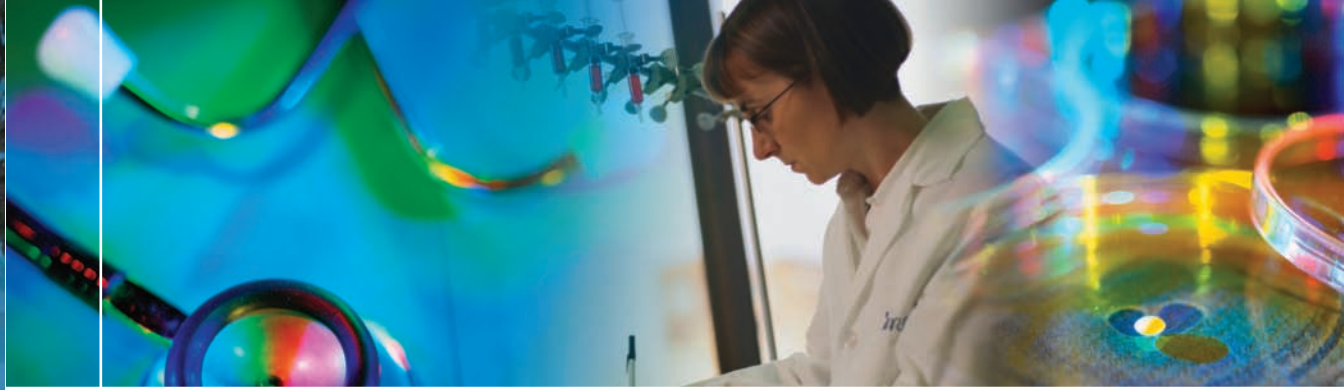


JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH  
JOHNS HOPKINS UNIVERSITY SCHOOL OF MEDICINE



# Graduate Training Programs in Clinical Investigation

Protecting Health, Saving Lives—*Millions at a Time*



## ORIGINS OF THE PROGRAMS

The first of its kind in the United States, the doctoral track of the Graduate Training Programs in Clinical Investigation (GTPCI) at Johns Hopkins trains clinical fellows to be more effective clinical scientists. We created the program in 1992 in response to adverse national trends for clinical investigation and the acute shortage of qualified clinical investigators in academic medicine. The program is jointly sponsored by the Schools of Medicine and Public Health. We admitted our first trainees in 1993.

Since then, we have expanded our programs to meet the needs of other health professionals actively engaged in clinical investigation. Our participants gain the skills to design and conduct clinical investigations of emerging medical treatments and technologies, diagnostic techniques, and new approaches to the study of human pathophysiology. Our graduates have gone on to careers as independent clinical investigators at academic institutions, pharmaceutical firms, and federal regulatory agencies. Many are pursuing academic careers in the United States and abroad.



“The GTPCI helped me develop the **methodologic expertise** in patient-oriented research that complements my clinical training, allowing me to successfully pursue a clinical research career within academic medicine.”

—JERRY A. KRISHNAN, MD

## OUR INSTITUTIONS

As the oldest and largest school of its kind, the Johns Hopkins Bloomberg School of Public Health is the place where the world's leading public health professionals gather to improve the public's health and save millions of lives. The Johns Hopkins School of Medicine is also a world-renowned research-intensive academic medical institution. Leaders from these schools will be your teachers, your advisors and mentors, and eventually your colleagues as you learn and grow in a place that is helping to shape the future of clinical investigations in medicine and public health. You will study the same way we teach and conduct research, on the leading edge of science and practice.

The schools welcome students from all over the nation and around the world—each contributing in a unique way to a dynamic learning environment.

## SCOPE OF THE PROGRAMS

We offer three full-time degree programs, one part-time degree program, a series of short courses pertaining to clinical research, continuing medical education (CME) programs, an intensive summer short course in clinical research methods for post-doctoral fellows, and a variety of enrichment opportunities.

Our programs are intended for faculty, post-doctoral fellows, and other allied health professionals working with human subjects in clinical investigation. Sub-specialty physicians and other post-doctoral medical scientists who have an academic appointment within the University and seek a career in patient-oriented research may pursue the doctoral program. Physicians and other medical scientists who do not hold an academic appointment within the University, but who are pursuing a career in clinical investigation, may apply to the Master of Health Science program. Health professionals with extensive clinical research experience may also qualify for one of the graduate degree programs. Health care professionals actively engaged in clinical investigations may take courses leading to a certificate in the Science of Clinical Investigation (SOCI) series.

