at EMBL are requesting similar cooperation from other journals that publish sequences, and we earnestly solicit the cooperation of investigators. Since for many purposes sequence data must be accessible to computer processing, we hope that an increasing number of investigators will come to feel that, just as a piece of research is not complete until it has been published, so a sequencing effort is not complete until data are available from the data banks.

CHRISTIAN BURKS
JAMES FICKETT
WALTER GOAD
GenBank, Mailstop K710,
Los Alamos National Laboratory,
Los Alamos, NM 87545

REFERENCES

1. C. Burks *et al.*, *Comp. Appl. Biosci.* 1, 225 (1986).

"Toxic Torts"

I appreciated Eliot Marshall's article "Immune system theories on trial" (News & Comment, 19 Dec., p. 1490) since it accurately documented studies supporting the existence of chemically induced immune dysregulation. I must however object to the description of the manner in which I reach my conclusions.

My assessments of immune system damage are based on abnormalities in phenotypic distribution of cells of the immune systems in exposed populations and clinical symptomatology such as recurrent infections, autoimmune diseases, increased incidence of cancers, and organ toxicity in the affected populations. This diagnosis is based on medical history, physical examination, and laboratory analysis. Although literature citations documenting immune system abnormalities associated with such chemicals support these conclusions, clinical manifestations provide the best assessment of immune system function and they are supported by the laboratory data.

My objectives in presenting my data first in the courtroom are to establish a framework within which manufacturers of toxic substances can ensure their safe use as well as to provide an impetus for funding research programs in immunotoxicology. I have placed this in the public record as often as possible. The results of these efforts are gratifying. I have never seen a vehicle of social change work as fast and as effectively as the "toxic tort" arena.

We now have data on clinical symptomatology and immune cell phenotype profiles in several large populations exposed to different immunotoxins. These data support my conclusions. My scientific colleagues should be aware that all of my data on population studies are a matter of public record and are available on request.

ALAN S. LEVIN
450 Sutter, Suite 1138,
San Francisco, CA 94108

SDI Goals

The negative response to the Strategic Defense Initiative (SDI) in a poll conducted among National Academy of Sciences (NAS) members (News & Comment, 14 Nov., p. 816) was predictable because of how the survey questions were phrased. An effective SDI system need only satisfy two goals: (i) a defense against ballistic missiles aimed at U.S. military assets and (ii) a functional capability that appears credible to a prospective aggressor. The comprehensive Ballistic Missile Defense system envisioned by SDI critics that would "take out more than 99 percent of incoming warheads" is not necessary for the first goal, nor is large-scale empirical testing required for the second goal. In short, the purpose of SDI is not, as the poll stated, to "provide an effective defense of the U.S. civilian population" but instead to preserve a U.S. capability to retaliate in the event of a Soviet nuclear first strike.

The threat of massive U.S. nuclear retaliation has stabilized the world for decades. It is now eroding. The Soviets have installed land-based missiles that can deliver megaton explosions to a target the size of a football field. These missiles are designed to destroy hardened military silos hidden under tons of U.S. earth. This magnitude of explosive power and accuracy presents the nearly 8000 Soviet nuclear missiles as a force for first-strike destruction and not an attack deterrent. The latter goal would have emphasized submarine missiles which, by comparison, are inaccurate but difficult to find (in-flight correction is 7 years off). Since a Soviet first strike can destroy about 95 percent of top-priority U.S. targets, under 12 percent of our 900 Minuteman III missiles would survive to retaliate. Thus only 10 percent of the 4000 top-priority Soviet targets would be at risk from our land-based Mark 12A warheads. As a practical matter, the number is considerably lower due to an extensive Soviet defense system supported by at least 16,000 SAM-2 missiles.

Soviet air defenses are prodigious and no longer penetrable by our B-52 bombers. These numbered 1300 in the early 1960's, but now total under 350. They are older than the pilots who fly them. If we consider how the Strategic Arms Limitation Treaty (SALT) limits the range of Cruise missiles, the sole deterent against a Soviet first strike appears to be U.S. retaliation from nuclear submarines. This means that each new development in submarine detection brings the world closer to nuclear destabilization. Current U.S. nuclear strategy arose from two unthinkable alternatives: mass suicide and surrender. Now SDI offers a third: mass intercept with time to rethink retaliation. More than that, sharing SDI technology would give the Soviets incentive to jointly work toward making a practical umbrella for them as well. The neglect of these and other factors indicates NAS members were polled on a system dissimilar to the one needed to satisfy the goals of SDI.

R. GANGE
Post Office Box 1536,
Princeton, NJ 08540

Erratum: In the editorial by Philip H. Abelson "The International Geosphere-Biosphere Program" (7 Nov., p. 657), the reference to T. F. Malone's article in *Environment* should have included the month (October 1986).

Erratum: In Table 1 (p. 351) of the report "Structure-activity studies of interleukin-2" by F. E. Cohen *et al.* (17 Oct., p. 349), reference 15 was incorrectly cited for the entries for the 1–29, 30–49, and 100–133 deletion mutants. For all three entries, the reference should have been (*16*).