LETTERS

Activism

An editorial about attempts by the animal rights movement to influence schoolchildren drew many letters, most of them sympathetic to the use of animals in research and stressing the importance of animal research to "medical and scientific progress." Some readers said they saw extremism on both sides of the issue and urged moderation. A very few writers said they were against all research on animals and accused the research community of being "provivisectionists."

Animal Rights

The editorial "Animal rights: Teaching or deceiving kids" by Deborah Runkle and Ellen Granger (5 Sept., p. 1419) points out some examples of how animal rights groups are getting their message out into the public, with particular focus on children. This emphasis is clearly intended to make inroads into future adult attitudes since, at present, the majority of the public supports the use of animals in medical research. Public opinion polls commissioned by Research!America since 1994 have found that two-thirds or more of the adult population believes that the use of animals is necessary for progress in medicine.

Vocal animal rights groups are, indeed, making an impact. Runkle and Granger are exactly right when they say that the research community must be equally vocal so it can counter the misinformation with good information. The size of the scientific community is far larger; its members have credibility and potentially much more influence than the animal rights activists.

We have numbers on our side; let's put them to use!

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Runkle and Granger accuse an overview article by Madhusree Mukerjee in *Scientific American* (*1*) of subscribing to an animal rightist position. That grossly oversimplifies an essay that most of your readers would surely find far more balanced, thoughtful, and constructive.

While embracing the desirability of alternatives, Mukerjee accepts the need for animal research. (If that brands her as an animal rightist, many medical researchers must also share that label.) But she also argues that extreme views on *both* sides of the animal research battle have led to a stalemate in which any search for alternatives is too often seen as a concession to animal rightists. As a result, the United States lags far behind Europe in finding and implementing alternatives.

Better education on animal rights issues is a good cause for the AAAS. But the stridency with which Runkle and Granger's editorial attacks mainstream views can only deepen the public's distrust of it and surely does not advance science at all.

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References

1. M. Mukerjee, *Sci. Am.* **276**, 86 (February 1997).

We wish to echo the sentiments expressed in the fine editorial by Runkle and Granger. We, the current, past, and future presidents of the American Physiological Society, agree that scientific organizations and publications have a responsibility to uphold the responsible use of animals by scientists and educators. Such research is essential to medical progress and, in many instances, there literally is no alternative.

As Runkle and Granger point out, the consensus among reputable scientific societies is that responsible and humane animal research is essential to medical and scientific progress. The American Physiological Society seeks to further public understanding of the necessity of humane animal use through its public statements and educational programs, and we commend *Science* for noting that it is the responsibility of all members of the scientific community to do so.

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I applaud Runkle and Granger's editorial warning about the flood of animal rights misinformation aimed at schoolchildren. Over the last decade, animal rights groups have dramatically stepped up their efforts to target the next generation. By linking their message to concerns about the environment and civil rights, these groups obscure the detrimental effect that their goals would have on human well-being.

Some teachers themselves have been slipping their own animal rights bias into classroom "exercises." Two years ago, grade-school teachers were reported to have encouraged students to write letters to the Gillette Corporation simply because it conducted animal tests on its products, as required by law (*1*).

For teachers interested in presenting the proresearch point of view, our organization offers a wide range of educational materials. We need to appreciate the seriousness of the animal rights threat and get involved in some way, such as making a classroom presentation or writing a letter to the editor. We cannot expect students to make informed choices without access to the facts.

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References

1. B. Carton, *Wall Street Journal*, 5 September 1995, p. A1.

Runkle and Granger are to be congratulated for their editorial advocating the need to provide accurate information about the use of research animals to primary and secondary students. The American Association for Laboratory Animal Science (AALAS) is a nonprofit educational association whose members include research scientists, laboratory animal veterinarians, animal facility managers, and animal care technicians. Our mission is to serve society through education and the advancement of responsible laboratory animal care and use. One of our goals is to serve as a catalyst for public education concerning laboratory animal use. We expect to accomplish this by developing new materials, facilitating the sharing of the many excellent materials already produced by various state and national biomedical research associations, and encouraging our nearly 8000 members to reach out to their local schools. We recently added a "Kids Page" to our website (www.aalas.org), which can be downloaded and used to stimulate classroom discussions. In addition, David Heil, co-host of the Emmy Award–winning PBS children's science series *Newton's Apple*, will provide advice on effective classroom techniques, as the keynote speaker at the national AALAS meeting to be held 16 to 20 November in Anaheim, California. The meeting will also include workshops by the New Jersey and California biomedical research associations on how to address young students in the classroom.

