



DEPARTMENT OF
HEALTH, EDUCATION, AND WELFARE
~~FEDERAL SECURITY AGENCY~~
PUBLIC HEALTH SERVICE

May 4, 1953

IN REPLYING, ADDRESS THE

~~Communicable Disease Center~~
Enteric Bacteriology Laboratories
P. O. Box 185
Chamblee, Georgia

Dr. J. Lederberg
Department of Genetics
The University of Wisconsin
Madison 6, Wisconsin

Dear Dr. Lederberg:

Your letter of April 30 and the enclosed draft of a manuscript arrived today. I have only scanned the introduction and discussion but from cursory examination the presentation seems quite logical. There may be details which will require some adjustment when the manuscript is gone over thoroughly. I think I can do this before I go to Michigan one week hence. Incidentally, this chore of talking in Ann Arbor has caused me no end of work and trouble. I believe I now have the material fairly well organized up to the work on Salmonella, which should be easier.

The thought came to me that it might be worthwhile to comment on the observation that the diphasic state apparently had been transferred in one experiment. How do you feel about this?

Our work on your last shipment of cultures has not progressed as rapidly as I had hoped it would. We have struck several snags. Some of the cultures were not what you anticipated. It may be that the wrong culture was sent in one or two instances. I will not go into this fully until I give you a final report on the cultures.

Culture SW 1016 has behaved in our hands just as did SW 674. Phase 2 was agglutinated to a degree by S. dublin serum, S. enteritidis serum and by S. dublin serum which had been absorbed with phase 2 of SW 1011. I shall look at numerous colonies of this in order to determine whether the reaction is due to back mutation.

The same condition prevails in SW 674 and I am going to look at a large number of phase 2 colonies of that form. You will be interested to know that on plating out the original of SW 674 colonies of both phases were found. Inasmuch as this culture repeatedly had been isolated from single colonies, I believe this indicates that the culture has a fairly high rate of natural phase variation.

Both SW 986 and SW 986-B are diphasic.

I believe it is not worthwhile to comment further on the shipment of cultures covered by your letters of April 11 and April 13. I hope

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to make a full report before too much time has elapsed. I am sorry that the work has taken such a long time, but as you know, things of this sort sometimes go very slowly. I have done absorptions with the phases of these cultures since all previous absorption experiments had indicated that complete antigens were transduced. If you feel that absorptions are necessary in any of these cultures, please inform me.

One more comment I would like to make - SW 1026 has offered the difficulties which you anticipated. We have not been able to revert the b antigen to i. It has gone instead to z₃₃. Before I give up on this I want to carry the organism for some time in absorbed b serum plus absorbed z₃₃ serum. I shall do this both with b phases and z₃₃ phases.

With kindest regards, I am

For the Officer-in-Charge, Bacteriology Section

Sincerely yours,



PRE:mg

Philip R. Edwards, Ph. D.
Bacteriologist-in-Charge
Enteric Bacteriology Unit