ON THE COVER
Between 1 & 3, (silver gelatin print) by Mach Bhati, Louisiana State University School of Medicine in Shreveport.

Reinventing the Physician-Scientist in the New Era of Health Care

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Since organized MD-PhD programs began to appear in the United States more than 30 years ago, dual-degree graduates have been the object of great expectations in the medical community. With training in basic research and patient care, MD-PhDs have been heralded as future leaders of clinical research and academic medicine. These children of two worlds embody the complexity and interdependence of patient care and biomedical research that characterize the US health care system.

Since the 1960s, the number and diversity of dual-degree programs has increased to reflect the changing demand for physician researchers in different settings. When the National Institutes of Health (NIH) launched its Medical Scientist Training Program (MSTP) in 1964, it provided funding to only 3 medical schools. Today, the NIH funds 34 institutions and 826 dual-degree trainees each year, and more than 80 schools offer MD-PhD opportunities using other sources of funds. Although early dual-degree students chose graduate fields almost exclusively in the basic sciences, today's MD-PhDs pursue a broader range of studies, including medical economics and the humanities.

Despite the popularity and prestige of the dual-degree track, a singular vision of its purpose and necessity is lacking. Some educators view MD-PhD programs as a flexible approach to scientific training, in which students can choose to be either basic scientists or clinical investigators. Others insist that the purpose is to create graduates who will simultaneously use their skills at the bench and in patient care.

In 1979, when James Wyngaarden described the clinical investigator as an "endangered species," MD-PhD training programs were thought to be a solution to the problem. But reports since then suggest that many dual-degree programs emphasize purely laboratory-based sciences rather than clinical research.

Recent trends in the US health care system have heightened questions about the relevancy and viability of MD-PhD programs. The highly trained MD-PhD seems out of place in the new primary care–oriented, cost-conscious health care paradigm. With academic health centers and scientific researchers facing growing fiscal pressures from managed care, future support for these expensive programs is far from secure. If medical schools are to continue to justify dual-degree tracks, they must demonstrate MD-PhDs' contributions to the nation's health care agenda.

This month, MSJAMA examines some of the issues surrounding dual-degree programs. Are MD-PhDs fulfilling the goals of “translational research” for which they were trained, often with public funding? How do their research choices and results compare with those of PhDs or MDs? As the relationship between medicine and science changes to reflect new priorities, so must the identity and the approach of the dual-degree physician-scientist.

REFERENCES