



VICTOR A. MCKUSICK FELLOWSHIP GUIDELINES

The Marfan Foundation and its divisions are requesting proposals to the Victor A. McKusick Fellowship Grant program. The fellowship program is designed as a shared funding partnership between an institution and the Marfan Foundation to support the development of a fellow. The fellow must have a research interest in the care and study of patients with Marfan syndrome, VEDS, EDS, LDS, and other genetically triggered aortic and vascular conditions. Proposals are being accepted for two-year grants in basic, translational or clinical research. A two-year grant not to exceed \$50,000/year for PhDs or \$75,000/year for MDs will be awarded from the Foundation's Victor A. McKusick Fellowship Fund. The institution of the awardee is expected to contribute matching funds based on the support received.

SCHEDULE

Application Deadline: **October 15, 2021**

Announcement of Awards: **March 1, 2022**

Funding Available: **June 1, 2022**

SPECIAL AREAS OF INTEREST

Special areas of interest are basic research, translational studies and clinical studies in cardiovascular, orthopedic, pulmonary, pain, ophthalmologic and other pertinent disciplines. Studies can consider novel animal model systems, new DNA/RNA technologies, artificial intelligence (AI) innovation, and any synergistic collaborations that may provide identification for new interventional targets and development of new therapies for Marfan syndrome, VEDS, EDS, LDS and other genetically triggered aortic and vascular conditions.

CONTACT

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PROCEDURE FOR SUBMISSION, REVIEW AND AWARD OF FELLOWSHIP GRANTS

A. INTRODUCTION

The Marfan Foundation's Victor A. McKusick Research Fellowship Grant is intended to provide the opportunity for career development with formal education and experience in research methodologies. The fellow should work in an active and progressive research environment that intimately involves the fellow in the conception, planning, execution and reporting of research related to Marfan syndrome, VEDS, EDS, LDS, and other related conditions. It is expected that the fellow receive formal education in such topics as biomedical statistics, research design, grant writing, and safety, regulatory and ethical concerns. At the end of the granting period, the fellow should have a firm foundation in the fundamentals that will prepare him/her to conduct independent research and compete effectively for extramural funding. The goal of The Marfan Foundation's Victor A. McKusick Research Fellowship Program is to advance research in the care of patients with Marfan syndrome, VEDS, EDS, LDS, and other related conditions and to facilitate the academic growth and development of future researchers and clinicians.

B. TYPES OF PROPOSALS SOLICITED

Each proposal should have the quality of an NIH proposal. The proposal must be based on an identified research project. Special areas of interest are basic, translational and clinical studies in cardiovascular, orthopedic, pulmonary, pain, ophthalmologic and other pertinent areas utilizing synergistic collaborations; novel theories; novel animal model systems; AI innovation; DNA/RNA technologies for identification of new targets and new therapeutic therapies. The award is designed to support fellows studying any discipline. Special consideration is given to proposals in non-cardiac disciplines and clinical research areas.

C. BUDGET

Fellowship awards will be available for PhDs for up to \$50,000 per year and for MDs up to \$75,000 per year. A 1:1 match of institutional support for direct funds (i.e., salary, supplies) will be required to support a full two-year study proposal for either \$100,000 (PhD) or \$150,000 (MD).

D. QUALIFICATIONS OF THE FELLOW

The applicant must hold an MD, DO, PhD, ScD, DDS, DVM or equivalent degree. Fellowships can be offered up to the post graduate year 6 level. Both U.S. citizens and non-U.S. citizens are encouraged to apply. Fellows should be eligible at their institution for specialty training in the field of Marfan syndrome including but not limited to genetics, cardiology, orthopedics, pulmonary and ophthalmology. The fellowship can only be held one time by any candidate.





E. QUALIFICATIONS AND RESPONSIBILITIES OF THE MENTOR

The mentor must have proven ability to pursue independent research as evidenced by original research publications in peer-reviewed journals and/or funding from extramural sources. The mentor may be in any department within the applicant's institution. The mentor must submit an evaluation of the fellow every six months as part of the progress reports required during the granting period. The application must include a statement from the mentor providing:

1. Information on the mentor's research qualifications in the scientific area studied in the application and previous experience as a research supervisor;
2. A mentor's plan describing the nature of the supervision and mentorship that will occur during the proposed award period; and
3. A plan for the transition of the candidate from the mentored phase of their careers to the independent investigator phase during the project period of the award.

F. ENVIRONMENT AND INSTITUTIONAL COMMITMENT TO THE CANDIDATE

The sponsoring institution must define and document a strong, well-established research and training program related to the candidate's area of interest including a high-quality research environment with staff capable of productive collaboration with the candidate. The sponsoring institution must provide a statement of commitment to the candidate's development into a productive, independent investigator and to meeting the requirements of this award. It should be clear that the institutional commitment to the candidate is not contingent upon receipt of this award.

