

NEW YORK UNIVERSITY-BELLEVUE MEDICAL CENTER  
NEW YORK UNIVERSITY COLLEGE OF MEDICINE  
550 FIRST AVENUE, NEW YORK 16, N. Y.

DEPARTMENT OF PHARMACOLOGY

October 1, 1956

OREGON 9-3200

Dr. Joshua Lederberg  
University of Wisconsin  
College of Agriculture  
Madison 6, Wisc.

Dear Joshua:

Sorry to hear that you lost 173-25. If you were a graduate student I would criticize you for not realizing that penassay broth probably does not contain DAP! Anyhow, we make this mistake every once in a while too since it's hard to realize that these soups bacteriologists have cooked up don't contain everything good in life.

We've had no trouble with reversions from this culture, and find it satisfactory, for ordinary purposes, to keep the strain going and to experiment with it using a DAP-containing filtrate as a source of DAP. This permits us to save our limited supplies of the pure compound, which is not commercially available. I'm sending you not only a fresh certified slant of 173-25, but a slant of lysine auxotroph 26-26, which accumulates DAP. If you grow this bug with vigorous shaking in minimal medium containing a limiting amount of lysine, such as  $10^{-4}$ /ml., you should accumulate after two or three days between 100 and 200 mg/l. of DAP. You can easily make a rough assay of your DAP accumulation by using 173-25 in the presence of lysine, on either solid or liquid medium.

I think the enclosed note on penicillin is fine, and I've taken the liberty of pencilling in a few minor suggestions. I'm not sure that Science wouldn't be a better place for it than J. Bact.

Here's the genealogy of our  $lac^{-}$  strain that interests you. We once isolated an unstable  $lac^{-}$  which we numbered J1-0, and which was lost. As I mentioned before, this mutant seemed interesting because its rate of reversion of the  $lac^{-}$  character was not accelerated by UV. From it we derived J2-1, which required histadine, J2-10, which required pantothenate, and J2-6, which required tryptophan. J2-6 begat J4-5, and -13, with respective requirements for histadine and (serine or glycine). Finally, J4-5 begat J6-2 and J6-6, with additional requirements for proline and for (isoleucine plus valine), respectively. I'm trying to resuscitate these old stocks, which we have not used for years and may not have kept very well. Whatever is viable will be sent to you within a few days.

Many thanks for your congratulations. Everything is going fine, though we are by now running into the traditional difficulty with managing to get enough sleep. Since he isn't yet a very good verbalist, I've not been able to find any rhetorical devices that will get him to mend his ways. But he is very cute. Best regards to Esther.

Sincerely,  
*Bernard*

Bernard D. Davis

*PS. Will send you on the DAP auxotroph soon.*