

OFFICE OF RESEARCH & INNOVATION

Request For Proposals Howard Hughes Medical Institute (HHMI) Mentorship Award

FUNDING ORGANIZATION
APPLICATION DEADLINE

USC Office of Research and Innovation (OORI)

5 PM Pacific Time on October 2, Annually. Proposals submitted after this deadline will be rejected without review. When a due date falls on a weekend, federal holiday, or when USC offices are closed due to weather or other circumstances, the application deadline is automatically extended to the next business day.

SCIENTIFIC MERIT REVIEW Octob

October - November

PROGRAMMATIC REVIEW

November

NOTIFICATION

November - December

EARLIEST AWARD DATE

December

EARLIEST START DATE

December 1

AWARD PROJECT PERIOD

Maximum project period is one year

AWARDS (UP TO)

\$85,000

The number of awards is contingent upon the receipt of a sufficient number of meritorious applications. All awards are subject to the yearly availability of funds, terms and conditions, cost principles, and other considerations.

BACKGROUND

The Office of Research and Innovation (OORI) Howard Hughes Medical Institute (HHMI) Mentorship Award intends to enhance the University of Southern California's researcher pool and the quality of research being conducted by preparing highly qualified researchers to apply to the HHMI Investigator Program. HHMI is a nonprofit research organization and philanthropy that is the largest private biomedical research institution in the nation. HHMI aims to advance scientific innovation by supporting transformative researchers who break new ground in basic and biomedical research. Through its prestigious Investigator Program, HHMI employs nearly 300 scientists who lead research labs at more than 60 top universities, colleges, and other research institutions nationwide. HHMI encourages Investigators to push their research fields into new areas of inquiry, and Investigators do research that radically changes our understanding of how biology works, from molecular, biochemical and cellular processes to genetics, development and disease mechanisms, in a wide range of organisms. These fundamental discoveries have been broadly recognized by the scientific community, including Nobel Prizes to more than 30 current or former Investigators.

OPPORTUNITY

In addition to conducting original research, <u>HHMI</u> Investigators also direct a research team and create a lab environment suited to tackling fundamental research questions; commit to mentoring and training the next generation of scientists; join an active community of <u>HHMI</u> scientists spanning career stages; and teach and play leadership roles at their host institutions. Specific benefits include:

- Become employees of <u>HHMI</u> and receive their full salary and employee benefits from the Institute;
- Retain academic appointments and laboratories at their respective institutions;
- Receive generous financial support for research (roughly \$8 million over a seven-year term, which is renewable pending favorable scientific review), as well as access to capital equipment funds;
- Belong to a community of more than 260 investigators and other <u>HHMI</u> scientists;
- Attend annual scientific meetings to share new research with other **HHMI** scientists.

<u>HHMI</u> appoints new researchers to its <u>Investigator Program</u> through a national Open Competition. Applications typically are due in March.

Currently, USC does not have any active HHMI Investigators. OORI's HHMI Mentorship Award incorporates HHMI "people, not projects" approach, and aims to provide select USC researchers with a unique mentoring experience in an active HHMI laboratory. The primary objective of the HHMI Mentorship Award is to prepare USC researchers with a research and mentoring experience by which they are well prepared to submit a highly competitive application for an open position in the HHMI Investigator Program during a future Open Competition. The OORI HHMI Mentorship Award will support travel and living expenses for a researcher to travel to an HHMI laboratory and conduct a research project under the mentorship of an HHMI investigators. A full list of active HHMI investigators can be found here.

RESEARCH TOPICS

Applications submitted to this RFP should detail potential research of relevance to and align with active HHMI Investigator Program research projects/programs. Broad topics of relevance are listed below:

- Proposals focused on expanding the understanding of how biology works, from molecular, biochemical and cellular processes to genetics, development, and disease mechanisms, in a wide range of organisms.
- Proposals focused on basic and biomedical sciences, plant biology, evolutionary biology, biophysics, chemical biology, biomedical engineering, and computational biology.

SELECTION OF HHMI LAB FOR MENTORING

Applicants for OORI's HHMI Mentorship Award are expected to perform research in fields related to the research conducted in one or more laboratories of active HHMI investigators. A full list of active HHMI investigators can be found here. Applicants are required to submit the names (and URLs) of at least one HHMI investigator with whom the applicant has identified as a potential mentor. A support letter from the HHMI investigator is strongly encouraged and will greatly increase the competitiveness of the application.

