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Program Name: 2025-2026 Young Researcher Innovation Grants (YRIG) **Grant Opportunity:** YRIG Predoctoral Grants

Website: https://cmtrf.org/young-researchers-innovation-grant/

Brief Program Description: YRIG Predoctoral Grants are intended to support promising predoctoral fellows in the conduct of research projects aimed at testing new and innovative ideas that will expand or advance drug development for Charcot-Marie-Tooth (CMT) disease. Awards will be prioritized to applicants that propose research projects with strong scientific merit and high potential to result in further research related to CMT drug development. For successful projects, follow-on funding from CMTRF may be a possibility.

Funding Amount: Funding of up to \$25,000 may be requested for a one (1) year duration.

Who Should Apply? This award is intended for junior researchers/doctoral students (MD, PhD, etc.) who are in a doctoral training program and under mentorship for the duration of the proposed project timeline. More details of eligibility and requirements are provided in Section IV below.

Key Dates:

OPTIONAL Letter of Intent (LOI) submissions period open*
Applications submissions period open
Applications reviewed
Award letters issued
Earliest project start date

*Option for applicants to receive preliminary feedback from CMTRF advisors on proposed research ideas

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I. About Charcot-Marie-Tooth Disease and the CMT Research Foundation (CMTRF)

Charcot-Marie-Tooth (CMT) is a group of inherited disorders caused by genetic mutations that result in damage to peripheral nerves, which are responsible for transmitting signals between the central nervous system (brain and spinal cord) and all other parts of the body, including the arms, hands, legs and feet. People with CMT experience problems with balance, walking, fine motor skills, and more. Symptoms may begin as early as birth or later in adulthood, and become gradually worse over time. There are multiple forms of the disease, with varying prevalence and caused by different genetic mutations with different biological mechanisms leading to disease. Collectively, CMT affects approximately 150,000 people in the U.S. and more than 3 million people around the world. 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. CMTRF's focus is to support projects that can lead to new therapeutics for CMT or greatly advance the speed and volume of CMT drug development. CMTRF grant <u>opportunities</u> have funded 25 projects so far, supporting promising CMT research in academia, industry and other entities. To date, CMTRF has invested over \$8M in research, and contributed to progress of <u>9 pipeline therapeutics</u> for CMT.

II. Program and Award Overview

For the 2025-2026 grant cycle, CMTRF is launching the Young Researchers Innovation Grants (YRIG) program. The YRIG Predoctoral Grants provide funding support for researchers in doctoral degree programs (MD, PhD, MD/PhD). The core goals of the YRIG Predoctoral Grants are to:

- Engage and recruit new talent and thinking to CMT research.
- Encourage the exploration of new or innovative ideas in CMT research
- Generate meaningful preliminary data that can be used to launch larger CMT research projects.

III. Funding Amount and Duration

- Up to \$25,000 may be requested. Funds are intended to provide salary support in the conduct of research or to support project related costs.
- No indirect costs may be requested.
- Applicants may request up to \$1,500 for travel during the award and are highly encouraged to use this to attend a future Global CMT Research Convention. For YRIG awardees, CMTRF will be provided free registration for the 2025 and 2026 Global CMT Research Conventions.
- Awards are intended for a one-year duration.

IV. Eligibility

- Applicants must be junior researchers who are in a doctoral training program (MD, PhD, etc.) and under mentorship at the time of the applications deadline.
- Research must be conducted within a PI sponsor's lab or in collaboration with external partners serving as mentor(s) and relate to one or more of the research priority areas outlined in Section V.
- A letter of support is required from the PI sponsor/mentor.
- Applicants from all countries are eligible to apply.
- Work may be conducted in academic/non-profit research institutions. Industry researchers are not eligible to apply.

