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REMARKS CONCERNING L'OPÉRON

by L. Sz.

As long as we are permitted to assume that the "enzyme" and the permease form one molecule, at least initially, all the experiments known to me can be reconciled with the model which I postulated in the March issue of the Proceedings. Accordingly, there would be no need to postulate an opéron. Rather, one would interpret the experiments of Jacob, Perrin, Sanchez and Monod as follows: There is a region of the DNA - region no. 1 - which determines the controlling site of the "enzyme". A mutation affecting this region may lead to a mutant which is constitutive both for the "enzyme" and the permease, because the "enzyme" molecule's altered controlling site may have a small affinity to the repressor molecule. Adjacent to region no. 1, there is a region no. 2 of the DNA, which determines the catalytic site of the "enzyme" and a mutation within this region may destroy, together with the catalytic activity of the "enzyme", also the permease activity. Adjacent to region no. 2, there is a region no. 3, and a mutation within this region leaves the catalytic activity of the "enzyme" unaltered, but it may abolish the permease activity.

I would be inclined to persist in these views until proof to the contrary, particularly if no mutant or recombinant of coli can be found which lacks the activity of the "enzyme" but has permease activity. Perhaps one ought to look for such a mutant. I have been trying to think of some method to do this, but I have not been able to think of a really good one.