NOMINATION PROCESS

Applicants to the program will only be accepted if they are nominated by the dean of one of six schools who oversees their research. A nomination letter from the dean is required. This competition is limited to researchers from these six schools because this is where research relevant to the HHMI mission is conducted at USC. Each of the six schools can nominate up to two faculty members, and they include:

- Davis School of Gerontology
- Dornsife College of Letters, Arts, and Sciences
- Keck School of Medicine
- Mann School of Pharmacy
- Ostrow School of Dentistry
- Viterbi School of Engineering

RETURN ON INVESTMENT

It is expected that proposals funded under this program will yield a return on investment of at least 10x. This will be determined by considering the magnitude of future funding awarded by federal agencies or other external sponsors, including the HHMI Investigator Program.

RESOURCES FOR SUBMITTING GRANT PROPOSALS

Applicants selected for funding are required to contact Research Strategy & Development (RSD), a Research & Innovation suboffice dedicated to supporting faculty in the preparation of competitive applications to federal funding agencies. RSD has considerable experience in generating and submitting proposals to federal agencies. RSD can provide support services to applicants, including science writing, budget preparation, and supporting documentation collection. Specific support provided is contingent on RSD workload and prior commitments. Applicants should contact RSD by sending an email to robyngil@usc.edu.

RESOURCES FOR PROMOTING INNOVATION

Applicants selected for funding are required to contact USC Stevens Center for Innovation (USC Stevens). USC Stevens is the university's technology licensing office, responsible for the translation of USC research into products for public benefit through licenses, collaborations, and the promotion of entrepreneurship and innovation. USC Stevens staff can provide critical guidance related to the invention disclosure and technology licensing processes, as well as an overview of USC's policies related to intellectual property, researcher IP rights, and responsibilities, amongst other topics. Specific support provided may include organized events through Research and Innovation's Center for Excellence in Research, and is contingent on USC Stevens workload and prior commitments. Applicants should contact USC Stevens by sending an email to stvinfo@usc.edu.

PROPOSAL REQUIREMENTS

Applicants must carefully follow instructions. The application will describe a one-year research project that can be conducted at the laboratory of an active HHMI Investigator, under the mentorship of that active HHMI Investigator. The application will also include in the budget the projected living expenses, e.g., rent or other housing expenses, travel, which would be required if the applicant would need to leave the greater Los Angeles area. Information uploaded beyond what is requested will not be included in the proposal package provided to reviewers.

- a) **Brief Description** (not to exceed 60 words): A succinct description of the proposed work.
- b) *Abstract* (not to exceed 20 lines of text): Provide a stand-alone succinct description of the proposed work.

- c) *Research Strategy/Narrative* (not to exceed 5 pages): Page limits are inclusive of figures and tables and include 1" margins of single-spaced text in 11-point standard font (Arial, Times New Roman, etc). The following headers should be included:
 - a) Significance: Explain the importance of the problem or critical barrier to progress that the proposed project addresses; include a program description focused on the ongoing and planned research program; explain how the proposed project will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields.
 - b) Approach: Describe the overall strategy, methodology, and analyses to be used to accomplish the aims of the project.
 - c) Technical Expertise: Identify a USC PI; description of five distinct scientific research contributions.
 - d) Relevance to Ongoing <u>HHMI</u> Research: Beyond stating specific interest in applying to the <u>HHMI</u> Investigator Program, describe why the proposed program is suitable for the <u>HHMI</u> Investigator Program, as well as solid reasoning and support for applicant's mentorship in an <u>HHMI</u> Laboratory.
- d) *HHMI Mentor*: Identify the name of an active <u>HHMI</u> Investigator who would serve as mentor for the proposed research project. A letter of support from that <u>HHMI</u> Investigator is strongly encouraged. If the applicant has not identified a specific <u>HHMI</u> Investigator as a mentor (and does not include a letter of support from the proposed mentor), the applicant is still required to list the name of one or more <u>HHMI</u> Investigators who could be a mentor. <u>If no HHMI</u> Investigator is identified by the applicant to be a mentor and if no <u>HHMI</u> Investigator agrees to be a mentor, then the application will not be funded.
- e) *Open Competition Commitment:* The proposal must include a statement in which the applicant commits to submit a proposal to a future HHMI Investigator Program Open Competition. For postdoctoral applicants, this also includes an attestation from the school that nominated them of an offer of a permanent, full-time faculty position at USC. Postdoctoral applicants will provide a commitment that they will accept this offer and return to USC.
- f) **Documentation of Eligibility**: Applicants will document that they will meet all requirements of the HHMI Investigator Program (see below) at the time that they apply to the HHMI Investigator Program Open Competition.
- g) *Innovation Ecosystem Commitment:* OORI is committed to establishing a thriving innovation ecosystem at USC that will build collaborations between USC researchers and venture capital firms, accelerators, incubators, small and large businesses, and foundations. OORI is working closely with USC University Advancement to develop these partnerships. The proposal must include a statement in which the applicant commits to contacting USC University Advancement at hpourman@usc.edu to discuss the potential for obtaining funding from venture capital firms, accelerators, incubators, small and large businesses, and foundations that are part of USC's developing innovation ecosystem.
- h) **Budget and Budget Justification** (not to exceed 2 pages): Specify a project start and end date. Utilize standard budget categories, only including the allowable budget cost categories as detailed in the **Grant Conditions** section.
- i) *Current Funding:* List all sources of internal and external support awarded during the past five years, current or pending, for the applicant. For each source, specify who on this

