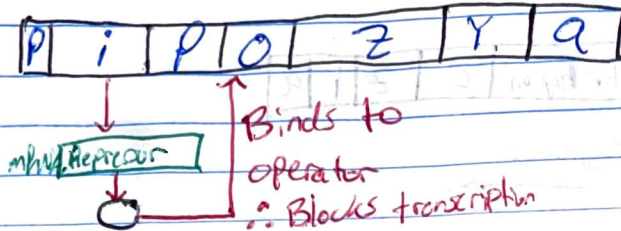
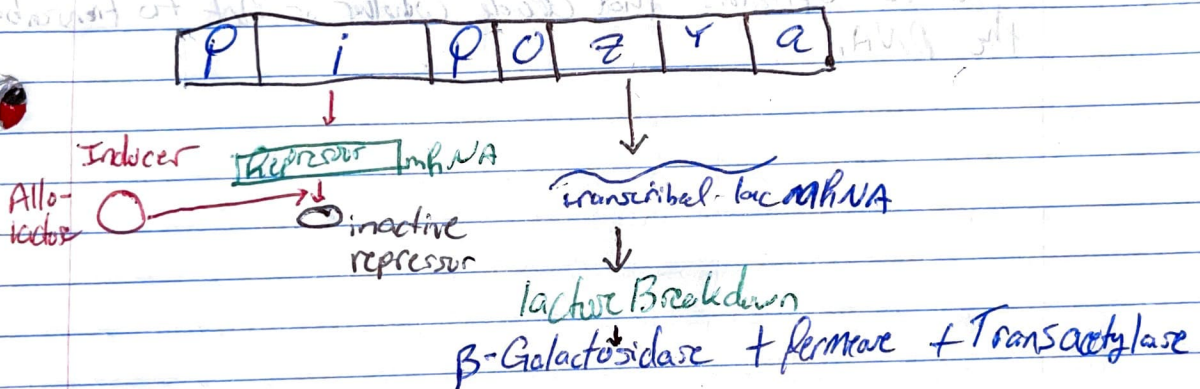


Lac Operon Assignment

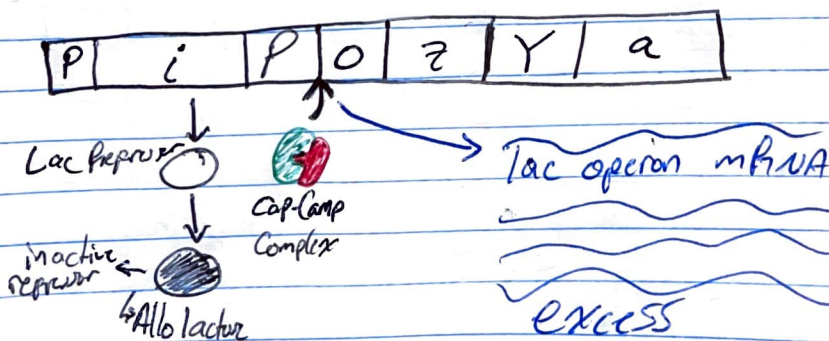
- 1) Absence of Lactose. When lactose isn't present, the Lac repressor binds tightly to the operator. This stops any transcription from occurring.



- 2) When lactose is present, the repressor binds ~~and~~ weakens and falls off the operator. This allows RNA Polymerase to transcribe the operon.



- 3) When Glucose is absent and efficiency switches to lactose, the process becomes dependent on molecules called cAMP and CAP. The binding of these molecules to the promoter site is required for transcription.



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- A diagram of a DNA template strand. The strand is represented as a horizontal bar divided into segments. From left to right, the segments are labeled: CAPS, CAMP, CAP, and a sequence of bases O, Z, Y, a. A red arrow labeled 'RNA Polymerase' points to the right, starting from the CAPS segment and passing through the CAMP and CAP segments. The CAPS segment is also labeled 'Promoter Region' in blue ink.

Allolactose

Regulation is taking place at the transcription level. Repressors bind to operators that decide whether or not to transcribe the DNA.

