National Institutes of Health Clinical Center Pharmacy Department

Residency and Fellowship Training Programs

Begun as a one-room Laboratory of Hygiene in 1887, the National Institutes of Health (NIH) today is one of the world's foremost medical research centers. An agency of the Department of Health and Human Services, the NIH is the Federal focal point for health research. The NIH comprises the Office of the Director and 27 Institutes and Centers. NIH has in excess of 75 buildings on more than 300 acres in Bethesda, Maryland.

Mission: The NIH Clinical Center is the clinical research facility of the National Institutes of Health. It provides patient care, services, training and the environment in which NIH clinician-scientists creatively and ethically translate emerging knowledge to improve the detection, treatment and prevention of human diseases for the health of a diverse nation.

- The NIH Clinical Center, composed of the Warren G. Magnuson Clinical Center and the Mark O. Hatfield Clinical Research Center, is equipped with 242 beds, 90 day-hospital stations, 15 outpatient clinics and a Clinical Pathology Department
- 7000 inpatient admissions, 9,750 new patients and 90,000 outpatient visits a year
- More than 1,600 laboratories and 900 active clinical research protocols
- Areas of clinical study include: aging; alcohol abuse and alcoholism; allergy; arthritis musculoskeletal and skin diseases; cancer; child health; chronic pain; deafness and other communication disorders; dental and orofacial disorders; diabetes; digestive and kidney diseases; eye disorders; heart, lung, and blood diseases; infectious diseases; medical genetics; mental health; neurological disorders; and stroke

The NIH Clinical Center Pharmacy Department
Robert DeChristoforo, M.S., R.Ph., FASHP, Department Chief

The Pharmacy Department provides patient-oriented pharmaceutical care of the highest quality, emphasizing rational, cost-effective pharmacotherapy and innovative, cutting edge pharmaceutical research. We strive to exceed the expectations of patients, investigators, and co-workers in an environment that provides the pharmacy staff with motivation, challenge, and professional growth.

Pharmacy at its best...

Ambulatory Care Pharmacotherapeutics & Research Fellowship
NIH Clinical Center Pharmacy Department
Bethesda, Maryland

Experience a unique opportunity to develop expertise in research methodology and ambulatory care medicine at the world's foremost biomedical research center. During this two-year program, the fellow will gain the experience necessary to conduct independent or collaborative clinical research; manage drug therapy for a wide range of medical conditions; develop skills in didactic and experiential teaching; obtain board certification in pharmacotherapy, and engage in the discovery, peer review, dissemination, and application of pharmaceutical and biomedical knowledge. The fellow will understand the NIH grants application, review, and funding processes, and have ample opportunity to publish findings in high-impact journals and present data at major scientific forums. In addition to developing and initiating new research proposals, the fellow will collaborate on ongoing clinical research related to ambulatory care pharmacotherapeutics.

OBJECTIVES

1. To train the Fellow to establish an independent and collaborative clinical research practice in primary care settings.
2. To develop expertise in research and scholarship related to therapeutic issues common to primary care pharmacy practice.
3. To enhance clinical skills which are necessary for the management of a wide range of therapeutic issues encountered by Primary Care Specialists.
4. To refine teaching skills which are essential for both academic and pharmacy practice positions.
5. To engage in discovery, dissemination and application of pharmaceutical and biomedical knowledge to improve patient care.
6. To develop an understanding of the NIH extramural grant application, review, and funding process.
7. To prepare for pharmacotherapy board certification.

DURATION

24 months

FELLOWSHIP DIRECTOR

Frank Pucino, Pharm.D., NIH/CC/PHAR

Faculty who will assist in teaching and collaborative research:

Scott Penzak, Pharm.D., NIH/CC/PHAR
Gyorgy Csako, M.D., NIH/CC/DLM
Robert Wesley, Ph.D., NIH/CC/OD
Ahmed A. Hasan, M.D., Ph.D., NIH/NHLBI
Raphaela Goldbach-Mansky, M.D., NIH/NIAMS
Francesco Celi, M.D., NIH/NIDDK

FELLOWSHIP PROGRAM DESCRIPTION

RESEARCH AND SCHOLARSHIP (60%)

