

December 10, 1946.

Dear Dr. Luria:

Further attempts to demonstrate different virus resistance patterns in our E. coli continue to show 1,3,5 as the only type of resistant colony obtained after plating with T-1. K/7 shows no cross-resistance. An attempt to analyse the 1,3,5 resistance complex genetically, by crossing a K/ 1,3,5/7 with a sensitive strain gave recombination between the T<sub>7</sub> and T<sub>1,3,5</sub> resistance factors, but the 1,3,5 complex remained intact in some 100 isolates of recombinant cells.

Have you any information on resistance patterns in K-12? There are some rumours around New York that you have discovered an 'allelic' series: I just thought you'd be interested to hear this- I hope to meet you in Boston for Christmas.

It may be of interest that in a cross:

B-M-T+L+B<sub>1</sub>+Lac+T<sub>1</sub><sup>r</sup> by the corresponding ++---S, that all 8 recombination types of the factors B<sub>1</sub>; Lac; and T<sub>1</sub> have been isolated, with widely different frequencies, continuing to suggest linkages with a map roughly: B<sub>1</sub>.B.M....Lac....T<sub>1</sub>...L..T.T<sub>7</sub>  
This is still very much a speculation, but linkages of factors on a single chromosome continue to provide the best explanation for the frequencies of various types.

With best regards, especially to Sonneborn,

Sincerely yours,

Joshua Lederberg.