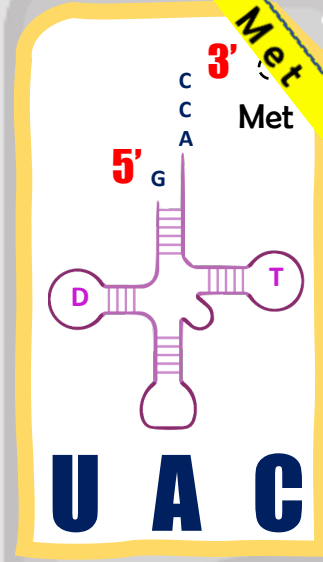


La RuBisCO
es lo más

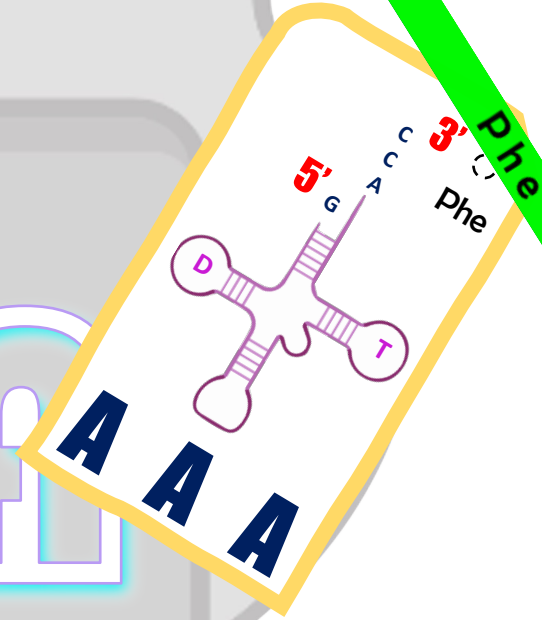


E



Met

A



Phe

¡SINTETIZA,
RIBOSOMA!

