Letters

Animal Research

Robert J. Denver *et al.* (Letters, 1 July, p. 11) wave a flag of anthropocentricity and promote the testimony of a layperson who has memorized the litany of the biomedical researcher and who happens to suffer from an incurable illness: "Follow the White Coats," Denver *et al.* seem to advise, "for they hold the promise of the future."

Do they?

Age-balanced data (*1*) demonstrate that for more than 98% of human cancers, mortality rates are equal to or greater than they were 35 years ago. Hundreds of millions of nonhuman animals have suffered and died during the last three decades to improve human survivability of these cancers. Conclusion: it hasn't worked.

"But," Denver *et al.* might say, "patients with Hodgkin's disease or childhood leukemia have a much better prognosis today than they did even 10 years ago, and animals were used in this research." True enough, but simply because nonhuman animals were used in this research does not prove they were integral to it. In fact, improvements in the treatment of these diseases are attributable to clinical research with humans, not invasive research with nonhumans.

Witnesses McKinlay, McKinlay, and Beaglehole (*2*) take the stand. Confirming the findings of a 1977 study by McKinlay and McKinlay (*3*), these scientists demonstrate that medical intervention accounts for no more than 3.5% of increases in human longevity, the vast differences between the present and the past clearly attributable to improvements in hygiene and life-style.

Ignoring the presentation of these and other relevant data by scientists within the animal rights movement, Denver *et al.* insist on the validity of traditional biomedical beliefs, thereby protecting their vested interests in animal-based research. If maintenance of the status quo was not the primary (and only) goal of the Association for Animals and Animal Research (AFA&AR), its members would join their voices with those of the animal rights movement in asking for more emphasis on prevention of disease through dietary and other life-style changes.

Further, Denver *et al.* offer little to no appreciation of the ethical issues involved in vivisection, constantly asserting that the ends justify the means, that is, repeating the threadbare anthropocentric arguments that have long "justified" causing pain, suffering, and death to other animals. Have other animals really been placed on this earth to act as biomedical slaves to the human species?

Finally, I am appalled that the pages of *Science* have become an advertising medium for such a special interest group as AFA&AR. The labeling by Denver *et al.* of the animal rights movement as anti-intellectual, antiscientific, and antihuman is seriously detrimental to the meaningful dialogue that must replace both the vitriolic anger and the mutual ignorance of the past. Denver *et al.* are correct in assuming that we antivivisectionists are not going to fade away; on the contrary, we cannot, for we are committed to taking the most ethical and scientifically innovative course available, even in the face of dogmatic protestations.

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2. J. B. McKinlay, S. M. McKinlay, R. Beaglehole, in *Handbook of Medical Sociology*, N. Roberts, Ed. (Prentice-Hall, New York, in press).
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The LiMB Database

There is increasing interest in characterizing and building a matrix of biological knowledge (*1*) and at the same time a growing recognition (*2*)—especially in the context of the proposed effort to completely map and sequence the human genome—of the need for a systematic and coordinated approach to designing, developing, and maintaining molecular biological databases. A prerequisite for much of this work is an overview of existing databases; unfortunately, until now, there has been no "database of databases" that would support developing and maintaining such an overview.

The Center for Human Genome Studies at Los Alamos National Laboratory is therefore pleased to announce the availability of Release 1.0 of the Listing of Molecular Biology Databases (LiMB), which contains information about more than 50 databases related to molecular biology and how they are maintained. The information was gathered from questionnaires returned to us over the past year and includes the names of relevant databases, their charters, the types and amount of data they incorporate, descriptions of the hardware and software systems being used for maintenance of the data, and details about submission and access to the data sets.

Although LiMB was begun as a simple descriptive directory, it will eventually include information that supports the approaches now being developed to provide automatic access to distributed biological data sets. As such, it should be of use to those in the biological "informatics" community who are doing research in designing and linking these databases.

The database is available without charge by electronic mail, on floppy diskette, or in printed form; requests (and submissions) should be sent to the address below (e-mail limb@lanl.gov). Any ideas for improving future releases and information about any molecular biology or related database not listed in Release 1.0 would be greatly appreciated.

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2. B. M. Alberts *et al.*, *Mapping and Sequencing the Human Genome* (National Academy Press, Washington, DC, 1988); Office of Technology Assessment, *Mapping Our Genes—The Genome Projects: How Big, How Fast?* (Government Printing Office, Washington, DC, 1988); L. Phillipson, *Nature* **332**, 676 (1988).

Marijuana Test: No Ibuprofen Interference

Eliot Marshall's article "Testing urine for drugs" (News & Comment, 8 July, p. 150) indicates that the Emit immunoassays "respond" to ibuprofen. This is incorrect. Before July 1986 the potential did exist, only in the case of one of our infrequently used marijuana assays, for interference from drugs containing ibuprofen. When that problem was discovered, the assay was quickly reformulated to eliminate interference.

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Erratum: Leslie Roberts' article "Human gene therapy test" (Research News, 22 July, p. 419) reported that a proposed gene therapy experiment was approved by the Institutional Biosafety Committee of the National Institutes of Health on 13 May. It should have read 13 July.

Erratum: In the first paragraph on page 1005 of the article "A molecular basis for MHC class II–associated autoimmunity" by John A. Todd *et al.* (20 May, p. 1003), invention of the polymerase chain reaction amplification method was incorrectly attributed to "Erlich and colleagues." The method was invented by Kary Mullis at the Cetus Corporation and developed by Erlich's group.