



# Journals feel pressure to adopt disclosure rules

**After an inquiry by *ES&T*, three leading science societies say they will now examine conflict-of-interest policies.**

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As environmental journals publish more controversial papers on topics such as human health and global warming, they are beginning to face a serious issue that medical journals have long been dealing with—conflict of interest. Although disclosure policies are standard in the medical community, publishers of environmental research have been slow to adopt such guidelines.

Last December, a front-page *Wall Street Journal* (*WSJ*) story reported that a medical study in the *Journal of Occupational and Environmental Medicine* (*JOEM*) contained a troubling omission. Ostensibly written by two Chinese researchers, the paper disputed findings that chromium-tainted water caused high rates of cancer. But court documents later revealed that the study had been conceived, drafted, and edited by ChemRisk—a scientific consulting firm working for PG&E Corp., which was involved in litigation over chromium pollution in California groundwater.

A month later, a similar story landed on *WSJ*'s front page, this time zapping the *Journal of the American Medical Association* (*JAMA*). Leading psychiatrists from Massachusetts General Hospital; Emory University; and the University of California, Los Angeles, had published a paper challenging the general assumption that hormonal changes during pregnancy protect women from depression. But the study failed to disclose that 7 of the 13 authors had been paid consultants or lecturers for the makers of antidepressants.

Both incidents created abrupt reactions. The editor of *JOEM* retracted the article on chromium, stating that the parties who submitted the study had failed to disclose the financial and intellectual input from ChemRisk. Meanwhile, editors at *JAMA* promptly reported that they were strengthening disclosure requirements for authors.

The two journals have one thing in common: they both had financial-disclosure policies that could be breached. But they are in the minority. According to a 2001 study [188KB PDF], only 16% of the top 1400 science and biomedical journals require authors to submit conflict-of-interest statements. And experts say that medical journals are more likely to require disclosure than journals in environmental science.

The editors of several environmental journals recently discovered that they had published papers by industry-funded researchers, yet had not disclosed the authors' financial backers. Officers of the American Geophysical Union (AGU) and the American Meteorological Society say that they do not have disclosure policies but note that they will discuss new requirements at upcoming meetings. Similarly, leaders with the Society for Risk Analysis, the publisher of the journal *Risk Analysis*, tell *ES&T* that they now require authors to sign conflict-of-interest statements and that the society has set up a task force to examine the issue.

“Disclosure is important so that people know if the researcher or reviewer has financial or other interests with a stake in the research results,” says *ES&T*’s editor Jerry Schnoor. “Then, people can judge the findings in that light.” Schnoor adds that *ES&T* is now strengthening its disclosure policy so that editors and readers will know who is funding studies.

## **The risk of smoky finances**

In December 1998, the U.S. EPA proposed several risk-mitigation measures to protect workers handling phosphine—a chemical for fumigating grain and other commodities. The proposals included creating a buffer zone around fumigation sites and notifying residents living within 750 feet. EPA also proposed lowering the exposure threshold of phosphine from 0.3 parts per million (ppm) to 0.03 ppm.

Court documents [52KB PDF] show that, to fend off regulations, RJ Reynolds Tobacco Co. (RJRT) funded the Phosphine Coalition, which successfully fought against the proposed changes. A centerpiece of its strategy was hiring the consulting firm Sciences International to lobby EPA and to write a study on phosphine’s toxicity.

The study was finally published in *Risk Analysis* in 2004. Five people appear as authors on the paper: Betty Anderson and two of her employees at Sciences International, and Joel Seckar and Paul R. Harp, who are listed as members of the Phosphine Coalition of Washington, D.C. The Phosphine Coalition does not have a street address, and the paper does not note that Harp and Seckar are employed by RJRT.

In April 1999, officials with Sciences International met with EPA staff to try to persuade the agency to halt the proposed changes to phosphine regulations. A month later, Anderson, Sciences International’s executive director, sent a memo [64KB PDF] to Seckar stating, “I believe that the approach with the greatest likelihood of affecting EPA’s position is to prepare and publish in a peer-reviewed journal a scientific paper or article that describes the current science on the toxicity of phosphine.” She continues, “Since I am currently Editor-in-Chief of the international journal *Risk Analysis*, perhaps the peer-review process could be expedited, if we decide that it is the journal of choice.”

At the end of 1999, RJ Reynolds released a report highlighting the company’s [accomplishments](#) [56KB PDF]. “R&D led the Phosphine Coalition in addressing the scientific issues involved when the Environmental Protection Agency (EPA) proposed a new phosphine exposure standard,” reads a passage. Further along, the document states, “The efforts of the Coalition saved RJRT many millions of dollars.”

“I’m not all that shocked, really,” says David Ozonoff, a professor of environmental health at Boston University, after reading the court documents. “I mean, it’s bad, but I’ve just seen so much worse with the asbestos industry. Maybe I’m just jaded or getting used to this.”

Wendy Wagner, a law professor at the University of Texas in Austin and a leading authority on the use of science by environmental policy makers, says, “What these documents show is that industry can bring a great deal of resources to bear and overwhelm agencies trying to protect public health.”

Anderson tells *ES&T* that she did not work with RJRT on the phosphine toxicity problem but did work for the Phosphine Coalition, which comprised various agriculture interests, including the grain industry. Anderson says that she recused herself from the peer-review process, and she points out that the paper was

not expedited.