## FACULTY AND COURSE HIGHLIGHTS

The GTPCI are multidisciplinary, drawing faculty from at least seven departments and disciplines within the School of Public Health, as well as from 25 divisions or departments in the School of Medicine. Our faculty provide skills, knowledge, and mentoring for health professionals to undertake successful careers in clinical investigation, with a focus on patient-oriented research. GTPCI trainees have access to a variety of faculty and educational resources generally not available to aspiring clinical investigators.

All our advanced degree programs require at least 70 hours of formal coursework, including courses in biostatistics, epidemiology, and clinical investigation. Additional courses hone skills in scientific communication, thesis development and grant writing, and professional development, and provide an understanding of ethical and regulatory requirements for human subjects research.



"I enrolled in the GTPCI during my cardiology fellowship. What I greatly underestimated was the advantage **formal clinical investigation training** would add to my credentials when applying for funding and the intellectual resources I am reaping from the collegial relationships I have formed with the GTPCI faculty."

—SUSAN ZIEMAN, MD

## DEGREES OFFERED

### PhD in Clinical Investigation

The doctor of philosophy (PhD) degree in Clinical Investigation is our flagship program. The usual track for sub-specialty physicians is four years, leading to both clinical board eligibility in a medical discipline and the PhD.

Candidates normally take one full year of didactic instruction after an initial clinical training year in a medical or surgical subspecialty, gaining the scientific grounding for subsequent original research. Faculty from the GTPCI and a preceptor from the fellow's School of Medicine home division or department jointly mentor thesis research. Fellows already enrolled in a clinical fellowship program at Johns Hopkins usually apply during their first year of clinical training.

Applications also are accepted concurrently with clinical fellowship applications for those who seek an early commitment. PhD candidates must complete 90 credit hours of instruction, including one year of full-time coursework, with additional specialized coursework during the following two years, during which thesis research is conducted. A comprehensive examination is given at the end of the didactic year.

Candidates must satisfy all University requirements for the

PhD, including preliminary oral examinations and thesis preparation and defense.

### ScM in Clinical Investigation

Trainees not wishing to or unable to fulfill the requirements for the PhD may be awarded the Master of science (ScM) degree with the program's approval, after satisfying the course and thesis requirements. Only applicants who already have a PhD and wish to pursue thesis research may directly apply to be a candidate for the ScM degree.

### MHS in Clinical Investigation

The master of health science (MHS) degree in Clinical Investigation is a one-year training program for physicians or other health professionals with an advanced degree, who desire rigorous training in patient-oriented research. The MHS degree track may also be appropriate for junior Johns Hopkins Medical Institutions (JHMI) faculty, or post-doctoral clinical fellows limited to less than a three-year commitment by their School of Medicine departmental constraints, or other issues. It is also appropriate for professionals who do not have an academic appointment within Johns Hopkins, and for medical students who desire intensive training in clinical investigation.

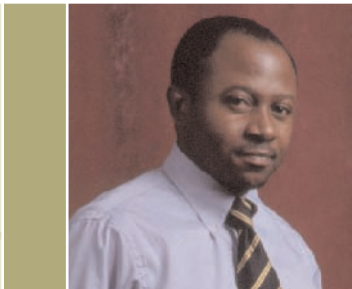
The MHS degree is designed to be a one-year, full-time program; but candidates may also pursue the degree part-time for up to four years. A faculty advisor provides academic and career advice and monitors the student's academic performance. After all coursework is completed, candidates must take a comprehensive exam. Thesis research is not required.

## OTHER OPPORTUNITIES

### The Science of Clinical Investigation Certificate Program

The SOCI Certificate Program is a four-course series. The certificate is issued by the Schools of Medicine and Public Health. The SOCI curriculum is intended for scientists, clinicians, and support personnel fully engaged in clinical investigation.

Each course is held in the evening, once a week for seven to eight weeks, at the Johns Hopkins Medical Institutions. Lectures, readings, case studies, and small interactive group discussions or projects help to clarify the subject matter. Students are evaluated on the basis of homework exercises and/or a course project.



