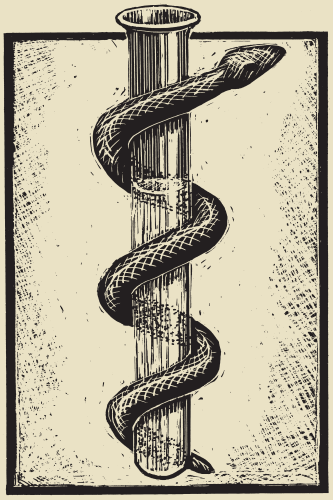
An unusual hybrid

By Arye Elfenbein



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The Aboriginal legends of Australia describe the platypus as an animal befriended by birds on account of its bill and webbed feet; by fish because of its aquatic proficiency; and by wombats due to its fur, four legs, and ability to nurse its young. Although each clan tried to entice the platypus to join its ranks, the platypus eventually recognized that it was unlike each in many ways. As a student in the M.D.-Ph.D. program, I sometimes have a sense of what life might be like as a platypus —for there are times when I feel I don't quite belong on either side of the educational divide.

Last year, when all my M.D. classmates graduated and left campus in one bewildering moment, it became apparent to me that I would never become as pure a clinician as they will. Though we went through the same courses together, in that instant their careers suddenly seemed transformed into a different species. "You'll still be here at our five-year reunion, right?" they would jest, for the M.D.-Ph.D. course does indeed average eight years.

Contrived: It is interesting to note that when the first English taxonomist to discover a platypus sent one home for inspection, it was regarded as an elaborately sewn-together farce. What could be more preposterous than a duck-billed, web-footed, egg-laying mammal? Likewise, I sometimes wonder whether the M.D.-Ph.D. combination is a contrived, sewn-together monster or, instead, an unusual hybrid of ideological perfection.

A sense of doubt began to develop as some of my ideals received an early bruising. It was difficult for me and other doctoral students to learn that the world of science often harbors bitterness among researchers, politicking for authorships and grants, jealousy of those with medical rather than scientific careers, and even a sarcastic perversion of intellect that must be the purest antithesis to reason.

Exam: Likewise, in the medical classroom, I was on occasion disappointed to find myself engaged in an arguably indispensable yet exasperating memorization exercise—a course strangely titled the Scientific Basis of Medicine (how often I wished for an emphasis on science as strong as that suggested by the course's name!). With but a few refreshing exceptions, there seemed to be a strong de-emphasis on science in favor of dogmatic, fact-driven learning. I was at a loss whenever I believed the answer to an exam question was somewhere between the choices of A, B, C, or D. I was also saddened to encounter occasional physicians who expressed a condescending boredom for the molecular details of medicine. This was invariably (and ironically) accompanied by a sense that such information was useful only to pass examinations.

Outside of academics, I have encountered another source of disquiet—an issue of practicality. I am often asked why I am pursuing a course of study that too often leaves its disciples deciding between science and medicine. Is it a sensible decision or just an intellectual infatuation? In truth, I am troubled to see that unlike the relationship between composer and performer or lawyer and judge, there is often a rift between scientist and physician. They draw from vastly disparate reservoirs of knowledge. Most disheartening to me is seeing how the demands of both science and medicine too often turn the union into an abrasive partnership within a person.

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More than a few times now I have listened to these words from individuals I admire and respect: To ask a human being, even if brilliant, to extend himself or herself too far in multiple directions necessarily results in mediocrity. With shy and graceful understatement, I suggest that this thought remains particularly uncomfortable for me.

Mutual: Although such experiences have brought me to perceive a fragmentation of science and medicine, I do envision a time when their mutual foundations will reunite them. I wonder whether education in science and medicine will ever become indistinguishable from each other and whether every scientist and physician will one day be an M.D.-Ph.D., in a sense. I hope for a time when advanced clinical practice will demand persistent attention to the basic sciences and will be steered only by scientific reasoning.

Similarly, I long for a time when (as is the case in other countries) the pursuit of pure science in contrast to medicine will not be beset with the funding hurdles that are placed in the way of future pioneers in discovery; when support for science will no longer be subject to the whims of changing political administrations; when notions such as bench-to-bedside research will be universally revered. To me, one promising acknowledgment of these issues at Dartmouth is the soon-to-begin Program in Experimental and Molecular Medicine. With its potential in mind, I optimistically hope for a curriculum as revolutionary as the measures needed to address these concerns.

Now that I'm at a midway point along this hybrid educational path that I've chosen, I am starting to appreciate the inexpressibly fulfilling richness of a learning experience unlike any other. The combination of science and medicine is a strange, beautiful creature that is still trying to find its place in the world. I owe much to the generous and supportive mentors who have guided me this far. ■

The "Student Notebook" essay offers insight into the activities or opinions of students and trainees. Arye Elfenbein, an M.D.-Ph.D. student at Dartmouth Medical School, is doing his doctoral research in the Department of Pharmacology and Toxicology, studying how endothelial cells, which line the blood vessels, initiate migration to form new vessels. Elfenbein, who was born in Israel and spent his childhood in Sydney, Australia, majored in neuroscience at Brandeis University and has worked as a laboratory technician and an emergency medical technician in Boston. He also studies piano at Dartmouth College.