

Predoctoral Clinical Research Training Program for Medical Students: Instructions for Applying

This year there is a new program that provides intensive learning experiences that will prepare Johns Hopkins medical students interested in clinical research careers to be exemplary researchers (in any discipline, specialty or subspecialty). This is made possible through a new NIH Roadmap funded Pre-doctoral Clinical Research Training Grant.

Clinical research has a three-part definition:

(a) Patient-oriented research. Research that is conducted with human subjects and involves material of human origin (such as tissues, specimens and cognitive phenomena) for which an investigator (or colleague) directly interacts with human subjects in an outpatient or inpatient setting to clarify a problem in human physiology, pathophysiology or disease. This area of research includes:

- Mechanisms of human disease (e.g. role of inflammation in development of diabetes)
- Therapeutic interventions (e.g. comparison of techniques of home hemodialysis for ESRD)
- Clinical trials (e.g. randomized trial of different surgical procedures for spinal stenosis)
- Development of new technologies (e.g. role of epigenetic markers in colon cancer)

(b) Epidemiologic and behavioral studies. Studies that deal with the causes, distribution, and control of disease in populations; and research in which the actions and reactions of humans (e.g. patients or health care providers) in response to external and internal stimuli are studied through observational and experimental methods. Examples of this kind of research include:

- Studies of biological, psychological or social risk factors for acquiring a disease or for disease progression (e.g., quantifying the risk of lung cancer among smokers; the risk of obesity among individuals who are sedentary; the risk of heart disease among individuals with depression; the risk of mental illness among individuals exposed to violence or trauma)
- Studies of the impact of behavioral interventions on the risk of developing a disease or its complications (e.g., the impact of dietary or physical activity interventions on the development of high blood pressure or diabetes in a group of research subjects)

(c) Outcomes research and health services research. A multidisciplinary field of scientific investigation that examines how people get access to health care, how much care costs, and what happens to patients as a result of this care. For clinicians and patients, outcomes research provides evidence about benefits, risks, and results of treatments so they can make more informed decisions. For health care managers and purchasers, outcomes research can identify potentially effective strategies they can implement to improve the quality and value of care. Outcomes research seeks to understand the end results of particular health care practices and interventions. These end results may include mortality, physiologic measures, clinical events, equity of services, as well as effects that people experience and care about, such as symptoms, functional measures (quality of life), and patient experiences with care. Examples of outcomes and health services research include:

- A study that develops a way for clinicians to determine which patients with pneumonia can be treated safely at home, an option that not only reduces Medicare costs but is preferred by many patients.
- A study that identifies and addresses the barriers to better care for myocardial infarctions — for example, through development of a tool to help doctors know which patients with suspected heart attacks will benefit from thrombolytic treatment.
- A study of the impact of a quality improvement program for depression on depression symptoms, functional status, and patient satisfaction with care.

Predoctoral Clinical Research Training Program for Medical Students: Instructions for Applying (cont'd)

Students who are accepted into this program will be exposed to structured curricula in study design, epidemiology, and biostatistics through a Master's degree in Public Health (MPH quantitative track, 80 credits) or a Master of Health Sciences in Clinical Epidemiology (64 credits) at the Bloomberg School of Public Health. They will also have the opportunity to work with a mentor who is a Johns Hopkins faculty member to design and implement a research study and write up the results for publication. The program has funding for 8-10 students per year and includes partial tuition support, a \$20,770 stipend for the student and a stipend for the mentor.

Students will gain training and experience in:

- Articulating an appropriate question/hypothesis
- Identifying an appropriate study design and data set for answering the question
- Obtaining IRB approval
- Gaining familiarity with aspects of data management
- Identifying and applying appropriate statistical methods and correctly interpreting results
- Gaining familiarity with tracking and recording steps in the analysis of a data set
- Writing up the results of a data analysis for a professional publication
- Oral presentation of the results

To apply for the degree programs, see the websites listed below for specific instructions:

MPH: <http://www.jhsph.edu/academics/degreeprograms/mph/> (due December 1, 2005)

MHS in Epidemiology: http://www.jhsph.edu/dept/EPI/Student_Resources/Masters%20students.html (due April 1, 2006)

Applicants should inform the program of their application to the MPH or MHS programs. Additionally, a brief supplemental application to the Pre-doctoral Clinical Research Training Program is required.

Instructions for supplemental application: Please fill out the face sheet below and write a 1-2 page statement (single-spaced, 12 point font) describing your career objectives, interest and/or experience in at least one of the clinical research areas described above. Please submit your completed application to Ms. Michelle Moody (mmoody@jhu.edu) by **5 pm January 6, 2006**.

For more information, please contact:

Ms. Michelle Moody
Senior Academic Program Coordinator: Predoctoral Clinical Research Training Program
Phone: 410-502-0454/Fax: 410-614-7295

Web: www.jhsph.edu/welchcenter/predoc_app.html

FACE SHEET for SUPPLEMENTAL APPLICATION: PREDOCTORAL CLINICAL RESEARCH TRAINING APPLICATION: Due January 6, 2006

1. Current Status (select one): MS 1 MS 2 MS 3 MS 4 Other (list) _____

2. PERSONAL INFORMATION

Last Name _____ First Name _____ Middle _____

Home address _____

Email address _____ Home phone _____

Work phone _____ Cell phone _____ Pager _____

Gender Female Male Date of Birth _____

Citizenship US Citizen Non-citizen Nationals Permanent Resident

(Alien Registration Receipt Card 1-151 or 1-155 or other verification of permanent residency)

Ethnicity (check all that apply, at least one must be selected for NIH reporting purposes):

American Indian or Alaskan Native African American Asian American Hispanic White

Other (list _____)

3. INSTITUTIONAL INFORMATION

Current Institution: Johns Hopkins Other _____

Current School: Medicine Nursing Dentistry Public Health Other _____

4. PROPOSED TRAINING

Eligibility for the T32 Predoctoral Clinical Research award is contingent upon acceptable plans for advanced didactic training in clinical research. Eligible academic programs are listed below: Please indicate which formalized degree program you are in or intend to apply to:

MHS in Clinical Epidemiology

MPH with Concentration in Epidemiological & Biostatistical Methods for Public Health & Clinical Research

5. PRIOR EDUCATION/TRAINING

Undergraduate School: Degree: _____ Major: _____ Dates: _____

Professional School: Degree: _____ Major: _____ Dates: _____

Other School: Degree: _____ Major: _____ Dates: _____

6. RESEARCH INTEREST (enter up to 5 keywords to describe your area of research interest).

PLEASE MAKE SURE YOU HAVE PROVIDED ALL INFORMATION IN THE CHECKLIST

Office use only: face pers /state plans CV nom rec ltrs trans

Johns Hopkins Clinical Research Scholars APPLICATION CHECKLIST

PERSONAL STATEMENT
(maximum of 1-2 pages, single spaced, 12 point font)