- proposal was involved, their role on the project, title of the award, period, award amount, and sponsor (including subagency).
- j) *Letter(s) of Support*: Provide a nomination letter of support from the dean whose school oversees the applicant's work. If the applicant is a postdoctoral researcher, a letter of support from the school nominating the candidate is expected to include an attestation that the applicant will be offered a permanent, full-time faculty position at USC. A letter of support from a proposed HHMI Investigator who would serve as a mentor is strongly encouraged but not required.
- k) Scientific References (not to exceed 1 page): This includes citations listed in the narrative.
- 1) *Curriculum Vitae* (not to exceed 5 pages): Applicants may use any standardized CV format (e.g., NIH Biographical Sketch, NSF Biographical Sketch, etc.).

ELIGIBILITY

PIs must be a permanent, full-time faculty at USC, or a postdoctoral researcher who expects to be appointed as a permanent, full-time faculty at USC. Tenure track and non-tenure track faculty are eligible; visiting and adjunct faculty are not eligible to apply. It is expected that the applicant will meet all of the HHMI Investigator Program Open Competition requirements. These requirements are subject to change; check the HHMI Investigator Program website for current requirements. Current eligibility requirements specify that an applicant to the Open Competition:

- Holds a PhD and/or MD (or the equivalent).
- Has a tenured or tenure-track position as an assistant professor or higher academic rank (or the equivalent).
- Has more than five, but no more than 15, years of post-training, professional experience. To meet this requirement, the applicant's first post-training professional appointment must have begun no earlier than March 1, 2009, and no later than April 1, 2019.
- Is the principal investigator on one or more active, national peer-reviewed research grants with an initial duration of at least three years as of April 1, 2024. Mentored awards and training grants do not qualify. Multi-investigator grants may qualify.

GRANT CONDITIONS

OORI's awards and grant programs are administered by the Research Initiatives and Infrastructure (RII) office.

- If a faculty has an industry relationship, an approved management plan must be in place prior to receipt of award (https://disclose.usc.edu). Teams that will form a startup should anticipate submitting a conflict of interest disclosure. Questions regarding conflict of interest and disclosures can be directed to Ben Bell in the Office of Compliance (benjamab@usc.edu).
- At the time of being notified by Research Initiatives and Infrastructure (RII) office that an award will be made, and as a condition of funding, awardees will provide to RII the name, title, and email address of a USC senior business official who will establish an internal funding account in which OORI funds for the award will be transferred.
- Within one month of being notified by RII that an award will be made and as a condition of funding, awardees will provide RII with an account number and enable view access for the account, such that RII staff will be able to view the account balance. If this information is not provided to RII within this timeframe, RII may elect to rescind the award and use the funds to make an award to another applicant.

