BACKGROUND AND REQUEST

UNIVERSITY OF CINCINNATI
Master of Science in Clinical and Translational Research

EXECUTIVE SUMMARY/RECOMMENDATION

This program clearly meets the Chancellor's standards for new graduate degree programs. The Regents' Advisory Committee on Graduate Study recently voted unanimous approval for the new program. There were no serious concerns raised in the review.

Request: The University of Cincinnati College of Medicine's Department of Environmental Health requests approval for a Master of Science in Clinical and Translational Research degree program.

Program Purpose/Mission: The purpose of the proposed Master of Science in Clinical and Translational Research program is to train clinical professionals (physicians, nurses and other terminal degree clinical professionals) to become independent investigators and to provide them with training in clinical epidemiology, clinical effectiveness, molecular epidemiology, clinical trials, and translational research necessary to prepare successful career development and independent investigator awards. The disciplinary purpose and ultimate goal of the program is to move practitioners from the realm of personal clinical experience to objective evidence. This program uses existing courses and degree requirements for a MS degree in Environmental Health, with a concentration in Epidemiology. A clinical research degree program directly supports the University of Cincinnati's Millennium Plan and initiative for professionally-focused Master's degrees, as well as a strategic step in the National Institutes of Health Roadmap.

The following objectives will be obtained for all graduates of the program:

1) Knowledge in clinical epidemiology and clinical effectiveness, biostatistics, molecular epidemiology and clinical trials
2) Ability to be a critical-consumer of the medical literature
3) Understanding of biostatistical method and terms and ability to successfully interpret and communicate biostatistical analyses
4) Ability to develop research hypotheses, specific aims and the methodology to conduct patient-oriented research
5) Ability to apply contemporary research tools to clinically relevant areas of investigation
6) Understanding of responsible conduct of research according to NIH standards

Graduates of the program will hold research positions in academia, hospitals, and governmental agencies. Physicians who have previously graduated from the Clinical Research Training Program in the Division of Epidemiology and Biostatistics have typically taken academic positions. Approximately 85% of the University of Cincinnati's graduates have taken academic positions and continue to conduct research within their own particular specialty.

Enrollments: The enrollment estimate for the program is conservative and is based on a recent poll of fellows and faculty who have expressed an interest in obtaining a MS in Clinical and Translational Research degree. Based on these estimates, 7 students would register full-time and 33 part-time, for a total of 40 students. This number is the maximum limit that the proposed courses can fill and faculty can advise. It is anticipated that new sections of existing courses will need to be created to accommodate the increasing interest in clinical research training programs.

The Master of Science in Clinical and Translational Research will be marketed towards clinical professionals (physicians, nurses and other terminal degree clinical professionals). Initially, the program will focus on the "grow your own" philosophy and recruit locally. However, owing to the limited number of Master of Science in Clinical Research programs in Ohio, and the national agenda to train more physician-scientists, it is anticipated that the program will capture a large regional, national and international pool of applicants.

The proposed program is committed to recruiting and retaining underrepresented minority groups. The Division of Epidemiology and Biostatistics has a track record of training minorities, as exemplified by a current African American physician student and a recent Hispanic physician graduate from the MECEH training program. The objective is to encourage underrepresented professionals to broaden their medical career pathway and encourage them to consider pursuing a Master of Science in Clinical Research.

Curriculum: The proposed program has forged partnerships with multiple training programs to create a well-structured and unique training program. A major strength of the training program is the partnership with the Division of Epidemiology and Biostatistics in the Department of Environmental Health. Existing courses within Epidemiology and Biostatistics will be part of the core MS in Clinical and Translational Research training. The curriculum will be composed of 48 graduate credit hours on a quarter system. This includes a minimum of 3 credit hours of Thesis Research. The thesis will be based upon clinical, laboratory, or field research. Full-time Master of Science students will be registered for 10-19 graduate credit hours per quarter. Students receiving a University Graduate Scholarship (UGS) must be registered for 12 graduate credit hours for each quarter for which they are receiving support. In order to obtain a Master's degree, a student must maintain a 3.0 GPA or higher. At least 2/3 of the minimum graduate credits necessary for the degree must be at a level of a 3.0 GPA or higher. Students will be required to keep their Advisors and the Clinical Research Program Office well-informed of their degree intentions (i.e., when they intend to complete the program). Upon acceptance

into the proposed program, students receive a timeline for completion which details what and when milestones need to be completed in order to complete the 2 year degree. The 2 year degree is very attainable, even for part-time students. Typically, students complete the program in 2 years while continuing their clinical responsibilities. The credit hour requirement can be completed by taking 7 credits over 7 quarters (including 1 summer) or 8 credits or 6 quarters.

Faculty, Facilities and Resources: The proposed MS in Clinical and Translational Research will increase the number of students per class, so the faculty will have increased workloads per course. The proposed budget will recover faculty time from grants to provide quality educational courses for the program. Administration of the program will require a full-time Graduate Studies Director for Clinical and Translational Research (Dr. Erin Haynes, Assistant Professor, Division of Epidemiology and Biostatistics), and a full-time program assistant (to be hired). Faculty for the new courses has already been selected.

The Director of the Department of Environmental Health, Dr. Shuk-Mei Ho is providing over $1,000,000 to the renovation of office space (5,000 sq. ft.) for faculty. In addition, Dr. Ho is providing $40,000 to the renovation of Graduate Studies and $30,000 for much-needed video conference equipment to enable students to view a class at a distance if they are unable to attend owing to clinic duty, conference attendance, etc.

The financial plan for the proposed degree program has three components; faculty, administrative support and general operating expenses. The program is supported by the Academic Health Center, Chairman of the Cincinnati Children's Hospital Medical Center, and the Dean of the College of Medicine. The tuition generated from the program does not adequately cover the program expenses, but these will be accounted for through their earnest support and financial contributions. Each will pay 1/3 of the remaining costs.

Evidence of Need: For several decades, the medical community has been concerned about the reluctance of young physicians to prepare for and enter careers in clinical research. Equally troubling is the attrition rate of accomplished clinical investigators within academic medical centers is unacceptably high. The American Association for Medical Colleges has stated that *...there is an urgent need for medical schools and teaching hospitals to create new models of clinical research organization and infrastructure, along with more nurturing environments, so that the next generation of physician scientists can conduct high quality, innovative clinical research.* Very few clinical research training programs exist within the State of Ohio. Currently, there are only two; The Clinical Research Scholars Program (CTRSP) at Case Western Reserve University School of Medicine, and the Clinical Research Training Program at the Cleveland Clinic Foundation. The latter offers a Master's degree program in

Clinical Investigation, which is part of the CWRU Clinical Research Scholars Program (CTRSP). The Master of Science in Clinical and Translational Research degree program at the University of Cincinnati will fill a local void in training by awarding physicians with a Master's degree in Clinical and Translational Research.

End of Comment Period: April 23, 2009
No Comments Received, Recommend Approval

Approved	
Eric D. Fingerhut, Chancellor	4/30/09 Date

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