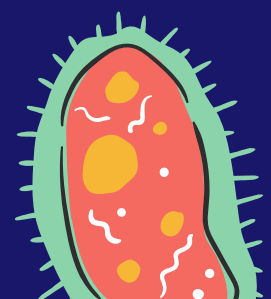
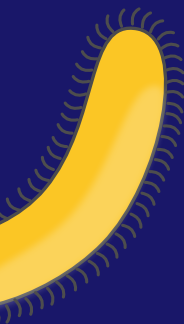


Gene Gala

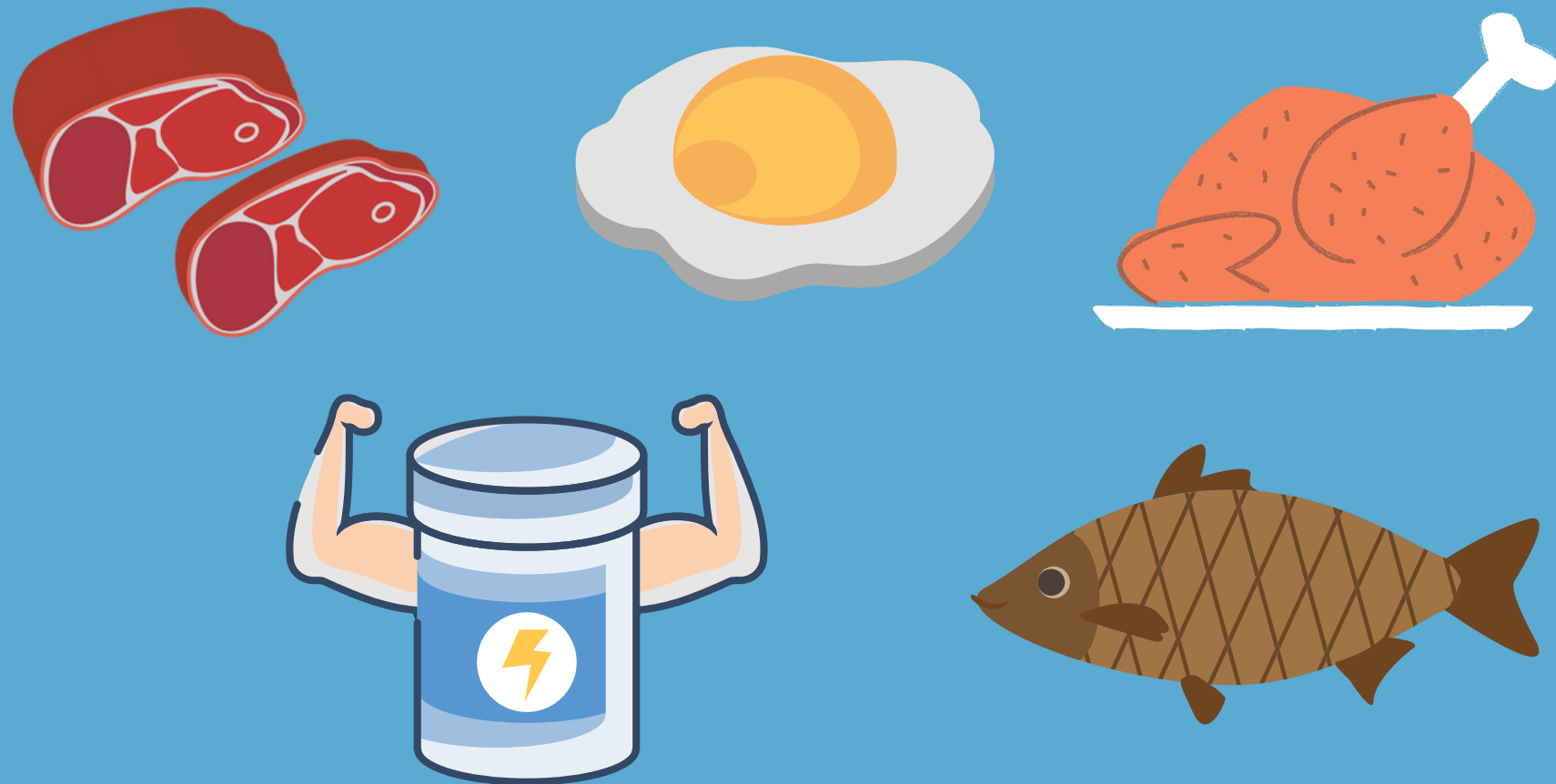
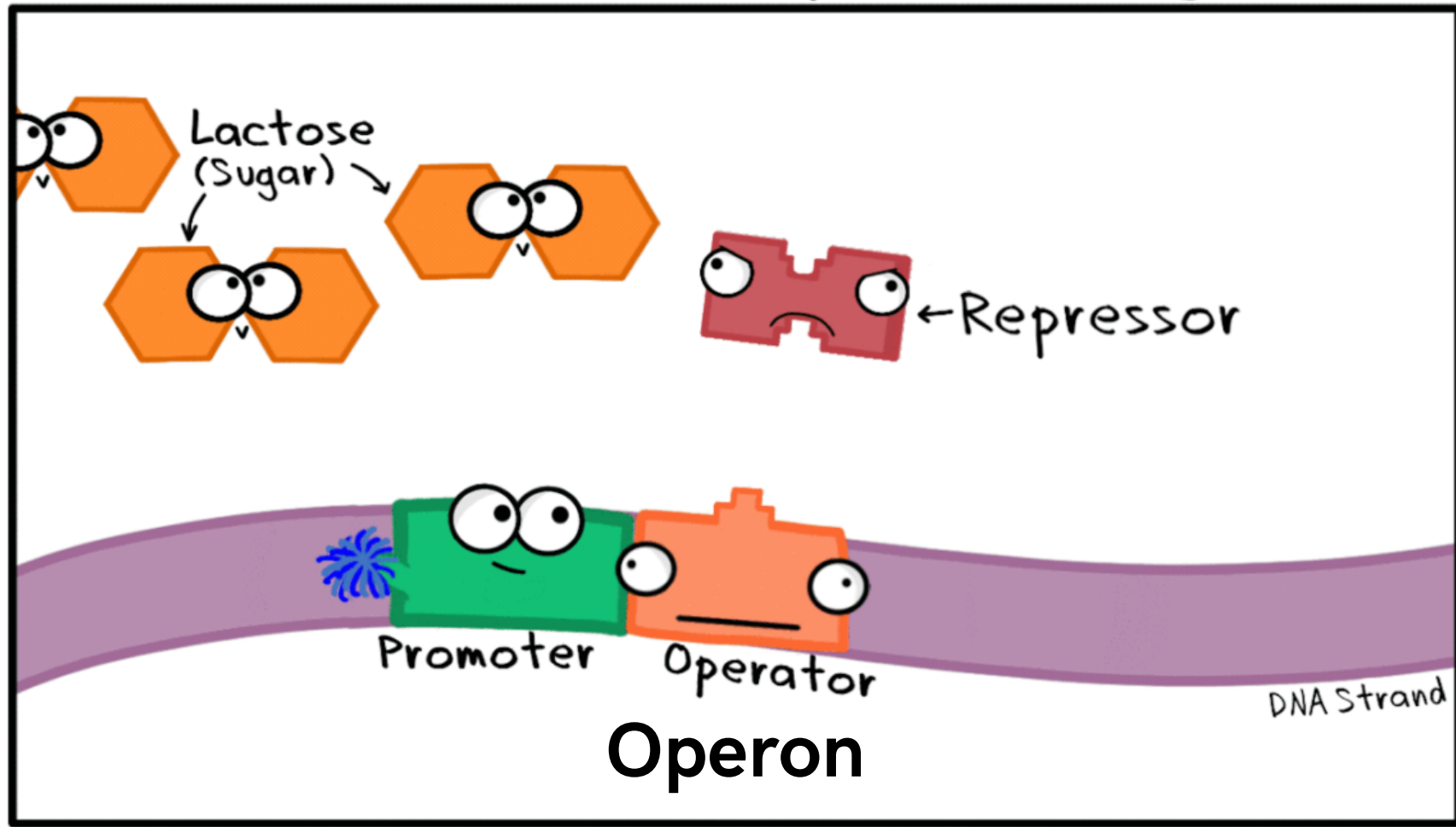
- A Visit to the SynBio World

