

Marine Biol. Lab.
Woods Hole, Mass.
August 4, 1954

Dear Professor Uetake:

I have now been able to study your most interesting manuscript. Before sending it on to Dr. Porter, I would like to discuss with you a few suggestions for its revision. First, I will summarize some matters of scientific importance, and then details of form:

page 3 "4." What is "broth"? How old are the mixed cultures? Are they standing cultures or do you aerate?

page 5 "9". Is this an autolysate preparation?

page 6, first paragraph: This is the critical experimental description, and should be given in more detail. Were the different autolysates titrated for phage and, if so, on what indicator. In fact, will all of the phages form plaques on all of the strains listed, or if not, what are their host ranges? (This information is essential for anyone who would try to repeat the expts.) As I will mention again for p. 11, more details should be given on the proportion of altered colonies.

page 11. VIII. This is a most important experiment, and is well-designed. However, some numerical data should be given. I imagine that the translucent colonies consist of mixtures of sensitive, lysogenic, and infected bacteria, as we have often observed in comparable platings (see Genetics, 38, 51-64, (1953) near end of paper). It is impossible to evaluate the correlation of lysogenicity with antigenic variation unless one has some estimate of 1) the fraction of bacteria that are altered, 2) the fraction of bacteria that are lysogenized and 3) tests for bacteria that are lysogenized but not altered antigenically, all in addition to your statement 4) that the variants are all lysogenic (page 9. I suggest you make an explicit statement of how many variant isolations were tested for lysogenicity and for conversion ability). I realize for technical and other reasons that not all of these measurements may have been made, but whatever information is available should be presented; the data that are lacking should be pointed out for future determination.

page 12. XI What biochemical characters?

page 13. "s" In the light of your own excellent discussion, it would be better not to call this induced. May I suggest \bar{s} = direction of antigenic changes found after exposure to antiserum.

page 14. "4)" This important experiment is not presented in the text. The details should be given.

table 1: where known, plaque formation ability should be recorded also.

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On the whole, the paper should give more emphasis to experimental details and less to discussion and literature review. While the Japanese work should be reviewed, most American bacteriologists are well acquainted with transformations, etc.

Title: it would be better English and just as informative to shorten it to:

"THE RELATIONSHIP OF BACTERIOPHAGE TO ANTIGENIC CHANGES IN SALMONELLA GROUP E"

page 1. Delete lines 15-19, and corresponding references. It is enough to rely on Austrian's review. I would also leave out the reference to Laros' paper, as this gives very little information, and the mechanism is probably similar to your suggestion at p. 17-18, or rather to simple selection of spontaneous variants.

page 2. I would also delete the second and third paragraphs-- this is taken up again in the discussion.

page 16. I would delete, from section 12), all but the first sentence.

page 18-19 15). I do not necessarily advise, but would consider deleting table 3, and making a shorter summary statement instead. The phylogenetic relationships might be better speculated about at length in another paper.

If you will advise me of your reactions to my suggestions, I will make the necessary corrections and forward the manuscript to Dr. Porter. There are a few other minor corrections in style that seem too trivial to discuss. Do you want me to read the galley proof as well-- I will be happy to do so. My present criticisms do not, of course, detract from the outstanding contribution embodied in your work.

Yours sincerely,

for the phages and cultures which have arrived at Madison.
Some of the phage vials were
tampered with, -- some of the phage vials were
had been opened, but the bacteria seem all right, and we
manage the situation.

JL