LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE
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21-5-53

Dear Joth, Herewith typescript of paper as sent in, and recd. by JGM on 20/5/53. I will send prints of photos later. I will send this surface mail in view of the trouble before, but will follow this with air-letter, which shd overtake it, in a few days when our typist comes back from week off. Micro-manip. goes on slowly. One new thing come up is that 1 motilised cell, (SW541 + φ/TM2) picked at 2-4½ hour (at 37°) after mixing, can give rise to 2 or 3 motile cells at say 10 hours later, each of which

Qs on re-isolation & 12 hours at room-temp gives ++ non-motile and one or two motiles (also motiles which give only non-motiles, presumably phenotypic lag after loss of flue by segregation 1 or 2 or 3 generations back). I was much disconcerted at first, but think it is OK now on assumption that Q carries a fragment of chromosome which is already duplicated or triplicated etc, & that this disintegrates to elementary active units very early in its new host. 3 occurrences in 20 single-motile cells so I think cannot be technical error. Am now looking for corresponding fencing in trails, i.e. 2 or 3 trails with common origin.

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Other complication of micro-manip expts. are that many cells fail to divide after isolation. They may lie around for days, disappear (? ∅ lysis) or resume growth hours later, and that known motile cells constantly become stuck either in surface film or in angle of drop. So only + motility phenotype is significant. However generally I think abort. tr-duct. hypoth. is satisfactorily confirmed. More later. Bruce

P.S. Owing to miscalculation of no. of carbon ~~of typed~~ the copy I am sending to N Z is deficient of the pages 1, 2, and 5–10 inclusive

PPS I also include copy of abstract sent to Int Cong. Genetics. & do. sent to Rome. The former is to followed by 500 word abstract to be printed in Proceedings, so please suggest any amendments or expansions. Have not heard from Cavalli.