

INDIANA UNIVERSITY

BLOOMINGTON, INDIANA

DEPARTMENT OF ZOOLOGY

Oct. 20, 1960

Dr. Elof A. Carlson
Dept. of Zoology
University of California at L.A.
Los Angeles 24, Calif.

Dear Elof:

It was good to see you in San Francisco but I didn't get to talk to you enough. Also, I had wanted you to get a chance to talk to my friend Carl Sagan since I think you would have been fascinated by his present project of trying to adapt some microorganisms so that they may be able to convert the atmosphere of Venus into something ultimately suitable for man. You may remember that he is a special friend of Sisi's.

The enclosed abstract may interest you since you will see that in the last sentence of the first paragraph I mention the possibility that the reason mutagens having two active groups have a higher mutagenic effectiveness may be that they attack both strands of the double stranded DNA at corresponding or nearby points, thus making a finalized mutation more likely rather than a restitution. I was interested to learn that you are thinking of carrying out such an experiment because I have thought it should be done. Perhaps when you publish your paper you might mention this abstract. ~~enc~~

One possibility I had in mind for attacking the matter was to compare the relative effectiveness of mutagens with only one and the corresponding ones with two active groups on double stranded versus single stranded phages. Of course one would have to be sure that the single stranded phage was really in a single stranded condition when treated. Some evidence has recently been obtained, I am told, that single stranded phages are in a double stranded condition when in the host organism. There are of course other possible ways of throwing light on the hypothesis.

The enclosed abstract was published last June in the summary of proceedings supplied to the participants in the conference before it began and is again in press in the final proceedings of the conference. Unfortunately, I did not have the time to expand it into a full paper as they had wished me to do. Nevertheless, I do not think the points really need expansion for people familiar with the genetics involved.

I'll be looking forward to seeing you again at the New York meetings and perhaps in Bloomington too, either on your way to or from the meetings. Today and tomorrow our guests are arriving for the little conference on Drosophila genetics that Zimmering arranged for the Indiana-Illinois-Wisconsin area. In addition, we hope to have Herskowitz from St. Louis, Altenburg from Houston, and Auerbach. It's too bad you're too far away to get to all the meetings but I hope the rather ideal nature of the locale you are in makes up for that.

With kindest personal regards, to you and your wife,

Yours sincerely,



H. J. Muller

HJM:slh
enc.