References and Notes

1. *Research and Development Funding in the Proposed Fiscal Year 1985 Budget* (Congressional Budget Office, U.S. Congress, Washington, D.C., March 1984).
2. These and subsequent NOAA budget numbers are based on *FY 1985 NOAA Congressional Submission Budget Estimates* (Office of Oceanic and Atmospheric Research, NOAA, Rockville, Md., February 1984).
3. F. A. White, *Bull. Am. Meteorol. Soc.* **65**, 374 (1984).
4. *Comparison of FY 84–85 Funding in Atmospheric and Oceanic Research for NOAA, NSF, NASA and Selected Agencies* (Office of Oceanic and Atmospheric Research, NOAA, Rockville, Md., February 1984).

Patents and Research Freedom

Jeffrey L. Fox, in his article "Patents encroaching on research freedom" (News and Comment, 8 June, p. 1080), discusses a recent decision by the U.S. Court of Appeals for the Federal Circuit, *Roche Products Inc.* v. *Bolar Pharmaceuticals Co., Inc.* The title and tone of the article seem to us to imply that the decision somehow threatens research.

The court's decision crystallizes old law; it does not create new law. The decision ruled as infringement the unfair use of the patentee's invention by those who merely copy for their own profit. Specifically, the decision ruled that, during the 17 years of exclusivity, the use of a patented pharmaceutical compound for the purpose of testing or investigating it for drug approval constitutes patent infringement.

In the article an attorney for Bolar is quoted as saying that this opinion could "negate the experimental use exception, unless it's for pure amusement." The court's decision does not inhibit truly experimental use. Indeed, the decision reinforces its legitimacy by convincingly citing precedents.

Bolar did not even contend that its commercial use of Roche's invention would fall within the traditional experimental use exception; rather, Bolar contended that the exception should be expanded. But the court felt that "unlicensed experiments conducted with a view to the adaption of the patented invention to the experimentor's business is a violation of the rights of the patentee. . . . We cannot construe the experimental use rule so broadly as to allow a violation of the patent laws in the guise of 'scientific inquiry,' when that inquiry has definite, cognizable, and not insubstantial commercial purposes."

Thus the court correctly recognized that true "scientific inquiry" is exempted from patent infringement by the traditional "experimental use" exception. Neither the court's holding nor its language gives rise to any suggestion that true "scientific inquiry" would be restricted. But the court also recognizes that labeling commercial activities as "scientific inquiry" does not make them such. A generic drug house's use of the patented invention—not for the purpose of true scientific inquiry but for the purpose of generating data for its own business purposes—was clearly and properly held to violate the laws.

We hope these comments place the significant decision of the Court of Appeals for the Federal Circuit in the proper perspective. The enforcement of patent laws against copyists will serve as an incentive to research and to those who financially support it. Nothing in the law or in the court's recent decision will inhibit true "scientific inquiry."

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Factoring Work

I would like to correct several statements in the article by Gina Kolata, "Factoring gets easier" (Research News, 2 Dec. 1983, p. 999).

A group of us has been occupied with factoring integers for decades. This activity has been carried out independently of the American Mathematical Society (AMS), which has never sponsored our work, and of the yearly meeting of computational mathematicians in Winnipeg. The AMS has recently published our book of tables of factorizations (the Cunningham Project), which we gave to them. The manuscript was in camera-ready form. The factoring work is still ongoing; it is not work that has been "closed off" because of this publication.

Since the first computers were introduced some 35 years ago, mathematicians—certainly number theorists—have exploited computer hardware to solve their problems, using ingenious ideas of various kinds to gain speed. This is nothing new.

It was D. H. Lehmer and his father D. N. Lehmer who were involved with building sieves at the University of California and elsewhere to work on number theory problems. My associate in 1971 was Michael Morrison, not "John" Morrison.

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