different from the review [by the Food and Drug Administration (FDA)] if the same enzyme were intended for use as a thrombolytic agent administered intravenously to patients.

We are convinced that protection of human health and the environment, stimulation of industries using new biotechnology, and assurance of safety of products are mutually compatible. The FDA's record of having approved more than 150 products (including in recent weeks the first interferons and a monoclonal antibody that treats acute renal transplant rejection) that use recombinant DNA or hybridoma techniques in their manufacture is evidence of this conviction.

However, government cannot perform regulatory oversight of scientific and commercial endeavors in a vacuum. We require the advice and criticism of academics and of the public. And while we welcome such commentary as Koshland's in *Science*, there are alternatives to effecting better regulation. The most direct is to analyze and comment on the scientific assumptions in statements of policy, and we urge individual scientists and professional organizations to make the required investment in time and energy to do so. The FDA's last statement of policy on biotechnology elicited a dismal response: a mere 34 official comments. Can that really be all the interest there is in the scientific and regulatory approaches of a major regulatory agency—with responsibility for products accounting for 25 cents of every consumer dollar—to important new technologies?

In addition, public education via lectures and articles directed at nonspecialists, while less direct, is a worthy investment.

Perhaps there was appropriate but unintended irony in Koshland's metaphor of "one gene–one enzyme," which is not an invariant principle. It is now known that certain messenger RNA precursors can be spliced in alternative ways, such that a single primary messenger RNA transcript may ultimately yield two or more very different polypeptides. Likewise, "one license–one hearing" can be a useful, although not universally applicable, model.

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REFERENCES

1. *Fed. Regist.* **51**, 23301 (26 June 1986).

Response: The Biotechnology Science Coordinating Committee appears to be an excellent approximation of the simplicity and responsibility that were advocated in my editorial. I do not think the lack of letters indicates lack of interest but perhaps a past experience of scientists having suggestions fall on deaf ears. Miller and Young deserve great credit for their good solution to a difficult problem and for a receptiveness that will encourage responses.

I hope that Washington bureaucracy does not get as complex as gene expression. If it does, we may have to extend the adage "Ontogeny recapitulates phylogeny" to "Sociology recapitulates enzymology."

—DANIEL E. KOSHLAND, JR.

Erratum: In the article "Mathematicians recognize major discoveries" by Gina Kolata (Research News, 15 Aug., p. 722), Fields Medal winner Michael Freedman was incorrectly described as being a member of the University of Southern California faculty. Freedman is Charles Lee Powell Professor of Mathematics at the University of California, San Diego. In addition, several names in the article were spelled incorrectly. Field's should have been Fields, Nevalinna and Navanlinna should have been Nevanlinna, Kirky should have been Kirby, Atyiyah should have been Atiyah, and Strasen should have been Strassen.