V. Research Criteria and Priority Areas

For the YRIG, research projects must include innovative approaches that address major challenges or gaps that exist for CMT drug development. Collaborative projects or efforts across research groups and industries are highly encouraged. All projects must:

1. Focus on one of the following Priority Areas:

- <u>Improving drug delivery to the PNS</u>: Testing new delivery approaches not previously explored for the peripheral nervous system (PNS), optimizing current drug delivery approaches to be more specific to the PNS, researching the blood nerve barrier (BNB) and/or cell types impacted by CMT (e.g. Schwann cells and nerve axons) to better understand how they can be targeted for therapeutic delivery, etc.
- <u>Identifying new therapeutics or drug targets</u>, which can be specific to an individual CMT subtype or applicable across multiple subtypes
- <u>Translating research to the clinic</u>: Generating improved research models, identifying or validating new biomarkers and outcome measures, other activities to improve clinical trial readiness, etc.
- Other areas that can have a strong impact on CMT drug development will be considered, but must be pre-approved by CMTRF following the submission of a Letter of Intent (LOI)
- 2. Include basic science, translational, or clinical research that is applicable to CMT drug development, which can be specific to an individual CMT subtype or applicable across many CMT forms.

VI. Letter of Intent Submission Process – OPTIONAL

LOI submission period open: October 15 – December 13, 2024.

Prior to submitting a full application, applicants are highly encouraged to submit an OPTIONAL short 2-3 page Letter of Intent (LOI) for the idea of their project ahead of submitting their full proposal so that CMTRF staff and YRIG committee can review the idea and provide initial feedback and suggestions that can be incorporated into the full application.

LOIs can be submitted at any time starting on October 15, 2024.

Feedback will be provided within 4 weeks. Excludes holidays.

If you choose to skip the LOI stage, this will not negatively impact the review process for your full application.

If you choose to submit an LOI, do so at: https://webportalapp.com/webform/ryig-loi No registration is required for the LOI submission site.

The LOI asks for the following:

- Your information
- PI sponsor/mentor information (if applicable)
- Project areas of focus
- Project title
- Expected proposed project budget
- Two to three-page project summary including a one paragraph summary; rationale; aims; preliminary results; research plan; timeframe; references.

VII. Application Submission Process

Application submission period open: December 9, 2024 - February 28, 2025, by 5:00 PM (Eastern)

A link to the online YRIG Submission Portal will be shared on December 9, 2024 at https://cmtrf.org/young-researchers-innovation-grant.

1. <u>Submission Portal Registration and Use</u>

On the Submission Portal:

- 1. You will be asked to create a username and password.
- 2. You will be asked to complete a profile.
- 3. Once you are logged in, you will land on your personal YRIG applications portal home page/ dashboard. This provides a description of what and how to prepare for your application. These instructions are also detailed below.
- 4. Items marked *** below can be prepared separately and then should be uploaded to the application as files.
 - a. For file uploads, PDF is recommended. Most other electronic formats are accepted (Word, Excel, PNG..)
 - b. Where documents are to be prepared then uploaded/appended these should be typed using Font: Times New Roman 12 or Arial 11, and Margins: No less than a half inch on each side.
 - c. Information should be presented in a clear, specific and concise manner.
 - d. Key figures and legends must be included in the Scientific Proposal and should be of sufficient quality and size to be evaluated by the reviewer.
- 5. Once you start an application you can "save as draft", log out, and return later to complete it.

2. General Application Information

Complete sections as follows:

- 1. Application Type: Check "Predoctoral Grant".
- 2. Applicant Information: Complete your personal details as requested.
- 3. **PI Sponsor/Mentor Information:** Provide the requested information for the individual who will serve as your mentor.
- 4. Title of Project.
- 5. Lay Summary (one paragraph): This should be a brief overview of the project that can be understood by a non-scientist. This statement may be used to inform the non-scientific departments of CMTRF and the general public of the nature of this work. Applicants should not include any confidential or proprietary information, including intellectual property, in the lay abstract.
- 6. **Scientific Summary (one paragraph)**: This should be a brief overview of the project and can be in scientific language. This statement will be used to inform the scientific community.
- 7. Research Focus Areas: select those that most closely describe your proposed study.
 - a. Primary Area of Scientific Focus: check one
 - i. Drug delivery to the PNS
 - ii. Identifying new drugs and targets
 - iii. Translating research to the clinic
 - b. Research Stage (bench-to-bedside): check one
 - i. Basic
 - ii. Translational
 - iii. Clinical

2. <u>Scientific Proposal: Limit 5 pages (excluding references)***</u> This must include:

a. **Abstract** (1 page limit): Briefly describe the background, rationale, and the proposed Specific Aims to accomplish the research goal or test the project hypothesis.

b. Background and Research Plan (4 page limit): This should include the following:

