LETTERS

Mouse Pox Threat

Mouse pox is a serious viral disease of laboratory mice with potential for causing extensive morbidity and mortality, depending on the strain of mouse. The etiologic agent, ectromelia virus, is in the genus *Orthopoxvirus* and shows strong serologic cross-reactivity with other members of the genus (*1*). During the past decade, the United States was considered free of ectromelia virus with only an occasional epizootic being reported, usually traced to the direct introduction of virus from Europe or other endemic areas. However, between November 1979 and November 1980, outbreaks have been recognized at the National Institutes of Health (NIH) in Bethesda, Maryland, and in biomedical research institutions in Minneapolis, Salt Lake City, St. Louis, and Chicago (*2*). These outbreaks were all associated with scientists or laboratories engaged in immunologic research. In fact, the virus had been present for long periods before recognition in colonies providing inbred strains of mice to investigators throughout the United States. This created a situation by which the virus may have become endemic in this country.

In certain inbred strains of mice, clinical signs of mouse pox may not be evident, and the virus can be localized within a mouse colony for long periods of time before being recognized (*2*). Current epidemics have been difficult to deal with because of limited and even inaccurate published data and information on the epizootiology and biology of the virus in inbred strains of mice. Lack of a specific and sensitive serologic assay has also caused difficulties. Historically, control has been based on destruction of entire mouse colonies (*3*), although immunization with vaccinia virus has been reported to be successful (*4*). In view of the uniqueness of certain genotypes of inbred mice, destruction of whole colonies is obviously not satisfactory.

A seminar on mouse pox was held at the last annual meeting (5 to 10 October 1980) of the American Association for Laboratory Animal Science, where data and information on the disease and on some of the current outbreaks were reported. The proceedings of this seminar will be published in the next 5 to 6 months. (Information on the symposium can be obtained from E. A. New, Building 13, Room 2E55, National Cancer Institute, National Institutes of Health, Bethesda, Maryland 20205.)

Because of the serious consequences of mouse pox to biomedical research, surveillance and control along with the necessary epizootiologic studies and laboratory experimentation are of great importance. Researchers at an intramural laboratory at the National Institute of Allergy and Infectious Diseases are doing some experiments with wild strains of ectromelia virus. A computer-based system has been devised at NIH for the collection and tabulation of epizootiologic data. This system is available to scientists investigating outbreaks of mouse pox.

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References

1. F. Fenner, in *The Mouse in Research*, H. Foster, D. Small, J. Fox, Eds. (Academic Press, New York, in press).
2. G. D. Wallace, R. M. Werner, P. L. Golway, D. M. Hernandez, D. W. Alling, D. A. George, paper presented at the American Association for Laboratory Animal Science Seminar, Indianapolis, Ind., 5 to 10 October 1980.
3. R. E. Shope, *J. Lab. Clin. Med.* **44**, 333 (1954).
4. J. J. Trentin and M. A. Ferrigno, *J. Natl. Cancer Inst.* **18**, 757 (1957).

Radioactive Biomedical Waste

The article in the 12 December 1980 issue of *Science* (News and Comment, p. 1228) concerning a Nuclear Regulatory Commission (NRC) proposed rule for disposal of certain biomedical radioactive waste is misleading. It suggests that the NRC proposes to solve a difficult problem faced by hospitals and biomedical research institutions by rather cavalierly classifying the waste as nonradioactive. This is not the case.

The proposed rule is based on an extensive investigation into the quantities of radioactive materials involved and analysis of potential radiation exposure to members of the public under the worst conditions feasible. The analysis which supports the rule is available to the public (*1*) and to *Science*'s reporter. It indicates that potential radiation exposure is very small, and cost savings to medical institutions are substantial. The proposed rule does not classify the waste as nonradioactive. It would authorize the disposal of certain waste without regard to the extremely small quantity of its radioactivity.

Under the provisions of the proposed rule, we estimate that a total of about 30 curies of tritium and less than 10 curies of carbon-14 could be released annually to the environment from the disposal of scintillation media and animal carcasses (*2*). This would be the total from this activity throughout the United States and may be compared with the 28 million and 280 million curie environmental inventory of tritium and carbon-14, respectively, in the world, produced mainly by cosmic radiation (*3*). Calculations employing conservative assumptions indicate that, when radiation exposure occurs, as a result of the rule change, the dose to exposed individuals is likely to be much less than 1 millirem per year.

The potential savings to biomedical research institutes for disposal of scintillation media and animal carcasses under the proposed rule is about $13 million.

The *Science* article refers to two comments in opposition to the proposed rule and one in favor of it. To date, we have received more than 300 comments from state authorities, professional organizations, institutions, and individuals. The vast majority of these comments support the proposed rule.

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References

1. *Proposed Amendments of 10 CFR 20 in Disposal of Certain H-3 and C-14 Wastes* (SECY-80-415. Nuclear Regulatory Commission, Washington, D.C., 9 September 1980).
2. *Ibid.*, enclosure 2, attachment 1, "Biological waste statistics."
3. *Radiological Quality of the Environment* (Environmental Protection Agency, Washington, D.C., May 1976), pp. 18-19.

Scientific Spoofs

For a study of humor in science, I would appreciate references to instances of satire, spoofs, jokes, and deceptions published in the scientific journal literature or in scientific monographs or texts. Related anecdotal material would be most welcome.

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Erratum: A News and Comment Briefing ("OSHA backs away from strict lab rules," 28 Nov. 1980, p. 992) incorrectly quoted a National Research Council report on safe handling of laboratory chemicals as saying, "For most laboratory environments, . . . regular monitoring of the airborne concentrations of a variety of different toxic materials is both unjustified and unjust." The report actually said it was "unjustified and impractical."