- Awardees commit to submitting, in the future, an application or applications to the <u>HHMI</u> Investigator Program Open Competition.
- Postdoctoral applicants must provide an attestation from the school that nominated them for this award that they will offer them a permanent, full-time faculty position at USC, and that they commit to accept the offer and return to USC.
- Awardees commit to contacting Research Strategy & Development (RSD) to explore obtaining support services for external agency grant submissions, including science writing, budget preparation, and supporting documentation collection. Awardees contact RSD by sending an email to robyngil@usc.edu.
- Awardees commit to contacting USC Stevens Center for Innovation to obtain guidance related to the invention disclosure and technology licensing processes, as well as an overview of USC's policies related to intellectual property, researcher IP rights and responsibilities, amongst other topics. Awardees contact USC Stevens by sending an email to stvinfo@usc.edu.
- Failure to spend at least half of the awarded funds within six months of the project start date may result in the suspension of the remaining funds.
- This award will not provide financial support beyond the duration of the award and does not carry the opportunity for renewal.
- Funds not spent by the end of the project period will be returned to OORI.
- Awardees have discretion in the budgeting and re-budgeting of funds to meet their research needs within the guidelines of the fund and the terms of the proposal. However, funds may not be transferred to another project or other researchers or institutions.
- Awardees commit to attend an in-person ceremony with Research & Innovation leadership.
- Awards are not transferable to other researchers or institutions.
- Awards include fringe benefits but are not assessed Facilities & Administration Costs (formerly known as Indirect Costs).
- Allowable budget expenses:
 - o Faculty salary & fringe
 - o Travel
 - Materials & supplies
 - Other (including rent or other housing costs)
- Non-allowable budget expenses:
 - O Postdocs/graduate/undergraduate student RAs/administrative personnel salary & fringe, excluding funding student tuition and other student-related fees.
 - o Equipment
 - Consultant costs
 - Subcontracts
- All USC rules, concerning conflict of interest, human subject research, animal research, etc., apply to projects funded under this program. Funding will only be provided following confirmation that all pertinent reviews have been submitted for approval by relevant committees (e.g., IRB, IACUC).

Applicants consent to the sharing of the application with potential HHMI mentors who they identified in their application.

Applicants must identify a potential HHMI investigator as a mentor OR provide the names of potential mentors who will be contacted by OORI staff to determine if they agree to be a mentor for the applicant. If no HHMI Investigator agrees to be a mentor, then the application will not be funded. Applications will be reviewed by HHMI Investigators identified as a potential mentor by the applicant. If the applicant does not provide a letter of support from a potential HHMI Investigator, OORI leadership will contact HHMI Investigators identified by the applicant as potential mentors and share the application. HHMI Investigators will assess the research achievements and prospects for future contributions of the applicant's independent research program. The Investigator will be asked to rate applications on a 1-5 scale regarding the likelihood that a project will have a sustained and powerful influence on science (1, 2 or 3: high impact. 4 or 5, medium impact). Review criteria will be based on the following:

- 1. *Significance/Broader Impacts*: Impact on knowledge, practice, outcomes, or policy; societal benefit; contribution to scientific inquiry and discovery.
- 2. Feasibility: Ability of the project to be completed within the designated project period.
- 3. *Potential of Success:* The likelihood of being successful in a future <u>HHMI Investigator Program</u> Open Competition.
- 4. *Budget:* Cost-effectiveness and availability of any support/match funding from a USC school or program. Reviewers will consider whether the budget and the requested period of support are fully justified and reasonable in relation to the proposed activities.

PROGRAMMATIC REVIEW

USC programmatic review will be based on a variety of factors, including the likelihood of the applicant being successful in a future HHMI Investigator Program Open Competition. Applicants must identify a potential HHMI Investigator as a mentor OR provide the names of potential mentors who will be contacted by OORI staff to determine if they agree to be a mentor for the applicant. Ultimately, funding decisions will be made based on both HHMI Investigator scientific and USC programmatic reviews. If no HHMI Investigator agrees to be a mentor, then the application will not be funded.

DIVERSITY, EQUITY, AND INCLUSION

OORI and RII strongly support a culture of diversity, equity, and inclusion. Proposals should incorporate meaningful DEI practices across the project team and proposed activities. This will be a consideration during the programmatic review.

REPORTING AND ACKNOWLEDGEMENT OF SUPPORT

Awardees will be required to submit a one-page progress report, which will be due six months into the project period and at the point of project period completion. This report must detail scientific, financial, and research performance over the preceding months. All publications arising from work supported under this program must acknowledge the *USC Research and Innovation HHMI Mentorship Award*.

PROPOSAL SUBMISSION

Submit your proposal application utilizing the RII application submission and reporting portal. Go to https://rii.usc.edu/funding/oor-portal/ to log in or create an account using your USC email address.

FURTHER INFORMATION AND PROGRAM CONTACT INFORMATION

We encourage inquiries to RII concerning this funding opportunity and welcome the opportunity to answer questions from potential applicants about allowable expenses and all other issues. For additional information or inquiries, please send an email to rii@usc.edu with "HHMI Mentorship Award" in the subject line.