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- <u>Background</u>: Critically evaluate existing knowledge and specifically identify the gaps the project is intended to fill. Concisely state the importance and rationale of this research by relating the specific aims to longer-term objectives. This section should also show the potential importance of the proposed work to CMT, in particular those areas listed as areas of special interest in this RFA. In addition, describe the relationship of the proposed work to your long-term career goals as they apply to CMT.
- <u>Preliminary Results</u>: If applicable, provide any preliminary results that support the project or rationale.
- Experimental Design and Methods: Provide details of experimental design and methods to be used to accomplish the specific aims. Describe protocols and methods; if these are novel, describe why they might be better than current approaches. Discuss the data expected to be obtained and the means by which data will be analyzed and interpreted. Describe how results will impact any component of the research plan. Discuss potential pitfalls and/or limitations of the proposed procedures and alternative approaches to achieve the aims.
- <u>Facilities and Equipment Available</u>: Describe resources to be used for this project, such as laboratory, clinical, animal, computer, office, etc. Provide any additional information about the environment, including any support services available that will be utilized. If facilities or equipment at a consultant's or collaborative site will be used, they should be identified and clearly described.
- <u>External Research Support</u>: If the proposed project includes consultant arrangements and/or collaboration with other individuals or institutions outside the applicant's group, describe the working relationships and provide a letter of support from these collaborating individual(s).

c. References: Up to two (2) pages of references may be provided. Literature cited should be numbered in the sequence that they appear in the text and listed at the end of the Research Plan. Provide authors, title, journal/ book, year.

3. Proposed Budget***

- a. **Total Amount:** Fill in the total amount in the box as requested. Predoctoral Grant applicants may request up to \$25,000.
- b. **Currency:** Budget requests must be in US dollars (\$USD). If applicable, convert from your local currency using e.g. <u>https://www.oanda.com/currency-converter</u>

c. Detailed Budget***

Use the budget template provide by CMTRF - link posted at <u>https://cmtrf.org/young-researchers-innovation-grant/</u> - fill out the template and create a PDF.

Note that budget tables have pre-set formulae that calculate totals. Enter data only where indicated in RED. More details are provided below.

Budget Table 1: Direct Costs – Personnel

• For the applicant and any other individual for whom salary support is sought from this grant:

- o Enter name, role, base salary/year, % effort to be committed and calendar months to be committed. These entries will auto-calculate the total request for each individual and populate the table.
- o Enter the distribution by Aim for each personnel. Note that totals in the orange subtotal boxes for personnel direct costs should match.
- o For hires yet to be made, enter "TBD" under the "name".

Budget Table 2: Research Costs & Travel Stipend

- Applicants may request a \$1,500 stipend to support travel to the CMT Global Convention in 2025 or 2026.
- Applicants may request research costs.
 - Categories include animals, reagents/supplies, equipment, contractor and technical service fees, and travel.
 - Enter the category and description of each research item being requested in the proposal.
 - Enter the cost across applicable Aims.
 - Subtotals will be automatically calculated.

Budget Table 3: Overall Requested Budget

- Direct cost numbers will be auto-calculated.
- No indirect costs may be requested.

d. Applicant Attestation

Once the budget tables are complete, provide the details in the attestation below them. This confirms that the information provided is accurate and complete to the best of your knowledge.

e. Budget Justification***

Budget justification should not exceed **two pages total.** Address all categories applicable to your budget. Prepare this as a Word document, PDF and upload to the application portal at the appropriate section.

Personnel:

- For each person listed, provide a paragraph (no more than 10 lines) highlighting role and training applicable to the project and justification for the % effort and calendar months.
- For "TBD" positions, highlight the qualities sought and the recruitment status and timeline.
- NIH Biosketches will be requested for all listed personnel elsewhere in the application process, so be sure to prepare these. More information: <u>https://grants.nih.gov/grants/forms/biosketch.htm</u>

Research costs:

Provide a breakdown of all research related costs being requested, including:

- Animal study costs
- Reagents/Supplies
- Equipment usage fees or purchases
- o Contracting or consulting fees
- o Other research costs required for the project

Unallowable Costs:

- General office technology, computers, software fees.
- Office supplies.
- Publication costs.

- Conference travel with exception of approved CMTRF stipend for travel to the CMT Global Convention.
- Facility renovation or furniture.
- Entertainment or living expenses
- Tuition
- Insurance, visas.
- Indirect costs.

