Medical Research Fellows Program

Program Information

2015

Application Deadline
January 12, 2015

Announcement of Awards
March 2015

Department of Science Education
Medical Research Fellows Program

The goal of the HHMI Medical Research Fellows Program ("Med Fellows Program") is to strengthen and expand the nation's pool of physician-scientists. The fellowships provide funds to support fellows and meet their research- and education-related expenses. HHMI awards the fellowships through an annual competition.

The fellowship provides support for one year of full-time research training in fundamental biomedical research. It includes a stipend, a research allowance for enrichment activities that directly benefit the fellow and for some of the fellow's research-related expenses, and a fellow's allowance to be used for health care and education-related expenses incurred as part of the fellowship. Fellowship research must be conducted at an academic or nonprofit research institution in the United States, excluding the National Institutes of Health (NIH) in Bethesda, Maryland; or at the KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH) in Durban, South Africa. The fellowship may be conducted abroad if the mentor is affiliated with an academic institution or non-profit organization in the U.S.

In 2015, HHMI plans to award up to 60 fellowships to medical, dental, and veterinary students who show the greatest promise for future achievement in biomedical research and who have demonstrated superior scholarship as undergraduates and during their initial medical, dental, or veterinary school training. To ensure continued excellence and diversity among applicants and awardees, HHMI welcomes applications from all qualified students and specifically encourages applications from women and members of minority groups underrepresented in the sciences.

**Partnership Initiatives.** Some Medical Fellows conducting research in the following areas may be supported by organizations partnering with HHMI:

- Duchenne muscular dystrophy research (Partner: Duchenne Research Fund);
- Epilepsy research (Partner: Citizens United for Research in Epilepsy);
- Gastroenterology or hepatology research (Partner: American Gastroenterological Association);
- HIV or TB research (Partner: K-RITH);
- Inherited retinal degenerative disease research (Partner: Foundation Fighting Blindness);
- Orthopaedic research (Partner: Orthopaedic Research and Education Foundation)
- Parkinson's disease research (Partner: Parkinson's Disease Foundation)
- Preclinical research in interventional radiology (Partner: Society of Interventional Radiology Foundation); and
- Veterinary student research (Partner: Burroughs Wellcome Fund).

The application process is the same for students eligible for partnership-sponsored fellowships. There is no separate designation required in the online application. HHMI will identify applicants for consideration for these awards.

Fellows sponsored by organizations that have partnered with HHMI will receive the same level of funding and will have all the obligations and privileges of other fellows participating in the program.
Medical Research Fellows Program at Janelia

The HHMI Medical Research Fellows Program is seeking highly talented students with an interest in neuronal networking and/or imaging at the cellular and molecular level for an intense year-long research training experience at the Janelia Research Campus, a world-class biomedical research center in Ashburn, Virginia. Students should have a proven track record of research accomplishment, a commitment to a basic research field being pursued by Janelia investigators, and must comply with the specific application and eligibility requirements for the Janelia program. Awardees will live and work on the campus, located in Loudoun County, Virginia, which is near Washington, D.C.

Medical Research Fellows Program at K-RITH

The Medical Research Fellows Program at K-RITH is targeted to students interested in conducting laboratory research in HIV, TB, or co-infection in a state-of-the-art research institute at the heart of the TB and HIV epidemics. Fellows will spend the year living and working in Durban, South Africa. Students should have previous research experience and a strong interest in infectious disease. Students must comply with the specific application and eligibility requirements for the K-RITH program.
## Fellowship Support for Research Training

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ELIGIBILITY

Applicants must be currently enrolled in a medical, dental, or veterinary school in the United States. Students may apply during any year of their studies, but applicants in the last year of school must defer graduation until completion of the fellowship year.

All students must make a commitment to conducting 12 months of continuous, full-time research with minimal interruptions for interviews for residency or post-graduate training. These fellowships are not available to students enrolled in a combined medical, dental, or veterinary/PhD program (e.g., MD/PhD), a PhD program, or an ScD program or to those who have completed a PhD or an ScD in a laboratory-based science.

Previous laboratory research experience is required. Applicants should have one or more substantial research experiences (e.g., summer or part-time research experience). Applicants with a year of full-time research experience since entering medical, dental, or veterinary school must show how further full-time research experience at this time would strongly enhance their future research careers. Students applying for the Medical Research Fellows Program at Janelia should have significant research experience and accomplishments.

