

USA

●A key advisory committee last week decided to recommend that guidelines which now govern recombinant DNA experiments in the United States should be amended to facilitate experiments with human DNA. Though the committee's recommendation, which will eventually be made to the Director of the National Institutes of Health (NIH), may not be accepted, it is sure to generate considerable debate.

The committee, the Recombinant DNA Advisory Committee, carries considerable weight because it was largely responsible for drafting the present NIH guidelines. The guidelines require that recombinant DNA experiments involving human genes must be performed in the highest level of physical containment (P4), and in addition, crippled strains of microorganisms must be used (a so-called EK2 system). Those requirements effectively bar work with human genes for the time being because no P4 laboratories have yet been certified, and few universities are likely to build them. The advisory committee will recommend, however, that the containment level should be reduced to P3 and EK2, a level which would allow such work to go ahead in many places.

The committee decided to recommend the change for a variety of reasons, and its vote was 11 to 1, with one abstention. A number of committee members told *Nature* last week that they agreed to recommend the change because they feel that evidence, accumulated since the original guidelines were drafted, indicates that potential hazards associated with many types of recombinant DNA research are extremely remote, and work with human DNA is likely to yield important results. In particular, Roy Curtiss of the University of Alabama, who proposed the change, argued that so far nobody has found faithful expression of vertebrate DNA in *E. coli*, that if cloned DNA were to get into the intestine it would rapidly be degraded by enzymes in the gut, and that several experiments suggest that *E. coli* containing 'foreign' genes is at a selective disadvantage.

The move is sure to be criticised on scientific as well as political grounds, however. Experiments involving human DNA were assigned to the highest level of physical containment largely because of the possibility that human cells may harbour cancer viruses whose genes might be picked up and cloned along with the human DNA, but some of the advisory committee members noted that so far an

intensive search for human cancer viruses has failed to find any. That potential hazard cannot be entirely ruled out however, and the recommended relaxation of the guidelines is therefore likely to be controversial.

The committee will meet again in June to discuss further recommendations to amend the guidelines, and its proposals will eventually be sent to



the NIH Director Donald Fredrickson, who will almost certainly subject them to public discussion before acting upon them. In the meantime, Congress is busy working on legislation to regulate recombinant DNA experiments, and it is likely to require that new regulations be drafted. It could take as long as 18 months for new regulations to be drafted and implemented, however, so the NIH guidelines are likely to be important for some time yet.

●Meanwhile, in a move which is sending a few tremors through the biomedical research community, the environmentalist organisation Friends of the Earth, has gone to court to seek an order halting federal funding of recombinant DNA research in the United States. The organisation has charged that NIH violated the law by failing to publish an environmental impact statement before it issued its recombinant DNA guidelines last year.

The law in question, the National Environmental Policy Act, requires that government actions likely to affect the environment must be preceded by publication of an analysis setting out the potential environmental impact and discussing alternative courses of action. NIH issued its recombinant DNA guidelines in July, and it published a draft environmental impact statement six weeks later. A final version of the statement is now

under review in the Department of Health, Education and Welfare and it has yet to be published.

The chief reason why the process got out of step was that NIH didn't realise until the guidelines were in the final stages of being drafted that an environmental impact statement would be required. A long delay in issuing the guidelines would therefore have resulted if NIH had followed the letter of the law.

When the draft environmental impact statement was published in August, NIH Director Donald Fredrickson admitted that the legal process had been short-circuited, but he argued that the public interest was best served by prompt issuance of the guidelines. Recombinant DNA experiments were then proceeding under general safety rules recommended by a group of geneticists which met at Asilomar, California, early in 1975, and since the NIH guidelines are more strict than the Asilomar rules, Fredrickson argued that "the escape of potentially hazardous organisms was more likely in the absence of NIH action".

Friends of the Earth is claiming that because NIH failed to follow the procedures laid down by the National Environmental Policy Act, the guidelines were issued improperly and should be withdrawn. Federal funding for recombinant DNA experiments should then be halted, the suit demands, pending the resolution of safety issues.

NIH has 60 days to respond to the suit, and lawyers from the Department of Health, Education and Welfare met last week to discuss their response. Even if the courts find that NIH violated the letter of the law, however, they need not necessarily require a halt to the research.

●A bill to provide a major infusion of funds into earthquake prediction and into the design and construction of earthquake resistant buildings, dams and other structures, was approved unanimously by the Senate last week, and it has also been passed by a key committee in the House. The bill, which has been kicking around Capitol Hill for several years, is thus virtually certain to clear Congress in the next few weeks. It would authorise expenditure of \$55 million next fiscal year and a total of \$205 million over the next three years for earthquake research, and it directs the President to draft an implementation plan and to recommend ways to help communities prepare for earthquake warnings.

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