

The Mazumdar-Shaw International Oncology Fellows: A Koch Institute Partnership for Catalytic Cancer Research at MIT

The Koch Institute for Integrative Cancer Research at MIT is a National Cancer Institute-designated Basic Cancer Research Center, where researchers seek and design new solutions to the complex problems of cancer. The Koch Institute's highly collaborative teams of biologists, chemists, materials scientists, computer scientists, clinicians, engineers, and others pioneer innovative and cross-disciplinary strategies for detecting, treating, monitoring, and even preventing cancer. The Koch Institute shares MIT's commitment to education and it comprises, in addition to its distinguished faculty, a large cohort of postdoctoral researchers and MIT graduate students and undergraduates—the next generation of leading cancer investigators. Koch Institute researchers seek to interact with the most gifted scholars everywhere, as global innovations in bioinformatics, nanotechnology, immunology, mobile technology, and advanced materials hold tremendous promise in the fight against cancer.

The Mazumdar-Shaw International Oncology Fellows Program

To realize opportunities for collaboration, MIT has established the Mazumdar-Shaw International Oncology Fellows Program: a high-impact, bilateral collaboration with India with cancer research training as its cornerstone. The aim of the Mazumdar-Shaw International Oncology Fellows Program is to help raise a new generation of cancer researchers in India whose careers and professional networks will be increasingly global. The broader mission is to build India's position as an intellectual hub for oncology research from which significant advances are expected to emerge.

This Fellows program offers two-year, full-time opportunities for postdoctoral scientists, engineers, and physicians to undertake cancer research at the Koch Institute for Integrative Cancer Research at MIT, working at the interfaces between biology and medicine and the diverse fields of engineering, computer science, and the physical and chemical sciences.

Mazumdar-Shaw International Oncology Fellows will have extensive opportunities for substantive engagement with the Koch Institute research community, the larger Boston-area research community, and other postdoctoral researchers at MIT.

At the Koch Institute, the Fellows will be encouraged to:

- Collaborate with other researchers within the Koch Institute's 29 intramural and 30 extramural faculty labs and across MIT
- Participate in a range of Koch Institute- and lab-sponsored programs, activities, and events
- Attend regular lab meetings, weekly Koch Institute -sponsored research forums and seminars, project-specific research retreats, and the annual KI research retreat.

At MIT, the Fellows will be part of a robust, dynamic academic community that includes more than 800 postdoctoral scholars, as well as related career, social and support services.

Beyond MIT, the Fellows will have the opportunity to attend seminars sponsored by the many academic and clinical centers in the Boston area, and to take advantage of MIT's relationships with the larger life-sciences, biomedical, and engineering communities nearby.

The Fellowships

The Mazumdar-Shaw International Oncology Fellows Program is currently accepting applications for 2 two-year full-time positions. Candidates will be expected to identify an important biomedical research question and to propose a related project that extends their research interests and abilities. *The Fellowship is awarded with the express expectation that the Fellows will subsequently continue their*

research in India. Fellows are expected to have plans for continuing their research work in India following their fellowship at MIT; funding for this subsequent work must be secured separately.

The Mazumdar-Shaw International Oncology Fellowship provides the following:

- a yearly stipend consistent with the KI postdoctoral salary scale;
- travel expenses for the Fellow and their KI faculty advisor to share their research with colleagues at peer institutions in India;
- additional support to cover expenses including health insurance and small items of equipment;
- \$40,000 USD per Fellow per year for research.

Funding for the second year of the Fellowship requires formal approval of a progress report containing a report on the first year research carried out at MIT, a statement of support by the Fellow's MIT faculty sponsor(s), and a statement of intent about subsequent research plans in India.

The Fellowship is awarded with the additional expectation that the Fellows will travel to India once or twice per year during their Fellowship term to present their research to colleagues at peer institutions in India, and that during one of these trips their KI faculty advisor will join them. Funding for travel and related expenses covered by the Fellowship will require pre-approval by the Koch Institute.