“I have combined a post-doctoral fellowship in clinical pharmacology and mentored clinical research through the GTPCI. This program, **unique to Hopkins**, has been a real bonus that will prepare me to be an independent clinical investigator.”

—THOMAS NDOVI, MD

The certificate is awarded after satisfactory completion of courses equivalent to 90 CME credit hours. Only GTPCI degree students can receive academic credit for SOCI courses.

These courses are eligible for CME credit and may be taken by University employees supported by the tuition remission program. For descriptions of current SOCI offerings and registration information, visit the CME website at <http://www.hopkinscme.org/cme/events/SciClinInvest.html> or contact the CME office at 410-955-3988.

### Summer Short-Course Program

Methods in Clinical Research is offered as a full-time course for two weeks every July. It is designed for clinical post-doctoral fellows who are otherwise untrained in clinical research methods. This course provides an intensive introduction to clinical research methods, emphasizing epidemiological, biostatistical, and computing techniques.

Submission of an abstract for a research project and the consent of instructor are prerequisites. This course is not intended for academic credit. This short course is sponsored by the GTPCI and the Department of Epidemiology.

### CHOOSING THE RIGHT ACADEMIC PATH

#### PhD

- Subspecialty physicians who have completed at least one year of clinical training
- Physicians who have at least a three-year fellowship appointment within JHMI
- Other health professionals with an appropriate advanced degree and substantial human subjects research experience

#### MHS

- Physicians and other health professionals with advanced degrees with only one year available for full-time training
- Post-doctoral investigators without current academic appointments within JHMI
- JHMI faculty or post-doctoral clinical fellows limited to part-time study
- Post-doctoral clinical investigators interested in coursework without a thesis research requirement
- Medical students desiring intensive clinical research training at the pre-doctoral level

#### SOCI

- Faculty, trainees, staff, or those outside of JHMI engaged in major clinical research activities
- Those interesting in pursuing an evening-based curriculum compatible with full-time job responsibilities

### CLINICAL RESEARCH RESOURCES

The GTPCI departmental office is in Carnegie 320 within The Johns Hopkins Hospital, conveniently adjacent to the outpatient General Clinical Research Center (GCRC). The GCRC is an NIH-funded core institutional resource that supports excellence in clinical research. Its priority is to support investigator-initiated research that has peer-reviewed funding, but unfunded pilot studies, feasibility trials, and industry-supported trials may also qualify for support. Training of clinical investigators at all levels is a major part of the GCRC mission, and in this endeavor it works closely with the GTPCI.



“Like most physicians, I never received formal training in how to do clinical research. As a student in the GTPCI, I’ve been able to build a strong foundation in biostatistics, epidemiology, and study design. I now feel confident that I have **all of the tools I need** to be successful in academic medicine.” —JEAN WANG, MD

The Johns Hopkins Hospital GCRC has three units: The Pediatric Unit, Adult Outpatient Unit, and Adult Inpatient Unit. These are administered under the same guidelines and procedures, and individual protocols can be implemented in one or more units. There is another funded GCRC unit on the Johns Hopkins Bayview Campus for investigators at that location.

Students are encouraged to have a laptop computer for classes and presentations. The School of Public Health provides wireless network interface cards for PC laptops. The interface cards enable access to School networking resources such as email, the Internet, and networked printers.

#### ADMISSIONS

Applying online saves time and money. Application instructions specific to the GTPCI degree programs, related forms, deadlines, and transcript and standardized test requirements can be found at [www.jhsph.edu/gtpci/application.html](http://www.jhsph.edu/gtpci/application.html).

The following requirements apply to our degree programs:

- MD or appropriate advanced degree in a biomedical science
- Personal statement of professional and clinical research goals
- Letters of recommendation that meet the criteria outlined on the GTPCI website at [www.jhsph.edu/gtpci](http://www.jhsph.edu/gtpci)
- Test of English as a Foreign Language (TOEFL) for applicants for whom English is a second language

*Note: Minimum requirements may differ slightly for each degree program.*

#### CONTACT US

We encourage you to contact the Program Office at 410-502-9734 or by emailing us at [gtpci@jhsph.edu](mailto:gtpci@jhsph.edu) for questions or further information about any of these programs. Our website contains detailed descriptions and useful links about all of our offerings.



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