

Copy of a printed diagram referenced as "Behaviour of a diploid heterozygous for the regulator and for both structural genes"

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presence or absence of inducer, is schematized in Figs. 3-5. Fig. 5 describes the behaviour of a diploid heterozygous for the regulator gene and for both structural genes.

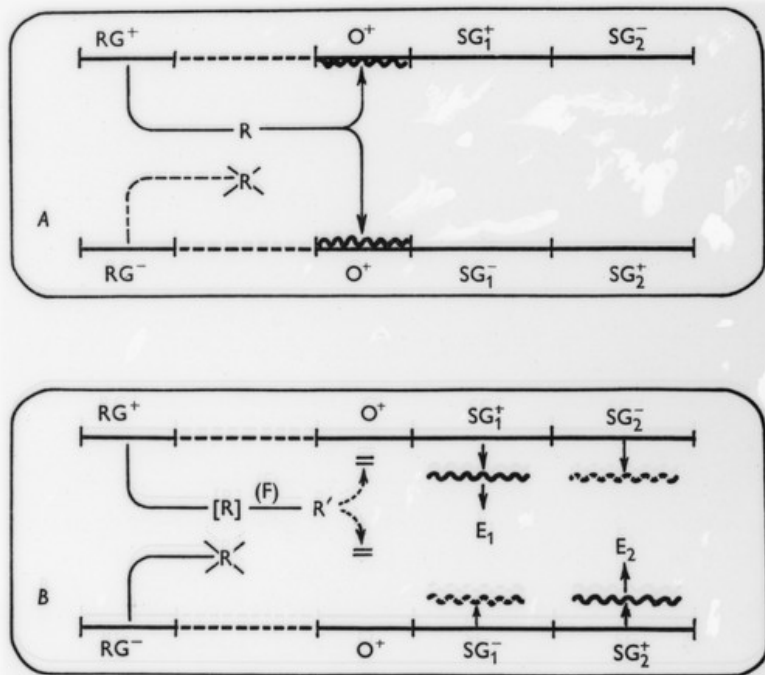


Fig. 5. Behaviour of a diploid heterozygous for the regulator and for both structural genes. (A) The mutated regulator gene (RG^-) produces an inactive repressor while the normal regulator gene (RG^+) produces normal repressor which blocks transcription in both operators. No enzyme is synthesized. (B) In presence of inducer, transcription is allowed. SG_1^+ on one chromosome produces E_1 , and SG_2^+ on the other chromosome produces E_2 . The diploid therefore behaves in every respect like a haploid wild-type.

The detailed biochemical study and genetic analysis of several hundred mutations which affect the 'lactose' system of *Esch. coli* has

properties of the enzyme
galactosidase (z) gene
(2) Many 'constitutive' mutations
outside of the structural
region, galactosidase
These mutations do
constitutive allele is

Fig. 6 represents
mutants. One per
mutation 'maps'
to synthesize β -g

R N

Fig. 8. Genetic map
which affect spe
galactosidase-perm
chromosome. The
lysis of the to
enlargement of
structural gene
inside the or

This striking e