In an email, Seckar says that the coalition has disbanded and adds that he was only an active participant and not the coalition's lead contact.

An editor with *JAMA*, Drummond Rennie, says that the whole affair contains a nest of problems. "I really don't know where to begin," he says. Multiple conflicts, he says, would have precluded publishing the article in a medical journal. "I'm not accusing anyone of doing anything outside the standard of their field," he says, carefully choosing his words. "What I am saying is that this does not fit the standard of my field."

Former EPA assistant administrator Lynn Goldman, currently a professor of public health at Johns Hopkins University, says she had trouble sleeping after reading the documents. "It really shows how peer review has just turned into some form of pixie dust that is sprinkled over studies so that they can save companies money when they run into regulatory problems," she says.

The Society for Risk Analysis discussed the issue at a board meeting in June. Society president Chris Frey tells *ES&T* that the group has instituted new financial disclosure policies for authors and reviewers. "It's a growing issue of importance," Frey says of conflict of interest in science. "But the society has recognized the need for these policies."

### **A word for my sponsor**

Although the Intergovernmental Panel on Climate Change (IPCC) in 1995 found evidence for a "discernible human influence on global climate," high-profile celebrity skeptics and think-tank activists have kept a decade-long debate spinning in the press. Numerous reports have revealed that these people and their institutions receive money from the oil and gas industry, but little evidence of their financial dealings is revealed in the peer-reviewed literature.

A case in point is Pat Michaels, a professor of environmental science at the University of Virginia and the resident climate-change expert at the Cato Institute, a free-market think tank that receives money from ExxonMobil.

Last July, Michaels made headlines across the U.S. when ABC News and the Associated Press reported that Colorado-based Intermountain Rural Electric Assoc. (IREA) had paid Michaels more than \$100,000. IREA is heavily invested in coal-burning power plants.

"We here at IREA believe that it is necessary to support the scientific community that is willing to stand up against the alarmists and bring a balance to the discussion," wrote Stanley Lewandowski, Jr., the group's general manager, in a July letter to other utilities.

While taking money from special interests, Michaels was also criticizing studies that linked climate change to more intense hurricanes. In May, he published a study in *Geophysical Research Letters*. And in December, he published a comment [72KB PDF] in the *Journal of Climate* with Chris Landsea of the National Hurricane Center and Chip Knappenberger of New Hope Environmental Services. Neither article listed Michaels' corporate sponsorship.

“There’s a financial conflict, and it should be disclosed,” says Don Kennedy, editor of the journal *Science*.

Penn State professor of meteorology Michael Mann says that journals outside the medical field fail to recognize the hazards of researchers compromised by corporate funding. “But the threat is just as real, and I believe that journals in other areas of science will become increasingly sensitive to the threats posed by conflicts of interest,” he says.

But some environmental scientists contacted by *ES&T* seemed less certain than their colleagues in the medical community about the importance of disclosure and whether corporate funding skews results.

“In Michaels’ case, it is clear that he has a scientific view [that] global warming is not a problem that accords with the coal industry,” says Tom Wigley, a senior scientist with the National Center for Atmospheric Research. “But that does not mean his science is distorted.”

Judith Curry, a professor of atmospheric sciences at the Georgia Institute of Technology, also expressed mixed feelings about the need for disclosure. “I don’t think the oil-company money influences Michaels all that much,” she says. “He thinks what he thinks, and therefore oil companies throw money at him.”

“Publishing in the refereed literature is just that: publishing in a refereed format, and it speaks for itself,” wrote Michaels in an email to *ES&T*. When asked whether he should list his funding sources, he replied, “I suggest you call the people at journals for more authority than I have!”

“Personally, I hadn’t thought about this issue much until now,” says Michael Friedman, the journals production manager at the American Meteorological Society, which publishes the *Journal of Climate*. “I believe that all journals would be helped by a firmer policy regarding this subject,” he says, adding that he plans to suggest that society executives discuss the issue at their next meeting.

“I think it is most important to present the science in a way that allows the conclusions to be evaluated by the reader. Other matters are secondary,” says Tim Grove, a professor of earth sciences at the Massachusetts Institute of Technology. Grove is president-elect of the AGU, which publishes *Geophysical Research Letters*, but he says that his statements reflect his personal opinion and not the society’s.

“One might argue that putting in a conflict-of-interest statement... could lead to the dismissal of the work by scientists who do not favor the view presented in the paper, without considering the evidence,” he says.

“We will have an executive discussion on this, and we’re looking at the policies of other journals,” says Tim Killeen, president of the AGU. He also echoes Grove’s concerns that disclosure might lower the credibility of studies.

But Kennedy dismisses such arguments and points out that Michaels would have been required to report industry funding if he had published in *Science*. Disclosure, he says, is important if journals wish to remain credible. “If they don’t do it, people are entitled to doubt the objectivity of the science,” he says.

Science journals reporting basic research have not been under the public lens like medical journals, says Sheldon Krinsky, a professor of environmental policy at Tufts University and author of the book *Science and the Private Interest*. “Issues like global warming or genetically modified foods could touch a similar society nerve that puts pressure on nonmedical journals to adopt conflict-of-interest policies,” he says. —