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DEPARTMENT OF MEDICINE

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Dr. Joshua Lederberg
Dept. of Genetics
College of Agriculture
The University of Wisconsin
Madison 6, Wisconsin

Dear Lederberg:

It was nice to hear about your present fine appointment. I think it is a real achievement, and one you well deserve. I have heard of and seen references to the work you did with Tatum, but being unfamiliar with the field am ignorant of the details. I would appreciate your sending any reprints you may have.

Regarding your specific question about the yeast, it is true that during August I, and a fourth year medical student repeated and confirmed the work of Fox and Ward, but the work stopped after only 4-5 weeks when a shipment of radioisotopes arrived (for my major project). However, I think we will start again in about a month, and will try to establish the optimal conditions for producing these precipitins and make also an effort to study the quantitative aspects of the precipitin system. One difficulty which we encountered and have been unable to circumvent is the fact that the yeast extracts are various shades of brown and the precipitates that form when they are mixed with the appropriate antigen are colored. Since we have been using UV absorption (on the Beckman spectrophotometer) to quantitatively measure precipitates, and getting absorption spectra to get information on the constituents of ppts. the presence of color has been a real handicap--and the absorption spectra so far obtained have been utterly uninformative. Perhaps you know what causes the color and what we can do to remove it. I haven't gone to the literature, but I can tell you that so far everything which has a absorbed color has also absorbed the "antibody"(e.g. charcoal, fetter-cel, etc.).

As you so well know the implications of such a system are truly far-reaching and I am anxious to return to the problem. However, my major concern is, and will continue to be, studies in protein metabolism, particularly as related to immuno - chemistry and we have just completed our first big goal which was to find a method for preparing a protein (antigen) labelled with a radioactive tracer in such a way as not to impair the protein's immunologic specificity. The use of this method promises to be highly interesting.

Incidentally, regarding the use of my name in your review--it seems to me that even without confirmation Fox and Ward's work might be mentioned. If you feel better about including confirmatory work, I think it alright to mention me. However, since the work was done

in collaboration with Levin, and, in a sense, also with A. S. Keston (of the Chemistry Dept. at N.Y.U.) with whom I am collaborating in the rest of my work, I think it proper to use all names or, preferably, none at all. If you must use our names I suppose you might say something to the effect: ".... substantially confirmed by Eisen, Levin and Keston(priv. comm.)."

Let me know how your work goes and if you plan on doing anything with yeast antibodies, I would appreciate learning about media, etc. that you decide to use. We are quite ignorant about growing, extracting, fungi and yeast and in the little work we have so far done, we have used only 15-20% molasses as the medium (see Fox and Ward).

With best wishes,

Sincerely yours,

Herman

HNE:GEE

Herman Eisen