iGEM 2021



IISER Tirupati

DAY 2



Genetics of microworld

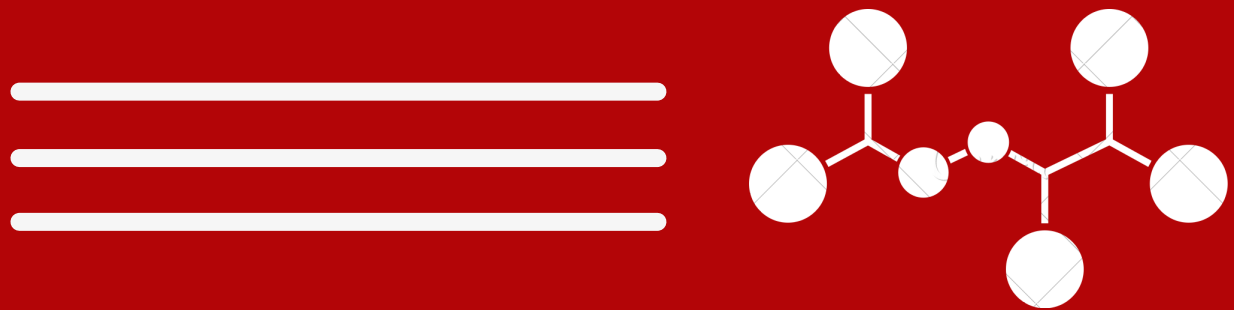


Question of the Day

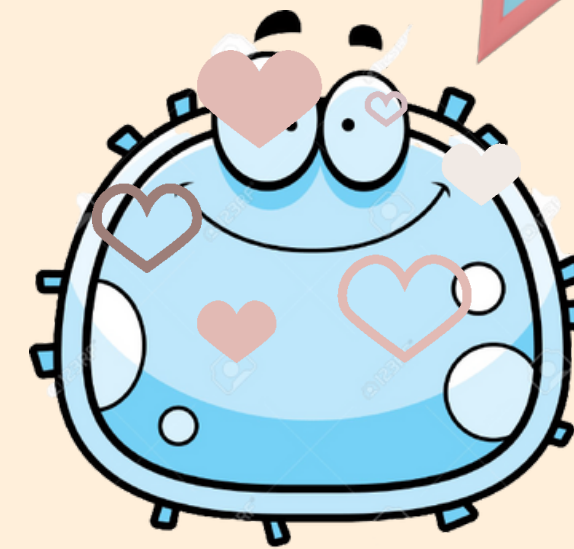
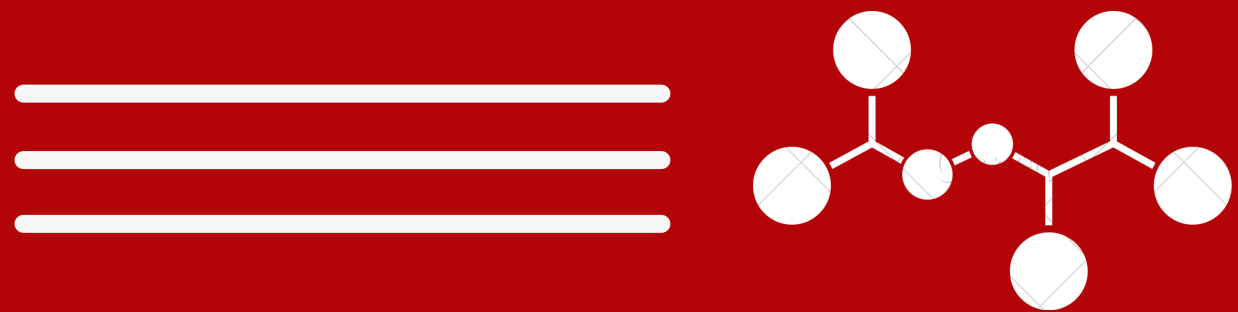
Do you think bacteria eat sugars? And if so, where do they get these sugars from?



Proteins



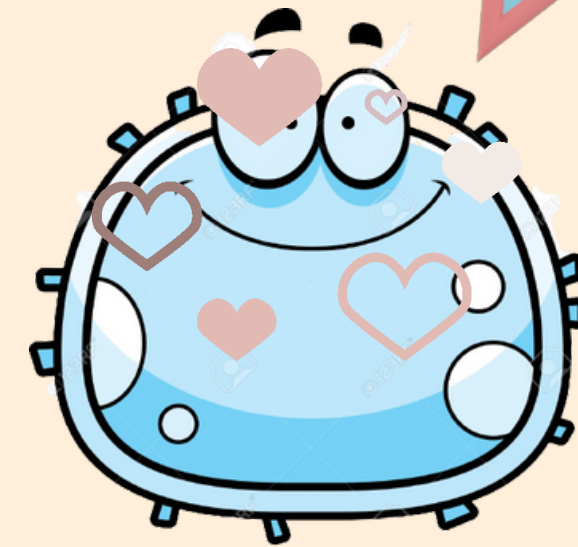
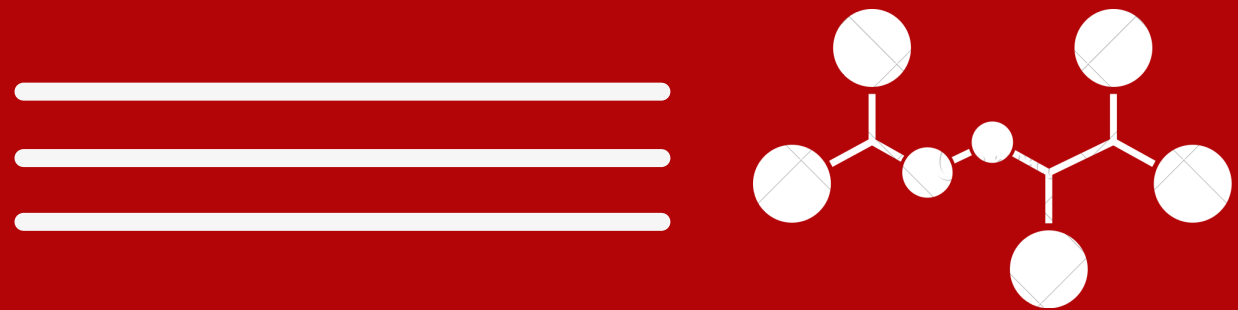
Proteins



I cannot live without you babe!



Proteins

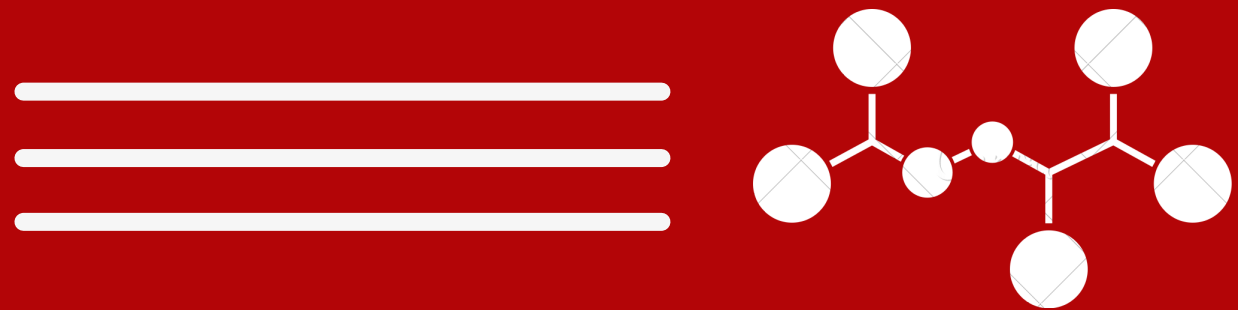


I cannot live without you babe!



