

THE UNIVERSITY OF CHICAGO
CHICAGO 37 · ILLINOIS
INSTITUTE OF RADIOBIOLOGY AND BIOPHYSICS

1155 East 57th St.
Chicago 37, Illinois

June 16, 1948

Dr. J. Lederberg
Department of Genetics
University of Wisconsin
Madison, Wisconsin

Dear Lederberg:

This is a sequel ^{and correction} to my letter of the 4th of June. I have been uneasy about the behaviour of various of your strains towards phage 3, and have therefore applied a more elaborate way of testing resistance to this phage. I have not tried Y₁₀, which Novick previously characterized as sensitive, but I tried the original K strain, the 58-161 strain, the threonineless strain which you sent us, as well as the strain requiring both lucine and threonine which you sent us. I also tested the prototrophes obtained by mating the 58-161 strain with W, and by making the F/6 x W/1 cross.

The K₁₂ strain which we obtained from you was most resistant, and the prototrophes mentioned above were least resistant. The other strains mentioned were intermediate. Whether the various degrees of apparent sensitivity are due to host range mutants of the viruses, or whether we have to deal with differences with regard to absorption ^{resistance} ~~resistance to~~ phage 3 itself, I am not able to say as yet. On the basis of what I have seen so far, it is possible that the degree of sensitivity of the various growth factor deficiency strains is determined by the genes which are responsible for these growth factor deficiencies. And it is further possible that the K₁₂ strain itself has comparatively recently undergone a mutation to phage resistance while being subcultured. To sum up, I am quite uncertain at the moment how the difference between the prototrophes and the K₁₂ strain with regard to

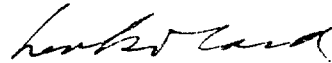
Dr. J. Lederberg

-2-

June 16, 1948

resistance to phage 3 has to be interpreted.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "Leo Szilard".

Leo Szilard