The fellowship term for all Medical Fellows may begin no earlier than May 1, 2015, and no later than September 1, 2015. There are no citizenship requirements for application, but those who are not U.S. citizens must have and maintain an appropriate visa with eligibility to work in the United States status by the award acceptance deadline of March 20, 2015. Students must be authorized to work in the United States during the entire term of their HHMI fellowship year. HHMI will not handle visa matters for applicants.

Students applying for a position as a Medical Research Fellow at Janelia must be able to start the fellowship year between May 1 and September 1. Those who are not U.S. citizens must have eligibility to work status by the award acceptance deadline of March 20, 2015 as they will be employees of the Janelia Research Campus.

Students may apply to either the Medical Research Fellows Program at Janelia or K-RITH, or the standard Medical Research Fellows Program. It is recommended that those applying for the Janelia or K-RITH options have a mentor and project in mind at another fellowship institution in the event their prescreening application does not progress in the Medical Research Fellows at Janelia or K-RITH competition. Those not progressing past the Janelia or K-RITH interview stage are encouraged to complete the standard Medical Research Fellows Program application with a mentor at another fellowship institution by January 12.

Applicants may not concurrently have two Medical Research Fellows applications in the HHMI Competition System (e.g., a Medical Research Fellows at Janelia or K-RITH application and a standard Medical Research Fellows application). However, Medical Research Fellows at Janelia or K-RITH applicants may apply to the standard Medical Research Fellows Program.
Fellows Program, with a mentor at another fellowship institution, after notification in early or mid-December that their Janelia or K-RITH application is not progressing to the next stage of the competition.

**LOAN DEFERMENT**

HHMI can complete loan deferment forms for fellows so that they are able to defer their loans during their HHMI fellowship year.

**AREA OF RESEARCH**

The proposed project must be in the basic, translational, or applied biomedical sciences. HHMI does not fund clinical research, health services or health policy research.

**BASIC SCIENCE RESEARCH**

Basic science research is conducted to increase understanding of the physical, chemical, and functional mechanisms of life processes and diseases.

**TRANSLATIONAL RESEARCH**

Translational research is the process of applying ideas, insights, and discoveries generated through basic scientific inquiry to the treatment or prevention of diseases.

**APPLIED RESEARCH**

Applied research is directed toward specific objectives, such as the development of a new drug, therapy, or therapeutic procedure. It involves the application of existing knowledge to a specific medical problem. Applied research can be conducted with animals or non-animal alternatives, such as computer models or tissue cultures.

Examples of eligible fields of research include the following:

- Biochemistry
- Bioinformatics
- Biomedical engineering
- Biophysics
- Biostatistics
- Cell biology
- Developmental biology
- Epidemiology
- Genetics
- Immunology
- Mathematical and computational biology
- Microbiology
- Molecular biology
- Neuroscience
- Pharmacology
- Physiology
- Structural biology
- Virology

Applicants to the Medical Research Fellows Program at Janelia or K-RITH should review the research underway at the respective sites to determine if the projects being pursued meet their interests: [www.janelia.org/janelia-research/labs](http://www.janelia.org/janelia-research/labs) or [http://www.k-rith.org/scientists-research/investigators](http://www.k-rith.org/scientists-research/investigators).

**RESEARCH MENTOR AND RESEARCH PLAN**

The applicant is responsible for selecting a research mentor at an academic or nonprofit research institution in the United States and for making arrangements to work in that person’s laboratory. HHMI will not make these arrangements. The designated mentor must be the faculty member who will directly supervise the proposed research. *A mentor may have no more than two applicants in any one competition year.* An applicant may have a co-mentor if her or his research plan crosses areas of expertise, or if a co-mentor would strengthen the research training experience. *Selection of a mentor is a key step in the application process and a particularly important element in evaluation of the application by the review panel.* In selecting
a mentor, the applicant should seek a scientist who has recent publications in the area of research, experience in the research techniques to be used, external grant support from NIH or other major agencies, the ability to provide financial resources to support the research project during the fellowship term, the time and interest to train the applicant, a track record of mentorship, and a strong, stimulating research environment in the department.

The proposed mentor does not have to be an HHMI investigator. Applicants are encouraged to consult with several individuals, including deans, senior faculty, and members of the laboratory under consideration, before making a final choice of mentor. (See “Application Tips,” page 12.)

