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RESEARCH GRANT APPLICATION GUIDELINES AND REQUIREMENTS

The Cure RTD Foundation (CureRTD) and its international affiliates announce the availability of funding for basic science and clinical research on the natural history, biochemical basis, and treatment of Riboflavin Transporter Deficiency (RTD). We encourage investigators at all professional levels to submit their best ideas. There are no geographical limitations to this funding.

Download Information (<http://curetd.org/research/grants/>)

- Grant Application Process and Requirements (PDF)
- Cover Page that should accompany the grant submission (Word)
- Research Grant Policies (PDF)

Grant Program Priorities

The goal of CureRTD's Research Grant Program is to advance medical knowledge of the basic mechanism of the disease. Although CureRTD will consider any research proposal related to RTD, it is particularly interested in supporting research that will have an impact on therapeutic approaches including the following areas::

- Understanding pathophysiological mechanism of neurodegeneration in RTD and implications for therapies.
- Flavin transport in RTD and strategies for optimizing flavin delivery in patients.
- Genetic, epigenetic and protein approaches that target improved riboflavin transporter functionality.
- Discovery and validation of biomarkers in RTD.
- The search for compounds that may improve mitochondrial/cellular performance and/or provide neuroprotection in RTD.

Applications for any of these areas will be accepted for grants, and will be given preferential consideration in the CureRTD Research Grant Program cycle.

Background

Riboflavin Transporter Deficiency (RTD), formerly known as Brown-Vialetto-van Laere (BVVL) and Fazio Londe (FL) syndrome, is an early-onset neurodegenerative disorder. RTD is caused by mutations in either the *SLC52A2* or *SLC52A3* genes that encode riboflavin transporters RFVT-2 and RFVT-3, respectively. The disease is characterized by motor, sensory and cranial neuropathy. Treatment with riboflavin has recently been found to ameliorate symptoms in many patients but research is required to both better understand optimal flavin treatment strategies and develop complementary novel therapeutic strategies. Because many clinical and biochemical abnormalities of RTD remain poorly understood, we are seeking proposals for both basic science and clinical research that may shed light on any aspect of the syndrome with the object of developing advancing current treatment or a cure.

Budget and Award Size

Awards range from \$10,000 to \$100,000 per year. Strong preference is given to excellent, early-career and early-stage proposals in the range of \$30,000 to \$50,000 per year. Smaller and larger awards will be considered. Grants are usually for one year, with the possibility of renewal for up to two additional years, subject to satisfactory progress reports. We expect successful projects to be able to attract future funding from other organizations. All budgets will be scrutinized for allowable costs (see “Disallowed budget items” below). Applicants should only consider budget item requests that are necessary for the completion of the project.

Types of Proposals Sought

We are interested in providing “seed grant funding” to young investigators as well as attracting experienced investigators new to the field of RTD basic science or clinical research. We anticipate that these funds will be used for the testing of initial hypotheses and the collection of preliminary data leading to successful long-term funding by the National Institutes of Health (NIH) and other major granting institutions around the world.

CureRTD allows young, non-tenured investigators to include in their submitted budget up to 75% of the total grant amount as PI salary. In addition, for those clinical applications where volunteers must travel to a clinical research site, these travel expenses will be handled separately and will be excluded from the budget maximums mentioned above.

Letter of Intent:

A letter of intent is **mandatory** for all grant applications and can be submitted at any time to keith.massey@cureRTD.org. The letter of intent is a one-page document describing the applicant's research plan/idea in applying for funding. Based on the outcome of this review, the applicant may be invited to submit a full application.

It is recommended that the letter of intent be submitted as soon as possible to allow ample time for CureRTD to provide feedback and (assuming the feedback is positive) for the applicant to assemble the proposed application. The purpose of the letter of intent is to allow for evaluation by a subset of the CureRTD Scientific and Medical Advisory Board, which will provide feedback to the applicant about the suitability of their proposal for the CureRTD Research Grant Program. CureRTD will endeavor to provide this feedback within 2 weeks of receipt of a letter of intent. Although the feedback will be intended to provide guidance on the suitability of the proposed research for possible funding, this feedback will not be binding on any final funding decisions of the CureRTD Research Grant Program.

