Background: Success of the NIH Roadmap, which emphasizes interdisciplinary research and translation of discoveries “from the bench to the bedside,” depends upon the active involvement of physicians in the research enterprise. Yet the proportion of physician researchers applying for clinical research grants from the NIH declined from 40% of total applications in 1972 to 25% in 1997. This decline of physician-scientists is multifactorial, but the NIH has identified recruitment and retention of medical students into patient-oriented research careers as one priority for reversing this trend.

Objective: To develop a training program for University of Pittsburgh medical students who are interested in a clinical research career.

Methods: We named the program the Clinical Scientist Training Program (CSTP) for symmetry with our existing Medical Scientist Training Program (MSTP), the MD/PhD program which historically has been predominated by bench research training. Students in the CSTP can pursue a 4-year certificate in clinical research or a 5-year joint MD/MSc in clinical research. In an effort to remove one financial barrier to participation in the program, and to a research career more generally, we provide medical school tuition scholarships to highly selected students. In developing the curriculum, we built upon the existing infrastructure of our institution’s successful NIH K-30 Clinical Research Training Program (CRTP), which currently serves clinical fellows and junior faculty. Medical students will enroll in the same research methods courses, but additionally attend a longitudinal monthly seminar throughout the 4-5 years of participation and receive phased team-mentorship that moves from interest identification to formal mentored clinical research. Each student’s performance will be assessed by coursework grades, seminar participation, and the evaluation of their research project by a committee of 3 faculty including their primary research mentor.

Results: The program matriculated 7 students, 2 of whom received tuition scholarships, from a total of 11 applicants in the 2003-2004 academic year. Each plans to complete the joint MD/MSc. Anticipated funding sources to defray living expenses and tuition for the additional year of study include existing NIH institute-specific T-32 training grants with predoctoral slots, research assistant positions on existing RO1 grants, and private foundations.

Conclusions: This is a novel program designed to recruit and retain medical students into clinical research careers. The major challenges are the high levels of supervision required and the absence of a non-institute-specific NIH funding mechanism for medical student clinical research training that does not lead to a PhD.