The research plan should be suitable for a one year research-training period. It is extremely important that the project provide a rigorous, high-quality research training experience doing hypothesis/discovery-based research, and not technician-type work. The project should ask a specific and substantive question about basic biological processes or disease mechanisms, diagnosis or treatment. In general, applicants should avoid limiting the project to working out details of a laboratory technique. In addition, they should avoid projects that involve a single protocol for the fellowship term with no opportunity to devise experiments based on data from initial experiments. (See “Application Tips,” page 12.) Extensive discussion between the applicant and the proposed mentor is expected in order to identify an appropriate research project—one that is up-to-date, instructive, and feasible in a one-year fellowship period—and to craft the research plan. It will be assumed that the applicant has written the plan after discussion with the mentor.

In past years reviewers have found that some applications did not reflect an appropriate level of interaction with the mentor prior to submitting the application. Applicants should allow sufficient time to develop the research plan fully and to make evident the quality of the expected working relationship. Applicants to the Medical Research Fellows Program at Janelia or K-RITH will be matched with a mentor if their application progresses past the interview stage. See further details on the two-step application process for Janelia or K-RITH on page 11.

LOCATION OF STUDY

Fellows must choose an academic or nonprofit research institution in the United States (excluding NIH) as their fellowship institution. Research may be conducted at an institution outside the United States as long as the fellow’s mentor is affiliated with the U.S. fellowship institution (on faculty). The fellowship institution need not be the student’s medical, dental, or veterinary school. Fellows are responsible for making all arrangements for attendance at their chosen institution.

A fellow may engage in research away from the fellowship institution (including a non-U.S. research institution) during the fellowship term if, in the research mentor’s judgment, such an arrangement would further the fellow’s training.

Awardees of the Medical Research Fellows Program at Janelia will work and live at the Janelia Research Campus in Ashburn, Virginia. Students selected for the Medical Research Fellows Program at K-RITH will work and live in Durban, South Africa for the fellowship year.
FELLOWSHIP TERM

The fellowship term may begin no earlier than May 1, 2015, and no later than September 1, 2015. The term of the fellowship is 12 consecutive months.

Fellows must engage in research full-time during the fellowship term. Fellows may not undertake medical, dental, or veterinary school coursework, a clerkship, or any graduate school coursework, with the exception of one graduate course per semester that is directly related to the fellow’s HHMI research project, with approval in advance from HHMI. Students may receive academic credit for their research. They may not take time off to study for boards or other examinations.

STIPEND AND ALLOWANCES

The stipend is $30,000 for the 2015–2016 fellowship year. There are no allowances for dependents. HHMI provides funds to the fellowship institution, which in turn pays the stipend to the fellow. If the student begins the fellowship term prior to the HHMI payment date in early June, it is their responsibility to arrange for temporary funding by the fellowship institution until the HHMI funds are received.

Indirect costs (F&A) are not provided with this award. Federal, state, or local fringe benefit rates and employer-related costs such as FICA and Medicare (employer’s portion), worker’s compensation, unemployment insurance, and similar costs cannot be charged to this award. Visiting student researcher rates may not be charged to this award.

A fellow may not supplement the stipend through private employment or consulting work or receive funds from another external fellowship, scholarship, or similar award. However, the fellow’s institution may supplement the stipend in accordance with its usual policy for comparable students.

Fellowship institutions receive an annual research allowance of $5,500 on behalf of each fellow. The allowance may be used for Medical Research Fellows Program enrichment activities that directly benefit the fellow, including travel to scientific meetings, HHMI Medical Research Fellows regional meetings, HHMI science meetings, and for some of the supplies for the fellow’s research project, journal subscriptions, and similar research-related expenses. Use of the allowance will be made in consultation with the fellow’s mentor.

HHMI also provides fellowship institutions with an annual fellow’s allowance of $5,500 on behalf of each fellow. The first priority for use of this allowance is health, dental, and vision insurance for the fellow. The allowance may also be used for required education-related fees incurred as part of the fellowship. It is also permissible to use the fellow’s allowance for tuition and registration fees within the fellowship term for one graduate course per semester specifically related to the fellow’s research, with advance approval from HHMI, and research-related expenses that directly benefit the fellow. It is not permissible to use any funds in the award for tuition or registration fees toward any professional degree, except to the extent that students are required to maintain their matriculation at their medical, dental, or veterinary school.

