

July 25, 1955

Dr. Robert Briggs  
Lankenau Cancer Research Institute  
Philadelphia 11, Pa.

Dear Bob:

Esther and I have been putting the final touches for the ms. for the symposium paper, whence some questions came to mind about your studies with toluidine blue.

I was particularly intrigued by your account of fertilizations with partially inactivated sperm. Do you ascribe the abnormal embryos to aneuploidy? If so, do you think each chromosome is a unit of response to the dye? Then some kind of "multiplicity reactivation" experiment might be possible. Anyhow, you had a footnote which implied that a more detailed cytological study might be forthcoming— have you anything that bears on the history of the partially inactivated sperms?

We were immediately re-interested in this because there is a recent claim of partial fertilization in *E. coli*— these French workers disrupted mating cultures prematurely and claim to have induced (or<sup>e</sup> revealed) the transmission of partial gametes. The evidence there is not very convincing, and they are somewhat confused as to whether they are inducing the effect (as seems more likely) or uncovering a normal process. But I was curious about possible analogies. Muller and Pontecorvo had something similar with UV'd sperm, but never published more extensively than a note in *Science* (92:418, '40). I am a little surprised that no one (as far as I know) has followed your dye effects in *Drosophila*, where a more complete genetic analysis would be possible, but I am sending a copy of this letter to Herskowitz to see what he thinks about it.

Yours sincerely,

Joshua Lederberg