

**Proposal: Combined Medical Oncology/Ph.D. Program  
University of Louisville**

**Rationale:** The genetic alterations and signaling pathways that cancer cells depend on for survival and growth have only recently been defined. This new knowledge has provided great opportunities for the clinical development of novel anti-neoplastic strategies that rely on targeted therapies and diagnostics. Unfortunately, a bottleneck exists in the translation of basic discoveries into clinical practice which is largely due to a relative paucity of physician-scientists who are trained to both conduct hypothesis-driven research and practice medical oncology. In recognition of this deficit as well as the increasing complexity of cancer medicine, particularly with respect to the interface between laboratory discovery and clinical care, this combined Medical Oncology/Ph.D. Program has been proposed.

**Objective:** To train internal medicine sub-specialists to both practice medical oncology and conduct hypothesis-driven research with an emphasis on pharmacology and toxicology.

**Approach:** Individuals who have completed medical school, the U.S. Medical Licensing Exams I-III, and an Internal Medicine Residency Program will pursue both clinical training in the Medical Oncology Fellowship Program and research training in the Pharmacology/Toxicology Graduate Program.

**Year 1:** Inpatient Oncology Training

Outpatient Oncology Training (minimum ½ day per week)

Attendance at the Hematology/Oncology Journal Club,  
Translational Research Series, Core Curriculum, Tumor Board and  
Multi-Modality Seminars

Research rotations through Pharmacology/Toxicology laboratories

**Years 2-4:** Required Coursework:

PHTX 672-5 Research Methods in Pharmacology and Toxicology I-IV

PHTX 623 Scientific Writing

BIOC 675 Cancer Biology

Attendance at research seminars sponsored by the Department of  
Pharmacology & Toxicology and the Brown Cancer Center

One Graduate School Elective

Preparation (NIH grant format) and defense of dissertation proposal

Dissertation research

Completion of qualifying exams I.D and 2

Presentation and defense of research dissertation

Outpatient Oncology Training (maximum ½ day per week)

**Year 5:** Hematology Inpatient and Outpatient Training: 6 Months  
(*optional*)