If the fellow is conducting research at an institution that is not his or her medical, dental, or veterinary school, the fellow’s allowance may
be used to cover reasonable travel and moving expenses to and from the fellowship institution up to a maximum total of $1,500.

HHMI funds may not be used for the purchase of electronic devices or software, including computers, computer equipment, camera or video equipment, cell phones, PDAs, MP3 players, e-readers, or any related accessories.

At the end of their fellowship year, fellows may use balances remaining in the fellow’s or research allowance accounts for continuation of the research conducted during their HHMI fellowship year, attendance at scientific conferences if they are presenting their HHMI research, and publications costs related to their HHMI project, if any, as long as they are matriculated in medical, dental, or veterinary school. The fellowship institution must make every attempt to make these funds available to the fellow while they are still matriculated.

Medical Research Fellows at Janelia will receive an annual salary of $30,000 as employees of the Janelia Research Campus for their research year. They will also be provided with health insurance, furnished on-campus housing, and a $5,500 allowance for conference travel, and related courses and books.

EVALUATION AND SELECTION

Fellowships are awarded on the basis of the applicant’s ability and promise for a research career as a physician-scientist, and the quality of the training that will be provided. The applicant’s ability and promise are assessed through the personal statement, the proposed research plan, and letters of reference. The quality of the training is evaluated through the research plan and the information provided in the mentor’s endorsement, including the mentor’s curriculum vitae, a list of current funding, a list of trainees, and an individualized training plan for the applicant.

Applications will be reviewed by a committee of distinguished biomedical scientists. The committee will evaluate each applicant’s demonstrated scholarship and promise for future achievement in biomedical research. The committee will also consider the appropriateness of the designated mentor and the research project for training in the proposed area of research, the quality of the training environment, and the mentor’s stated plans for training the applicant. The review committee will evaluate the impact of the research experience and how it would further the applicant’s development in relation to the level of any previous research experience.

The final selection of awardees will be made by HHMI, taking into account the evaluations of the review committee and the program goals. Due to the large number of applications to this program, individual feedback is not feasible.

CONDITIONS OF APPOINTMENT

Appointment of a fellow is contingent on satisfactory completion of the academic year in which the fellowship application was submitted, and on the student’s academic status as a student in good standing.

Fellows will be required to engage in research full-time and may not undertake any medical, dental, or veterinary school coursework, a clerkship, or any graduate school coursework during the fellowship term, with the exception of one graduate course per semester that is directly related to the fellow’s HHMI research project, with approval in advance from HHMI. During that year, fellows may not be
enrolled in a Ph.D. or an Sc.D. program.

After an award has been made, a change of fellowship institution or mentor or a major change in the research plan requires HHMI approval for continuation of the fellowship.

Fellows are expected to conduct research according to the highest scientific and ethical standards and in compliance with all applicable laws, regulations, and policies regarding protection of human research subjects, humane care and use of laboratory animals, and laboratory safety. Fellows are responsible for the conduct of research and the preparation of research results for publication within the established guidelines of their fellowship institutions. HHMI assumes no responsibility for a fellow's research findings or their interpretation.

2016 SCIENTIFIC MEETING OF MEDICAL FELLOWS

All current medical fellows will gather at HHMI headquarters in Chevy Chase, Maryland, in May 2016 for the Scientific Meeting of Medical Fellows. The occasion will provide fellows with an opportunity to share their scientific accomplishments with their peers and to hear scientific talks by leading physician-scientists, and other program alumni.

All fellows are required to participate in the meeting and to present either a 10-minute talk or a poster on their research project.

This publication sets forth only the most basic program information. All fellowships are subject to further provisions contained in the booklet Information for Medical Student Fellows and Fellowship Institutions (which will be e-mailed to awardees) and any further documentation provided by HHMI.

APPLICATION PROCESS

Application is via HHMI’s Web-based competition system at www.hhmi.org/competitions. Submission of all applicant, mentor, dean, and reference forms must be via the Web.

A complete application has three sections.

