Peripheral Nerve Multi-Omics Request for Proposals

Questions? Contact kate.andersh@cmtrf.org

Grant Opportunity: Peripheral Nerve Multi-Omics RFP

Website: *cmtrf.org/noderfp*

Brief Program Description: The CMT Research Foundation (CMTRF) is building a centralized, multi-omic data platform dedicated to peripheral nerve biology to accelerate discovery and translation for Charcot-Marie-Tooth (CMT) disease and related peripheral neuropathies. This targeted Request for Proposals (RFP) will fund the generation of high-value bioinformatics datasets that **expand knowledge of mouse and human gene expression profiles in the peripheral nervous system (PNS)**. Priority will be given to projects that strengthen our ability to translate findings between preclinical models and human disease.

Funding Amount: Funding of up to **$75,000** may be requested for a **one (1) year** duration.

Who Should Apply? This award is open to researchers at academic, non-profit, or industry/biotech institutions with the expertise and resources to generate PNS-relevant expression data. Both early-career and established investigators are eligible to apply. More details of eligibility are provided in Section IV below.

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I. About CMTRF and the Bioinformatics Workbench "NODE"

Charcot-Marie-Tooth (CMT) is a group of inherited neuropathies caused by genetic mutations that damage the peripheral nerves responsible for transmitting signals between the central nervous system and the rest of the body. CMT affects approximately 150,000 people in the U.S. and more than 3 million people worldwide. There is no effective treatment or cure for CMT.

The CMT Research Foundation (CMTRF) is a patient-led, non-profit organization focused on advancing the development of treatments and cures for CMT. To accelerate this work, CMTRF is developing the Neuropathy Open Data Exchange "NODE" bioinformatics Workbench: a centralized platform for exploring multi-omic datasets relevant to peripheral neuropathies, enabling researchers to upload, compare, and visualize data across studies and species. A key gap the NODE aims to fill is the scarcity of datasets that directly connect mouse model biology to human peripheral nerve disease.

II. Program and Award Overview

The core goals of the Peripheral Nerve Multi-omic RFP are to:

- Generate high-value bioinformatics datasets that expand mouse and human gene expression profiles in the PNS
- Catalyze new comparative and translational approaches to peripheral nerve biology
- Improve the field's ability to translate preclinical findings into human-relevant insight

III. Funding Amount and Duration

- Up to $75,000 may be requested. Salary support is not to exceed 50% of the total amount requested. The majority of funds requested must be used for research expenses.
- Applicants may request up to $1,500 for travel during the award. Awardees will be provided free registration for the Global CMT Research Convention and are encouraged to use their stipend to cover travel for this event.
- Indirect costs must not exceed ten percent (10%) of the total budget and must be justified. Approval of indirect costs is at the discretion of CMTRF.
- Awards are intended for a one-year duration.

IV. Eligibility

- Both early-career and established independent investigators are eligible to apply.
- Applicants who do not yet have an independent laboratory should provide a letter of support from a PI sponsor/mentor.
- Applicants must have access to equipment or core facilities to conduct large scale sequencing.
- Work may be conducted at academic, non-profit, contract research organization (CRO) or pharma/biotech institutions.
- Projects must focus on the Research Priority Areas outlined in Section V below.
- Applicants from all countries are eligible to apply.
- Multi-PI or cross-institutional collaborations are highly encouraged.

V. Research Priority Areas

All proposals must expand knowledge of mouse and human gene expression profiles within the peripheral nervous system (PNS). Applicants are encouraged to utilize one or more of the following, alone or in combination:

- Human PNS-relevant tissues: e.g., sural nerve or skin biopsies, dorsal root ganglion (DRG) tissue, or other accessible human peripheral nerve sources.
- Relevant mouse models: transcriptomic or epigenomic profiling of sciatic nerve, DRG, Schwann cells, or neuromuscular junction (NMJ) tissue from CMT or other peripheral neuropathy models.
- iPSC-derived models: human iPSC-derived sensory or motor neurons, Schwann cells, or organoid systems that provide a tractable bridge to human disease.
- Other approaches focused on the PNS that meaningfully expand mouse and human expression data are welcome; if uncertain of fit, applicants may submit a Letter of Intent (Section VI) for feedback.

Priority will be given to proposals that generate datasets and/or analyses suitable for incorporation into the NODE Bioinformatics Workbench. A data sharing and deposition plan is a required deliverable of the funded project.

VI. Application Submission Process

Application submission period deadline November 20, 2026, by 11:59 PM (Eastern).
Documents prepared and uploaded to the application should use Font: Times New Roman 12 or Arial 11, with margins no less than a half inch on each side. Information should be clear, specific, and concise.
The application portal can be accessed via this link: https://webportalapp.com/webform/noderfp
General Application Information:

- Application Type: Peripheral Nerve Multi-Omics RFP

- Applicant Information and PI Sponsor/Mentor Information (if applicable).
- Title of Project.
- Lay Summary (one paragraph, understandable to a non-scientist).
- Scientific Summary (one paragraph, scientific language).

