Cohen

October 13, 1956

Dear Seymour:

I've forgotten to thank you for the thymineless mutant— so thanks! I just wanted to see what it looks like, so far have not anything serious with it.

One of my graduate students (Alan Richter) is getting impatient with pure genetics, and would like to move to a hybrid problem: we've been discussing some collaboration with Charlie Heidelberger. One thing he might get into is a more careful analysis of genetic effects of analogue substitution. If so, first we would try to go after a thymineless mutant in E. coli K-12. But before investing in this, we would want some advance reassurance that thymine per se is incorporated in this strain (keeping in mind Kornberg's observation that some coli strains pick up uracil and others do not). We've thought of a fairly simple trial on the incorporation of thymine* by the wild type strain, but it occurs to me you may already have some helpful information on this point.

The penicillin-protoplast-L colony system gets clearer all the time; most of it is essentially anticipated in the older work. So far, unfortunately no encouragement for the occurrence of any genetic novelties. Park has some analyses of staph walls that corroborate the postulated role of the uridine conjugates & has independently arrived at essentially the same conclusions on the chemical side. Diaminopimelic acid (per Bernie Davis and Work) also has to be fitted into the jigsaw puzzle, which is a fair guess as to what the cell wall is.

Yours sincerely,

Joshua Lederberg

RBZ