

jected to a governmental risk assessment.

However, agricultural research even with plants or microbes that have been powerfully modified by a variety of traditional genetic techniques, has *not* been routinely subject to governmental "case by case every case" evaluation, except for certain plant pests, noxious weeds, or organisms considered to be veterinary vaccines. And when one considers that an individual plant breeder "may introduce into the field 50,000 genotypes per year on average or 2,000,000 in a career" (2, p. 66), and that many of these are transgenic, it is clear that the logic of the ESA's position is flawed (4).

Simon cites what he considers to be another contradiction between the NAS-NRC reports and the ESA paper, noting the NAS-NRC conclusion that intergeneric organisms present no unique hazards per se and that most engineered organisms are expected to be less fit than their parental organisms. He continues, "Conversely, [the ESA report] predicts that '[o]rganisms with novel combinations of traits are more likely to play novel ecological roles.'" These statements are not necessarily incompatible. An intergeneric organism may not represent a "novel combination of traits" with respect to ecological, genetic, or even phenotypic factors. Conversely, intragenetic genetic changes can

confer changes that exert drastic effects. As we emphasized one must consider carefully the *function* of coding or regulatory elements that have been transferred; less important is the technique used to confer the genetic change or the presumed evolutionary distance between the nucleic acids being recombined.

Simon characterizes our proposal as "too little" and derides it as "self-regulation." Actually, it provides an algorithm that has unlimited flexibility. Depending on what is judged to be an acceptable regulatory burden on researchers and the government, an appropriate level of scrutiny for certain organisms, and other factors, the mechanism can vary widely—from an extremely stringent scheme with a high proportion of required case-by-case governmental risk assessments to a more laissez-faire one in which there is complete exemption or a requirement only for notification for the majority of experiments. Whatever the choice, the cardinal principles of sound regulation would be met.

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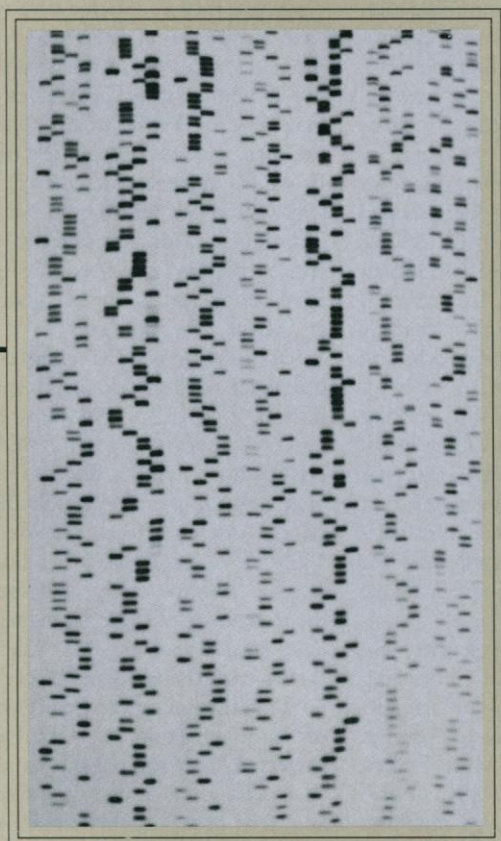
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1. National Academy of Sciences, "Introduction of recombinant DNA-engineered organisms into the environment: Key issues" (National Academy Press, Washington, DC, 1987).
2. National Research Council, "Field testing genetically modified organisms: Framework for decisions" (National Academy Press, Washington, DC, 1989).
3. Ecological Society of America, *Ecology* 70, 298 (1989).
4. The recent U.S. Kiawah Island International Symposium (November 1990), "Biosafety Results of Field Tests of Genetically Modified Plants and Microorganisms," at which the results of nearly 150 field trials were described, affirmed at least the short-term predictability of the safety of recombinant DNA-manipulated organisms.

The Trabi: Not a Problem

I would like to make a few comments regarding Michael Balter's article "Microbes and 'the Trabi problem'" (News & Comment, 12 Apr., p. 205). I am originally from Poland and have been in the United States for 10 years. While living in Poland I owned a Trabant. I bought it in 1971 for 65,000



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złoty, or 1 year's salary for a medical school faculty member. I had to prepay and wait 10 months before it finally was delivered. For ten long years I drove my beloved Trabant around Poland and Eastern Europe. In 1980, I drove it to Norway, where I worked for 3 months as a biochemist in Bergen. I never had the feeling that I was driving a "running gag." Some people in Norway had never seen a Trabant before, but no one invited me to an auto graveyard. I did not think it was the best car in the world, but, given the conditions of life in Poland and other Eastern European countries, it was very economic and convenient.