Section 1: The applicant’s portion

- Registration
- Application
  - Contact Information
  - Dean’s Contact Information
  - References’ Contact Information
  - Mentor’s Contact Information
  - Confidential Information
  - HHMI Affiliations
  - Education
  - Demographic Information (optional)
  - Research Experience
  - Professional Activities
  - Honors and Awards
  - Publications (if any)
  - Personal Statement (should not exceed one single-spaced page)
  - Project Title (should not exceed 255 characters, including spaces and punctuation)
  - Research Plan Summary (should not exceed 1,600 characters including spaces and punctuation, or approximately one-third of a single-spaced page)
  - Research Project Plan (should not exceed four single-spaced pages)
  - Research Project Plan Citations (should not exceed one single-spaced page)

In addition to the Web-based submission above, the applicant is responsible for

- Providing the mentor, co-mentor (if applicable), dean, and references with the information necessary for them to submit the required letters and other information.
After the applicant registers and initiates the Web-based application system, he or she will be able to submit the names and contact information for the mentor, co-mentor (if applicable), dean, and references. Once the names have been submitted, e-mails generated by the Web-based system will provide them with login instructions. *It is the applicant’s responsibility to make sure that the mentor (co-mentor, if applicable), dean, and references have provided all required information by the application deadline.*

**Section 2: The mentor’s components (and co-mentor’s, if applicable)**
- Contact Information
- Training Record — completion of a table indicating his/her experience supervising the training of individuals in biomedical research by entering the number of trainees by educational level
- Trainee Outcome — report the career outcomes of up to 6 representative trainees: 3 most recent and 3 most illustrious (name, current institution, position, training start and end dates [month/year])
- CV or NIH Biosketch — upload not to exceed 4 pages
- Grant Data — upload a list of current grants, not to exceed 4 pages, including source(s), title(s), and annual direct costs. May use the supplemental grant information page or Other Support page included in the NIH grant applications.
- Applicant Assessment — assessment of the applicant’s potential for a career as a physician-scientist, as evidenced from mentor’s interaction with him or her. Letter should be no longer than 1.5 pages in length.
  Comment on:
  - quality of the applicant’s academic preparation for research and scientific background
  - applicant’s intellectual and research abilities including perception of his or her originality, accuracy, and enthusiasm for the project
  - relative contributions mentor and applicant have made in the development and writing of the research plan
- Training Plan — describe plans for the research training of this particular student and the research environment in the mentor’s laboratory. Upload should not exceed 2 pages. Individualized training plan is very important in the overall evaluation of the application.
  Address:
  - how mentor will be involved in training the student on the proposed project and advising him/her on career development
  - who will guide the applicant on day-to-day technical issues
  - how the composition, size and structure of the mentor’s research group will advance the student’s success and research development
  - what formal and informal seminars, laboratory meetings, journal clubs, etc. will be used to enrich the student’s scientific development
  - the adequacy of financial and physical resources, including computer resources, to support the proposed project during the entire fellowship term. HHMI does not provide support for computer equipment, software or related accessories.

Web access for the mentor will be initiated by the applicant (see Section 1 above).

**Section 3: Dean’s confirmation and letters of reference**
- Dean’s confirmation. By answering questions in the online application, the dean (may be a student affairs dean, advisory dean, etc) must indicate that the student will be allowed to participate in the program, *if selected.* Instead of submitting a dean’s letter, the dean will be provided with a textbox to comment on the applicant’s
unique characteristics, qualifications, experiences, accomplishments or research interests that pertain to the application. Comments are limited to 2,500 characters including spaces.

• Two letters of reference from persons (other than the mentor or co-mentor on this application or dean) who are familiar with the applicant’s talents, abilities, and previous research experience, if any. Referee should discuss:
  ◦ applicant’s ability to conduct research, master knowledge required, and think independently
  ◦ applicant's potential for a career in biomedical research
  ◦ how applicant compares with others at the same stage
  ◦ student's qualifications, indicating the student's academic and intellectual abilities including his or her originality/creativity, accuracy, research ability, scientific background, ability to exchange ideas, perseverance in pursuing goals, and ability to relate to others.

Web access for the dean and references will be initiated by the applicant (see Section 1 above).

APPLICATION TO THE MEDICAL RESEARCH FELLOWS PROGRAM AT JANELIA AND K-RITH

Applicants should note that the timeline and requirements differ for the Janelia and K-RITH program options as follows:

Two-step application process:

1) The prescreening application is due by November 3 followed by in-person interviews for selected candidates at Janelia or via Skype for K-RITH in early December.

