March 27, 1952

Dr. Werner V. Haas
411 East 69 Street
New York 21, N.Y.

Dear Werner:

Thanks very much for sending out the Wakeman strain and the polyauxotrophs. I've done a few crossing tests with them, with no very conclusive results.

First of all, the Wakeman strain is definitely F+ (as shown by transfer of the F+ agent to K-12 testers). I think that there can be little further doubt that the Hfr and Hlt series are derived from Wake.

The Wake. strain itself gave a negative result when testeddwith W-1177 etc. on streptomycin minimal agar: it would have been passed over in our routine screening program.

Similarly, in accord with earlier records and remarks, I did not find evidence of crossing either between the polyauxotrophs you provided, or between them and any K-12 testers (F+ and F-). However, I have also gone back to a few of the cultures labelled Hlt, for example Hlt h2-p1 and Hlt-Tr1-h3. These gave very sporadic results with K-12 testers, and altogether only a very few prototrophs were obtained, so that I cannot place too much emphasis on any negative results. The "sterile" Hl-QT h stock has given me prototrophs with K-12 testers, and a very few (but undoubtedly significant) with one or two non-K-12 testers. These combinations are far too sterile to be of any use as such for genetic studies. All crosses were done on minimal agar. In a few cases, the parents were grown together. at 37°.

There must be something that I'm overlooking, and that would make the situation more hopeful. I gathered that you have obtained substantial yields in crosses of Hlt-- stocks X 58-161 and W-677. Can you give me the details of your experiments that might help me to do the same? The pant cultures that I now have are: Hlt: h2thr; h2p2; h2cyst; h2m; h1tr; tr1h3; p h4; ptr; h2p1. Hl: h2; QTp; QTh; h2p2; tr1; h2arg; I haven't tried all of these by any means, and would appreciate any lead to help get them to cross with Hl2 testers.

Are you having any luck with pant mutants in K-12?

Sincerely,

Joshua Lederberg
Assoc