G. REVIEW PROCESS

The Marfan Foundation's Scientific Advisory Board, a committee of experts in basic, translational and clinical research, will review each application. Each proposal will receive a priority score based on the evaluation of the committee. Priority scores will be forwarded to The Marfan Foundation where award decisions will be made based upon relative scientific merit ranking of the submitted proposals, and on priorities of The Marfan Foundation. All applications will be held in the strictest confidence and all decisions by The Marfan Foundation are final.





H. TERMS OF THE FELLOWSHIP

1. Duration:

Applications will be accepted for two-years of training. Extension of grant period for unexpended funds may be given beyond the two-year period upon review of request. Two-year funding period begins June 1, 2022 and ends May 31, 2024. Requests for change in funding dates will be considered.

2. Changes of Status of Designated Fellow

If the named fellow changes affiliations, a request for transfer must be approved by The Marfan Foundation. If the fellow ceases research in the field for which the fellowship was made, the award will terminate and the remaining balance will be returned to The Marfan Foundation.

3. Site of Project

Site of the project is unrestricted.

4. Budget

Budgets for up to, but not exceeding, \$50,000 per year for PhDs and \$75,000 per year for MDs for a two-year period are acceptable. Any unexpended funds shall be returned to The Marfan Foundation upon completion of the granting period unless prior approval is given by Foundation. Payments will be made to the fellow's institution which will be responsible for administering the funds. The Marfan Foundation does not pay for institutional overhead, construction or renovation; purchase of major capital equipment; office equipment or furniture; travel (except as required to perform the project); tuition fees; journal subscriptions, dues or memberships; equipment service contracts; or salaries for secretaries. Funds will be distributed semi-annually. The institution of the awardee is expected to contribute matching funds based on the award received.

5. Indemnification of The Marfan Foundation

The fellow, mentor, and any co-investigators and his/her Affiliated Institution will be obligated to indemnify The Marfan Foundation from any and all liability that may arise from the fellow/ mentor/Affiliated Institution's conduct and the Foundation's affiliation therewith due to the award relationship.

6. Institutional Support

The mentor and fellow assume responsibility for conducting research projects and supervising the work of co-investigators. The fellow must demonstrate that access to a suitable caseload or patient population will be available for study during the funding period for clinical studies.

7. Use of Animals and Humans in Biomedical Research





Fellows must certify that the research facilities, its researchers and employees adhere to the Animal Welfare Act National Research Council Guide for the Care and Use of Laboratory Animals, and any appropriate US Department of Agriculture or National Institutes of Health Regulations and Standards. An Institutional Review Board (IRB), Institutional Animal Care and Use Committee (IACUC) or its equivalent must approve research involving human subjects or animals, and a copy of the approval or pending approval must be sent with this application. Copies of annual IRB renewals must be forwarded to The Marfan Foundation. IRB/IACUC approval must be documented prior to dispensation of The Marfan Foundation funds. The application must include letters of support if the proposed project uses facilities not routinely available to or directly under the supervision of the sponsoring program.

8. Publications

All discoveries resulting from work supported in part by The Marfan Foundation should be made available to the public and scientific community through approved scientific channels such as national meetings and peer reviewed publications. Publications will acknowledge the support of The Marfan Foundation. Two reprints of each publication must be forwarded to the Foundation.

9. Publicity

The Marfan Foundation shall be permitted to use the fellow and mentors name, image and likeness, as well as the name of the Affiliated Institution, in connection with all statements, printed materials or electronic media related to the fellowship award or related to The Marfan Foundation's Research Program. At the Foundation's request, the fellow will provide the Foundation with appropriate photographs and biographical information to be used in connection with this award.

10. Intellectual Property

Pursuant to the Foundation's established policy, inclusion of the IP provisions is a condition for the Foundation making a grant and entering into all research agreements.

11. Progress and Financial Reports

The Principal Investigator must provide a progress report and a financial report no later than 45 days after the completion of the first 10-month period and at the completion of the grant. Failure to provide such reports will preclude the Principal Investigator from obtaining further funding. Consideration for future funding will be dependent upon completion of these progress reports. An additional and final questionnaire will be forwarded to the grant recipient after the completion of the grant to describe any publications and subsequent funding received based on research performed using the Foundation's funds.

12. Liability of The Marfan Foundation.

The Marfan Foundation assumes no financial liability of patient care responsibilities of any kind undertaken by the fellow or mentor. The mentor and the mentor's institution





acknowledge that The Marfan Foundation is not legally liable for the conduct of the fellow or the mentor and associate investigators.