2) Applicants progressing after interviews will be matched with a Janelia or K-RITH mentor, develop a research proposal with that mentor, and complete the remainder of the Medical Research Fellows Program application by January 12.

All application components must be submitted online in the HHMI Competition System.

The prescreening application includes:

• Contact Information
• References’ Contact Information
• Education
• Research Interests and Experience (should not exceed five single-spaced pages)
• Research Experience
• Professional Activities
• Honors and Awards
• Publications (if any)

Two reference letters are to be submitted online directly by referees by November 3 (see reference letter information on p. 14).

Applicants that advance after the prescreening stage will complete the remainder of the Medical Research Fellows Program application components by January 12:

• Dean’s Contact Information
• Mentor’s Contact Information
• Confidential Information
• HHMI Affiliations
• Personal Statement (should not exceed one single-spaced page)
• Project Title (should not exceed 255 characters, including spaces and punctuation)
• Research Plan Summary (should not exceed 1,600 characters including spaces and punctuation, or approximately one-third of a single-spaced page)
• Research Project Plan (should not exceed four single-spaced pages)
• Research Project Plan Citations (should not exceed one single-spaced page) The dean’s confirmation and mentor’s components, described in Sections 2 and 3, above, are to be submitted online directly by those third
parties by January 12.
The two reference letters submitted for the prescreening application will be used for the remainder of the Medical Research Fellows Program application.

APPLICATION AND AWARD DATES
All components of the application must be submitted online by January 12, 2015, to be considered in the fellowship competition. Applicants should retain copies of the application materials they have completed and submitted online. Application materials will not be returned. Evaluations of the review committee will not be made available to the applicant. HHMI will notify applicants by e-mail of the outcome of their applications on March 13, 2015. Awardees must notify HHMI by March 20, 2015, of their intent to accept or decline the award.

CONTINUED SUPPORT FOR A SECOND YEAR
In the spring of the initial year of research training, fellows may apply for continued fellowship support for a second year of full-time research. The second-year fellowship provides the same level of funding (stipend, research allowance and fellow’s allowance) as the first year fellows. Only a small number of these fellowships will be awarded. They are made only when a second year of research training will significantly further the research experience of the fellow. Fellows who will be enrolled in a combined professional degree/Ph.D. or Ph.D. program are not eligible to apply.

While all aspects of the application are evaluated, the proposed mentor and the research plan are extremely important. In addition, reviewers place considerable weight on the plans for training the applicant and on reference letters.

APPLICATION TIPS
ONLINE APPLICATION
• Observe the January 12, 2015, submission deadline.
• Proofread carefully; do not rely on spell check.
• Read and follow the instructions.
• Follow the guidelines for number of pages. Be brief when so requested.
• HHMI will obtain your AMCAS file directly from AAMC. If you do not have this information on file with the AAMC, you must request transcripts from your undergraduate institution(s), and you will need to request that your DAT or GRE scores be sent directly to HHMI.
• Before submitting your application online, print a copy for your records.

RESEARCH EXPERIENCE
• Previous laboratory research experience is required (one or more substantial research experiences; e.g., summer or part-time research experience).
• Present the topic of your research in a way that makes clear why it is of interest. Be sure to place your work in the context of the relevant scientific field.
• Do not focus on techniques. Emphasize the scientific question you addressed, the general approach you took, and your findings and conclusions.
• Clearly describe the contributions you made in the laboratory.
• It is important to include a summary of what you accomplished in each research experience.

SELECTING A MENTOR
• Your choice in mentors can significantly affect the outcome of your application.
• Your mentor should be well-funded and have recent publications in your proposed research area. Use PubMed (www.pubmed.gov) to look up a potential mentor’s publication record and NIH ProjectReporter to look up grants (http://projectreporter.nih.gov).

• Deans, chairpersons, and course directors are excellent resources for identifying potential mentors. They can help guide you to productive laboratories with interest and experience in training medical, dental, or veterinary students.

You are encouraged to consider laboratories of HHMI investigators, early career scientists, HHMI professors, and Janelia researchers.

A list of investigators interested in mentoring Medical Research Fellows can be found at www.hhmi.org/medfellowships.

• Talk with several possible mentors. Confirm that the mentors under consideration have recent publications, sustained external grant support, a strong record training medical, dental, or veterinary students, and the time and interest to train you.

