11/14/45.

Dear Mr Lederberg:

We discussed your most interesting results at Seminar yesterday. Is it possible that you had a conventional back-mutation of the pab gene in the original adapted strain giving rise to a heterocaryon? In cross 1 you might have selected perithecia from nuclei of the constitution

1633^+ (back mutated $\times$ 1633^- = 1:1

While in cross 2 you happened to get perithecia from the cross

$1633^- \times 1633^+ = 1:1$

~~and in~~ Then cross 3 ~~was~~ and 4 would come out OK.

If this were so, then by taking your presumed 1633^- E^+ strains from single spores of cross 1, you should not be able to repeat cross 2.

— over —

Possibly you already have the data to eliminate the suggested possibility. If not you should be able to get them easily. We couldn't think of any other reasonable explanation though we didn't put too much effort into it. We'd be glad to know what further evidence shows!

With best regards to you & the Ryans,

Sincerely yours

E M Beadle