As inflation was going on, the person to whom I sold the Trabant sold it for 250,000 złoty in 1987. It was 16 years old, plastic, and smoke-belching, but still not a "running gag." Of course, there were endless engine overhauls, new tires, batteries, and so forth, but a plastic body was eternal. I hope that someday "the Trabi problem" can be solved, but in the meantime I would like to correct the impression that no one has ever liked the Trabant. There was a time when we, the owners and the Trabant, had a lot of good times together.

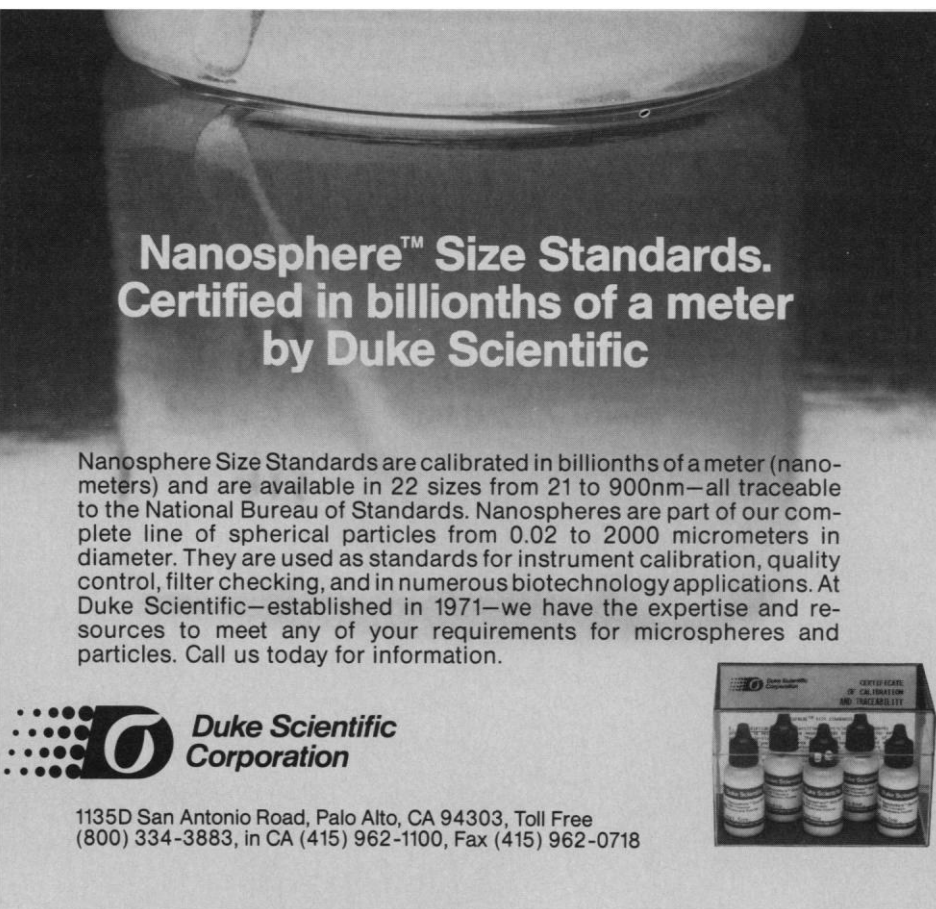
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Journal of Biological Chemistry and Protein Crystallization Papers

In a recent letter (22 Mar., p. 1408), John Tainer stated that the *Journal of Biological Chemistry* has ceased publishing detailed protein crystallization papers. Tainer further implied that the reason for this was low citation frequency. This is not correct. The journal will be pleased to accept papers that give information on crystallization provided that they also contain sufficient additional information such that the paper, as a whole, makes a substantive contribution to biochemistry. Citation frequency is not a consideration. A summary of journal policy on this matter follows:

The editors of the *Journal of Biological Chemistry* encourage authors to submit manuscripts reporting new macromolecular structures by x-ray crystallographic methods. Reports of studies at all stages of structure analysis are welcome and will be considered on their own merits and on whether they are thought to further significantly our understanding of biochemistry. However, in general, manuscripts that only describe conditions for crystallization of a macromolecule or the diffraction pattern and space group of the crystals are not thought to contain sufficient information to warrant publication in the journal.

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The editors of the *Journal of Biological Chemistry* hope that this statement corrects any misunderstanding regarding the acceptability of crystallographic manuscripts in the journal.

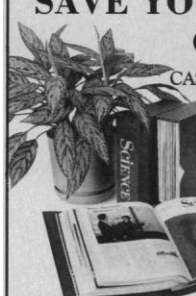
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Antinoise and Energy Expenditure

Every new technology has a cost that is initially overlooked. Active noise control (Research News, 26 Apr., p. 508) reduces noise by destructive interference, "leaving behind nothing but silence." But it should be obvious that the sound energy does not vanish; application of antinoise could result, in some cases, in the expenditure of *twice* as much energy as the original noise. Some of this energy can go into heat, so it is ironic that one of the first applications of active noise control is to quiet air conditioner ducts.

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