Constitutive

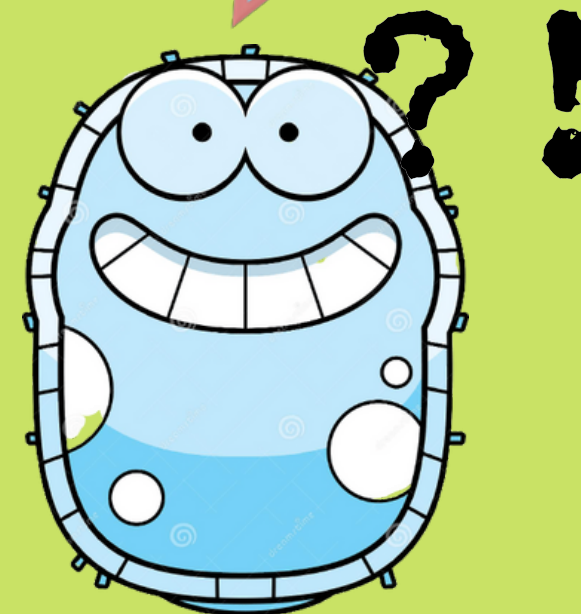
Proteins



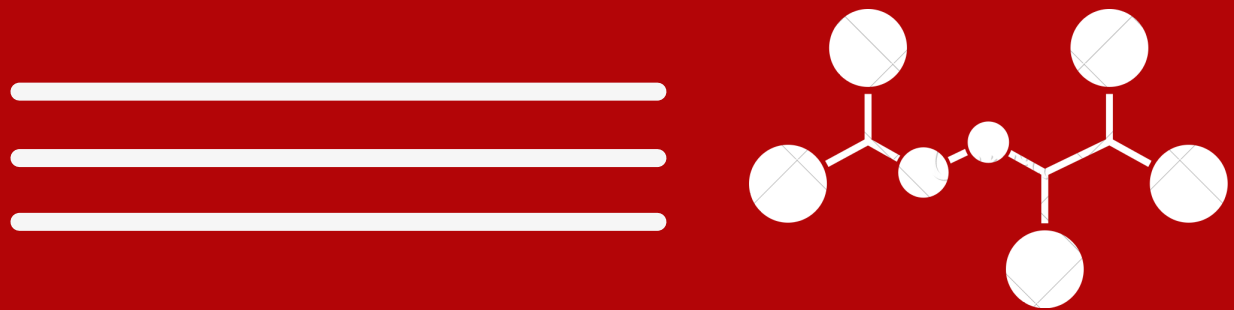
I cannot live without you babe!



Hey you there? Needed a little help of yours!



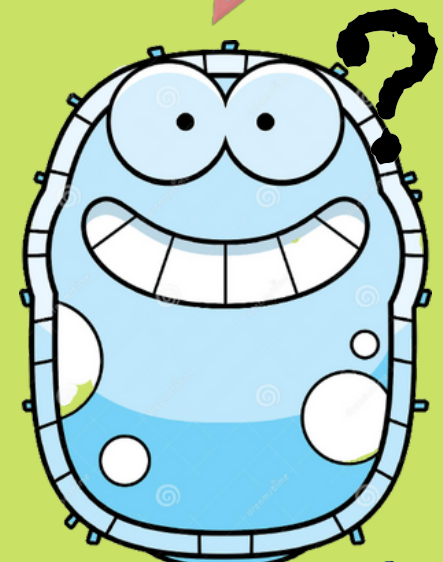
Proteins



I cannot live without you babe!



Hey you there? Needed a little help of yours!

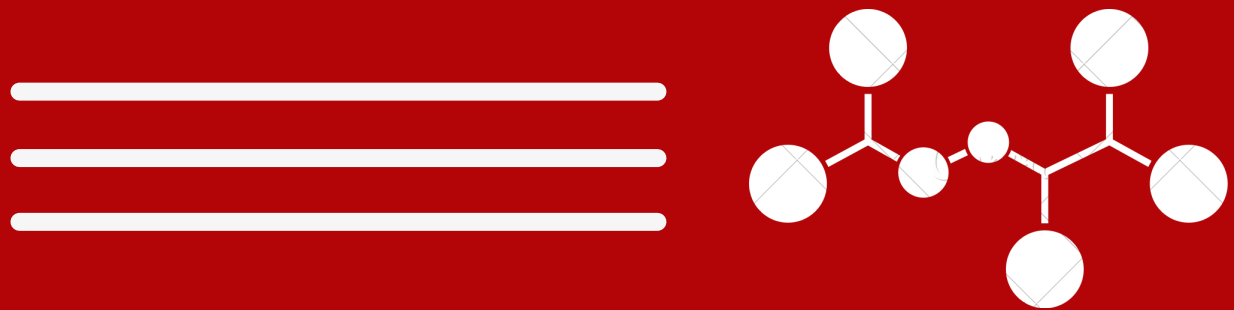


!



Occasional

Proteins

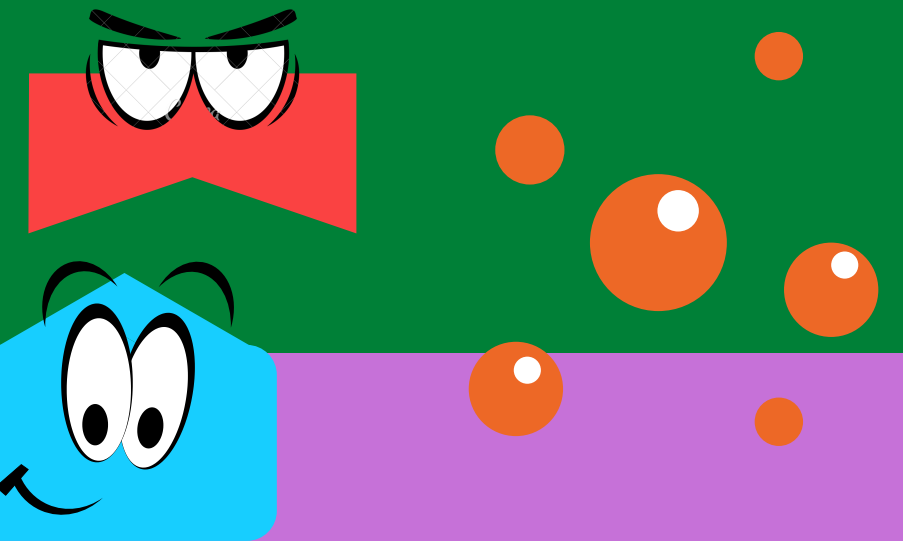


I wanna start producing the proteins!

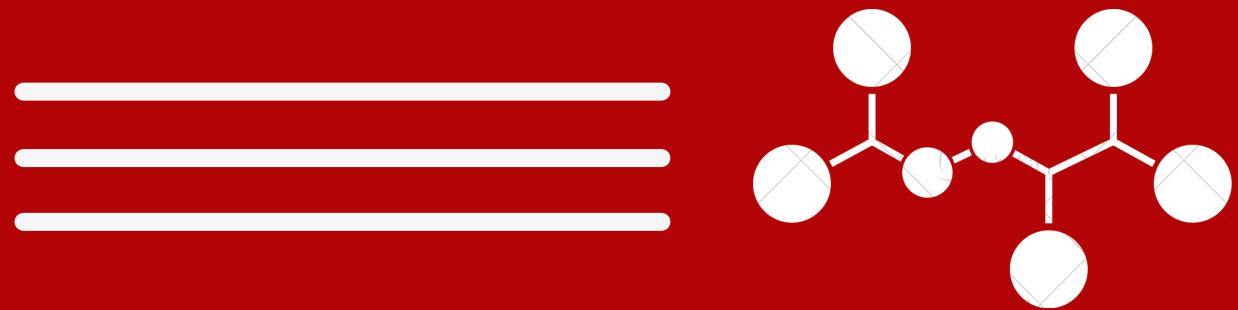
Promoter

Inducer

RNA Polymerase



Proteins



I wanna start producing the proteins!

Promoter

Inducer

RNA Polymerase

Inducer

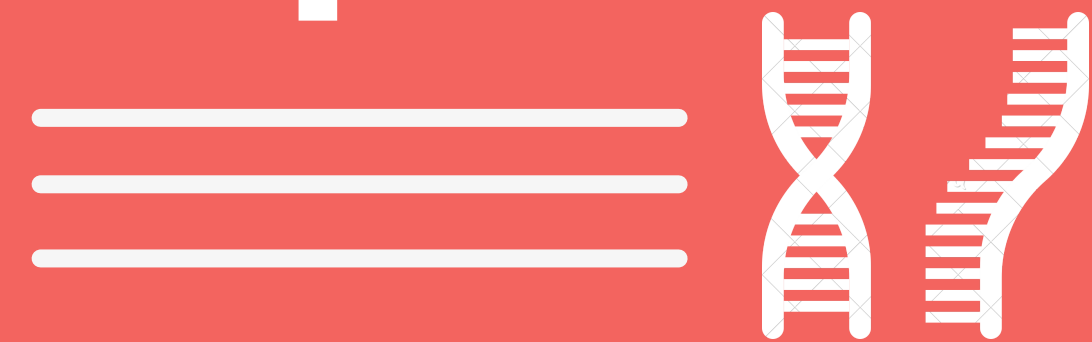
Noooooess!! I want to block the things!

