14. 4. 57.

Dear Dr. Lederberg,

I have just come back from three weeks holiday and found your very kind letter waiting for me. Thank you very much. As to your first question I can only say that I would gladly except an invitation to come to the U.S.A. and lecture there on the L-forms etc. and I should be greatly pleased to take part in discussions and to see your and other people's work.

I read your M.S. with great interest though I must admit that I did not grasp all the genetical information it contains. In regard to filtrable activity I should like to draw your attention to the fact that "granule formation" takes place twice in the pleomorphic cycle of a bacterium. (A) When bacteria prepare to produce L-forms they disintegrate (or develop) very small forms (granules). These, I suppose recombine to form L-bodies. (B) The L-forms themselves (which some people might call "zygotes") reproduce by formation of small viable filter-passing granules. They can go on in the L-stage or revert into bacterial forms. Therefore if you are out to obtain recombination your culture should be in the phase here designated with (A) and not in the L-phase proper here designated with (B). I.e. if my ideas are correct!

I did not work with a weak phage but with a diluted phage in my experiments with Coli B. I used phages of the T series, particularly T2 and also T3. I use a dilution 1:100 or 1:1000 and place one drop of such a dilution on a plate of nutrient agar, add one drop of a fresh Broth culture of B and spread phage dilution & bacterial suspension over the plate. I shall send you my phages soon. The same technique has been used for a B. Anthracis & its phage with very good result and an ample development of L-forms. I am going to send you

by the same post (but not by air) a collection of photographs with explanations which should illustrate my results.

There is also a new paper of mine in the press which deals with the production of L-forms in B. Morax-Axenfeld and Proteus. I expect it will be out in September.

I have not seen my review yet.

Last year I had some discussions with Cavelli while he worked at Cambridge & we did some very preliminary experiments together which were unsuccessful in regard to recombinations.

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It would be very gratifying indeed if we could link up some of our researches.

Yours sincerely,

E. Klieneberger-Nobel.