## STANFORD UNIVERSITY MEDICAL CENTER

## DEPARTMENT OF GENETICS

November 17, 1977

Dr. George W. Beadle 5533 Dorchester Avenue Chicago, Illinois 60637

Dear Beets:

(Horning)

Thank you for your note of the 13th and the comments from Norm that you forwarded. I am happy to have the corrections about kynurenine and the other points that Norm mentioned, and will incorporate them into the final version.

However, about biotin as a growth factor I am almost certain that this was found independently by Tatum. The way that the Butler, Robbins and Dodge paper is mentioned in your own PNAS article published in November 1941 left me that impression the very first time that I read the paper. Their article appeared on September 12, 1941. Your PNAS manuscript was communicated on October 8th. It looks as if your reference to the Science article was an afterthought, put in at the very last moment just when their paper appeared.

In addition, here is Ed Tatum's notebook for March 18, 1941. His first effort to grow Neurospora on a synthetic medium used only thiamin: when this didn't work, he tried biotin with and without supplements. There is no mention of Robbins, and the way he went about it also makes pretty clear that he did not simply have a direct early communication of their work. Now all this is hardly a rigorous argument, and if there were some side correspondence still available, one might be able to make another case. However, I am inclined to let the wording stand as it is without attempting to push the matter any further than that, unless, of course, you have a contrary recollection.

I am delighted to have your commendation of the article, and so I will be sending the original to Corner by the same post, finally to put this obligation to rest.

My best wishes, as ever,

Yours,

[\* Rochefeller Univ. achivis ].

Joshua Lederberg Professor of Genetics

Enclosure

In so far as we have carried them, our investigations on the vitamin requirements of *Neurospora* corroborate those of Butler, E. T., Robbins, W. J., and Dodge, B. O., *Science*, 94, 262-263 (1941).

JL:ek-f