

Nov 2, 1953

My dear Beale:

Of course your remarks in your letter of the 26th are hardly a quibble [and I doubt that you would have thought so yourself]. I perhaps should have been more explicit in my letter of the 10th in stating the alternatives to the conditional "If...transduction involves only... chromosomal fragments...." So far, we have no criteria of genetic localization except concordance in transduction. It would be very helpful to have a sexual (K-12 type) recombinational mechanism in this group, but this has yet to be found, though it would be rash to deny the possibility and we are still looking.

The only remark I can add to the possibility of a cytoplasmic determination is that we would, in any event, expect the recipient cell cytoplasm to be greatly preponderant over the cytoplasm that might, hypothetically, be carried over with the nuclear fragments. Then one would perhaps expect the phase of the recipient to have an overriding control. I.E. cells in phase 2 (emx) of abony ought then always to give 1,2;b types when exposed to phage from typhimurium, regardless of phase (1 or 1,2). This would not be necessary, however, if the cytoplasmic encouragement were specific for the allele as well as the locus. Obviously, the important experiments have yet to be completed, namely the role of the phase of the recipient in the determination. There have been some technicalities obscuring the interpretation of the experiments that have been done in this direction, and the study is still in progress.

Of course you may keep the preprint. Judging from reprint requests, the paper is now in print (Jour. Immunol. 71: 232-240. I will send you a reprint when the supply arrives (probably about 6 weeks).

Sincerely,

Joshua Lederberg