

cies must be seen against the background of his own approximately 15-year employment at the Food and Drug Administration and his occasional previous arguments in favor of ceding exclusive regulatory overview of human gene therapy to his own agency. He now sings for a supper paid by those who make derision of public service, especially in the federal government, a part of their political toolbox. Fink's editorial is an acknowledgment of the debt that the research community in this country owes to "a legion of gifted public servants." I was pleased to see it published and would add that the debt extends much more widely.

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The support for, and appreciation of, embattled federal science bureaucrats championed by Fink is likely to be enthusiastically echoed by all scientists in the United States. Fink writes that the action of Herman Lewis at the National Science Foundation permitted him and his students to perform an experiment that advanced the development of a hepatitis B vaccine by 2 years and saved millions of lives that would otherwise have been lost. This statement

rests on their 1978 report of the first case of yeast transformation. For this work, Hinnen, Hicks, and Fink used a yeast-selectable marker on a bacterial plasmid (1). Did the work of Fink and his colleagues materially affect the timing of the development of a hepatitis B vaccine? I think not. A product derived from human placenta developed by Merck and by the Institute Pasteur was in use by 1982 (when expression of the surface antigen in yeast was published). Transformation of yeast by a 2-micrometer-based vector was reported in 1978 by Jean Beggs in the United Kingdom (2) very shortly after the Hinnen *et al.* publication. As the 2-micrometer plasmid is a multicopy endogenous plasmid, it is not surprising that more efficient high expression transformation can be obtained with vectors based on it. Consequently, it is 2-micrometer-based vectors that have been used for hepatitis antigen and human insulin production in yeast. In addition to those mentioned by Fink, the then SmithKline Beecham group in Belgium independently played a major role in the development and widespread application of the vaccine based on the antigen synthesized in yeast.

Fink writes that Lewis's sensible action caused the National Institutes of Health to bring forward the genetic engineering

of yeast by 2 years. The National Institutes of Health was probably also influenced by the Ashby report in the United Kingdom (3) and the work of a European Molecular Biology Organization committee, for which another science administrator, J. Tooze, deserves substantial credit.

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References

1. A. Hinnen, J. Hicks, G. Fink, *Proc. Natl. Acad. Sci. U.S.A.* **75**, 1929 (1978).
2. J. D. Beggs, *Nature* **275**, 104 (1978).
3. *Report of the Working Party on the Experimental Manipulation of the Genetic Composition of Microorganisms* (Cmnd. 5880, H.M. Stationary Office, London, UK, 1975).

Biosystematics Database

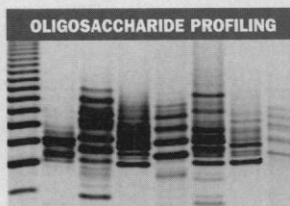
I was pleased to see the Random Samples item about the Interagency Taxonomy Information System (ITIS) (5 Apr., p. 37). I would like to acknowledge the U.S. Environmental Protection Agency's partners on this vital project. The U.S. Departments of Agriculture, Interior, and Commerce's Na-

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tional Oceanic and Atmospheric Administration, together with the Smithsonian National Museum of Natural History and academic collaborators, have been instrumental in development of the database. ITIS illustrates a success of the National Science and Technology Council's Committee on Environment and Natural Resources, and Vice President Al Gore's reinventing government in action. An ongoing goal of the ITIS effort is to involve the global bioscience community in building an infrastructure that results in improved access to credible, continuously improving biosystematics information.

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Rules of the Game?

I found David Satcher's "Advice from the top" (Women & Minorities '96, 29 Mar., p. 1910) head and shoulders above both Anne C. Petersen's (p. 1904) and Lydia Villa-

Komaroff's (p. 1905). The last sentence in Satcher's piece says it all: "I assume that you can change people and change situations. You just need to find a way to do it." How different in attitude from Petersen's "women who understand the informal rules of the game are more likely to succeed." Succeed in what? A "game"? I don't consider science and the issues we face today in this society a game. It is deadly serious, as many who have tried to change the rules have found out. We are finally beginning the discussions necessary to achieve respect for the differences throughout our society, including among those who wish to pursue scientific careers. When will the day come when a woman is a success on her own terms instead of "making it" because she learned someone else's rules. When will we, as women in science, acknowledge our capacity to contribute in unique and productive ways to the scientific endeavor?

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Corrections and Clarifications

Throughout the 3 May letters by Jerome S. Puskin and Neal S. Nelson (p. 631) and Donald A. Pierce and Dale L. Preston (p. 632), under the heading "Risks from low doses

of radiation," the unit "Selvin" should have been "sievert." The error, which *Science* regrets, was introduced during editing. Also, in the letter by Puskin and Nelson, the word "generation" in line 9 of the next-to-last paragraph should have been "general."

The issue date on pages 342 through 349 of the 19 April 1996 issue incorrectly gave the year as 1995.

The Research News article "New role for HIV: A vehicle for moving genes into cells" by Jon Cohen (12 Apr., p. 195) should have noted that the lab of Mario Stevenson is now at the University of Massachusetts Medical Center and that it also was instrumental in first showing that HIV can infect nondividing cells.

Letters to the Editor

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