

Letters

Human Subjects Research

In reporting a recent investigation by the New York State Department of Health of research involving human subjects at the State University of New York at Albany (SUNYA), R. Jeffrey Smith (News and Comment, 28 Oct., p. 383) cites a series of allegations about the policies and research of the university's psychology department that we consider misleading or incorrect.

First, it should be noted that students in SUNYA's introductory psychology classes are not coerced into experimentation. In addition to having the option of writing a short research paper instead of participating in research, students who do act as subjects have a choice among experiments and can always refuse to participate or can discontinue participation in any experiment with the right to full credit if they merely appear for an appointment. These options have been made clear to students in writing at the beginning of each semester.

Informed consent is a requirement for those studies that involve risk or the production of any discomfort (social, psychological, or physical) that would be greater than that experienced by an individual in his normal everyday life. The guidelines used by the researchers at SUNYA were those developed by the American Psychological Association, which stipulate, among other things, that prospective subjects must be informed of the nature of the discomfort involved. Subjects were told that mild electric shocks would be experienced, that the shocks would be uncomfortable but not painful and could do no permanent harm, and that they (the students) were free to refuse to participate or to discontinue participation at any time during the experiment without prejudice. Oral consent was obtained from each subject and several refused to participate. The regulations of the Department of Health, Education, and Welfare (HEW) and the law in the State of New York require that written consent be obtained. Because the university viewed only government-sponsored research as regulated by

HEW guidelines and because no one knew of the existence of the obscure state law (which had not been enforced since its inception in September 1975), the psychology department was guided by the ethics manual published by its professional association. Thus, while technically our consent procedures were not in compliance with either state law or the HEW guidelines, our noncompliance was not intentional and most likely not inconsistent with practices at other universities throughout the United States.

The implication from the cited allegations is that an electric shock apparatus was malfunctioning at the time one experiment was being conducted and that a student could have been killed. There is no evidence that this was the case. The shock apparatus was not, as alleged, taken to an engineer immediately after the experiment was conducted. The study was completed on or about 1 February 1977. A graduate student and an undergraduate are known to have attempted to modify the equipment for another study, and when it completely broke down it was taken to an engineer for repair (on 20 March). The engineer said that *at the time he examined it* a person could, under certain unspecified conditions, suffer a lethal shock. He also said (although it is not reported) that he could not say what state the equipment was in at the time the study was conducted several months before.

Another cited allegation is that a study was conducted by the Albany public schools without the approval of the state health commissioner or the informed consent of the children's parents. It is further reported that there was widespread local criticism of the Albany school board for permitting the experiments. In fact, parental permission was obtained for the study in question. The Albany school board also approved the research and the consent procedures used. It is true that the public health commissioner's approval was not sought, but at that time no one at the university knew of this stipulation in the state law.

Finally, an allegation is cited that the

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Congressional Science Fellowships: Child Policy Applications Invited

The American Association for the Advancement of Science invites applications for the sixth year of its Congressional Science Fellow Program. (See *Science*, 2 December 1977, page 918).

The AAAS selects individuals from a broad range of disciplines and science-related professions to spend one year working in some area of Congress, and runs a program for its and other sponsors' Fellows. In the past five years 24 individuals, selected and sponsored by AAAS, have held Congressional Science Fellowships. Each program year includes more than ten other fellows selected by several cooperating affiliated sponsors. To date, 70 people have held such Fellowships. This year the AAAS will make five Congressional Science Fellowship Awards. One unrestricted and four in some area of child and family policy, that is, child development, education, health policy, and so forth.

The award is \$16,000 for the period of one year, beginning 1 September 1978, and includes nominal moving and travel expenses. Interested applicants requiring a higher stipend are encouraged to discuss their situation with the program director. The AAAS provides a two-week orientation. Each Fellow chooses his or her own assignment with guidance from the AAAS.

Candidates may apply from any physical, biological or behavioral science or field of engineering, as well as any health-, education-, or child-policy related area. Candidates must be members of the the AAAS or concurrently applying for membership.

Information on the selection criteria, application procedure, and program details are available from **Dr. Richard A. Scribner, Director, AAAS Congressional Science Fellow Program, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036.** Deadline for application is 15 March 1978. Announcement of the awards will be made before 1 May 1978.

psychology department had set up its own Ethics Review Committee to monitor research involving human subjects, *in violation of requirements* by HEW and the State of New York. Proper perspective would show that, because there was no overall institutional review process for nonsponsored research at the university, and because the psychology department was concerned that careful professional ethical standards be maintained in all human research, an ethics review process was voluntarily established in 1975. In our view, this was a responsible action by the psychology department, not an attempt to circumvent proper procedure. In fact, had this review process not been in effect, written research proposals, judgments of risk by committee members, and consent and debriefing procedures would not have been available for inspection by the state health department in their recent investigation.

The dispute between the New York State Department of Health and the university has now been resolved. The basic issue all along was the fact that the university did not have a properly constituted institutional review board and that nonsponsored research involving human subjects was not reviewed by the institutional review board. The university has admitted to these violations of state law and has taken all the required steps to remedy the situation.

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Although Gallup and Tedeschi say that SUNYA psychology students were not coerced into participating in experiments, an instruction sheet provided to the students by the psychology department says, "The majority of the faculty of the Psychology Department would prefer that students choose to participate in research for the following reasons" and then goes on at some length to elaborate on the faculty's position. In the settlement, SUNYA officials admitted that the voluntary consent of the students had not been obtained.—R.J.S.

Protease Inhibitors and Muscular Dystrophy

It was rewarding to have our research on the use of leupeptin in dystrophic muscle mentioned in a recent Research News article on protein degradation by

Gina Bari Kolata (11 Nov., p. 596). However, the description of our studies leaves something to be desired. The focus of our research with protease inhibitors has not been to make chicken "muscles get larger," although this is a consequence of the *in vivo* treatment, but to prevent or inhibit degeneration of muscle tissue, especially in dystrophic cells. This we quite conclusively demonstrated in tissue culture (1) and *in vivo*, as reported at a recent symposium on muscular dystrophy (2). It is encouraging that Libby and Goldberg have corroborated our results. As we have suggested, the use of these low-molecular-weight nonimmunogenic protease inhibitors (first described by Umezawa and his co-workers) offers promise not only in the elucidation of the mechanism of protein turnover but also in the treatment of degenerative disorders.

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1. E. B. McGowan, S. A. Shafiq, A. Stracher, *Exp. Neurol.* **50**, 649 (1976).
2. E. B. McGowan, L. Siemankowski, S. A. Shafiq, A. Stracher, in *Pathogenesis of Human Muscular Dystrophies*, L. P. Rowland, Ed. Excerpta Medica, Amsterdam, 1977; available from Elsevier/North-Holland, New York).

Lignite-Fueled Power Plants: Radioactive Emissions

Unless the Texas Utilities Company is planning to surreptitiously operate advanced fission reactors, John Walsh incorrectly implies (News and Comment, 4 Nov., p. 471) that stack releases from lignite-fueled electric generating stations would contain measurable amounts of uranium fission products.

In fact, a study (1) of the radiological impact of gaseous effluents from a model coal-fired power plant indicates that radium-226 and radium-228 are the major contributors to offsite population doses. These radium isotopes are *decay* products of uranium-238 and thorium-232, respectively.

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1. J. P. McBride, R. E. Moore, J. P. Witherspoon, R. E. Blanco, *Radiological Impact of Airborne Effluents of Coal-Fired and Nuclear Power Plants* (ORNL-5315, Oak Ridge National Laboratory, Oak Ridge, Tenn., 1977).