

MD-PHD, COMBINED DEGREE

From its inception, the physician-scientist has been a hallmark of Johns Hopkins medicine and the Johns Hopkins School of Medicine. Indeed, the Hopkins tri-emblem represents the three core values of the institution: teaching, patient care, and research.

The Johns Hopkins School of Medicine offers a variety of opportunities for the training of medical scientists. A combined curriculum leading to both MD and PhD degrees enables students who aspire to careers in academic medicine to obtain intensive training in specialized areas of the biomedical sciences in addition to top-flight medical training. The traditional diversity and flexibility of the educational opportunities at Johns Hopkins permit the design of individualized programs to meet the needs of students with a variety of interests, educational backgrounds, and career goals.

To accomplish our training goals, we expect students to fully commit to medical training while in medical school and research training while in graduate school. However, we also take important steps to ensure that students are exposed to the intersection of both worlds early in their training, as well as given the professional and career development advice they need to succeed.

In a word, the MD-PhD curriculum at Johns Hopkins is flexible. Most students decide to complete the first two years of medical school before they begin graduate school and finish the last two years of their medical training after completing their thesis work (see the Timeline below). However, students who want more first-hand experience in clinical medicine before beginning graduate work can elect to complete three years of medical school, followed by their graduate training, and then the last year of the medical school. This can give them a better appreciation of the potential clinical relevance of their research. In making a choice, trainees consult extensively with the Program Director, the Dean of Students, members of the MD-PhD Committee, prospective research mentors, and their faculty advisors. Students in the MD-PhD Program are automatically accepted to all graduate programs, so decisions regarding graduate training programs can be made with a strong understanding of each program. The MD-PhD Committee is responsible for program oversight, admissions, and student mentorship (<http://mdphd.johnshopkins.edu/mentoring/>). On average, students complete MD-PhD training within seven-to-eight years.

Hopkins interdisciplinary organizational structure means each faculty member may be affiliated with several clinical departments, research sections, and graduate programs.

Formal graduate programs in the School of Medicine encompass the following areas: Biochemistry; Cellular, and Molecular Biology; Biological Chemistry; Biomedical Engineering; Molecular Biophysics; Functional Anatomy and Human Evolutionary Studies; Cell Biology; Cellular and Molecular Medicine; History of Medicine; Human Genetics; Immunology; Neuroscience; Pathobiology; Pharmacology and Molecular Sciences, and Cellular and Molecular Physiology. Students are also eligible to obtain their PhD in one of the 11 graduate programs at the Bloomberg School of Public Health or the School of Arts and Sciences on the Homewood Campus. Students may select a thesis mentor from faculty in the Schools of Medicine and Public Health.

The MD-PhD Program also sponsors special seminars and lectures, It also maintains a dedicated library, the Paul Talalay MD-PhD Library, to enrich the educational opportunities of all MD-PhD students. Efforts are

made to acquaint MD-PhD candidates with the major advances, concepts, and cutting-edge techniques in contemporary medicine and biomedical sciences. We also create an environment that promotes a more intimate personal contact with successful medical scientists in this institution.

Admission Procedures. Individuals who wish to apply for admission to the combined MD-PhD Program of the School of Medicine must submit an application through AMCAS on which they will indicate the MD-PhD Program. Once the AMCAS application has been verified and submitted to Hopkins, the applicant will receive an invitation to complete the Hopkins Secondary Application. Here the applicant will submit the additional materials required for the combined degree. Hopkins does not allow applicants to apply to both the traditional MD program and the combined program during the same cycle.

All combined-degree applications are reviewed by a separate MD-PhD Review Committee (<http://mdphd.johnshopkins.edu/md-phd-committee/>) which is comprised of faculty from the basic sciences, clinical arena as well as faculty from the Bloomberg School of Public Health. A separate Graduate School application is **not necessary**. The MD-PhD Committee determines whether or not an interview is indicated.

In general, the committee is looking for students with a passion for research and a commitment to medicine. This assessment is based on the applicant's research experience, letters of recommendation, academic performance and extracurricular activities. The Committee considers standardized test scores only in the context of the applicant's other credentials. If an interview is granted, the applicant is notified by the MD-PhD Office and after the applicant accepts, the process for scheduling an interview begins. Interview visits generally occur over two days. Applicants are interviewed by members of the MD-PhD Committee and other faculty members who share their research interests. Applicants have many opportunities to meet with current students and tour the campus during their visit.

All eligible applicants who are admitted to the MD-PhD Program are funded under the NIH Medical Scientist Training Program (MSTP) Award.

This program, supported by the National Institutes of Health, provides full tuition, stipend, and medical and dental insurance for students. Due to federal restrictions, only U.S. citizens and permanent residents are eligible for MSTP funding. Approximately 10-12 MD-PhD students matriculate each year.

Students who matriculate to the traditional MD Program but have a clearly demonstrated interest and experience in scientific research, are eligible to apply to the combined MD-PhD Program. These students may apply for admission during the fall of their first or second year of medical school. These qualified applicants are evaluated and placed in the pool for the current application cycle and will be considered for MSTP funding.

Financial Support. The Johns Hopkins School of Medicine Medical Scientist Training Program (MSTP) is supported by a training grant from the National Institutes of Health. A number of exceptional students with unusual accomplishments and commitment to a career in the medical sciences will be selected for traineeships under this program. Such fellowships provide stipend and tuition support for combined medical and graduate study. All students who are admitted to the MD-PhD Program will be considered for these awards.

Graduates of The Johns Hopkins University School of Medicine MD-PhD Program have gone on to become leaders in many areas of academic medicine.

Advice on the scope and opportunities offered by these programs may be obtained from the Director or Administrative Director of the MD-PhD Program.