CMTRF reserves the right to disapprove costs outside of this list.

4. Gantt Chart***

A clear visual timeline for your milestones, and the conduct/completion of the proposed work. Use template provide by CMTRF - link posted at <u>https://cmtrf.org/young-researchers-innovation-grant/</u> - fill out the template, create a PDF of this, and upload as indicated.

5. NIH Biosketches***

These must be provided for the applicant, PI Sponsor/Mentor, and any other key collaborators who are referenced in the application. This includes international applicants.

Format must follow the NIH Biosketch link (this includes international applicants) which can be found at https://grants.nih.gov/grants-process/write-application/forms-directory/biosketch

6. Letter of Support

Applicants must provide a letter of support from a PI sponsor/mentor. This should specify the applicant's ability and fit to complete the proposed study, and the availability of/access to sufficient resources to conduct the proposed research.

7. Institutional Review Board/IACUC Approvals***

Where applicable, CMTRF requires that U.S.-based awardees obtain Institutional Review Board (IRB) approvals in accordance with federal policies for <u>human subjects research</u> and <u>animal research</u>. Copies of these approvals, if available, must be uploaded with the application. If pending, provide expected review/approval dates. CMTRF will not release payments to awardee institutions until these documents are received and on file at CMTRF.

8. Other Support

Provide information on any other sources of research funding you have (current and pending). Include grants, stipends, scholarships, etc. This should include source agency, grant type, amount, duration, grant number (if known) and abstract. Information on other support assists CMTRF in the identification and resolution of potential sources of overlap.

Commitment of an individual's effort greater than 100 percent, is not permitted.

VIII. Project Review Process and Criteria

It is anticipated that review of these applications will be completed March 1 - May 30, 2025.

1. Applications will first be reviewed by CMTRF staff to ensure they are complete, and that they meet the goals of the program. Those that do not meet these requirements may be triaged.

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- 2. Applications will be evaluated by the YRIG committee, which is composed of members from CMTRF's Scientific Advisory Board and Research Advisory Committee, on the following criteria:
 - a. <u>Significance</u>: Does the project have the potential to advance scientific knowledge, address a critical challenge in the CMT drug development, and lead to meaningful outcomes that could impact or lead to future research, treatments, or further understanding of the subject area?
 - b. <u>Innovation</u>: Is the project idea, approach, or technology something that is not being explored or addressed by others in the CMT field?
 - c. Approach: How scientifically sound and feasible is the project plan?
 - d. <u>Investigator Environment</u>: Does the applicant have the expertise/resources necessary to carry out the project? Does the applicant have an interest in continuing or advancing the project after the award?
- 2. Projects will be nominated for an award based on the overall score from the YRIG committee. The number of awards given is dependent on availability of funds.
- 3. All awards are subject to compliance with applicable regulations and CMTRF policies and are contingent upon agreeable contract terms.

Chief causes for assigning low priority review scores to applications include the following:

- Insufficient information or documentation
- Inadequate statement of hypothesis, experimental design or methods
- Failure to demonstrate awareness of and plans for coping problems and pitfalls
- Insufficient or improper controls
- Failure to describe potential relevance of the proposed study to issues in CMT
- Failure to document the necessary skills or training to accomplish the goals of the proposal
- Failure of the applicant to meet all of the criteria described in this RFA

IX. Contract Execution

If your application is approved for funding, you will receive a Letter of Award on or around June 2, 2025. Following this, CMTRF will negotiate an Award Contract with your institution. CMTRF forges partnerships with our funded grantees that include a revenue share program, which will in turn be reinvested into translational research for treatments and cures for all types of CMT. Therefore, CMTRF negotiates and executes an award contract with every project. Every contract includes a return on the Research Foundation's initial investment which is then reinvested in new projects. Once the contract is fully executed, your award funding can be issued. It is expected that the earliest start date will be July 1, 2025.

X. Resources and Other Information

For the latest updates and news about this RFA, visit: https://cmtrf.org/young-researchers-innovation-grant/

XI. Contact Information

For technical support and grant information: Edritz Javelosa, PhD, Scientific Research Manager, CMTRF edritz.javelosa@cmtrf.org

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For scientific and project applicability questions: Riann Egusquiza, PhD, Director of Research, CMTRF riann.egusquiza@cmtrf.org