Each grant application must contain the following elements to be considered complete:

1. A completed Information Form (please use the template provided).
2. A completed Budget Form/Table (please use the template provided).
3. An Abstract summarizing the project, including a statement of what issue(s) the project addresses, a description of why the work is important to either the furthering of knowledge about RTD or the treatment of individuals with the disorder, and a description of how the project will be accomplished. (Note: this abstract may be used for RTD publicity purposes). (1 page or less).
4. The following Research Strategy section, which has a total limit of 6 pages. Section lengths are recommendations.
 - a) A section presenting the specific aims of the project, stating both the objectives and the hypotheses to be tested in the project. (1 page)
 - b). A discussion of the background and significance of the work proposed, including a critical evaluation of previous research and existing knowledge, specifically identifying the gaps that the project is intended to fill, and explicitly stating the importance of the proposed research. (1 page)
 - c) A thorough summary of research design and methods, describing the experimental design and methods that will be used to accomplish the specific aims. Include how the data will be collected, analyzed and interpreted. Present any preliminary data and/or findings. Describe any new methodology and its advantage over existing techniques. Discuss any potential difficulties and limitations of the proposed procedures and what

alternative approaches could be used to achieve the project's aims. Provide a timetable for the project. (4 pages)

5. A statement indicating whether human subjects or vertebrate animals will be involved in the research. If the project will include either or both, then additional documentation will be required by CureRTD, as stated below. (less than a page)
6. A description of the resources and environment available for the project. This should include facilities, laboratory space and major equipment that are pertinent to the project. Also describe any procedures, materials or situations that may be hazardous to personnel and the planned precautions to be exercised. (1 page or less)
7. A list of project personnel (name, title, institution, and role on the project), including the percentage effort that each person is expected to devote to the project. (less than a page)
8. A list of references.
9. A detailed budget narrative section for the proposed project is required. This budget section explains the Budget Form/Table of section 2. This budget narrative fully describes and justifies the expenses. Grant funds will be disbursed by CureRTD semi-annually, based on this budget. The start of the fiscal year for the grant will be the date the first check is issued—usually April of the year following the application deadline. Unless you specifically state otherwise, it will be assumed that one-half of the first-year funds will be disbursed (and spent) in each of the two six-month periods comprising the first fiscal year for that grant. (If you would like to request disbursement at a different rate, then a separate budget form for each six-month period must be completed.)
10. A biographical sketch of the application

In the interest of having a fair competition of ideas, there will be two budget categories when considering the Salary and Benefits expenses for the PI—the “Young Investigator” category and the “Established Investigator” category. In the “Young Investigator” category (e.g., when the applicant is non-tenured, assistant professor, adjunct employee, etc.) the Salary and Benefits of the PI cannot amount to more than 75% of the direct costs. If the application is from an “Established Investigator” (i.e., associate professor and higher, permanent employee), then no more than 10% of the direct costs may be budgeted Salary and Benefits for the PI. The “Established Investigator” category may include the Salary and Benefits of post-doctoral students, graduate students, laboratory technicians, etc.; however, in all cases the subtotal of the Salary and Benefits category cannot exceed 75% of the direct costs.

The categorization of “Young Investigator” or “Established Investigator” is only for budget purposes—all applications within each CureRTD Research Grant cycle are competitively evaluated based on individual scientific merit with all others in that cycle.

Clinically-oriented applications that involve the testing or treatment of RTD individuals often have significant budget outlays for the travel of volunteers to certain clinical research sites—an expense that is not directly pertinent towards evaluating the scientific merit of the application. For this reason, any application which includes the travel of research volunteers to specific clinical research sites may submit a separate budget sheet that provides the details of these travel expenses (include transportation, room, and board). This Travel Expenses Budget for volunteers will not be part of the total budget limitations, and these expenses will not be used in evaluating the merit of the application. However, the total of these “travel expenses” cannot exceed \$25,000. CureRTD may fund these travel expenses directly or it may develop alternative arrangements with the grant recipient to accomplish the same task. Applicants submitting this type of clinically-related projects should include a separate Travel Expenses Budget sheet detailing these expenses.