Repressor

Promoter

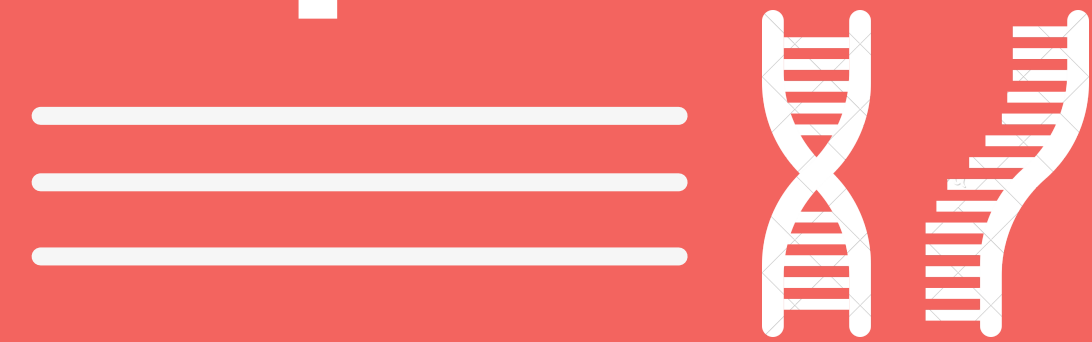
RNA Polymerase

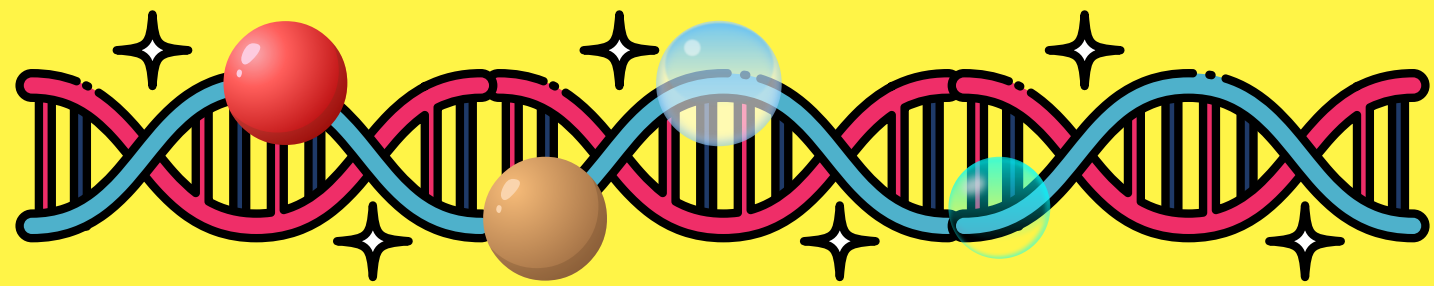
Operon



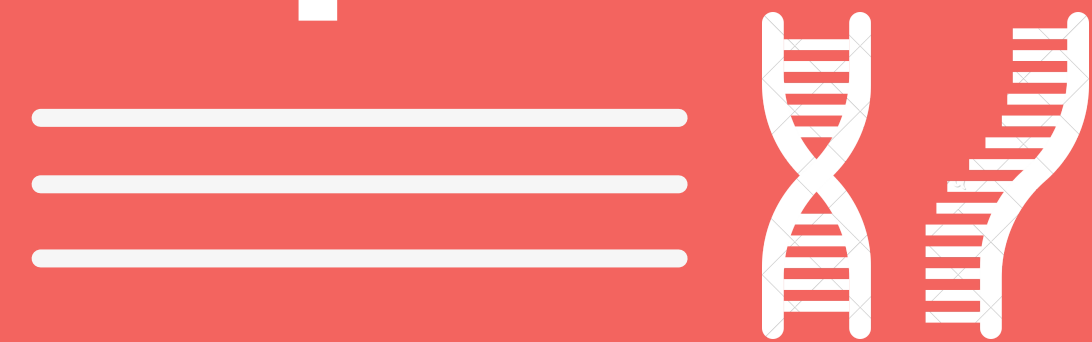


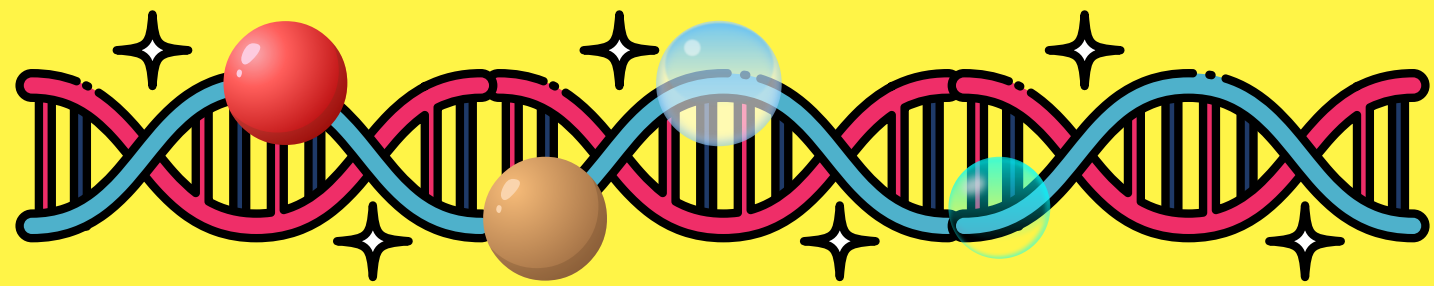
Operon



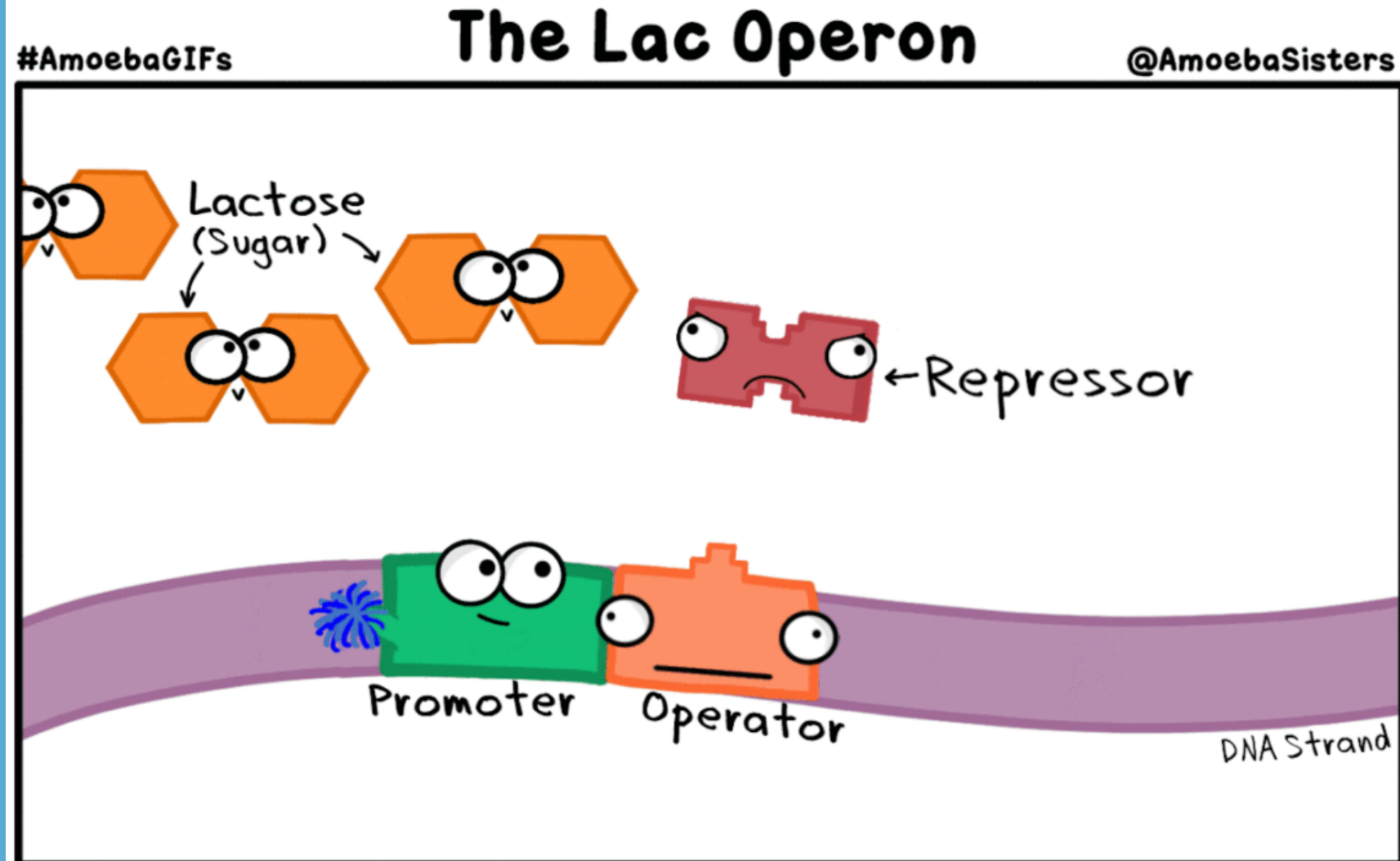
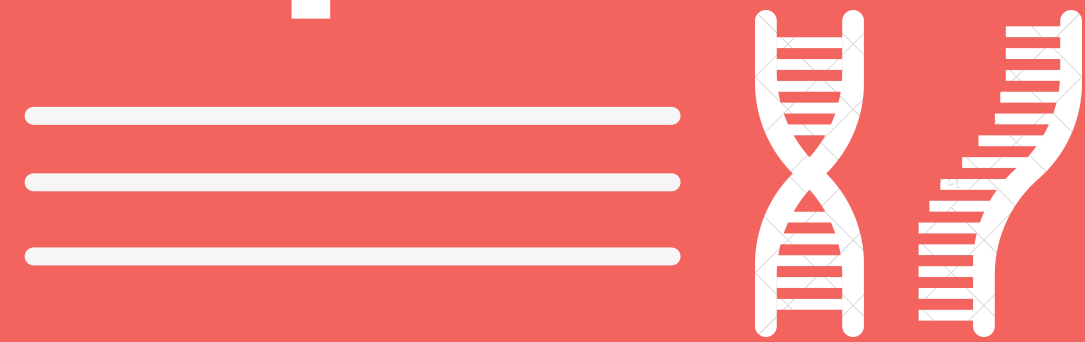