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In their editorial against animal rights, Runkle and Granger accuse some activists of deliberately confusing the issues of healthy eating and environmental concerns with an animal rights message. Why is it acceptable for a university's schools project, apparently provivisection in concept and targeted against the animal rights movement, to be called "Science for Life"? Doesn't this incorrectly equate the issues of scientific research (most of which has nothing to do with animal experiments) and vivisection? Provivisection groups continually confuse these issues, giving themselves proscience names such as the "Foundation for Biomedical Re-

search," rather than honest ones that reflect their interests (perhaps the "Foundation for Biomedical Vivisection").

When talking about propaganda, let's apply a consistent standard to both sides of the debate.

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The challenge before the scientific community has not changed since the turn of the century. While the faces of animal activists have surely changed, the face of animal activism remains true to its anti-vivisectionist heritage. Their primary vehicle has been, and remains, public (mis)-information campaigns to gain popular and financial support. As we approach the next millennium, we should be shouting our message. There should be a great deal of distance between a simple lie and a complex truth.

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We concur with Runkle and Granger that the biomedical research community should share responsibility for countering the misinformation being spread by animal rights activists.

During the last decade, the state associations for biomedical research have been dedicated to educating the public about the value of biomedical research and about the critical role of animal models. Researchers using animal models are doing significant science that amazes and fascinates children, and we have been telling kids about it. We've also done our best to nurture the next generation of researchers. And we've worked to educate people of all ages about how animal-based biomedicine improves our health and well-being, reduces healthcare costs, and also drives a sizable chunk of the economy.

However, many of us are disappointed by the lack of a coordinated national effort to develop high-quality educational materials. Only time will tell whether the research community will forfeit the privilege of using animals in research simply because we have not devoted sufficient time and resources to explaining why medical progress still relies on the appropriate use of animals.

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As a former high school teacher, I am interested in the notion of how and what we teach our young people. There frequently is a fine line between teaching and propaganda, and nowhere has this become more apparent than in the issue of animal rights. There can be bitter polemic on both sides. This being said, I suggest that, as part of middle- and upper-level students' education, they be invited to visit laboratories to see for themselves how science is being practiced. Young people, when given the opportunity, can decide for themselves whether they are being deceived or not.

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Response: We did not brand Mukerjee an animal rightist, but said that her so-called overview has a strong animal rights bias. We have not changed our view. We do not favor using animals in experiments that do not require their use, nor are we aware of anyone in the scientific community who holds this extreme view. Far from attacking mainstream views, as Rennie asserts, we are expressing the mainstream view, as evidenced by the accompanying letters. We agree with Mallow that middle- and high school students should visit research laboratories, with one clarification added. When given the appropriate factual tools and background to help them understand what they are seeing, students can decide for themselves what constitutes a deception. This is what the Science for Life project is doing.—**Deborah Runkle and Ellen Granger**

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Insulin Gene Patent Litigation

I found Eliot Marshall's article (News, 22 Aug., p. 1028) about the 1977 cloning of the rat insulin gene and the subsequent patent litigation engrossing. However, some remaining uncertainties need to be resolved.

1) If the letters Judge Hugh Dillin characterized as "smoking guns" were intended to make a record of what transpired, why were the letters and the events they recorded never mentioned in the 14 October 1977 memo by William Rutter and Howard Goodman? The University of California, San Francisco, biosafety committee and the National Institutes of Health (NIH) administrators investigating the events surely would have found the letters directly pertinent. The statement by Rutter and Goodman in the NIH files says nothing about retaining DNA.

2) Was DNA from the original pBR322 experiment retained or not? If so, what was done with it? The chronology is puzzling. It seems that destruction of the original pBR322 clones happened on 19 March and registered letters saying that not all the DNA was destroyed were dated several days later. But the claim seems to be that DNA was neither retained nor used.

3) What are the accession numbers of the pMB9 deposits at the American Type Culture Collection (ATCC) mentioned in the final paragraph of the article? Sequencing the original pMB9 clones might indeed resolve some of the controversy (although, depending on any subcloning process details, it might not). I asked ATCC staff about these, but to date they have not been able to identify any such deposits.