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LETTERS

Guidelines for Xenotransplantation

In the ScienceScope item "FDA airs qualms over xenotransplants" (6 Jan., p. 19), it was stated that the U.S. Food and Drug Administration (FDA) is concerned that " 'Xenografts' might allow dangerous pathogens lurking in animals to jump to humans." Readers might assume that Institutional Review Boards (IRBs) and Institutional Animal Care and Use Committees (IACUCs)

ALFRED B. THOMAS/ANIMALS, ANIMALS

Organ donor? Concerns about potential risks of animal-to-human transplants being addressed at medical centers.

at universities are not paying enough attention to this issue. This is not the case. For example, we at the Columbia-Presbyterian Medical Center in New York City are committed to conducting a thorough review of this possibility.

As noted in the ScienceScope item, surgeons at our institution have requested permission from the IRB and the IACUC to transplant a baboon heart into a human as a life support measure until a human heart becomes available. After initial review, many issues arose that were discussed with the investigator, including possible infectious disease consequences. A half-day workshop was held by the two committees to which the investigative group and several outside experts in various disciplines were invited. Again, the infectious disease issue and the possibility of a threat to the public health received close scrutiny. Thus, an extensive initial review of the protocols was conducted.

Several experts in infectious diseases from outside the institution were consulted who expressed a range of opinions. There are little data on the possibility of a new infectious agent arising from xenotransplantation and, hence, there is a wide range of opinion on the probability of such an occurrence and its potential danger. Therefore, our institution has recommended that a group of experts on recurrent and emerging infections be convened to help decide this issue. The Institute of Medicine will hold a workshop to attempt to develop an acceptable protocol for minimizing the possibility of an emerging infection. The findings of the workshop could act as a guide for us and for other institutions interested in clinical xenotransplantation and for agencies such as the U.S. Centers for Disease Control and Prevention, the National Institutes of Health, and the FDA, should they decide to proceed with xenotransplantation.

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U.S. Neutron Sources

In the article "The looming neutron gap" (News & Comment, 17 Feb., p. 952), Daniel Clery and Andrew Lawler discuss the consequences of the cancellation of the Advanced Neutron Source (ANS) for neutron-scattering research in the United States. I have been a strong supporter of the ANS and agree that cancellation of the project will prevent the United States from taking the lead in this important field. However, the analysis presented was incomplete because the most productive, cost-effective U.S. neutron source is not mentioned. The research reactor at the National Institute of Standards and Technology (NIST) is in the final stages of completion of a major enhancement to its capabilities, the Cold Neutron Research Facility. The combined neutron facilities at NIST serve many more researchers than does any neutron facility at the Department of Energy (DOE), with nearly 1200 participants from 48 industries and 85 universities in the United States (and from many non-U.S. institutions). The array of instruments,

when fully operational, will approach the versatility represented at the Institut Laue-Langevin in Grenoble, France, with performance at least comparable to that of the best European reactor facilities.

None of this, of course, changes the fact that the United States must proceed to build next-generation neutron sources, and enhance existing sources where possible to meet growing needs. While construction of a new source is primarily the responsibility of DOE, we at NIST will continue to support this effort in the future as we have in the past. We will also continue to provide the best possible neutron facilities for U.S. researchers here at NIST well into the next century.

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Clery and Lawler conclude, "But until the next century, U.S. researchers will have to traipse across the Atlantic to conduct their experiments at the world's cutting-edge neutron-scattering facilities." Neutron scattering is not an end in itself, but merely one technique used to characterize substances. To do cutting-edge neutron-scattering research, one probably has to use a cutting-edge neutron-scattering facility. However, other research fields, such as materials science or biology, that use neutron scattering have other options available for cutting-edge research. The hoped for Advanced Neutron Source (ANS) in the United States was designed for neutron radiation effects research and neutron-induced production of transplutonium elements for research, in addition to neutron-scattering research. Although the design driver in the ANS was neutron-scattering experimentation, design compromises were made to accommodate the other research areas. So comments in the article about the drawbacks of dual-use facilities may have been overstatements, even though there are indeed problems with facilities that have more than one constituency.

Neutrons used in research can sometimes be replaced by probes of other types or other characterization techniques. Although neutrons provide a powerful method with which to obtain measurements of certain characteristics of materials, chemicals, and substances, it is possible to obtain proper characterization using other techniques. There is no doubt that the ANS or another powerful neutron source for the United States would be extremely useful. It appears that a window of opportunity for such a facility was missed by the previous Congresses, and preparation should be made for the next opportunity. Given the present budgetary situation and other factors, one may have to temporarily focus on improvements to existing facilities, alternative techniques, or advances in instrumentation to increase the effective neutron flux at the sample. If too much emphasis is placed on a neutron-scattering gap rather than on research advances, wrong policies or priorities, such as eliminating other research to accommodate neutron-scattering facilities, may result. The resulting harm would encompass the neutron-scattering research community as well as the remaining research fields.

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AIDS Data

In a set of letters entitled "AIDS-associated Kaposi's sarcoma" (24 Feb., p. 1078), there is one by Michael S. Ascher *et al.* (p. 1080) in which my letter in *Science* of 20 January (p. 313) is discussed. Ascher *et al.* write that "Duesberg misrepresents data from the San