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My dear Francis,

This letter contains very good news. I have now proved, by a rescue experiment, that the o gene controls the head protein. What is more, the same experiment shows that the protein structure can be recombined and segregated and I think this is a very important finding. The experiment was to cross T2 o^s UV x T4 o^r and select for o^s. Under these conditions, linkage is destroyed to the following extent: Two markers (h and r) which in a normal cross would be found together in 80% of the r, now only show 14% coincidence. Five rescued recombinants were picked, selecting for o^s and all had ~~other~~ the T4 markers present in original parent. i.e. we crossed $c^+ h^{2+} a^s r^+ o_s$ x $c h^{4+} a^r r o^r$ and all o^s were $c h^{4+} a^r r$. Stocks were grown and fingerprinted. Here are results so far:

	peptide ~~[illegible]~~					
	A	B	C	D	E	F
T2	+	+	−	+	−	−
T4	−	−	+	−	+	+
R2	+	+	+	+	+	+
R3	−	+	+	−	+	+
R4	+	+	+	+	+	+
R5	+	+	+	+	+	+
R6	+	+	+	+	+	+

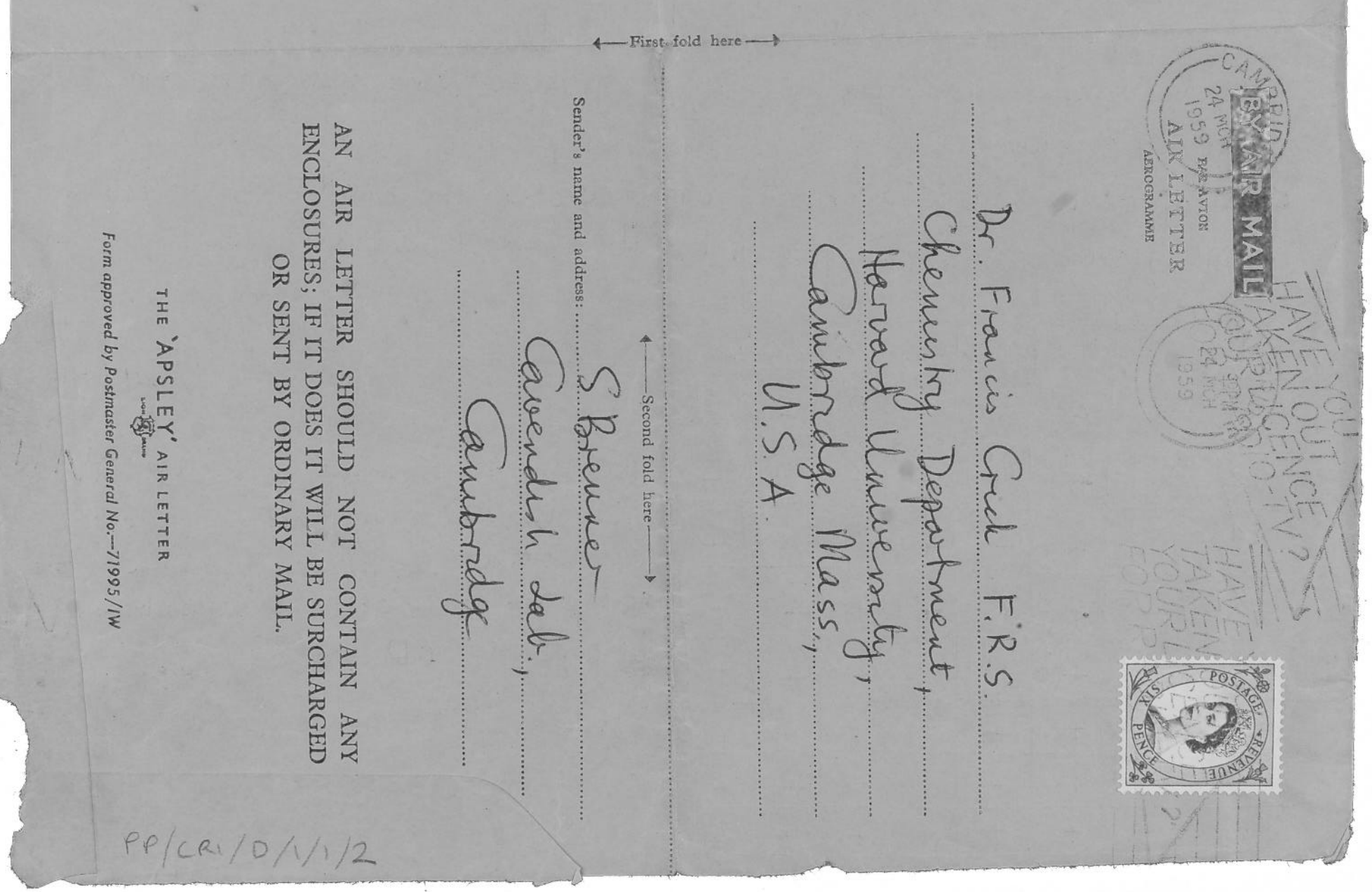
Notice (1) recombinant nature of R stocks showing that differences are not allelic (2) Close linkage of peptide B to o^s, (3) segregation of peptides A+D in R3.

There will be more data as we apply stains.

P.T.O

I will confirm this using isotopes since A + B can be seen in 1-D using phenylalanine – we also have found the homologous chymopeptides. It looks as though my crazy idea is workable – and I shall push on with it. Genetics going very well and more mutants in O_S cluster. I am going to make a determined search for this part of protein. Heard from Max about your Harvard job offers: I hope you don't succumb to the temptation. I have been offered one in Wisconsin which has been or will be offered to you as well. Now that the Institute is on the way, I'm not keen to move.

Lets hear all news Sydney



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