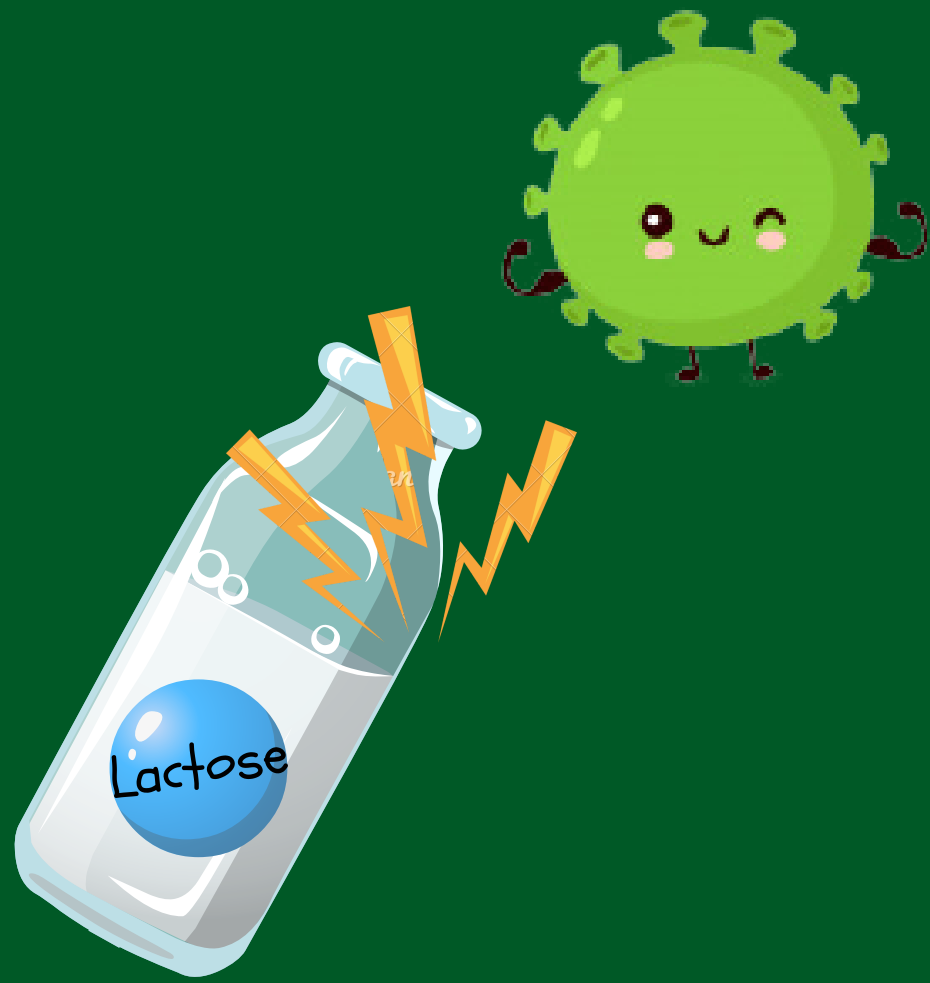
Operon





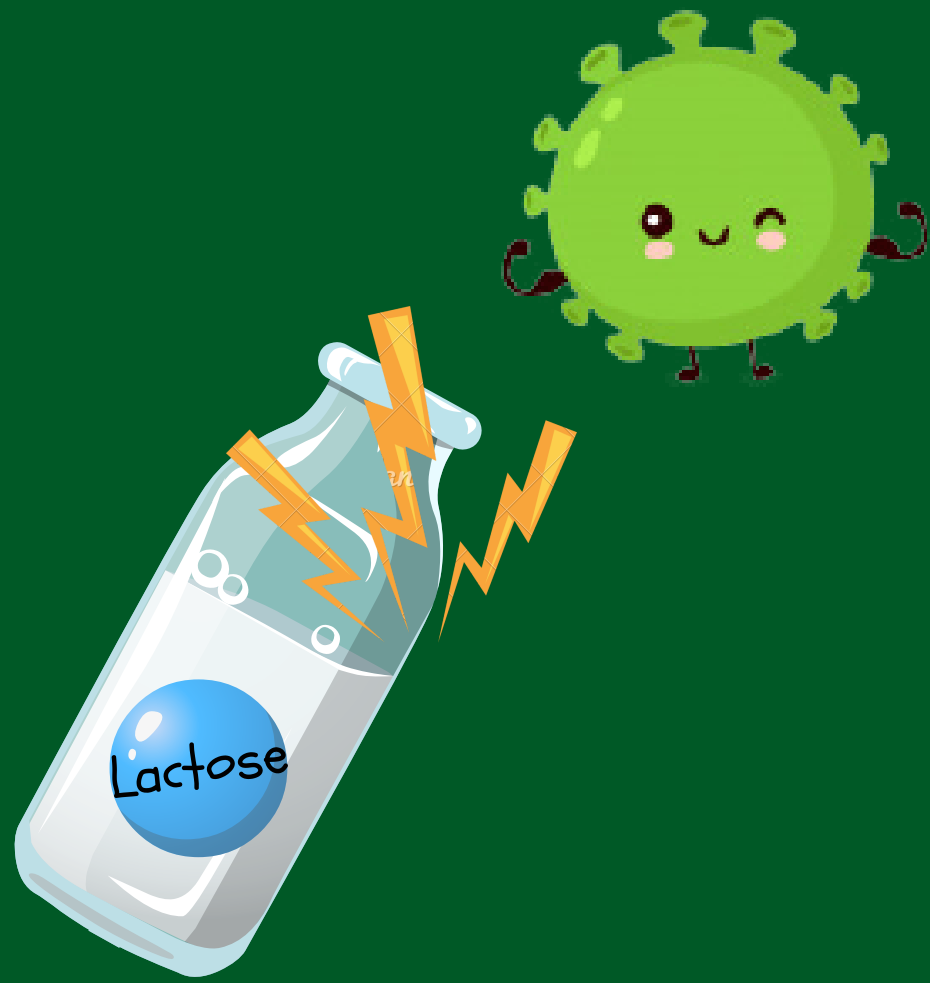
Operon





Operon





galactoside permease



