

June 17, 1959

Dr. Boris Rotman
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Dear Boris:

Your letter of May 20th was waiting our return from Europe.

We will certainly be what help we can for your problem. I hope you will find it possible sometime before very long to visit us and discuss some of the details especially as one of my students, Ann Cook, is deeply involved with the mutants of the Lac region. Mel Cohn along with the rest of the biochemists has just arrived and this promises to be an interesting place for such studies not to mention what Pardee is doing at Berkeley.

I don't think you have yet made a quite sufficient test of the hypothesis of galactose as an internal inducer since even the kinases-negative strains can synthesize at least galactose phosphate which might be the inducer or might be nonspecifically hydrolyzed to give galactose. The test will have to be made again perhaps with a mutant deficient in the epimerase.

Our "Lac₃⁻" mutants have all been obtained by irradiating on EMB lactose agar. About a third of lactose-negative mutants turned up in this category. Does the defect in galactose permease account for the lactose-negative character of these strains?

I will look to see if we have some cultures which carry the Lac₂ or Lac₄ mutation and which are also Gal₂⁻ and should lack the galactokinase. If we don't have them now it should be no great trick to obtain the corresponding recombinants, however as Miss Cook is taking van Niel's course this summer and I don't have my own assistant yet, it might take a little time.

All best wishes,

Joshua Lederberg

P.S. Thanks for eth reprints; now I can complete the mailings.

It is very odd that Gal₁ and Gal₂ should both lack the MGpase; they are ~~max~~ deficient in the transferase and kinase, respectively, as you know. Have you looked to see whether MGpase might be inducible by galactose in these mutants? Galactose might be synthesized through the Galactose-UDPGal-UDPGlu cycle in the wild type, and this might be a natural inducer in this case. Alternatively perhaps UDPGal is ~~max~~ the inducer, perhaps less likely.

Is there much point in our rushing to send you cultures in Chile? You indicated you would be returning to Albany in May. I hope we may have some chance to see you in a leisurely fashion sometime this summer-- perhaps here? Can you see some way to contrive to travel this way?