Eligibility Criteria

1. Fellowships are open to postdoctoral scientists, engineers, and physicians passionate both to tackle India-centric oncology problems and further India's position as a cancer research hub.
2. The applicant must be either: a) an Indian national or b) a non-Indian national with intent to work on an Indian-centric research problem and spend time conducting research in India.
Please note that applicants must hold an appropriate visa for eligibility. Applicants on H1-B visas are not eligible.
3. The applicant should be about to submit his/her doctoral thesis OR have up to, but no more than, three years postdoctoral experience from the date of his/her PhD or MD. Time spent outside the research environment will be taken into consideration.
4. Applicants may have a background in any appropriate field of study (e.g. biology, medicine, chemistry, physics, or engineering) but must propose to address an important cancer research question.
5. The proposed research should fall within the Koch Institute's current research focus areas, as described below and on the [Koch Institute's web site](#). Applicants must indicate which Koch Institute laboratory or laboratories would most effectively align with their proposed research.

The Koch Institute may consider inquiries from a host university regarding an exceptional biomedical research scientist or engineer who does not fall within the categories above.

Application Process

Applications are accepted for the current round from April 1 through noon EST on December 31, 2019. Fellows will be selected by the end of February, 2020.

The applicant should give careful thought to his/her choice of KI faculty sponsor(s). The applicant should drive the identification of a research question and the development of the proposal. However, the applicant's KI faculty sponsor(s) may be able to provide the applicant with advice and support during the application process. Additionally, applicants must confirm in writing the interest of the preferred KI Faculty sponsor(s) in the applicant's fellowship candidacy and potential fit in the lab.

Applications and all required documentation must be submitted electronically to MIT, via academicjobsonline.org.

The application process requires:

1. Curriculum Vitae
2. Research statement
3. List of pending applications for funding
4. Letter of support from an academic advisor
5. Proof of authorization to work in the U.S.

Regarding the research statement: The applicant's statement will describe the intended research objective with particular focus on the two years to be spent at MIT. The proposed research should fall within the Koch Institute's current research focus areas: nanotechnology-based cancer therapeutics; cancer detection and monitoring; metastasis; precision cancer medicine, including signaling and metabolic pathways and drug resistance; and cancer immunology. These research themes are more fully described on the [Koch Institute's web site](#).

Applicants may not apply for more than one Koch Institute fellowship at any one time. Resubmissions are not permitted.

Review Process

Application materials are reviewed by the Mazumdar-Shaw International Oncology Fellowship Screening Committee, following which a short list of candidates will be contacted for an initial phone or video screening interview with Koch Institute representatives. Ahead of the initial screening interview, candidates will have identified the Koch Institute lab in which they plan to conduct their research.

Through this video screening interview process, the Koch Institute faculty will select final candidates for onsite interviews. These candidates will travel to MIT at the Program's expense for a full day of interviews, including with the potential host lab(s). The Koch Institute Executive Committee will make the final selection of Fellows. No more than two Mazumdar-Shaw International Oncology Fellows will be selected each year. Applicants will be notified in writing of their success, or otherwise. Decisions will not be available by telephone.

Reviewers typically assess:

- applicant's track record
- importance of the research question
- interdisciplinary training component (such as, will a biologist be gaining experience in technologies and/or approaches that are not typically used in biomedical research or will a physicist, for example, be conducting research in a biomedical context?)
- applicant's choice of appropriate research sponsors
- feasibility of the approach
- applicant's vision of how the Fellowship will contribute to his/her career development
- applicant's longer-term aspirations
- impact the applicant seeks to make on a difficult cancer problem.

Application Contact

Inquiries may be e-mailed to ki-msfellowship@mit.edu or mailed to:

Koch Institute for Integrative Cancer Research at MIT
Executive Director's Office
Attn: Mazumdar-Shaw Fellowship
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