It seems that few are paying attention to the positive aspects of the thesis. The Chernobyl accident may have, once and for all, shattered the myth of a "China syndrome" ever occurring: an amount of nuclear fuel equivalent to that found in the largest Western reactors (approximately 135 metric tons) melted down at Chernobyl, yet did little if any damage to the lower regions of the reactor building. Additionally, it is not clear why more cesium was retained in the matrix of the Chernobyl core (exposed to a highly oxidizing environment for 10 days) than was retained, on average, in the melted portion of the Three Mile Island fuel. Answers to these questions may yield significant safety-related design improvements for future reactors. The thesis clearly recommends the *consequences* of the accident should be revisited, just as the *causes* were revisited by INSAG-7 (*3*).

Alexander R. Sich
43 Solent Road,
London NW6 1TY,
United Kingdom

References

1. A. Sich, thesis, Massachusetts Institute of Technology (1994).
2. E. A. Warman, paper presented at the New York Chapter Health Physics Society Symposium on the Effects of the Nuclear Reactor Accident at Chernobyl, Brookhaven National Laboratory, Upton, NY, 3 April 1987.
3. International Nuclear Safety Advisory Group, *INSAG-7—The Chernobyl Accident: Updating of INSAG-1* (Safety Series No. 75-INSAG-7, International Atomic Energy Agency, Vienna, 1992).

■

EPA Dioxin Reassessment

On 13 September 1994, after more than 3 years of effort, the U.S. Environmental Protection Agency (EPA) officially released draft documents describing its reassessment of the potential human health risks arising from exposure to dioxin and related compounds that bind to the aryl hydrocarbon receptor. During the early stages, EPA made extensive use of outside experts in the preparation and peer review of eight "State of the Science" chapters of its new Health Assessment Document (HAD) which, together with a three-volume exposure assessment, lays out the factual basis for EPA concerns. Most of us participated actively in this information-gathering process.

The new HAD's ninth chapter is a risk characterization that presents the conclusions EPA has drawn from the scientific

information base. Notable among these are that (i) dioxin is a probable human carcinogen; and (ii) impacts of dioxin exposure on human health, including enzyme induction and developmental, reproductive, or endocrine effects, may be occurring at or within an order of magnitude of average background body burdens.

It is important to note that the outside scientific community was not significantly involved in developing these conclusions. Apart from a day-and-a-half meeting with outside experts in September 1992, preparation of the risk characterization has been an in-house affair. Although much has been learned in recent years about the toxicity of dioxin and related compounds, there are still major gaps in understanding that can be filled only by additional careful scientific study. The conclusions of EPA's current risk characterization are thus heavily dependent upon many unproved assumptions and untested hypotheses that deserve careful scrutiny by the scientific community. Divergent opinions regarding these conclusions can be expected.

We strongly encourage scientists to take an active role in determining the inferences that can be drawn with scientific rigor from the available data. Most important, we urge EPA to clearly distinguish regulatory policy from matters of scientific fact. Otherwise, the press and public will surely misinterpret the hypothetical risks presented in the reassessment as real.

Christopher A. Bradfield, *Department of Molecular Pharmacology and Biological Chemistry, Northwestern University Medical School, Chicago, IL 60611, USA;* ***Michael A. Gallo,*** *Environmental and Community Medicine, Robert Wood Johnson Medical School, University of Medicine and Dentistry of New Jersey, Piscataway, NJ 08854–5635, USA;* ***Thomas A. Gasiewicz,*** *Department of Environmental Medicine, University of Rochester Medical Center, Rochester, NY 14642, USA;* ***Raymond S. Greenberg,*** *School of Public Health, Emory University, Atlanta, GA 30329, USA;* ***William F. Greenlee,*** *Department of Pharmacology and Toxicology, School of Pharmacy and Pharmacal Sciences, Purdue University, West Lafayette, IN 47907–1334, USA;* ***Joseph Margolick,*** *Division of Toxicological Sciences, School of Hygiene and Public Health, Johns Hopkins University, Baltimore, MD 21205, USA;* ***Donald R. Mattison,*** *University of Pittsburgh, Pittsburgh, PA 15261, USA;* ***Peter Munson,*** *Silver Spring, MD 20904, USA;* ***Robert A. Neal,*** *Center in Molecular Toxicology, Department of Biochemistry, Vanderbilt University School of Medicine, Station 17 Nashville, TN 37232, USA;* ***Allan B. Okey,*** *Department of Pharmacology, University of Toronto, Toronto, Ontario, Canada M5S 1A8;* ***David L. Olive,*** *Department of Obstetrics and Gynecology, Yale University School of Medicine, New Haven, CT 06510, USA;* ***Alan Poland,*** *McArdle Center for Cancer Research, Department of Oncology, University of Wisconsin, Madison, WI 53706, USA;* ***Arleen B. Rifkind,*** *Department of Pharmacology, Cornell University Medical College, New York, NY 10021, USA;* ***Joseph V. Rodricks,*** *ENVIRON Corporation, 4350 North Fairfax Drive, Arlington, VA 22203, USA;* ***Karl Rozman,*** *Department of Pharmacology and Toxicology, University of Kansas Medical Center, Kansas City, KS 66160, USA;* ***Stephen H. Safe,*** *Department of Veterinary Medicine, Texas A&M University, College Station, TX 77843, USA;* ***Thomas B. Starr,*** *ENVIRON Corporation, 7500 Rainwater Road, Raleigh, NC 27615, USA;* ***Thomas R. Sutter,*** *Department of Environmental Health Sciences, Johns Hopkins University, Baltimore, MD 21205–2179, USA.*

Corrections and Clarifications

In John Travis' Research News article "Glia: The brain's other cells" (11 Nov., p. 970), work at Iowa State University was mentioned on page 971, and Philip Hayden was named as the group leader. His team was one of two working on the project. The other group, which focused on the release of glutamate by astrocytes, was led by Srdija Jeftinija. In the same article, it was stated that William Greenough organized a glia workshop at last year's neuroscience meeting. That workshop was held at the 1993 Winter Conference on Brain Research at Snowbird, Utah.

In the News article "Astronomy's optical illusion" by John Travis (21 Oct., p. 356), the name of Paul Schechter of the Massachusetts Institute of Technology was given incorrectly on page 357 as Paul "Schectman."