

Letters to the Editor

Restructuring MD–PhD Programs: Career Training or Broad Education?

To the Editor: In his July 2007 editorial,¹ Dr. Whitcomb questions the value of U.S. MD–PhD training, citing the low percentage of students desiring research as their primary professional activity² and their low rate of NIH grant applications.¹ He laments the current system of training as having too much time away from the lab and advocates a system more conducive to research.

He makes a number of assumptions, two of which we challenge here. One, *the lower than expected percentage of students desiring research is a function of time away from the lab.* This is essentially an academic argument, since we cannot randomize students to different training protocols. Yet, we must still consider how best to improve students' education. While simply increasing the integration of research into early training appears reasonable, it is not the answer. We believe it is too much to ask students (or residents) to effectively integrate both research and doctoring at the earlier stages of learning. Instead, delving deeply into one discipline at a time as a novice, rather than striving for true coherence via integration, is more likely to develop solid foundations. We want our young physicians and scientists to treat their patients and execute their experiments with expertise and not just acceptable competence. The current system should certainly be modified to fit modern needs, but simply more integration and lab time are not the solution.

Two, *the need for MD–PhDs to perform more lab research as a part of their profession* is a more contentious matter. We must remember that most medical lab research is not performed by MD–PhDs, and the majority of physician scientists are not MD–PhDs. Then what do MD–PhDs do? They are uniquely positioned, by virtue of learning two traditional disciplines, to see complex problems from different perspectives—to be innovators, teachers, integrators, and leaders. It is the duty of dual-degree programs to

provide the education to encourage such qualities. To push all MD–PhDs toward the lab or particular subspecialties is shortsighted. All fields of medicine and surgery—and, indeed, public health policy and many business disciplines—need those who can integrate the skills of rigorous investigation with an understanding of patient issues.

For the National Institute of General Medical Sciences to truly get its money's worth, MD–PhD programs should provide exceptional multidisciplinary education, not career training. They need to encourage creativity, exploration, vision, and, especially, leadership. Only then will our society realize its full investment potential.

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In Reply: Ahn and colleagues claim I suggested that “the lower than expected percentage of students desiring research is a function of time away from the lab.” In fact, I simply presented the findings Ahn and colleagues reported in the same issue of the journal in which my editorial appeared and made no assumption

about the reasons for their findings. Second, they claim that I suggested that those holding MD–PhDs should “perform more lab research as part of their profession.” In fact, I made no such statement, but I did raise that issue indirectly by inferring that the success of MD–PhD programs should be judged by analyzing the research productivity of program graduates.

Ahn and colleagues disagree with that position. They propose that the “duty of dual-degree programs” is to provide the education needed to allow MD–PhDs to “see complex problems from different perspectives—to be innovators, teachers, integrators, and leaders.” And they seem to believe that by accomplishing those objectives, society's investment in the programs is realized. Their opinion is simply not congruent with the stated purpose of the Medical Scientist Training Program (MSTP), which is to train physician scientists who will participate in the conduct of biomedical research. To the degree that a significant percentage of program graduates do not follow that career path, the goals of the program are not being met.

Andriole and colleagues¹ recently presented data suggesting, as Ahn and his colleagues did, that many MD–PhD program graduates may not plan to pursue careers that are predominantly research based. They proposed that a mechanism is needed to document the career paths of program graduates to determine the extent to which the goals of the programs are being met. In an accompanying commentary, Rosenberg² echoed Andriole's concerns and called for tracking program graduates' careers to provide more accountability for the public investment in the program. To suggest as Ahn and colleagues do that the true purpose of the program is to provide “exceptional multidisciplinary education, not career training” distorts reality.

The main issue of my editorial was that the MSTP must be redesigned if it is to truly train physician scientists who will participate in a modern research environment. The logic for that argument stands uncontested to date:

No one would design a PhD program to produce *nonphysician* research scientists by building into the program a five-year period away from the research laboratory after the doctoral students completed their PhD studies, as is the case with the MSTP. This is the critical message of my editorial. This is the issue that those concerned about the production of physician scientists need to address. I wish Ahn and colleagues had focused on that issue in their letter, rather than on the far less important issues they chose to address.

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The Urgent Need for Pain Management Training

To the Editor: Approximately 50 million people in the United States suffer from persistent pain,¹ and pain treatment cuts across most medical disciplines. Despite huge strides in understanding pain, there is a major gap between that understanding and

pain diagnosis and treatment. In the 21st century, pain management is being accepted as a basic human right.² Thus, it is even more important to train medical students to be competent in the areas of pain assessment and treatment. However, few physicians graduating from U.S. medical schools have had comprehensive multidisciplinary pain education as part of their medical school curricula. This was shown in an AAMC survey in 2000–2001, which found that only 3% of medical schools had a separate course in pain management in their curricula¹; the situation is not much better today. Although a free, Internet-based CD-ROM textbook on pain was developed for medical students in 2003 by the American Academy of Pain Medicine, we feel there is an urgent need for formal pain management training within the medical school curriculum.

Pain education in medical schools could be in the form of pain symposiums, pain workshops, lecture series, and clinical rotations in pain management, according to what is available and feasible in each school. Interinstitutional elective rotations in pain management and summer research projects with resulting research publications in pain should also be encouraged. Funding for the latter is available from, for example,

Foundation for Anesthesia Education and Research grants to medical students from the American Society of Anesthesiologists. We at Yale have incorporated formal pain education into our curriculum using a multidisciplinary pain symposium at the second-year level with case studies for third- and fourth-year students.

We believe that medical schools worldwide should establish formal pain management education in each year of their curricula. This will enable graduating physicians everywhere to be well equipped to ease their patients' pain.

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