Air Mail

YALE UNIVERSITY
OSBORN BOTANICAL LABORATORY
NEW HAVEN, CONNECTICUT

June 9, 1950

Dr. E. L. Tatum
Department of Biology
Stanford University
California

Dear Ed:

Could I get a culture of strain 58-278 from you? This is the Coli biotin phenylalanine strain. Pete has been using this strain to investigate various resistance phenomena and has found that it behaved in an anomalous fashion. The most peculiar part of its behavior, however, is the fact that when plated on complete medium, it gives rise to two types of colonies, large colonies and small colonies. The large are biotin-phenylalanineless and the small colonies require neither biotin nor phenylalanine but do require norvaline. What this phenomenon actually is we do not know as yet. However, we felt it might be desirable to get cultures of this strain from other labs and make sure that this is a mixed culture typical only of our collection or that it has been a mixed culture from the beginning.

Regarding Beam's thesis--satisfactory arrangements have been made and we will appoint a departmental committee of readers. If the readers all find the thesis acceptable, there will be no oral defense. It seems a trifle ridiculous to make Carl take the long trip for a formality; thus rather than do this we decided to call the examination off. You will not be asked to serve as a reader since the work has been carried out under your direction and we assume that it has your approval. However, I would appreciate a short statement from you concerning your opinion of the work. As for the time of his receiving the degree, Miss Stahl tells me that no degrees will be awarded now until next June. However, the University will furnish a letter stating that Carl has fulfilled all the requirements for the degree and will receive it at the next presentation. I was asked to remind Carl that in order to receive his degree, he must register for one further term, that if his thesis is in by June 15th, Miss Stahl suggests that he register for the fall term of next year. You might tell him of this; I too will do so when next I write him.

We have been doing a little bit of work with the quadruple requirer 7655. I think you might be interested in the outcome of the recent genetic work. We have found in backcrossing that it is possible to isolate strains for simply the phenylalanine tyrosine requirement and that in such asci the anthranillic and paba requirements have simply disappeared. This is in agreement with some of our work with N^{15} which suggests that 7655 is actually a phenylalanine tyrosineless mutant and that the requirement for anthranilic and paba results from some biochemical abnormalities occasioned by the phenylalanine block. I thought you might be interested in this information in connection with the activity of sckemic acid.

Dot was here recently and told us that you obtained an allele C83. She said that you would be happy to send us a culture of it but I thought it best to

re C-83

mention our request directly to you since I don't wish to cause hard feelings with my interest in this strain. We have been doing some work with C83 and indeed are working on the enzyme at the present time. We would like, therefore, to make a direct comparison of the two enzymes unless you people wish to do that yourselves. The other thing, of course, that we would like to do is to test it critically as we have done on the 3416 alleles with the possibility of finding additional evidence for our complex Neurospora genes. Dot said that she did not know whether you were planning to play with this mutant or not. If this wouldn't be imposing on your good nature, we would appreciate very much a culture of your C83 alleles.

I do not know whether I wrote you or not but Sinnott has officially resigned as chairman of Plant Science and Paul has taken over for this coming year. What this will finally mean in terms of microbiology, is at present, undecided since we now have a Microbiology Department headed by Pete and a Plant Science Department with strong microbiological inclinations. Time will tell the outcome.

Best regards to June, Peggy and Barbara,

As ever,

Dave

David M. Bonner
Associate Professor of Microbiology

/evz