



**A reader points out a major role for science and engineering suggested in the recently released U.S. House of Representatives report on national science policy. The role of the U.S. Department of Defense in funding academic basic research is lauded. Proposed animal experimentation regulation in India is discussed. Standards for expert engineer witnesses are debated. A reader writes: "Reliance on experience and judgment in decisions that affect lives of others sets engineering and medicine apart from science." And two views of who should own scientific papers are presented.**

## Environmental Decision-Making

David Malakoff's article (News of the Week, 2 Oct., p. 23) about the U.S. House of Representatives Science Committee's new report on national science policy (1) does not mention that the report calls for a fourth major role for science and engineering, in addition to national security, health, and the economy: "that of helping society make good decisions. We believe this role for science will take on increasing importance, particularly as we face difficult decisions related to the environment" (1, p. 5).

The organization and scope of the federal government's present efforts in science for the environment are far from optimal (2). Congressman Vernon J. Ehlers (R-MI), the principal author of this new report, has recognized the problem and has joined with 90 of his colleagues in bipartisan co-sponsorship of legislation to create a National Institute for the Environment (NIE) under the National Science Foundation, with a mission to improve the scientific basis of environmental decision-making (3). It is reasonable to expect that both Congress and the Administration will make serious efforts over the next couple of years to more effectively achieve the new goal of the emerging national science policy: improved science for decision-making on the environment.

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### References

1. "Unlocking our future: Towards a new national science policy" (Interim report, House Science Committee, Washington, DC, 24 September 1998, [www.house.gov/science/science\\_policy\\_report.htm](http://www.house.gov/science/science_policy_report.htm)).
2. Committee for the National Institute for the Environment, *Environ. Profess.* **16**, 94 (1994); *Environmental Research and Development: Strengthening the Federal Infrastructure* (Carnegie Commission on Science, Technology, and Government, Washington, DC, 1992); *Environmental Research and Development: Status Report and Recommendations* (Carnegie Commission on Science, Technology, and Government, Washington, DC, 1995); Committee on Environmental Research, National Research Council, *Research to Protect, Restore, and Manage the Environment* (National Academy Press, Washington, DC,

1993); National Commission on the Environment, *Choosing a Sustainable Future* (Island Press, Washington, DC, 1993).

3. H. R. 2914, Sound Science for the Environment Act; see also [www.cnif.org](http://www.cnif.org)

## Animal Experimentation Rules in India

Pallava Bagla's article "Animal experimentation: Strict rules rile Indian scientists" (News of the Week, 18 Sept., p. 1777) implies that Indian scientists are against any "strict" rules because of the increased paperwork involved. We write to correct that implication. In fact, we are glad that a beginning has been made



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on formal regulation of animal experimentation in India. All we have against the proposed rules are three procedural reservations:

1) The rules envisage a single central committee as the sole licensing body for all experimentation in a large country. Considering the foreseeable workload for a single agency, we ask that the committee decentralize and operate through several Institutional Animal Care and Use Committees (IACUCs). Bagla mentions, correctly, that the Indian National Institute of Immunology formed an IACUC only this summer. What he does not say is that this simply set up a single committee for animal use-related issues that institutional committees on ethics and biosafety dealt with earlier. In their hands, all our animal experiments have followed U.S. National Institutes of Health norms for years.

2) The rules demand prior approval for each individual experiment separately. We think that this is impracticable and instead suggest licensing humane protocols in scientifically approved research projects.

3) The rules effectively prohibit the acquisition of experimental animals from non-Indian sources. This denies Indian researchers access to international genetically defined animal strain resources. We urge allowing such acquisition.

We think our suggestions conform to the "well-established norms adhered to in the West" mentioned by Maneka Gandhi, as quoted in Bagla's article. Despite the contention of anti-science "animal rights" advocates who are mentors of the proposed rules, the Indian scientific community welcomes the rules. We merely ask that the rules be modified to be compatible with good science.

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## DOD: A Critical Funder and Risk-Taker

Wm. A. Wulf's editorial (Science's Compass, 18 Sept., p. 1803), saying that the U.S. Department of Defense (DOD) "has become a critical funder of academic basic research," is extraordinarily timely, just when Congressman Vernon J. Ehlers (R-MI) has released a document on the future of American science (D. Malakoff, News of the Week, 2 Oct., p. 23). Indeed, DOD has always been that, ever since the Office of Naval Research started the concept in 1946. It is inconceivable that a national report could be written without emphasizing the absolute need to maintain DOD's basic research funding share as a key component of the national effort. A specific argument for DOD basic research is that it is the only part of the national system that proactively finds and supports outside-the-paradigm breakthroughs. In the 50 years of my "funded" life, neither I nor any colleague I know has found any other agency willing to take the risks that DOD takes on really new scientific discoveries.

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## Standards for Engineer Witnesses

The article about the Supreme Court's pending case involving standards for expert witnesses, "Should engineer witnesses meet same standards as scientists?" by Jocelyn Kaiser (News of the Week, 11