

Nelson

November 20, 1954

Dear Tom:

I have just had a chance to study more carefully the summaries that you left behind. I want to thank you for doing such a workmanlike job of it, and leaving no loose ends behind you. As far as I can see, you did pretty well complete this project, as far as it would be feasible to carry it, and the following conclusions seem pretty well substantiated (mostly as you already expressed):

Four Gal loci were studied, Gal₁; 2; 4; and 7, especially 2 and 7. 1 and 2 are regularly eliminated, i.e., are never heterozygous, and, whenever tested, prove to be hemizygous. 4 and 7 are never eliminated; whatever pure stocks were tested proved to be homozygous. This has an important bearing on the precision of breakage in the elimination, since these factors are so closely linked to one another and to Lp (which is also eliminated). These results agree with other data that had been accumulated (it would have been embarrassing otherwise). There is only one point I am uneasy about: in my earlier experiments on W-478 x W-583, I had never recovered any Gal₁. Probably the stock has either changed since then, or my earlier data were incomplete, or there had been a substitution. This can and will be fairly readily checked. Similarly, there may be a discrepancy in the exceptional Aray (III-22) which will have to be checked also. The Ara of W-583 is distinct from that of W-945; the latter has formerly been found to segregate also.

To check on the interrelation of Gal/Mal elimination, I summed the Gal₁ and Gal₂ results, and get the following 2x2 contingencies for Gal, Mal, S (-R = type A).

Mal/S	Gal/Mal	Gal/S
45:6	44:19	38:25
0:23	7:4	7:4

linkage! —essentially independent—

The numbers would have to be unreasonably large to be sure, but I would judge there to be only a small interaction, if any at all, between Gal and Mal-S. This probably means that there are two distinct sites of elimination, a point Luca is by no means unhappy about either. Unfortunately, the different experiments are not altogether homogeneous (cf. -R/-+S = 12:10 and 23:0 resp. in 2592x ~~445/17~~, #269). But there is certainly no closely linked association. I am arranging to check those #335 diploids for presence of Hfr, which would be a technically useful combination to have.

Nothing much new here; Luca's leaving in about 10 days; the single cell pedigrees are going on and on. I hope everything is going well with you, personally and professionally.

Yours,

P.S. I want to send a final report to Scantlebury at NIH. Did you see you had already sent him a "progress report"? I notice, I have an original. Should this go to him too?