β -galactosidase

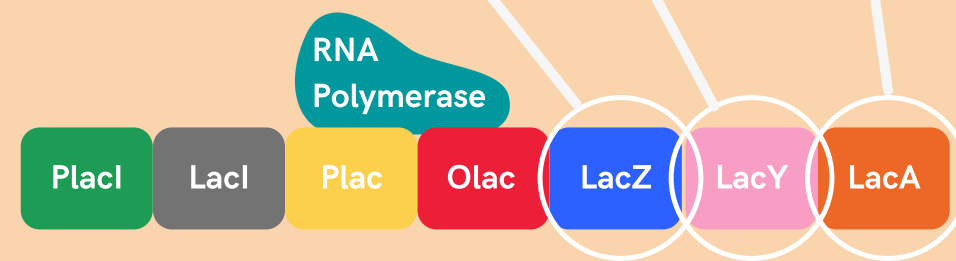
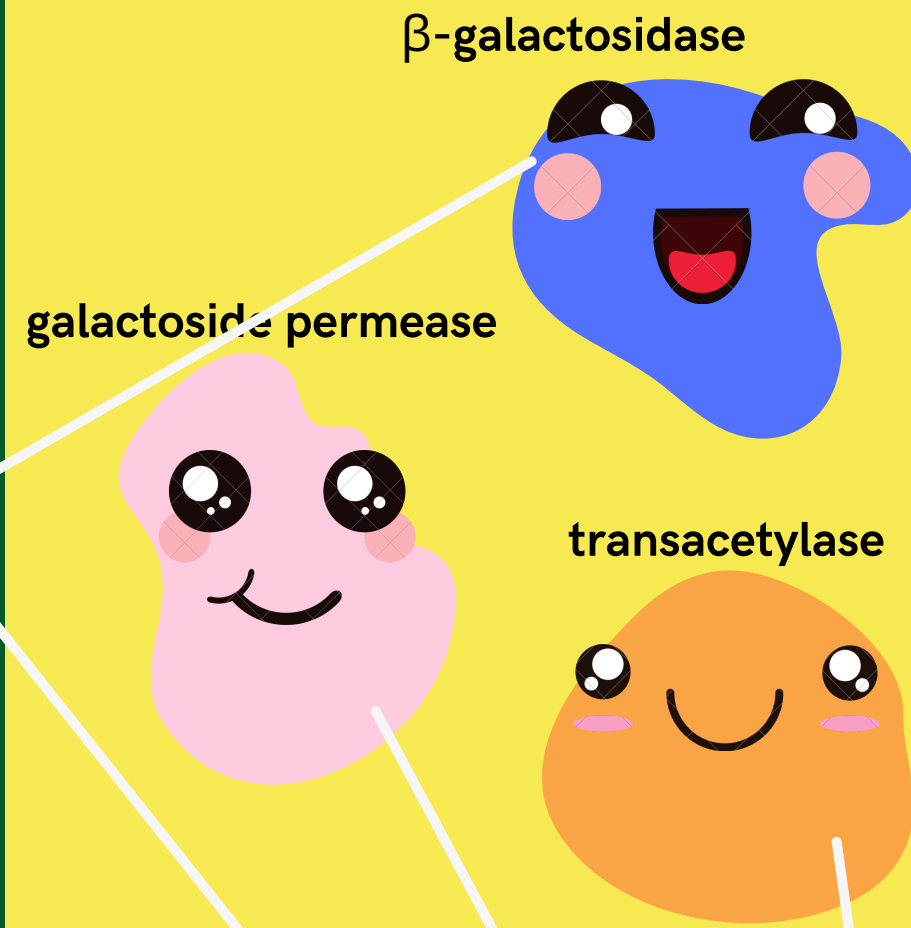
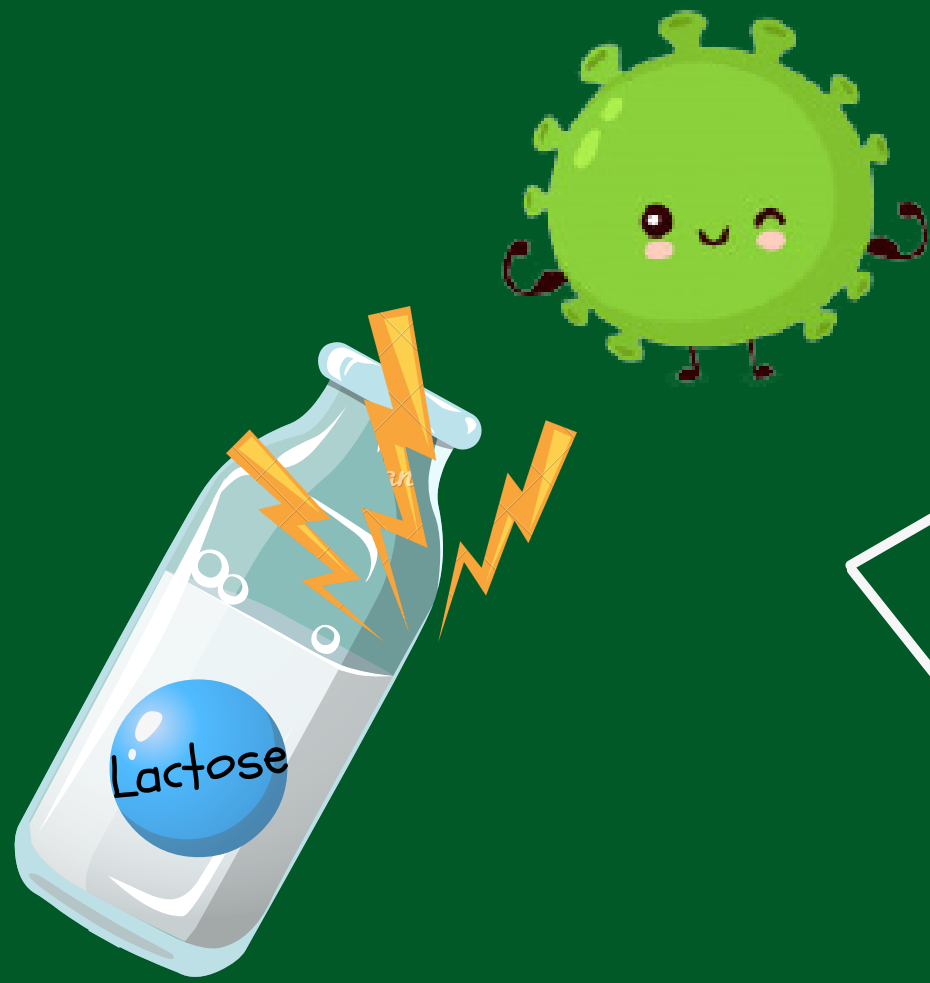


