

YALE UNIVERSITY
OSBORN BOTANICAL LABORATORY
NEW HAVEN, CONNECTICUT

January 14, 1947.

Dr. A.C. Braun,
Dept. Animal and Plant Pathology,
Rockefeller Institute,
Princeton, N.J.

Dear Dr. Braun:

I have just read your paper, Braun and Elrod, 'Stages in the Life History of *Phytomonas tumefaciens*' in the recent J. Bact. issue, with the greatest of interest. As the enclosed note will indicate, we have been studying gene recombination in a strain of *Escherichia coli*, with results which appear to us highly convincing. However, our efforts at characterizing the zygote have been entirely unsuccessful, and indeed might be expected to be futile because ~~the~~ its occurrence is infrequent according to the genetic evidence, in this strain. Your suggestion that it 'will be necessary to bring together in a single star different strains of the same species...and determine from this cross whether a recombination of characters results.' is of course the sine qua non of a genetic confirmation of the possibility that these stars are zygotes. I would suggest that to ensure that stars which can be formed in mixed cultures actually derive from cells carrying different gene combinations, it would be preferable to use irradiation-induced mutants of a single strain such as Chry. IIB, in a manner perhaps comparable to the procedure we have used in *Escherichia coli*. I hope that you will be able to continue these investigations genetically, and would appreciate very much hearing how they come out. If I can be of any assistance,

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please let me know