Research Focus Areas — Primary Area (check one):

  - Human PNS profiling
  - Mouse model PNS profiling
  - iPSC-derived PNS model profiling
  - Cross-species/comparative bioinformatics

Research Stage (check one):

  - Basic
  - Translational
  - Clinical

Scientific Proposal (5-page limit, excluding references):

- Abstract (1 page): background, rationale, and specific aims.
- Background and Research Plan (4 pages): background and gap addressed; preliminary results if applicable; experimental design and methods, including species/data sources; facilities and access to equipment; external collaborations and letters of support.
- References: up to 2 pages.

Proposed Budget:

- Total amount requested, up to $75,000 US dollars.
- Detailed budget using the CMTRF budget template (Personnel ≤ 50% of total; Research costs; Indirect costs ≤ 10%, discretionary).
- Budget justification (≤ 2 pages) covering personnel, research costs, and indirect costs.

Additional required materials:

- Gantt Chart: visual timeline of milestones, using the CMTRF template.
- NIH Biosketches for the applicant, PI sponsor/mentor (if applicable), and key collaborators.
- Letter of Support from a PI sponsor/mentor, where applicable.
- IRB/IACUC approvals or expected approval dates, where applicable
- Competitive Landscape/Commercialization (mandatory for pharma/biotech/for profit applicants, optional for academic/non-profit applicants)
- Other Support: current and pending research funding for all listed personnel.

VII. Project Review Process and Criteria

Applications will be evaluated by CMTRF's staff and scientific advisors on the following criteria:

- Significance: Does the project meaningfully advance knowledge of gene expression for the PNS in a healthy and/or disease state? Will the data generated support future CMT drug development?
- Innovation: Is the approach, data source, or model system novel relative to current efforts in the field?
- Approach: How scientifically sound and feasible is the project plan within the requested budget and timeline?
- Research Team and Environment: Does the team have the expertise and resources to execute the project, including any cross-institutional coordination required?

Score	1	2	3	4	5
Significance	Groundbreaking potential to fundamentally advance mouse-human PNS translation.	Clearly addresses a significant translational gap; outcomes are promising and impactful.	Adequately addresses the gap; outcomes achievable but may lack transformative potential.	Marginally addresses the gap; outcomes unclear or speculative.	Fails to address a meaningful gap in PNS nerve biology.

Innovation	Highly innovative approach that could reshape the field.	Demonstrates clear innovation in data, models, or methods used.	Moderately innovative; some novel aspects but not entirely unique.	Minor innovation; approach is only somewhat distinct.	Lacks originality or replicates existing efforts without added value.
Approach	Exemplary plan; rigorous, well-designed, highly feasible within budget and timeline.	Well-designed and feasible, with minor areas for refinement.	Scientifically sound with room for improvement in execution.	Some aspects are feasible, but plan has major weaknesses.	Poorly designed, unrealistic, or infeasible within scope.
Research team and environment	Exceptional expertise and resources; ideal environment for cross-species data work.	Strong expertise and supportive environment with minor limitations.	Adequate expertise/support and environment, with room for strengthening.	Limited expertise, support, or resources.	Team lacks the required expertise or resources for the proposed work.

Projects will be nominated for funding based on overall scientific evaluation, with final funding decisions made by the CMTRF Board of Directors (BOD). The number of awards granted depends on available funds. Once selected, CMTRF will work with awardee(s) to optimize scientific plan and approach to ensure project success.

VIII. Contract Execution

If approved for funding by the CMTRF Board of Directors, applicants will receive a notification by January 2027. CMTRF will negotiate an Award Contract with the recipient's institution, including a revenue-share provision that is reinvested into future CMT research. Award funding is issued upon contract execution. The earliest expected project start date is February 1, 2027.

IX. Data and Resource Sharing

CMTRF recognizes that the scientific value of the datasets generated under this award will extend well beyond the one-year funding period. We anticipate that awardees will continue to perform advanced analyses, comparative studies, and validation work on these datasets for several years following the completion of funding, and CMTRF welcomes and encourages this continued scientific use.

To ensure the broader research community can also benefit from CMTRF-funded work, **annotated datasets generated under this award must be deposited in the NODE Bioinformatics Workbench within six (6) months of the completion of the funded project**, consistent with the data sharing and deposition plan submitted as part of the application (Section V). This deposition timeline applies to the annotated dataset itself and does not require awardees to complete downstream analyses or publications within that window.

- Deposited datasets should include appropriate metadata and annotation sufficient to allow other researchers to interpret and reuse the data (e.g., sample/tissue source, species, experimental design, processing pipeline).
- Investigators retain the ability to pursue additional analyses, validation studies, and publications using their data after deposition
- Deposition to the NODE is not intended to limit an awardee's ongoing scientific use of the data they generated.
- Any exceptions or extensions to the deposition timeline (e.g., due to patient consent, IRB restrictions, or co-publication considerations) should be discussed with CMTRF as early as possible.

X. Resources and Other Information

For the latest updates on this RFP, visit the NODE Bioinformatics Workbench page at cmtrf.org/node.

XI. CMTRF Contact Information

For technical support and grant information: Kate Andersh, PhD, Scientific Portfolio Manager, CMTRF kate.andersh@cmtrf.org

For scientific and project applicability questions: Meghan Drummond, PhD, VP of Research and Drug Development, CMTRF meghan.drummond@cmtrf.org