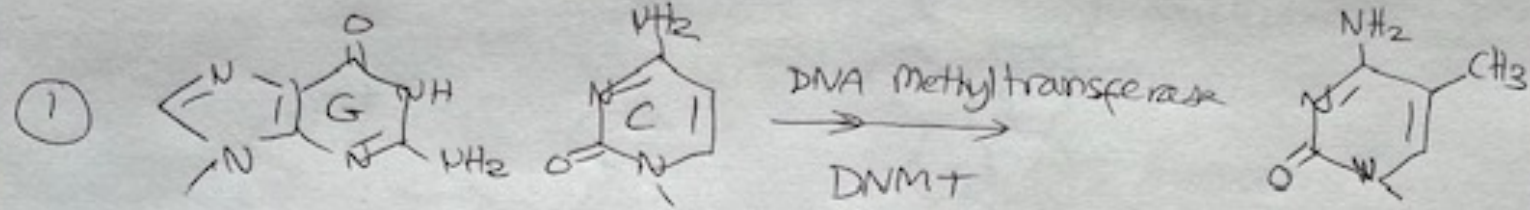


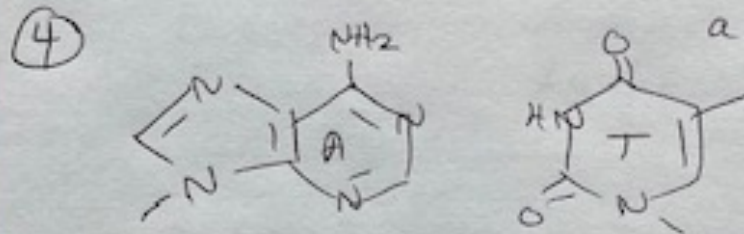
Prof. Engelward's
Board Notes for Lecture 7

20.109

Oct. 6, 2022

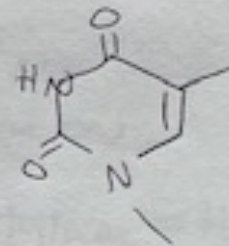


5MeC = Signal to turn a gene off

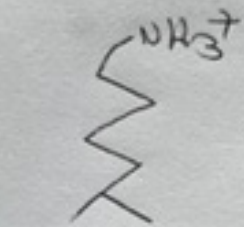


$\frac{1}{3}$ of all mutations are C \rightarrow T
Caused by deamination
of cytosine!

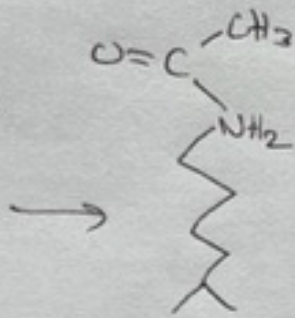
Deaminated
Cytosine = T



②

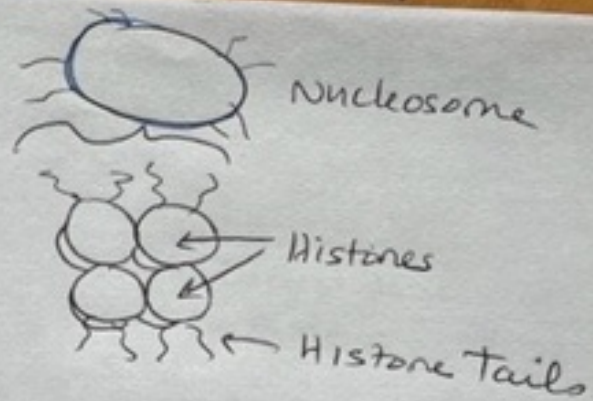


Lysine

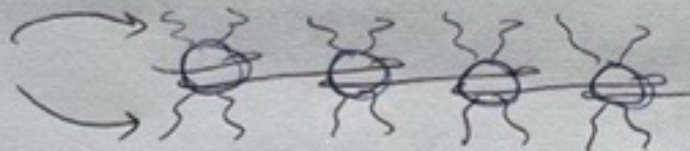


Acetylated Lysine

= Loss of positive charge



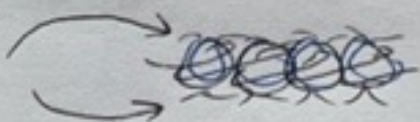
Acetylated Histone Tails



OPEN
Gene ON

⇓ Histone Deacetylase = HDAC

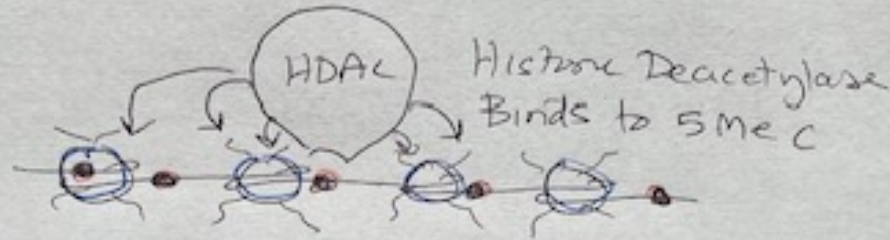
Normal Lysine on Histone Tails



CLOSED
Gene OFF

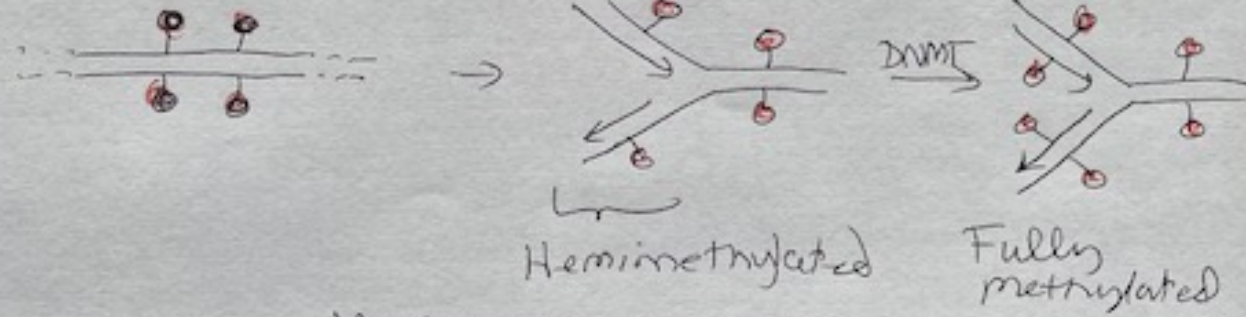
(M)

● = 5MeC



Deacetylated
= OFF

The diagram shows a DNA strand with four nucleosomes, but they are now represented by blue circles with multiple overlapping lines, indicating a more condensed state. The text 'Deacetylated = OFF' is written to the right.



HERITABLE PATTERN OF METHYLATED DNA

The way that you remove 5MeC is by using an enzyme to convert it into a damaged base and then using BER!