APPLICATION CHECKLIST	
APPLICATION CHECKLIST ☐ Award Program ☐ Brief Description ☐ Abstract ☐ Research Strategy/Narrative ○ Significance ○ Approach ○ Technical Expertise	 □ Open Competition Commitment □ Documentation of Eligibility □ Innovation Ecosystem Commitment □ Budget and Budget Justification □ Current Funding □ Letter(s) of Support □ Scientific References
 ○ Relevance to Ongoing HHMI Research □ HHMI Mentor 	☐ Curriculum Vitae

FREQUENTLY ASKED QUESTIONS

Q1: How much funding can I request?

A1: Program cap information is provided on page 1 of the RFP. You should request an amount you think is scientifically appropriate and justified. The requested budget is subject to both scientific peer and programmatic review, and any OORI award made could be for a lesser amount than requested.

Q2: I have identified multiple <u>HHMI</u> labs in which I could do my research, but I have not approached any to get a letter of support. Can I still apply to this program?

A2: We realize that it can be daunting to reach out researchers outside USC to "market" yourself as a mentee. If a support letter from a potential HHMI Investigator is not provided with this application, applicants still must provide a list of HHMI Investigators, one of whom could serve as a potential mentor. In this case, OORI leadership will contact the identified potential mentor. This mentor will also be asked to conduct the scientific review. If no HHMI Investigator is identified by the applicant to be a mentor, or if no HHMI Investigator agrees to be a mentor, then the application will not be funded.

Q3: Why do I need to identify a **HHMI** Investigator to serve as a mentor?

A3: No one knows your research better than you; thus, you need to carefully review the descriptions of the <u>active HHMI research programs</u> to identify an <u>HHMI</u> mentor most suitable for you.

Q4: Why is the **HHMI** Investigator doing the scientific review?

A4: No one knows the expectations of the HHMI Investigator Program and the Open Competition better than existing HHMI Investigators. Without a doubt, these individuals are the most qualified to give feedback on the competitiveness of you and your research program for an HHMI position during the Open Competition.

Q5: I am interested in working with a HHMI Investigator outside Los Angeles. Can I still apply?

A5: Of course. The budget for this award includes not only the expenses of conducting a one-year project in an HHMI laboratory, but also the living expenses (travel, rent, housing, etc.) that would be incurred for you to move outside of the Los Angeles area for one year.

Q6: I am a postdoc currently, but my school and department are planning to offer me a position at USC. Can I still apply?

A6: Yes, as long as your school is willing to attest in its letter of support its intent to offer you a full-time faculty position, and you provide a commitment that you will accept this offer and return to USC at the conclusion of this award.

Q7: If my proposal is selected for funding, will I automatically receive my requested amount? Q7: Not necessarily. The budget is subject to scientific peer and programmatic review, and a recommended award may be for less than what was requested.

Q8: If I receive the HHMI Mentorship Award and work in an <u>HHMI</u> Laboratory, what are the requirements for me to apply to the <u>HHMI Investigator Program</u> Open Competition?

A8: These can vary. Check the <u>HHMI website</u> to see the current eligibility requirements. The current requirements specify that at the time of application to the <u>HHMI</u> Open Competition (<u>not</u> at the time that you apply to this OORI program), you must:

• Have a Ph.D. and/or M.D.;

- Plan to dedicate at least 75% of their time to research at an eligible US institution;
- Hold a position that represents a substantial commitment by their institution, such as a tenure-track faculty position;
- Have a track record of peer-reviewed funding;
- Meet the required length of post-training, and professional experience prior to applying;

Q9: What is the current landscape of the HHMI Investigator Program?

A9: The <u>HHMI Investigator Program</u> employs more than 260 Investigators, located at approximately 60 US research institutions, who are widely known for pushing the boundaries of basic and biomedical research. In addition to conducting original research, <u>HHMI</u> Investigators also:

- Direct a research team and create a lab environment suited to tackling fundamental research questions
- Commit to mentoring and training the next generation of scientists
- Join an active community of <u>HHMI</u> scientists spanning career stages
- Teach and play leadership roles at their host institutions

Q10: Where can I find additional information on the currently active HHMI Investigator Program Open Competition?

A10: You can find additional eligibility details, submission requirements, and application process details at https://www.hhmi.org/programs/biomedical-research/investigator-program#Overview.