January 7, 1977

Dr. Robert Sinsheimer
Division of Biology
California Institute of Technology
Pasadena, CA 91109

Dear Bob,

You may remember that just before the beginning of the SIPI Congressional Briefing on December 14 we talked for a while. I told you that I had heard that some recombination experiments were being conducted in your lab. You then told me about your interest in the "nif" genes. As I recall the conversation, you indicated that you were taking, or were planning to take, "nif" genes from E. coli cells into which they had been transferred (by "natural" processes, not by recombinant DNA techniques) and insert them by recombinant DNA techniques in more convenient E. coli vectors. You also indicated an interest in using these materials, in the future, in connection with crown gall tumor. Our conversation was cut short by others, and by the Briefing itself.

Two days later I left for a long holiday. During that time I thought about our conversation, particularly in reference to the public statements that you have made regarding the Guidelines and recombinant DNA experiments. And I concluded that, at least in my view, your two activities, namely the experiments and your aggressive actions in opposition to the Guidelines, were inconsistent.

Upon my return, therefore, I read your December 20 "statement" with some interest, and finally with surprise and no little distress.

You state that it is "alleged" that you are engaged in recombinant DNA research. But the statement itself and the experiments you described to me indicate that you are in fact doing so. The Guidelines do have specific recommendations for experiments involving DNA from species that exchange genes in nature. And certainly, while the recommended containment is in general low, specific requirements do exist, especially when the "foreign" DNA may not be totally innocuous. The "nif" genes could hardly be considered without potential harm; indeed many of our colleagues have worried very specifically about the possible effects of such genes, in the context of recombinant DNA experiments. Further, problems that may arise from the use of Agrobacterium tumefaciens have been discussed and are specifically referred to in the Guidelines. Although you indicate

in the "statement" that the latter experiments will be done under full containment, I am troubled by your position on this matter. If you feel so strongly that the Guidelines are inadequate that you are impelled to undertake the nationwide campaign you have been conducting, how can you personally undertake experiments you believe to be potentially so terribly harmful? You must certainly realize that your statements and published articles can only be weakened in their influence on others by your activities. For me personally, my previous total belief in your sincerity has been seriously shaken. The obligation I felt to consider carefully your arguments has been undermined.

I do distinguish between your personal activities and your unwillingness to impose your views on colleagues at Cal Tech and I understand your "statement" in that regard. But again there are important inconsistencies. I think it is important that you realize that your public activities have in fact interfered most dramatically with the ability of colleagues in other institutions to proceed with "legal" work, within the Guidelines. For example, the influence of your position on the Mayor and City Council of Cambridge, and the Friends of the Earth cannot be denied. It is both direct, and indirect, in that others have exploited your statements and your distinguished reputation.

Finally, I would point out to you that those who are suspicious of the honesty and motives of scientists and of science anyway will see support for their suspicions in this situation. This will surely increase the difficulties in our efforts to deal rationally and openly with the problems raised by research.

Sincerely yours,

Maxine Singer