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Dear Dr. Lederberg,

I am sorry you did not hear from me since I had your strains; but the only thing I could do at that time was, as I wrote you then, to test whether they were still alive.

Only since the beginning of February I could start some work, and that has allowed me to see that they do behave as expected also under the other points of view. At this very first step of my work I have but little to tell you; but I should like to ask you some suggestions.

1) : the frequency of recombination in the three experiments I have made was rather constantly <sup>-8</sup> 10 prototrophs per cell of each of the two strains. I am following rather closely the technique you give in your 1947 paper in Genetics, except that my cultures are unshaken, and I am not using so far the trace element solution. Do you get consistently higher frequencies than that, and did you find recently any means of increasing considerably the frequency of recombination or mating? I do not like to use the UV technique proposed by Stone and others because it might affect crossing-over.

2) : I am not completely satisfied with the EMB technique of scoring for lactose fermentation. The difference between W 583 and 58-161 seems more one of time of fermentation, and at any rate 58-161 seems a poor fermenter by that technique, in comparison with coli B.

I did not test so far the other sugars for lack of reliable sugars-chemicals. Which do you think is the most reliable method of screening for fermentation?

3): W 583 seems resistant not only to T<sub>1</sub>, but to T<sub>5</sub> as well. I must test T<sub>5</sub> however, before making a definite statement, because it is a rather old strain of virus. But you probably know more about it.

4): I am working at 30° C. as you suggest, but I am feeling rather nostalgic about the usual 37° C. Is there any special reason for working at 30°?

My plan is essentially to secure new biochemical mutants in these stocks, and to study the pattern of virus resistance of coli K-12. I want to have a fair sample of genes over all the chromosome(s) length.

I should be very interested to know more about your diploid strains. And I wish to take this opportunity to ask you a reprint of your very good review <sup>of</sup> "Microbial genetics".

With best thanks,

Yours sincerely

*Luigi Casali*