I. CONTACT INFORMATION FOR CORRESPONDENCE

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J. DETAILS OF PROPOSAL

The application must be submitted electronically, including the application forms, additional pages, and appendices, as a single PDF file, via The Marfan Foundation website, marfan.org. Please name your application using the following format:

McKusickFellowship_LastName_FirstName.pdf

The application forms may be completed using the free Adobe Reader program. If you do not already have it, you can download it at <http://www.adobe.com/products/reader.html>. The Title Page form requires dated signatures; you may either insert a digital signature and date or print the form and then scan it to include in your application PDF.

Additional pages should be typed single-spaced using a font size of at least 12 points and with one-inch margins. Pages should be numbered at the bottom. Appendices should not be used to subvert the page limitation on the grant; however, figures, tables, diagrams and photographs can be placed in the appendices. Please present the proposal in the order that follows.

- 1. Title Page: 1 page**
 - a. Application form provided
- 2. Table of Contents: 1 page**
 - a. Application form provided
- 3. Project Abstract and Layperson Summary: 1 page each**
 - a. On a single page, describe precisely and clearly the nature, objective, methods of procedure and significance of the proposed research project, and how it relates to the





goal of providing a better understanding of Marfan syndrome, VEDS, EDS, LDS, and other related conditions and/or improving the treatment or diagnosis of Marfan syndrome, VEDS, EDS, LDS, and other related conditions (limit 300 words).

- b. Rewrite the abstract in abbreviated form in terms suitable for presentation to laypersons (limit 500 words).
4. **Research Plan: 3 pages**
 - a. Include Goals and Objectives; Rationale; Methodology; Evaluation. (Figures should be placed in appendix).
5. **Career Development Plan: 3 pages**

Plan can be written by the candidate and/or mentor.

 - a. Describe the resources and facilities that will be available to the candidate.
 - b. Describe how the institutional research environment is particularly suited for the development of the candidate's research career and the pursuit of the proposed research plan.
 - c. In a clear statement, provide assurances that the candidate will be able to devote a minimum of 75% of his/her effort in developing his/her research program, that the remaining percent effort will be devoted to activities related to the development of their research career, and that the candidate will be released from normal clinical, teaching or administrative duties. Candidates who will use the resources within a General Clinical Research Center (GCRC) during the course of the award should include a letter of agreement from either the GCRC program director or the principal investigator with the application.
6. **Please comment upon the importance of funding:**
 - a. Will this funding allow you to pursue studies that would otherwise not be performed? Is funding meant to supplement other sources of support?
 - b. Do you anticipate that this funding will increase your competitiveness for other funding sources?
7. **Please comment upon the significance of the work that you propose:**
 - a. Is it similar to or a direct extension of work that has been or is being performed elsewhere?
 - b. Does the work complement or extend other studies that are being performed at your institution?
 - c. How novel are the studies that you describe?
 - d. Would such a proposal be competitive for NIH funding in its current form, or would you require additional preliminary data?
 - e. Do you anticipate that the support would lead to the generation of physical resources that might be useful to other investigators in the field?
 - f. If so, would you be willing to make them widely available?
8. **Budget and Justification:** List full budget with amount requested. Include:
 - a. Names, titles, time/percentage effort of all participants, requested salaries and fringe benefits
 - b. Supplies required to complete project.





- c. Statement that the institution or other funding sources will absorb indirect costs.
 - d. A written budget justification. The budget justification should be suited to the proposal. It is important that the investigators match the dollar award with the actual project. If funding from other sources is being used to cover certain parts of the study, please elaborate on what parts of the budget will not be completed with Foundation funding and what the approximate costs of the full project would be. No overhead or indirect costs will be considered. List the additional sources of funding if budget exceeds proposal amount.
9. **Other Support: 2 pages:** List other support received by principal and co-investigators for any projects (include yearly and total budget and duration of any grants):
- i. Current
 - ii. Pending
 - iii. Description (in a paragraph, describe each current or pending grant and whether it has scientific or budgetary overlap with the present proposal).
10. **Biographical Sketches: 5 pages each**
- a. Using the supplied form, please provide biographical sketches for key personnel. Indicate the total number of publications in each of the (2) categories: referenced articles and invited works. If you prefer, you may use the NIH biosketch form instead.
11. **Facilities Description: 1 page**
- a. Describe what resources and facilities are available at the project site. Describe how the mentor and/or the institution will provide an experience that combines both clinical and research opportunities if applicable.
12. **Appendix**
- a. Figures, tables etc.
 - b. Literature cited
 - c. Human subjects experimental approval
 - d. Vertebrate animal experimental approval
 - e. Letters of support