Salary expenses for persons other than the PI can be included; however, in all cases, the “Salary and Benefits” subcategory subtotal shown on the Budget Form/Table (PI and non-PI salaries) cannot exceed 75% of the direct costs. Please note that for “Established Investigators”, there is a PI Salary and Benefits limit of 10% of the direct costs as detailed above.

Disallowed budget items in the CureRTD Research Grant Program include: travel expenses of the PI or colleagues to conferences or meetings, publication fees, and personal expenses. Other Cure RTD funds may be available to help with worthy research expenses; therefore, successful grant recipients are urged to contact the Science Director for more information.

In addition to the application described above, several specific documents are required, if applicable. These documents are not counted as part of the 6-page Research Strategy limitation:

- 1) Biographical information regarding the principal investigator(s), preferably in NIH format. If needed, an explanation of this format can be found at:
<http://grants.nih.gov/grants/forms/biosketch.htm>
- 2) Regulations require that all institutions maintain appropriate policies and procedures for the protection of human subjects. If applicable, please provide a copy of the informed consent form for any human subjects for the proposed project as well as proof of current or pending approval by an Institutional Review Board (IRB) (or a similar oversight group). (NOTE: Funding for the project, if the application is approved, will not be released by CureRTD until the final IRB approval has been secured and a copy, including the approved informed consent form, has been received by CureRTD.)
- 3) In keeping with CureRTD policy, all proposals must conform to regulations for the safe and humane treatment of animals. If applicable, please provide proof of current or pending project approval by the Institution’s Animal Use and Protection Committee (or a similar oversight group). (NOTE: Funding for the project, if the application is approved, will not be released by BSF until the final Animal Use and Protection Committee

approval has been secured and a copy has been received by CureRTD.) (See Addendum A for a general statement from BSF)

- 4) A list of three individuals (names, titles, addresses, and telephone and e-mail contact information) whom you think would be appropriate outside reviewers for your grant proposal. These individuals must be qualified to review your application, have not worked with you during the last three years, and have no conflict of interest. Conversely, if there are individuals you do not want to review your application, please note this in the application.

- Only proposals written in English can be considered.
- Incomplete applications will not be accepted.
- Resubmission of an application from a previous year will not be accepted unless the new application is substantially changed in the opinion of the CureRTD Science Director.
- An electronic version of the full application (in .doc format or in .pdf format, please) and any attachments must be sent to the CureRTD Science Director, Keith Massey at keith.massey@cureRTD.org or kmassey@shaw.ca by **May 1** and **October 1**.

Submissions by fax will not be accepted, and there will be no extensions of the deadline.

- Acknowledgement of CureRTD's receipt of the grant application will be sent by e-mail to the principal investigator within 7 days of the receipt of the document.
- Grant applications will be reviewed by the CureRTD Scientific and Medical Advisory Board (and selected outside reviewers), and recommendations will be forwarded to the CureRTD Board of Directors for their decision to fund or not to fund. The applications will be scored on the basis of:
 1. Importance and impact – the extent to which the research outlined could make a significant contribution to the understanding of RTD or the treatment of the disorder
 2. Feasibility – the qualifications of the investigator(s) to carry out the proposed work based on expertise, experience, and commitment; as well as the availability of all the elements required for the project (such as technology, reagents, and human subjects)
 3. Prospect of Long-term Funding – the likelihood of subsequent NIH or other major funding for any potential follow-on work (if appropriate)
- Notification of the CureRTD Board of Directors' decision regarding whether to award the grant will be sent by E-mail and by US mail. We request no telephone inquiries. All decisions are final. Please follow these instructions precisely.