

January 22, 1952

Dear Aaron:

I hope the annular-clearance resistance continues to work out. If it seems satisfactory in practice, would you let me know. I'm having some delay in getting parts for the electro-mechanical regulator, and may want to set up some small scale chemostats fairly soon for growing cells for quantitative fertility studies.

The F+ hormone has turned into something more grotesque: the "stimulation" I mentioned in my last letter but one (1/10) is an inherited modification of F- by F+ cells grown with it. Under these conditions, the larger fraction of ~~fixed~~ F- cells become permanently F+, but filtrates of F+ cultures have not yet shown such activity. Vigorous aeration of F+ 53-161 gives a phenocopy of F-. This may be due to the agitation rather than the oxygen; some other gases are being tried now. In the TLB₁ parentage, the change from F+ to F- evidently occurred between 679-680 and 679. Tatum picked two successive double mutants, to answer your question.

To go back to hydro-resistance, I've been toying with the idea of a controlled variable resistance by sliding a hollow tube inside a test-tube with a side arm near the top. This is probably not the best arrangement to avoid contamination and minimize leakage at the same time. I would use a variable resistance as a fine adjustment in series with a high fixed resistance. Now, with any possibility of improving the pressure regulation (by minimizing turbulence in the relief water-head) fairly precise control should be possible.

I warned you that you'd have a hotel on your hands with an extra room! May we place reservations for February 29 and March 1 (Fri & Sat PM). If there are any decent plays going, we'd like to see some for Sat.— We just saw Sleep for Prisoners here Sunday; it is quite an experience.— Fri PM there is a meeting of the Illinois Bacteriologists (complete with social hour and dinner) at the Hamilton Hotel (Madison & Dearborn). Would you be our guests for the dinner there, or couldn't you stand it? Sunday (if we can) we'll be driving to Cincinnati to this Cancer meeting (Sol & Max and Sonneborn, among others, are on the program too), but I hope we can spend a good deal of Saturday with you. We are not planning to go to Boston. If that means Tatum can shorten his program, it will be all to the better.

Sol's had the ms. (Monday) most of this time, and I haven't really looked at it myself. I regret that we don't have any excess velvet at the moment; some more samples are enclosed, and I'll try to remember to get some more.

Your letter included some great news. Good luck and best wishes to the three of you.

Sincerely,

Joshua Lederberg