Letters

Scientific Records and Regulations

The News & Comment article "A clash over standards for scientific records" by Eliot Marshall (4 May, p. 544) presents a relatively comprehensive account of the recent Public Health Service (PHS) conference on data management. However, many of the discussions during the workshop took place in small work groups and the reporter focused, of necessity, on the plenary sessions. As a result, the article was rather one-sided, and there were other points of view that should have been acknowledged. Also, the article contains several inaccuracies about the structure and function of the PHS scientific misconduct apparatus.

The article reports that "many of the academic leaders" at the conference expressed the point of view that there was no problem with data sharing and that the conference was "a waste of time." Although there were some participants who had this point of view, there were a substantial number of other attendees who felt that there were some important unresolved issues surrounding data ownership, sharing, and access and that the conference was a useful effort to get some of these issues on the table for discussion. Many of these issues were raised by the academic and scientific communities in responses to September 1988 notices in the *Federal Register* asking for comments on a range of proposed PHS policies on scientific misconduct.

The article also stated that the National Institutes of Health Office of Scientific Integrity (OSI) was a "part" of the Office of Scientific Integrity Review (OSIR) in the Office of the Assistant Secretary for Health, Department of Health and Human Services (HHS). This is inaccurate—the two offices are independent, with OSI being responsible for monitoring investigations into allegations of scientific misconduct at PHS grantee institutions (or conducting investigations when warranted), and the OSIR reviewing the results of such investigations and recommending sanctions to the assistant secretary. Both offices have a responsibility for fostering the responsible conduct of science in PHS-supported research.

Furthermore, the article states that the PHS investigates cases "in which a credible charge has been made that a grantee institution has not maintained standards in its realm." This statement is not correct and is especially troubling since it implies that the PHS is policing adherence to some unspecified set of "standards." The PHS requires grantee institutions to inquire into and investigate if necessary *allegations of scientific misconduct*. Despite suggestions that the PHS require or impose standards for the responsible conduct of research at PHS-funded institutions, we feel that it is the scientific and academic communities' responsibility to develop and adhere to such standards, and that the PHS should enunciate standards only for its intramural research programs.

The number of cases under "active investigation" reported in the article was 74, with an additional 50 being monitored for "other agencies." Actually, the OSI has about 74 cases that it is dealing with, but not all of them are active investigations. Many are very preliminary allegations that have not yet reached, and may never reach, the investigation stage. Of these 74 cases, the OSI is monitoring about 20 investigations being conducted by grantee institutions and is itself conducting about nine investigations and five or six inquiries.

The article (accurately) reports that some participants feel strongly that the PHS requirement that records related to research grants be maintained for 3 years should apply only to fiscal records. However, the regulation states that the requirement applies to all financial and programmatic records, supporting documents, statistical records, and other records reasonably considered as pertinent to an HHS grant. Given this language, it is hardly a reach to interpret the regulation as applying to research data. We understand that the concern of the academic administrators is that we are going to require formalized and systematic procedures for storing all research data generated with PHS funds. This would be unnecessary, expensive, and burdensome. We believe that it is the responsibility of the scientist, as a steward of federal research funds, to maintain his or her research data in an accessible and interpretable form for a minimum of 3 years after termination of a grant. Nevertheless, the grantee institution has the ultimate responsibility, under current regulations, to ensure that all data related to a research grant are available for the 3-year period.

Finally, it is worth emphasizing that the meeting achieved its purpose—to provide a forum for an open discussion of whether there are problems with data ownership, access, and retention, and, if so, how to foster more open scientific communication. The agenda was clearly exploratory in nature and was not intended to develop rules or regulations—such an aim was disavowed by PHS representatives, including myself, at several points during the meeting. There will not be any new regulations resulting from this meeting.

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Response: Reporters were barred from the "small workshops" Bivens describes; the comments noted in the article were those given audibly in open session.

Bivens makes it clear that the two scientific integrity offices at the Department of Health and Human Services are structurally distinct. They are, however, part of a joint effort, in that one (the Public Health Service office) recommends action on cases investigated by the other (the National Institutes of Health office).

As for the numbers, Jules Hallum, director of the NIH Office of Scientific Integrity, recently confirmed the length of his agenda: he said there were "about 80" cases on the NIH active list and "about 50" more being monitored for other institutions.

—ELIOT MARSHALL

Detection of Concealed Explosives

With the tragic December 1988 bombing of Pan Am Flight 103, there has been heightened interest in the detection of high-performance military "plastic" explosives in airport luggage (News & Comment, 13 Jan. 1989, p. 165). Conventional x-ray machines do not detect explosives directly, but rely on operators to identify explosives by their shapes. Obviously, a direct measurement of concealed explosives would provide a more reliable detection scheme. Prototype instruments that use thermal neutron activation analysis have been placed at high-risk airports. This method, which detects the high concentrations of nitrogen indicative of explosives, appears promising but currently lacks adequate sensitivity and specificity.

We outline here a simple and inexpensive method which makes use of this available instrumentation, but significantly augments this detection technique. We propose that explosives (or parts of explosives, such as detonators) be tagged with a distinctive marker. Such ideas are not new, but seldom have been discussed in the unclassified literature because of the concern that the announcement of any screening method would help terrorists circumvent it. The marker we choose is an uncommon element that emits characteristic radiation upon thermal neutron activation. Ideally, this marker should