

November 13, 1947

Dr. Rollin Hotchkiss
Rockefeller Institute
66th St. & York Av.
New York, 21, N. Y.

Dear Rollin:

Thanks loads for your letter of November 6th and the reagents, samples of which have just arrived. I will let you know whether we get anything from them as soon as we get the results.

Your news about Harriett was news indeed to me. I never had any notion at all that such a union was in the air. I spent a fair amount of time with Ephrussi last summer without receiving even a hit that this was coming off.

Scientifically, things are going along pretty well. We now have the adaptation problem pretty well in hand, especially with regard to preparation. Reiner devised an absorption and eluting procedure which separates the active material from some inhibitors and we can now get active preparations every time. We are now attempting to find out what it is and have a lot of hints, but nothing very certain yet except that it appears to be a large molecule which probably contains a protein component. What else there is in it we do not know. A good deal of the difficulty centers around a peculiar phenomenon in that the thing is extremely unstable in the absence of the corresponding substrate, that is to say, galactose adaptin is highly unstable in the absence of galactose, but in the presence of galactose nothing but the most vigorous procedures destroys it. We are trying to find a gentle method of getting rid of the galactose and then doing our enzymatic inactivations on the unstabilized material. Things should move relatively smoothly from here on in since we do not have to waste so much time in getting the material to work with.

I think you will be interested in a recent development in the azide problem. About two months ago I finally sat down

and decided to write up what we had and in the course of that I got several ideas which I tested, and it changes the nature of the interpretation of the phenomenon. You will recall that we were arguing that in the presence of azide the coupled phosphorylation at the triose phosphate dehydrogenase was skipped. Another possibility was that the azide, while permitting the reaction to occur, prevented the accumulation of the diphosphoglycerate. We tested this in various ways and the upshot of it is that we can show quite directly that azide interferes with the accumulation of acyl phosphate. We can also demonstrate that it does not prevent its formation. I am now writing the stuff up and I am very glad that I waited, because I think we have a much more reasonable and certainly, from the experimental point of view, a much more strongly supported hypothesis of azide action.

From a political point of view, things are pretty bad here and I have been forced to the conclusion that the sooner I transfer my program elsewhere, the more work I will get done with less wear and tear on my nervous system, so I am now actively looking around for a place where I can continue the research.

Sincerely yours,

S. Spiegelman

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