• Talk with other medical, dental, or veterinary students, graduate students, and postdoctoral researchers who have been in the laboratory you are considering. Confirm that the laboratory is a reasonable working environment and that the mentor is likely to spend significant time with you.

• A co-mentor should be added to the application if the research project plan is not within the mentor’s area of expertise or if the primary mentor is a junior faculty member with limited grant support and training history.

RESEARCH PLAN

• Your project should be hypothesis/discovery-based — that is, you should ask a specific and substantive question about biological processes or disease mechanisms, diagnosis or treatment that can be tested experimentally.

• Avoid a plan that is too descriptive. We are interested in innovative, well-grounded ideas that are intellectually challenging.

• Emphasize the scientific and, if possible, the medical importance of the question and the experimental approach you plan to take.

• Explain why the experimental model was selected for study of the question proposed.

• Include details on data analysis, quantitation methods, if applicable, and overall design of experiments. A proposed timeline for the experiments would be helpful.

• Make sure reagents or equipment that is vital to the research are readily available and accessible.

• Anticipate potential problems in the research and present alternative strategies.

• It is beneficial to include a discussion on data analysis and interpretation of results. Discuss the underlying mechanisms of proposed models, if applicable.

• Your research project plan should be developed in collaboration with your mentor but written by you and reviewed by your mentor before submission.

Reviewers want to read your presentation of the issues and approaches, and it is usually obvious when parts of the plan are taken directly from a grant proposal.

• Allow time for discussion with your mentor and for feedback on your drafts. Have another scientist (a faculty member, research advisor, or a dean) read and critique your project plan. Ask the mentor and the other reviewer to consider not only technical aspects but also the feasibility of the project. Is it suitable for a one-year experience? Is it a good training vehicle? Make sure it’s not just a technical exercise.

• Be sure to specify your role and that of your mentor (and others) in the development of the plan.
PERSONAL STATEMENT

- State why you are interested in laboratory research and how it might impact your career. What do you want to accomplish through the HHMI Medical Fellow experience? What discoveries—both scientific and personal—do you hope to make? We are interested in understanding your motivations for doing research and how the proposed experience will contribute to your future career.
- If you have limited research experience, explain what led you to the fellowship program and what you hope to get out of the research experience.
- If you have completed one year or more of full-time research, explain how an additional full-time research experience at this time would enhance your future research career, how you would benefit, and what you hope to learn from the experience.
- It is in your best interest to submit a statement that is distinct from the one you submitted for your medical, dental, or veterinary school application.
- If you are in your final year of medical, dental or veterinary school, comment on why you waited until this year to apply, whether you will participate in residency interviews during your proposed research year, and how you will make-up for the time away from lab (e.g., by extending your fellowship term).

REFERENCE LETTERS

- Provide your references with a résumé of your education and research experience. It may also be helpful to provide a copy of your research plan.
- If you have had a significant research experience but choose not to submit a reference letter from your supervisor, explain why (in the Personal Statement). Reviewers may question why it is absent.
- Some applicants request letters from prominent scientists who do not know them well. General letters of this type are not effective. Request letters from individuals who can evaluate your potential as a scientist.
- If at all possible, avoid using a “file copy” of an old reference letter. If you must do so, explain why (in the Personal Statement).

APPLICATION TIPS FOR THE MEDICAL RESEARCH FELLOWS PROGRAM AT JANELIA AND K-RITH

PRESCREENING APPLICATION:

Research Interests and Experience. Describe in detail your specific research interests, and their relevance to the research focus area(s) you would be interested in pursuing at Janelia or K-RITH (review the Laboratories at Janelia or K-RITH http://www.janelia.org/janelia-research/labs or http://www.k-rith.org/scientists-research/investigators). Discuss why your research interest and experience, skills, scientific/technical expertise, etc. would make you an excellent candidate for the program at Janelia or K-RITH.
STANDARD MEDICAL RESEARCH FELLOWS PROGRAM APPLICATION:

Medical Research Fellows Program at Janelia and K-RITH applicants should have a mentor and project in mind at another fellowship institution in the event their prescreening application does not progress in the Janelia or K-RITH competition.

Those not progressing past the interview stage are strongly encouraged to complete the standard Medical Research Fellows Program application with a mentor at another fellowship institution by January 12.

Please contact us if you have questions or need additional information.

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