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DATE: May 6, 1974

TO : Paul Berg

FROM : Stan Cohen

SUBJECT: BIOHAZARD LETTER

I have enclosed a draft containing some proposed modifications of the biohazard letter from Dick Robin. My suggested changes largely involve the introduction (which I modified to begin with an explanatory statement, rather than one which may suggest a certain amount of anxiety and/or recrimination), and the following points:

1. In addition to "human biohazards", environmental biohazards should also be included.

2. For balance, I think it might be appropriate to cite one or two specific potential benefits from this technology, as I have done in the revised text, in addition to mentioning the "general usefulness" in facilitating the solution of important biological questions, as Dick has done. Since the letter stresses the potential hazards, the uninitiated might wonder why any experiments of this type were done at all.

3. The scope of the plasmid recommendations should be expanded to include genes that produce bacterial toxins, as well as the antibiotic resistance markers. However, I do not favor a limitation on placing extrachromosomal antibiotic resistance markers into bacterial species which normally contain plasmids carrying such markers. I've tried to clarify this point in the draft by providing an example. You may wish to discuss it with other plasmid workers. Thus, the introduction of plasmid-borne penicillinase-producing genes into E. coli (which presently contains such genes) would be permitted (please see attached proof of paper that will appear in April PNAS), while introduction of such genes into Streptococcus or Pneumococcus which are normally penicillin sensitive should be avoided.

4. I think the National Institute of Allergy and Infectious Diseases should consider setting up a program to determine potential biohazards of the construction of plasmids containing prokaryotic genes from diverse sources to parallel the proposed studied to be sponsored by the NCI.

Please let me know what you think about these suggested modifications.

Sincerely,

Stan

I will phone you once you've had a chance to look them over.