



DEPARTMENT OF AGRICULTURE

LABORATORY OF INSECT PATHOLOGY
SAULT STE. MARIE, ONT.

October 15, 1953

Dr. Joshua Lederberg,
Department of Genetics,
University of Wisconsin,
College of Agriculture,
Madison 6, Wisconsin, U. S. A.

Dear Dr. Lederberg:

Coming back from Europe I found your letter of September 16. Many thanks for your interest in our work.

Your questions of the kind of trans-ovarial transmission of insect viruses cannot be answered clearly at present. As a matter of fact it is our chief headache to obtain absolute disease-free insect strains. At the present such insects seem not to exist because by continuous stress for instance application of fluorides (Vago) you can drive the virus out if not in the first more likely in the second or third generation. My personal opinion is of an almost perfect equilibrium which is nearly a symbiosis between these insect viruses and their hosts. This equilibrium can last probably indefinitely whereby a certain amount of multiplication must take place somewhere in the insect likely somewhere around the gonads. Very probably without a production of any inclusion bodies (polyhedra). These questions we are trying to solve now with C¹⁴ virus. I understand and appreciate enormously your interest in these questions in connection with cytoplasmic inheritance. I may add that I had several rather serious quarrels with Dr. Lwoff about this point. After reading your very excellent review on this matter (Physiological Reviews, Vol. 42: 403: 1952) I was very highly impressed by your "biological viewpoint". You seem to be one of the very few scientists who know and respect biology besides biochemistry.

I would highly appreciate it if we could discuss our problems personally. This should not be too difficult since we are not too far away. Being in Europe practically all this summer I have a lot to do this winter but I hope there will be an opportunity next year to meet and hope you will have time for a discussion. Will you be coming up near our place sometime? We would

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be extremely thankful if you could come. We have a most excellent laboratory here which is solely devoted to insect pathology.

Naturally I will send you all my reprints. I would appreciate it if I could get yours too. I just read your last review in Science and would be glad to get a copy.

In the first volume of "Advances in Virus Research" (Academic Press) there will be a big review article on insect viruses by me and I hope to get at least some reprints.

Very sincerely yours,



G. H. Bergold.

GHB/s