

SCIENCE'S COMPASS

Response

The notion of abundant alternative career opportunities for biomedical scientists is widely circulated. However, neither our survey nor the recent National Research Council (NRC) analysis (1) find evidence that such jobs exist in sufficient quantities, or that the jobs that are available offer the satisfactions—*independence, intellectual challenge, and a chance to contribute to fundamental understanding*—that induce biomedical scientists to choose their career.

Gale refers to the training program that one of us (F.S.) directed while he was a student at MIT. While his need for career counseling may not have been satisfactorily addressed, a significant proportion of his contemporaries chose to go into the biotechnology industry. Their choices were facilitated by several informational programs offered during Gale's residence, as well as the extensive contact between MIT faculty and biotechnology firms.

The issue remains of the need to uncouple training from basic research needs. Procuring tenure-track positions is becoming more competitive, but the demand for basic research may continue to expand in the

immediate future, since Congress increased National Institutes of Health (NIH) funding by 15% this year. We argue that meeting this need by training even more people will only exacerbate the problems our survey identifies. The challenge is to retain scientists in biomedical research by providing well-paid, satisfying jobs at the bench. Our suggestion to promote such positions was embraced in both the NRC analysis and by NIH Director Harold Varmus (2).

Finally, our proposal is for a very different structure from the hierarchical laboratory. We want to enable highly trained scientists in their 30s and 40s to find dignified opportunities to contribute their talent, energy, creativity, and, yes, independence, to the biomedical research enterprise.

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References

1. *Trends in the Early Research Careers of Life Sciences* (National Academy Press, Washington, DC, 1998).
2. Remarks of H. Varmus at the 25th Annual Meeting of the Society for the Advancement of Chicanos and

Native Americans in Science (SACNAS), Washington, DC, 10 October 1998, reported in the *Washington Fax*, 14 October 1998.

CORRECTIONS AND CLARIFICATIONS

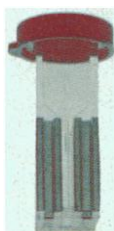
In the Random Samples item "Dubious benefits for early computer use" (16 Oct., p. 407), the affiliation for education professor Douglas H. Clements was incorrect. He is at the State University of New York, Buffalo.

In note 7 of the report "The chemistry of water on alumina surfaces: Reaction dynamics from first principles" by Kenneth C. Hass *et al.* (9 Oct., p. 265), the bracketed phrase "Bernstein, Lee, Yang, and Primakoff (BLYP)" at the end of line one and in line two should not have appeared.

In table 2 (p. 1968) of the Policy Forum "Monitoring nuclear tests" by Brian Barker *et al.* (25 Sept., p. 1967), the "Origin time (GMT)" for the 30 May explosion was incorrect. It should have been, "06:54:57.1."

In the article "A new look at monogamy" by Virginia Morell (Special Section, "Evolution of sex," 25 Sept., p. 1983), the location of Trinity University should have been given as San Antonio, Texas, not Houston.

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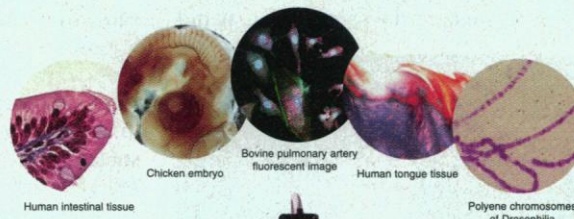
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