

ico (2) showed there was less seroconversion the higher the concentration of maternal antibodies at the time of vaccination. In our Senegal study (3), we also found no clear evidence of seroconversion among children with high concentrations of maternal antibodies. In fact, most of the clinical vaccine failures occurred in children with high concentrations of maternal antibodies at the time of vaccination. Most other studies did not provide an extensive tabulation of immunogenicity according to concentrations of maternal antibodies.

Scientists who have worked with the E-Z vaccine have observed that the virus infects cells in a different way from the Schwarz vaccine virus. This has complicated the definition of the titer of the vaccines, which is based on evidence of cell infection. There is still a wide variation in the estimates of vaccine titer between laboratories; these estimates span the threshold that distinguishes high-titer vaccines from medium-titer vaccines (4). The excess mortality associated with the high-titer E-Z vaccine was an unexpected development for investigators; there was early enthusiasm for it, and negative findings tended to be ignored.

To solve the problem of early measles mortality, more effort could be devoted to case management, which reduced the measles case-fatality rate by 73% in Senegal, a result similar to that produced by vaccination (1). Although more costly than vaccination, case management is an important complement to immunization.

**Michel Garenne**

*Department of Population and  
International Health,  
Harvard School of Public Health,  
Boston, MA 02115*

## References and Notes

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## Research in Japan

The article "Japanese academics bemoan the cost of years of neglect" by Alun Anderson in the special issue devoted to science in Japan (23 Oct., p. 564) discusses the problem of practices in Japan that "are not exactly welcoming" to foreigners. I believe that the Japanese research community is making great efforts to overcome this

problem. Over the past 2 years, as an American living in Japan, I have seen the Department of Public Health in the Faculty of Medicine at the University of Tokyo reach out to the international community. They hosted the Fourth International Symposium on Neurobehavioral Methods and Effects in Occupational and Environmental Health, sponsored by the World Health Organization and the International Commission on Occupational Health in 1991, and offered me and a visiting industrial health physician scholar from Belgium the opportunity to collaborate together on a public health study. In our case at least, there has been no lack of opportunity.

**William E. Luttrell**

*U.S. Naval Hospital,  
Yokosuka, Japan,  
Postal Service Center 475, Box 1810,  
Fleet Post Office AP 96350-1620*

The special issue on science in Japan did not mention one of Japan's most impressive recent accomplishments—a demonstration of the utility of fuzzy logic in industrial applications. Fuzzy controllers, for example, have been shown to be competitive in performance and cost. Their early use gave Japanese industries a technological advantage and impressive revenues. Moreover, fuzzy controllers have been designed for some control tasks that are beyond the capabilities of classical controllers: Michio Sugeno of the Tokyo Institute of Technology successfully tested one that controlled a pilotless helicopter by simple vocal commands (1). Other applications in knowledge engineering, robotics, medicine, and economics are opening ever greater opportunities for innovations in fuzzy logic.

**George J. Klir\***

*Department of Systems Science,  
State University of New York,  
Binghamton, NY 13902-6000*

\*President-elect, International Fuzzy Systems Association.

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## Brain Research in Europe

In the article "An uncertain start for a brain decade" by Peter Aldhous (News & Comment, 2 Oct., p. 23), it is stated that the ad hoc task force implemented by the Commission of the European Community (CEC) for preparing a "Plan of Action" for the European Decade of Brain Research is

being dominated by neuropsychiatrists and that the scientific program is mainly focused on clinical research and not enough on basic neuroscience. As president of the task force, I would like to clarify these issues. First, the task force is composed of experts from preclinical neuroscience, including executive members from the European Neuroscience Association and other European societies, and experts from clinical neuroscience. The composition of the task force is balanced. As reported in the article, some parts of the scientific program are still being developed. The task force is guided by the principles of balance between basic and clinical neurosciences, interdisciplinarity, and communication among all neuroscientists. The introduction of the scientific program states

An understanding of the functions of the brain represents one of the greatest intellectual and scientific challenges to mankind, and at the same time will bring far-reaching practical applications which may contribute to solve the major brain-related medical and psychosocial problems. Science has just reached the point where the enabling technologies for this long-dreamt-of goal have been developed: neuroscience has undergone a major revolution in the last few years, on the basis of the new capabilities created by molecular biology and genetics, by space-age instrumentation, and by information technology.