transacetylase



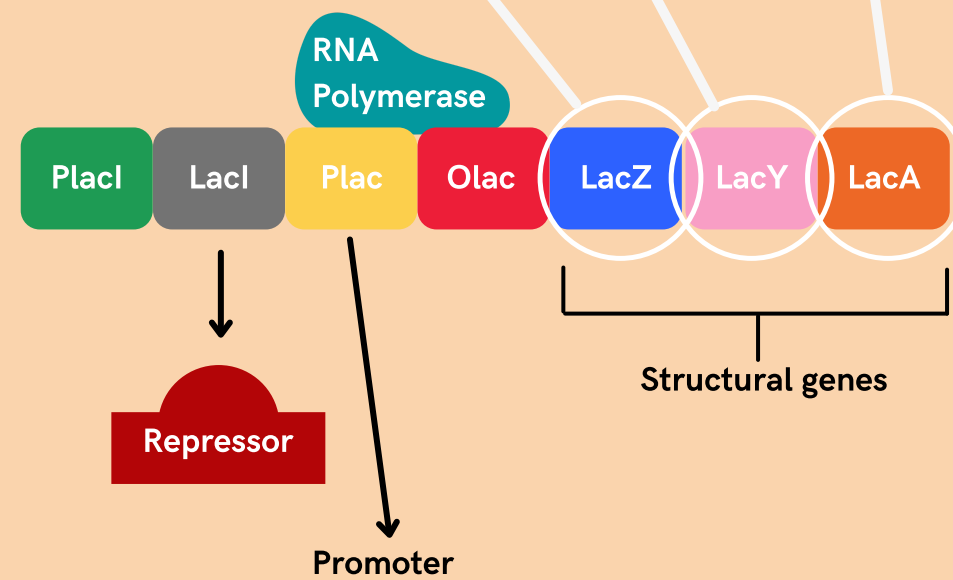
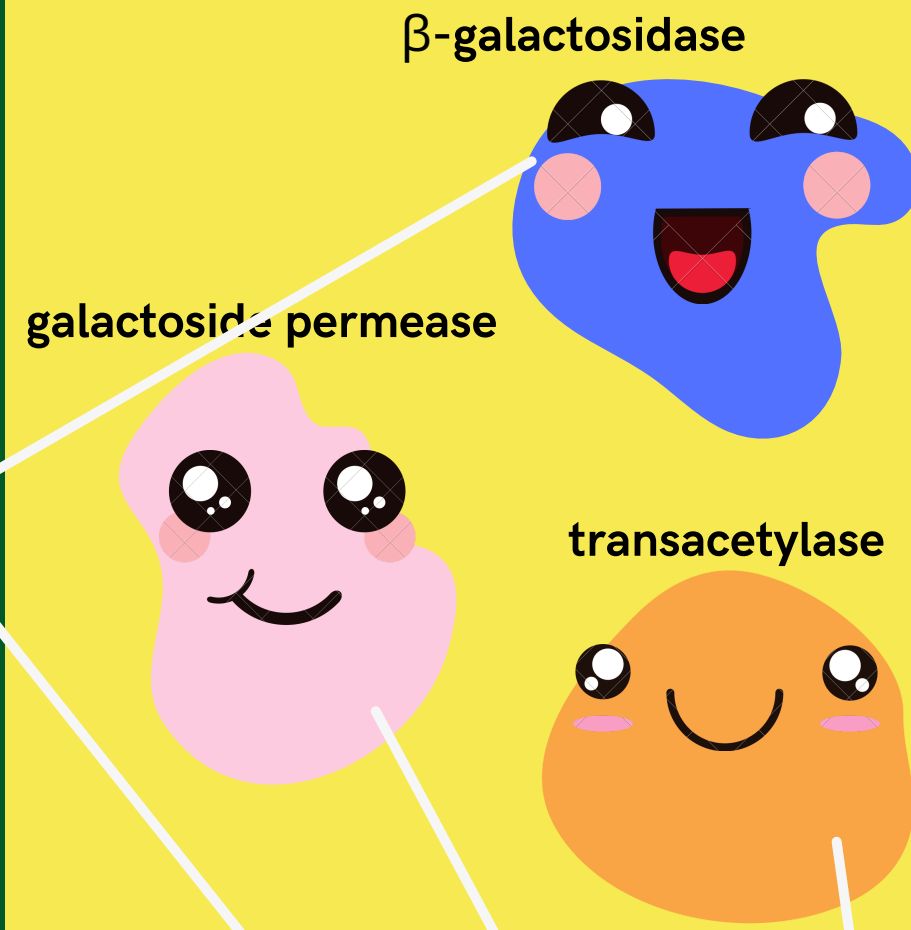
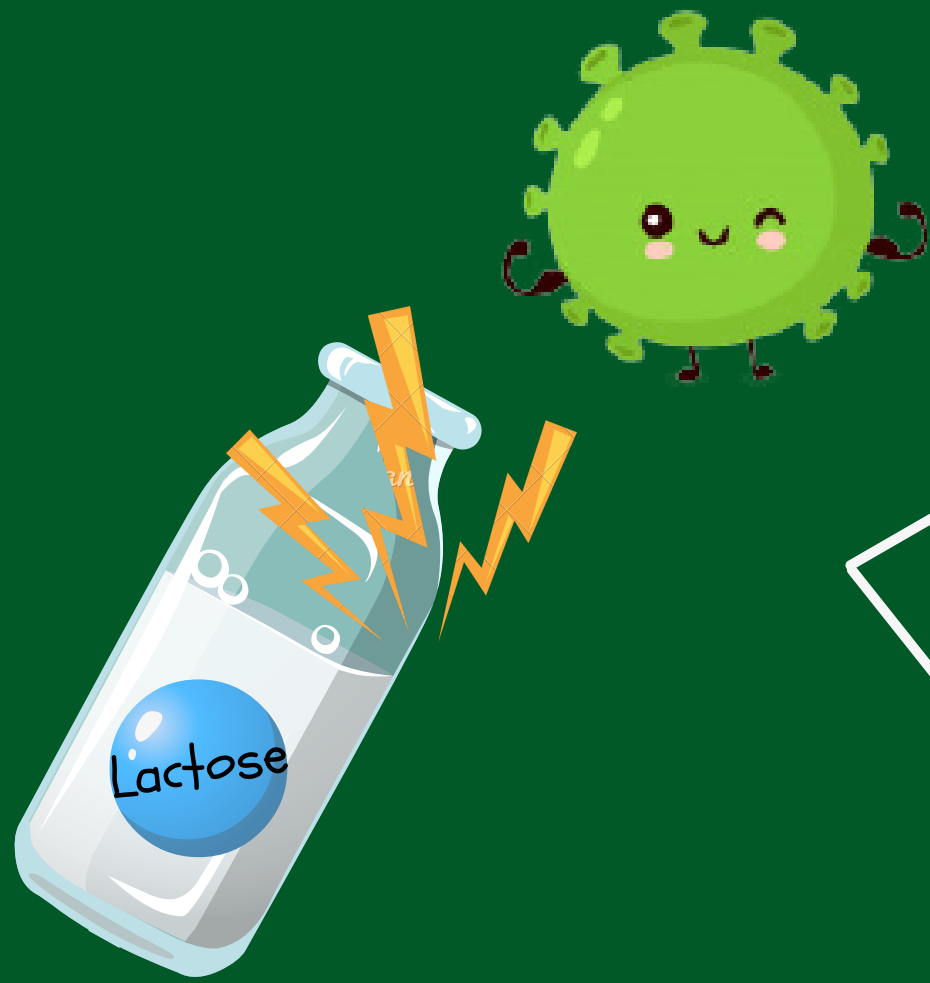
Operon



