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LETTERS

Malaria Vaccine

As one who, in 1976 with J. B. Jensen, provided methods for the continuous culture of *Plasmodium falciparum* (*1*), methods which have led to and greatly facilitated not only the development of SPf66 but also other work on an erythrocytic-stage vaccine for malaria, I would like to comment on the "dilemma" raised by the malaria vaccine (John Maurice, News & Comment, 20 Jan., p. 320). I see no serious dilemma. It is clear that SPf66 is sufficiently effective to warrant additional and more extensive trials. It is good to note that such a large trial is already in the planning stage for 1995 in Tanzania. Meanwhile, results from several trials now in progress are expected to be in during this year. If they are disappointing, the clamor for a million doses will decrease. If they are good, there will be little reason to restrict development as long as the funds for it can be provided. Of course, there is a lot we do not know, but we will be learning much in the next few years, with careful follow-up of those already vaccinated. Of special interest might be trials combining SPf66 with the use of insecticide-impregnated bed nets for the protection of young children, as suggested in a recent review by M. Tanner *et al.* (*2*).

If Manuel Patarroyo's work had been received with less criticism and more cooperation, perhaps we would be 5 years ahead of where we are now. It was, it seemed to me, an ideal example of how basic science should be applied to problems in developing countries. The basic work—culture of the parasites and use of the methods of Bruce Merrifield for peptide synthesis—was done at the Rockefeller University. A creative young scientist then applied these methods to a major medical problem in his country. He had support from his government, excellent laboratory facilities, and lots of drive and motivation. He furthermore had the special advantage of the availability of large numbers of *Aotus* monkeys in which to do his preliminary testing of some of the many antigens of *P. falciparum*. He came up with a combination of three peptides that together gave protection in monkeys. He then did something both clever and original—he took small fragments of these peptides and polymerized them into a synthetic polypeptide with a molecular weight of about 20,000. There was accordingly no need for him to use a carrier protein (the method others were using). In his first trials in humans, he showed great courage. He chose a cutoff point for treatment that turned out to be safe, yet provided for a significant result.

Very likely there will be a better malaria vaccine than SPf66. Meanwhile, we ought to be using what we have. I am reminded of a conversation with Tom Rivers many years ago. He was relating how he had to decide whether to go ahead with large-scale use of the Salk-killed vaccine for poliomyelitis or wait for the live vaccine, which might be better. He did not wait.

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1. W. Trager and J. B. Jensen, *Science* **193**, 673 (1976).
2. M. Tanner, T. Teuscher, P. L. Alonso, *Parasitol. Today* **11**, 10 (1995).

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Detecting Alzheimer's Disease

The report "A potential noninvasive neurobiological test for Alzheimer's disease" by Leonard F. M. Scinto *et al.* (11 Nov., p. 1051) describes patients with Alzheimer's disease who exhibited marked hypersensitivity in pupil dilation to a dilute solution of tropicamide. As ophthalmologists who routinely dilate patients' eyes with tropicamide, we have observed extremely variable pupil response to dilating agents. We repeated the protocol described in the report with 13 healthy subjects with a mean age of 32 years, and with no family history of Alzheimer's disease. The pupils of these subjects dilated (paired t test, $P < 0.0005$, data not shown) in a fashion similar to that of patients with Alzheimer's disease, as reported by Scinto *et al.*

While dilute tropicamide solution may be investigated as a screening test for Alzheimer's disease in elderly patients, we urge caution if it is used for this purpose in young, healthy adults.

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