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Professor C. H. Waddington, Sc.D., F.R.S.

TCC/IF/P.R.

Dr. J. Lederberg,  
Department of Genetics,  
University of Wisconsin College of Agriculture,  
Madison 6,  
Wisconsin,  
U. S. A.

4th October, 1950.

Dear Dr. Lederberg,

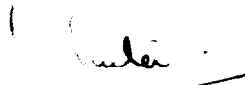
Very many thanks for your kind letter of 22nd September which has just arrived. I have not yet digested the enclosures and will reserve comment until a later date, but I am sure they will prove interesting.

I have now been joined in the recombination-fraction/  
map-distance work by a mathematical colleague, Alan Robertson. Our line of approach is an attempt to synthesise (i) A distribution of chiasmata in a bivalent arm, assuming some chiasma-interference function such as that proposed by Owen (Proc. Roy. Soc., 1949) but applied to the formation of chiasmata in the four-strand stage; (ii) A chromatid-interference function which has a maximum when the two chiasmata are adjacent, and falls away exponentially as chiasma separation increases. Chiasma ~~function~~ is still supposed to be a chain of events starting from the **centromere**. 1) *matari*

We appreciate, of course, that this model may not necessarily bear a very close resemblance to biological fact; but feel that it is probably on the right lines and worth following up to see its implications.

Very many thanks for your kindness.

Yours sincerely,

  
( T. C. Carter. )