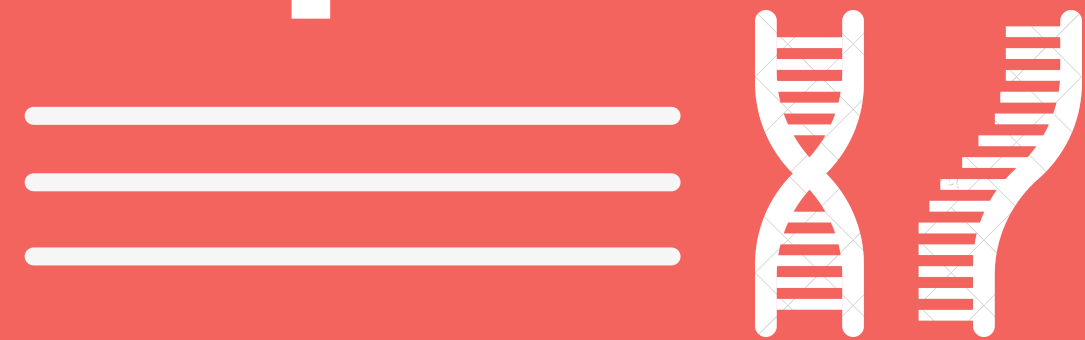


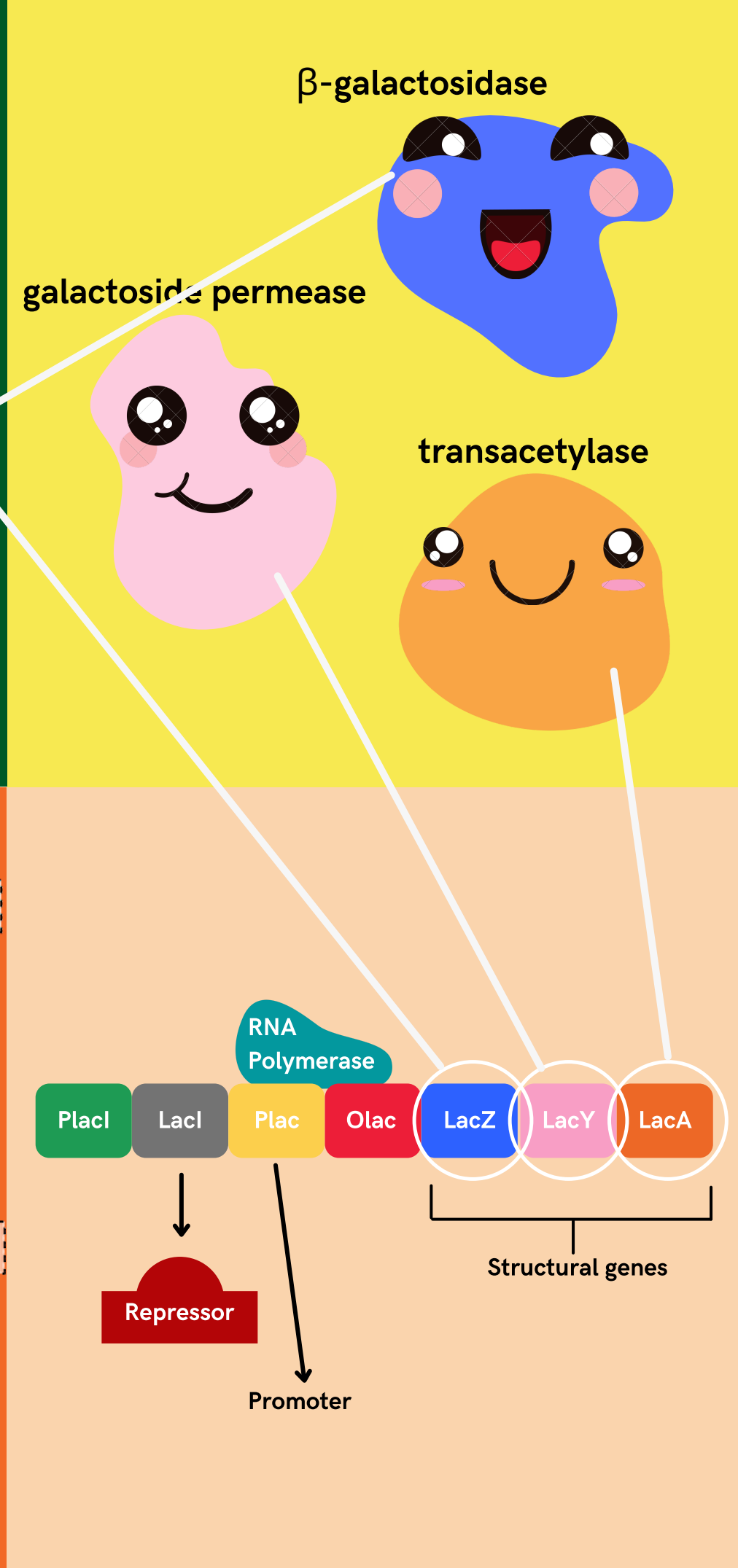
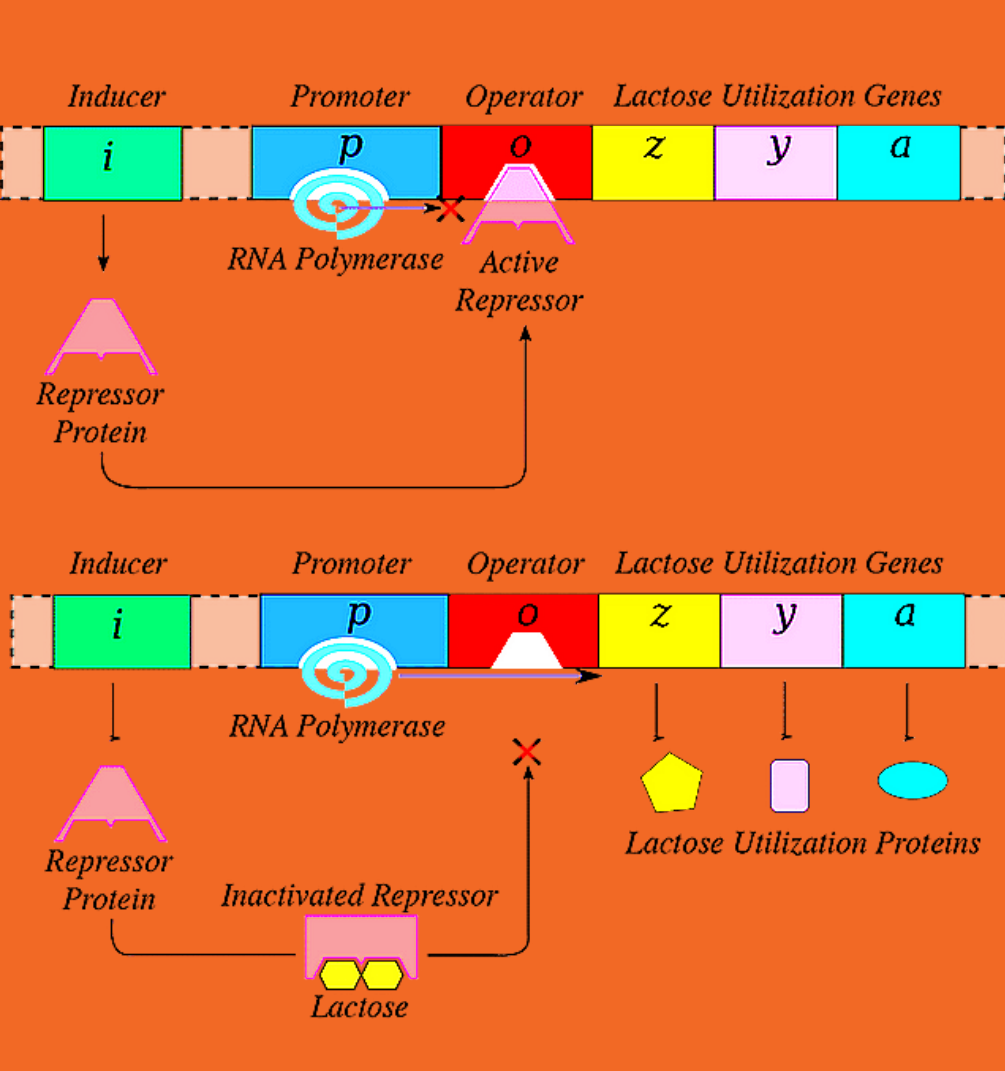
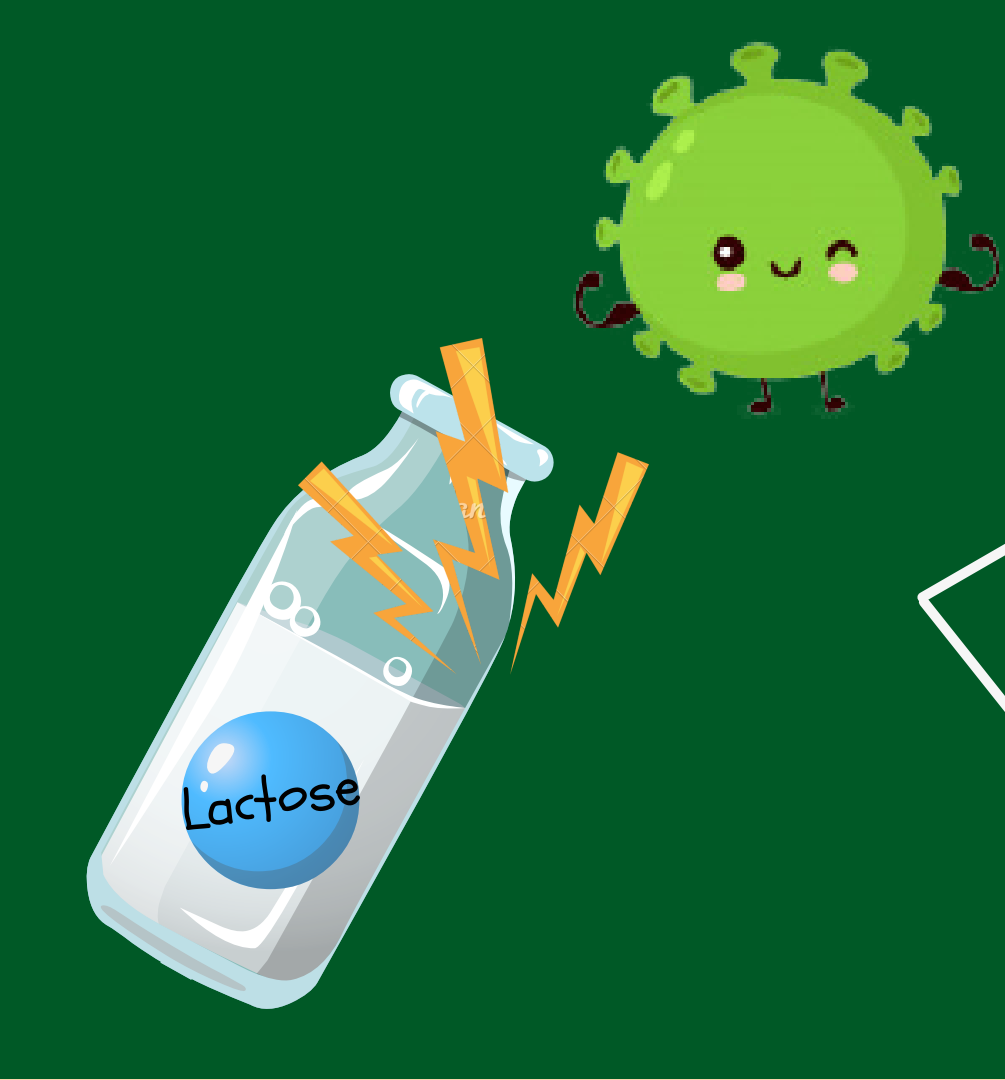
Operon





Operon





Operon

Lac Operon System



Source - [Gene Regulation and the Order of the Operon](#)





Thank You for listening!
Let's move on to the Quiz
Section...



Find out!

We know that the presence of lactose switches on the lac operon, but can the absence of a molecule also turn on an operon ?

HINT : The absentee is the largest amino acid