bias is no longer a valid world view or justifiable foundation for biomedical research.

The biomedical research establishment is increasingly reacting to the challenge of the animal rights movement in ways that are often hyperemotional, nonobjective, and uncharacteristically unscientific. This is a disturbing trend, since the same individuals continue to castigate the animal rightists for using such tactics.

What is needed in this continuing debate is objective analysis and discussion of the strengths and weaknesses of both sides of the issue. We are doing this. The phenomenal growth, increasing intellectual vigor, and legislative victories of the animal rights movement clearly demonstrate that we have made an acceptable case to the general public.

Until the biomedical research community is ready to accept that their traditional approaches to research and health care are not infallible, that change is needed and desirable, and that the legitimate concerns of the public must be seriously addressed, they will continue to encounter a high level of opposition.

JOHN E. MCARDLE
Humane Society of the United States, 2100 L Street, NW, Washington, D.C. 20037

EDB Alternatives

The issue of grain fumigation has been addressed in *Science* (News and Comment, 17 Feb., p. 671; Letters, 30 Mar., p. 1354) and elsewhere (*1*) in recent weeks. Commentators have described a retreat to more traditional chemical treatments of grain as the result of controversy and rulings over ethylene dibromide (EDB). We are concerned that this may stimulate a perception that the alternatives mentioned are safe or safer than EDB. The truth is that compounds such as aluminum phosphide, methyl bromide, and especially carbon tetrachloride mixtures (usually with carbon disulfide) are highly toxic. Grain terminal workers and grain inspectors are at special risk. We have documented serious multifocal nervous system damage among grain terminal workers, which we attribute to exposure to the carbon tetrachloride–carbon disulfide mixtures in particular (*2*). In practice, worker protection cannot be ensured. Uncontrolled fumigation of incoming grain cargoes and inadequate labeling of shipments according to prior fumigation are two important risk factors.

Our concerns and conclusions over the safety of grain fumigation are reinforced in the findings of a recent General Accounting Office investigation (*3*).

We hope that the EDB controversy spurs a broader examination of the safety and efficacy of the predominant chemical methodologies for insect control in the grain industry.

S. L. SAUTER
L. J. CHAPMAN
Department of Preventive Medicine, University of Wisconsin Medical School, 504 Walnut Street, Madison 53706

H. A. PETERS
C. G. MATTHEWS, R. LEVINE
Department of Neurology, University of Wisconsin Medical School, 600 Highland Avenue, Madison

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1. S. King, *New York Times*, 25 March 1984, p. E9.
2. M. Peters *et al.*, *Am. J. Indust. Med.* **3**, 317 (1982); S. Sauter, paper presented at the American Industrial Hygiene Association Conference, Portland, Ore. (1981).
3. *Grain Fumigation: A Multi-faceted Issue Needing Coordinated Attention* (General Accounting Office, Washington, D.C., 1981).

Gene-Splicing Experiment

Colin Norman's article "Judge halts gene-splicing experiment" (News and Comment, 1 June, p. 962) contains an incorrect assessment of the proposal submitted by Advanced Genetic Sciences, Inc. (AGS), to the Recombinant DNA Advisory Committee (RAC) for their consideration. The proposed biological control experiment does parallel that previously approved by the RAC for Steven Lindow and Nickolas Panopolous, but differs substantially in target crops and bacterial strains. The statement on page 963, "the company has been funding Lindow's research and now wants to test his modified bacteria on several different crops," is inaccurate and establishes a negative and detrimental viewpoint toward our scientific objectives and company interests. The strains cited in the AGS proposal were isolated and characterized at AGS independently of Lindow's efforts. Our proposal was in no way an effort to avoid the current litigation and injunction delaying Lindow's field application.

TREVOR SUSLOW
Plant Pathology/Bio-control Group, Advanced Genetic Sciences, Inc., 6701 San Pablo Avenue, Oakland, California 94608

Erratum: In the article "Windows on a new cosmology" by George Lake (18 May, p. 675), the caption for figure 4(b) on page 680 was incorrect. The photograph shows the electric dipole moment apparatus at the Institute Laue-Langevin in Grenoble, France [courtesy of N. Ramsey].