October 20, 1952

Dear Bruce:

Your letter of the 14th just received and duly deciphered. You must not have received my previous letter when you wrote this-- I am not surprised: through some lapsus menti, I addressed it to the London PG Med School! If you haven't got it by now, you should probably send over for it.

When I last wrote, I was just about to set up the progeny tests for the "linked transductions" to SW-543. For a while, I thought that only i phases were appearing, but this misapprehension was due to a discrepancy between the effectiveness of a serum in immobilizing in agar, and in agglutination. I still don't know the reason for this, but applaud the prospect of a complete serological analysis of the transinduced phases. I have also the observation, from SW-543 x FA (abony) of b phases which gave swarms in b agar. These reacted still, albeit weakly, only with b. These "attenuated b's" are still perfectly motile. I'll send you some of these, with notes. Transductions of other phases to SW-543, accompanied by b's in each case, have been verified. They include g, gm (enteritidis), gp (dublin) and r (heidelberg). I expect to do the progeny tests on the latter to help sew up this part of the story. b's are definitely coming out of SW-543 + FA(SW-623). I have some runs now on the second generation i's from this same combination, and think we can stop here. I see no way out of linked transduction, perhaps of components of a gene characterized by pseudo-alleles. It looks much the same as "autogenic" transformation in pneumococcus. There is no sign of linkage with another marker put into SW-543 (SW-666 = 543 Gal-, used in most of these). Norton is willing to admit that the spontaneous i was a fluke; the experiment involved heated FA as a control, and it presumably was not completely inactivated.

Sounds like you have some very nice new material, but let's call a halt and write up the summer's work before you've chased down too many other quarries. The Lac+ character sounds promising, if you can get FA out of it.

Spicer has been here about a week, and trying to make sense out of his S. thompson's and their phages. So far, they haven't been built up to a sufficient titre for any interesting purposes. My immediate ambitions

Instead of running all over the lot, why don't we divide the labor, I going over Boyd's phages? He promises in the mail as soon as now (Thompson 10). It is including his B4 (strain C20) whose host range may be of interest. a phage carried by LT-10 and another in Spicer's collection. It is fairly apparent that we have missed any B phages so far by the use of heat to sterilize the lysates. If S. bovis morbificans is really so generally susceptible to the A phages, we may have to revise our conclusions about the XII_2 as receptor. It has not yet been tested for absorption of FA.

Esther asks please not to bother about English skewers— not for this winter, anyhow. I append a pedigree diagram on what has been done so far on SW-543 genetics