Encouraging collaboration with the industry is important for both applied and basic research. The final version of the "Plan of Action" will have contributions from the relevant societies and the scientific leaders from Europe representing both basic and clinical neuroscience. It is essential that this program be approved and funded at an appropriate level without further delay.

If these objectives are achieved, all neuroscientists in Europe will benefit.

**J. Mendlewicz**

*Université Libre de Bruxelles,  
B-1070 Bruxelles, Belgium*

## Fetal Transplant Update

I would like to clarify some of the information in the article by Larry Thompson "Fetal transplants show promise" (News & Comment, 14 Aug., p. 868). We have now performed transplants on 54 patients at the University of Birmingham in the United Kingdom, 48 of which were reported (36 in detail) at the Fourth International Symposium on Neural Transplantation (held from 12 to 16 July 1992 at the George Washington University School of Medicine in Washington, D.C.). None of our patients has died as a result of the transplant oper-

ations, although three died more than 2 years after the operations, two from the progression of Parkinson's disease and one from an unrelated illness. Data from matched controls show that caudate implantation produced marked improvement (1). There was substantial improvement in physiological tests as reported by all the contributing investigators but, as others found, the clinical improvement was less dramatic.

**E. R. Hitchcock**

Midland Centre for Neurosurgery  
and Neurology,  
University of Birmingham,  
West Midlands B67 7JX, United Kingdom

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#### Endangered Species Act

The article "Everglades rebound from Andrew" by Joe Alper (News & Comment, 25 Sept., p. 1852) may have left some readers with the mistaken impression that the Endangered Species Act mandates a single-species, rather than an ecosystem, approach to conservation of biological diversity. To

the contrary, in 1973, Congress stated that the primary purpose of the Endangered Species Act is "to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved . . ." (1).

Unfortunately, neither Congress nor the federal agencies charged with implementing the Endangered Species Act have taken the necessary steps to fulfill the mandate of ecosystem conservation. Supporters of the Act hope to remedy this problem in 1993 as Congress addresses reauthorization of the law. Legislation was introduced in the last Congress that would have directed the U.S. Fish and Wildlife Service to develop integrated multispecies recovery plans for ecosystems or ecological communities containing multiple species that are either already listed as threatened or endangered or are candidates for listing. These Endangered Species Act amendments are expected to be introduced again in the new Congress.

**William Robert Irvin**

National Wildlife Federation,  
1400 Sixteenth Street, NW,  
Washington, DC 20036

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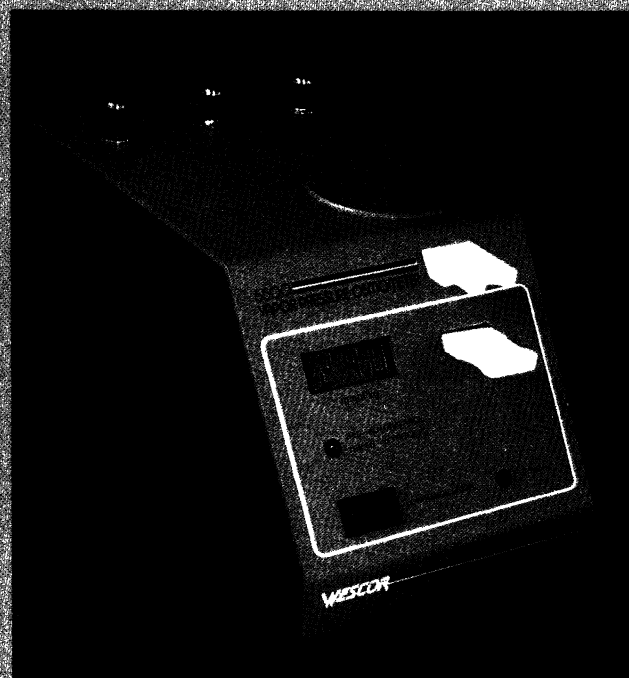
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