

July 14, 1948.

Dr. Ward Pigman,  
Institute for Paper Chemistry,  
Appleton, Wisconsin.

Dear Dr. Pigman,

I wonder whether you can favor ~~me~~ with at least a seed sample of lactulose to facilitate our preparation of the compound. If you can supply a larger quantity (1 - 5 gm.), I would be even more grateful.

Due primarily to the slowness of delivery of equipment, I regret that I can tell you very little of the progress of our work, except for the broad statement that genetic changes in the organism (*E. coli*) can control both qualitative and quantitative changes in the aglucon specificity of  $\beta$ -D-galactosidase. I have been unable to secure the necessary substrates ( $\alpha$ -L-arabinosides, fucosides, galacturonosides) for the study of the specificity of the glycosidic portion, but am still hopeful that some of them can be made here.

I still hope to be able to pay you a visit - possibly we shall be driving past Appleton some time this summer, which will provide the opportunity.

Mr. Martin Seidman, working in Link's laboratory, has prepared o-nitrophenyl  $\beta$ -galactoside, and this has proven to be very useful as a chromogenic substrate. We can find no literature on this compound, however. Have you ever come across it?

Yours sincerely, and with many thanks for  
past favors,

Joshua Lederberg,  
Assistant Professor of Genetics.