness to the goals of this funding opportunity.

Peer-Review Criteria

To determine scientific and translational merit, each application will be reviewed and scored according to the following criteria, listed in decreasing order of importance:

1. Impact

- How well the proposed project addresses a critical gap in lymphatic science or clinical care.
- The degree to which the research aligns with LE&RN's mission and strategic priorities.
- Potential for meaningful **near-term advancements** (e.g., new tools, insights, models) that could change practice or research direction.
- Strength of the long-term vision and likelihood of generating **enduring impact** on patient outcomes, understanding of disease mechanisms, or development of interventions.

2. Research Strategy and Feasibility

- Scientific rigor of the hypothesis, aims, rationale, and experimental design.
- Adequacy of supporting preliminary data and strength of the scientific rationale.
- Clarity and feasibility of the research plan, including methodology, controls, and anticipated outcomes.
- Consideration of potential limitations and inclusion of alternative strategies.
- Appropriateness of the statistical plan and data analysis strategy.
- For studies using human subjects or samples: the strength of recruitment/access plans and ethical considerations.
- For animal research: appropriateness of model(s), numbers, sex, and endpoints.

3. Translational Relevance

- How effectively the project bridges discovery science with real-world applications.
- Strength of the plan to incorporate **use-inspired insights** from clinical, patient, or community settings.
- Realism and feasibility of moving from lab conditions to implementation contexts (e.g., validation studies, preclinical pathways).

- The potential of the project to **inform, catalyze, or accelerate translation** of basic discoveries into clinical or community outcomes.

4. Personnel and Environment

- Appropriateness of the PI's expertise and track record in relation to the project goals.
- How well the proposed research will support the investigator's trajectory toward independence or leadership in lymphatic research.
- Whether the application reflects the applicant's intellectual leadership and vision.
- Qualifications and roles of collaborators or team members (if applicable).
- Strength of the institutional environment, resources, facilities, and support.
- Appropriateness of the effort levels for each team member.
- Evidence of institutional support and protected time to conduct the proposed work.

5. Budget and Justification

- Whether the budget is reasonable, cost-effective, and appropriate for the scope of work.
- Justification of each expense and alignment with project goals and timeline.
- Compliance with budget guidelines, including exclusion of indirect costs.

6. Timeline

- Clarity and structure of the timeline, including logical sequencing of tasks and subtasks.
- Realism of the proposed timeline, milestones, and performance sites.
- Adequacy of planning to ensure deliverables are met within the two-year award period.

Post-Award Requirements

Awardees will be required to participate in quarterly progress meetings (unless directed otherwise) with LE&RN's Science and Medical Director to discuss project milestones and any challenges encountered. A Year 1 Progress Report must be submitted at the 12-month mark and will be a condition for the release of the second installment of funds. LE&RN expects that research supported by this award will lead to the dissemination of findings through publication in a peer-reviewed scientific journal.

All publications, presentations, and public communications resulting from the funded work must include an appropriate acknowledgment to **The Jane Petty Translational Catalyst Award supported by The Lymphatic Education & Research Network (LE&RN)**.