The Fellow will gain the experience of developing a primary care pharmacotherapy-related question into a precise research hypothesis and proposal. Through preceptorship and collaboration with experienced scientists at the NIH, the Fellow is responsible for developing a methologically-sound and feasible research protocol, drafting informed consent documents, and preparing grant application(s) when appropriate. Additionally, the Fellow will gain didactic experience in areas of biostatistics, statistical software applications and/or grantsmanship. The Fellow will participate in ongoing clinical research projects, design an original research protocol for IRB submission, participate in the conduct a clinical trial, collect and analyze research data, present findings at appropriate national medical society meetings, and prepare the manuscript(s) for publication in peer-reviewed journals. The Fellowship Director will provide assistance and supervision in these efforts. The research projects will focus on ambulatory care pharmacotherapeutics and may involve determination of pharmacodynamics, pharmacokinetics, safety and/or efficacy of a therapeutic intervention. The Fellow will also gain further experience in the application of evidenced-based medicine to ambulatory care pharmacy practice, and have the opportunity to be exposed to Phase II, III and IV studies in terms of patient enrollment, reporting and documentation (e.g., case reports, IRB-related documents).
Two primary goals of the Fellowship are to enhance the Fellow's writing skills and national visibility. This will be accomplished by providing the Fellow with opportunities to publish in peer-reviewed medical journals and present research findings at regional and national professional meetings. The Fellow will also serve as a reviewer for various medical journals and national professional societies.

CLINICAL TRAINING (20%)

The Fellow will be able to refine his/her clinical skills in Ambulatory Care clinics. Following an orientation period, the Fellow will spend approximately 1-2 half-days each week in research clinics during the two-year Fellowship program to continue to refine clinical skills.

TEACHING & PRECEPTING (10%)

The Fellow will have the opportunity to continue to refine teaching skills by precepting Pharm.D. students during their the ambulatory care clerkship rotations and provide graduate-level didactic teaching in formal classroom settings.

GRADUATE COURSEWORK (5%)

The Fellow will have the opportunity be enrolled in didactic graduate coursework offered by NIH:

- Statistics (Statistics for Biomedical Scientists [STAT 500M])
- Grantsmanship (NHLBI extramural program)
- Clinical Research (Introduction to the Principles and Practice of Clinical Research)
- Pharmacology (PHAR 400)
- Pharmacogenomics

OTHERS (5%)

The Fellow will be encouraged to futher develop critical appraisal and writing skills by participating in the preparation of review articles, textbook chapters and letters to the editor. Fellows will also peer review for various pharmacy/medical journals and professional organizations. Additionally, Fellows will prepare for pharmacotherapy board certification by enrolling in the Pharmacotherapy Preparatory Course, and will receive additional training as available.

BENEFITS

Competitve stipend; health insurance; two weeks of vacation; and travel expenses to attend at least one professional meeting/symposium per year of training.

JOB DESCRIPTION

The principal activities of the Fellow will be research and scholarship which will occupy the majority of the Fellow's training. The Fellow will:

1. Design research proposals and grants, and submit these for scientific review (e.g., Pharmacy Research Committee) and to the appropriate committees or agencies including the IRB, FDA, and professional organizations.
2. Assist with all aspects of a clinical trial, including patient enrollment/assessment, data collection and analysis, manuscript/poster preparation, and presentation of research findings.
3. Collaborate with other scientists or clinicians on research projects with the opportunity to gain experience in areas of pharmacokinetics, pharmcogenomics and pharmacodynamics.
4. Perform an evidence-based medicine review using a research synthesis approach that includes assessment of clinical trials for quality of evidence, meta-analysis, review of expert opinions, and determination of overall strength of the evidence.
5. Provide the opportunity to enroll in research-related courses at the NIH.
6. Become familiar with the review process for NIH extramural grants and contracts proposals

A secondary goal of the Fellowship is to provide continued experience in patient care and teaching. This will occupy approximately 30% of the Fellow's time. The Fellow will:

1. Provide clinical services to specialized research clinics (adult and child health endocrinology, alcohol abuse and alcoholism, cardiology, rheumatology).
2. Provide clinical service at the Cardozo clinic for provision of innovative pharmaceutical care services to an indigent rheumatology patient population.
3. Assist with ambulatory care clerkship training of Pharm.D. students.
4. Present graduate-level didactic lectures in pharmacology and therapeutics.

UPON COMPLETION OF THE FELLOWSHIP

At the completion of the program, the Fellow will receive a certificate attesting to the satisfactory completion of a Clinical Fellowship from the National Institutes of Health.

APPLICANT REQUIREMENTS

Pharm.D. degree plus completion of a Pharmacy Practice Residency (or equivalent experience) is preferred; three (3) letters of reference; and on-site interview.

CONTACT PERSONNEL

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