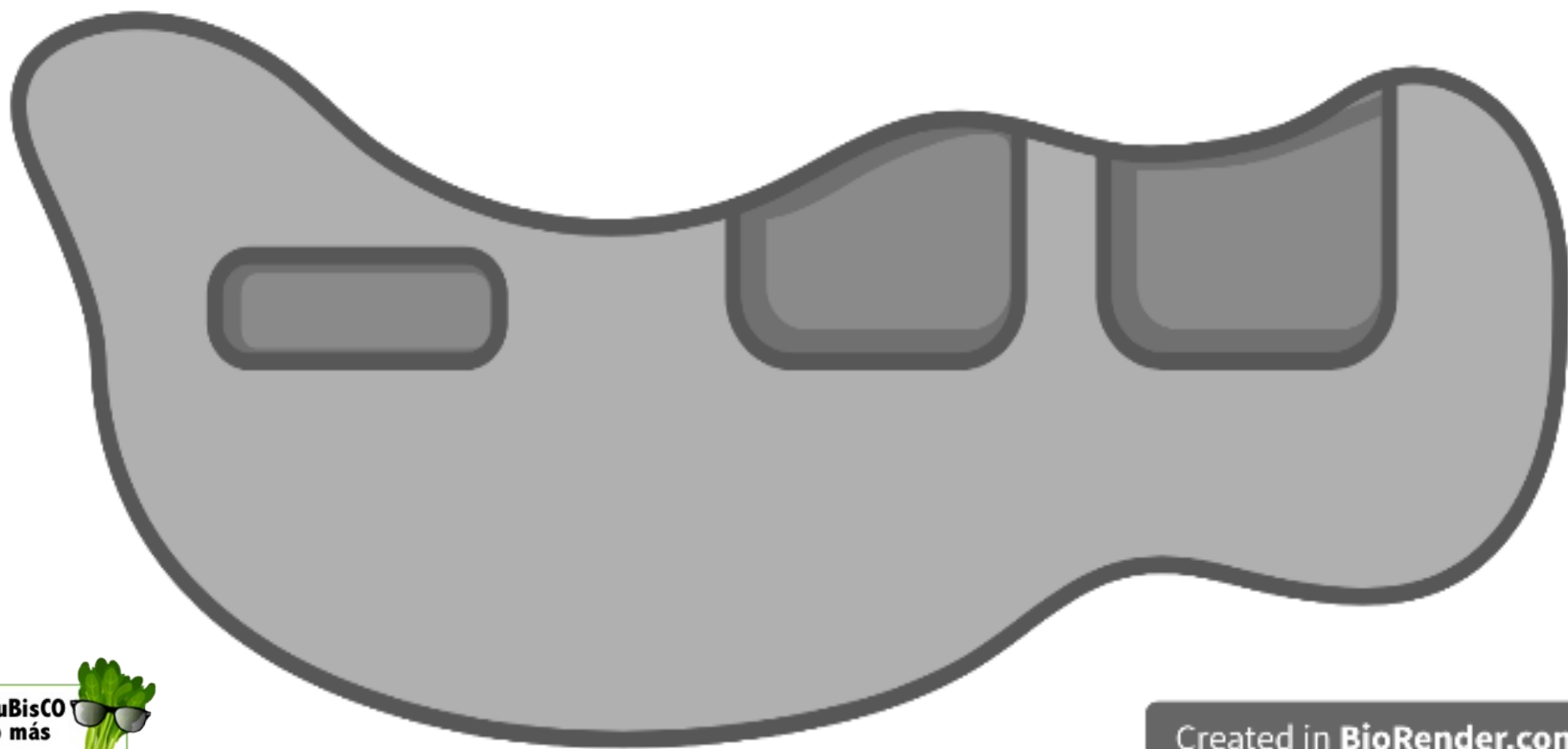
AUG

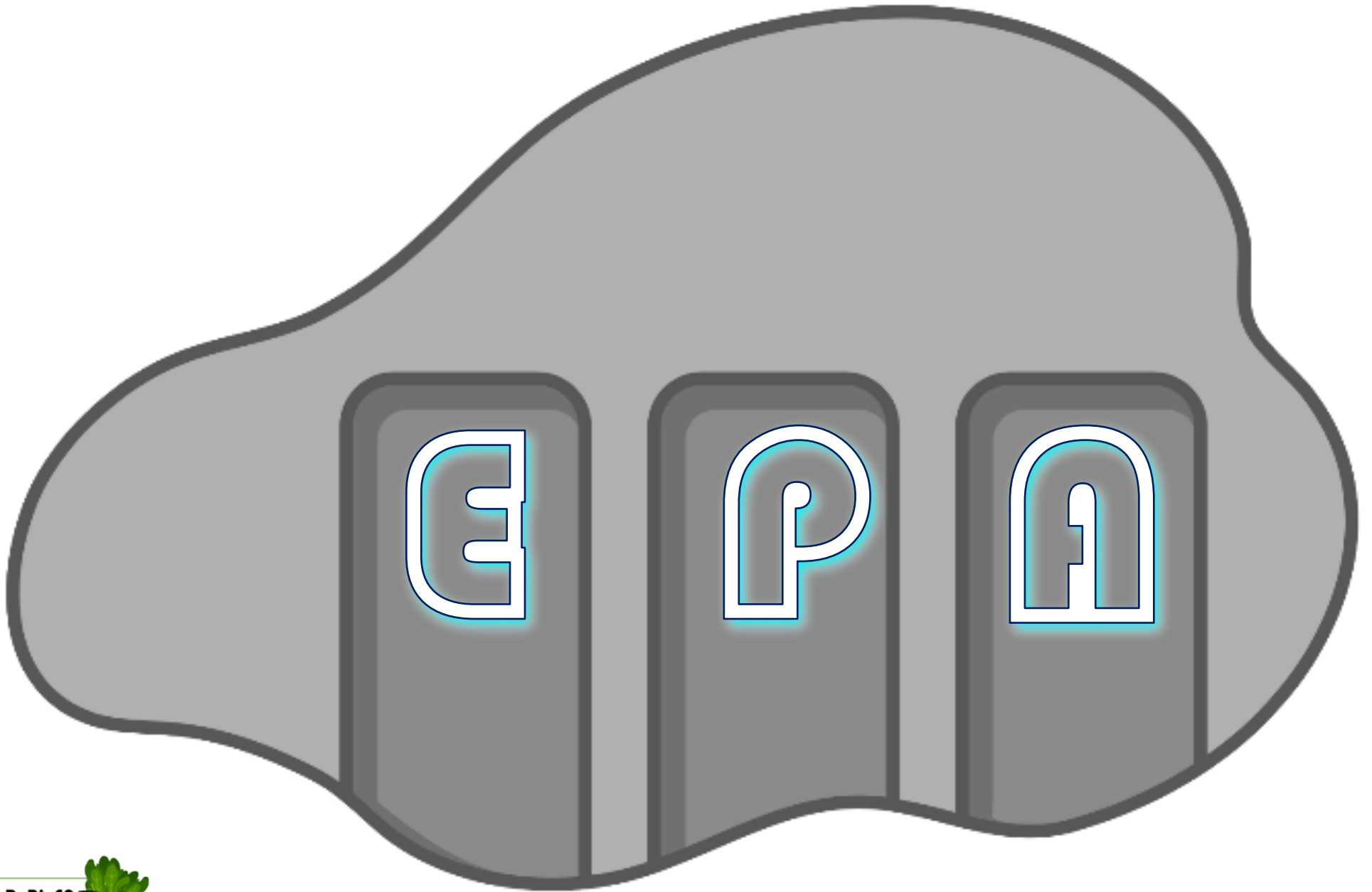
UUU

CUG

¡SINTETIZA,
RIBOSOMA!

1. El **ARNm** maduro se acopla a la subunidad pequeña del ribosoma
2. Posteriormente se une la subunidad grande del ribosoma
3. La proteína siempre se sintetiza leyendo el **ARNm** en sentido 5' → 3'
4. En el extremo 5' el **ARNm** tiene siempre el **codón de iniciación AUG**, que se coloca en el **sitio P** (peptidil)
5. El **ARNt** con el anticodón **UAC** se activa, uniéndose al aminoácido metionina (**Met**) y gastando **1 ATP**
6. El **anticodón UAC** del **Met-ARNt** es complementario al **codón AUG** y se coloca en el **sitio P**
7. El **aa2-ARNt** activado cuyo anticodón es complementario al siguiente codón, se sitúa en el **sitio A** (aminoacil)
8. La **Met** se suelta del **ARNt** y se une mediante un enlace peptídico al **aa2** del **ARNt** que está en el **sitio A**
9. La cadena de **ARNm** se desplaza, dejando al **Met-aa2-ARNt** en el **sitio P** y el **ARNt** vacío va al **sitio E** (exit)
10. Hay un codón nuevo de **ARNm** en el **sitio A** que es ocupado por el **aa-ARNt** con el anticodón complementario
11. La **Met-aa2** se suelta del **ARNt** que hay en el **sitio P** y se une al **aa3** del **ARNt** que está ahora en el **sitio A**
12. La cadena de **ARNm** se desplaza, dejando al **Met-aa2-aa3-ARNt** en el **sitio P** y el **ARNt** ya vacío en el **sitio E**
13. Entra al **sitio A** un nuevo **aa4-ARNt** con el **anticodón** correspondiente y, de esta forma, continúa leyéndose todo el **ARNm**
14. La cadena polipeptídica continuará formándose hasta que llegue un **codón de terminación (STOP)** al **sitio A** que indicará el final de la traducción, soltando la proteína ya completa del **último ARNt** y liberándola del ribosoma





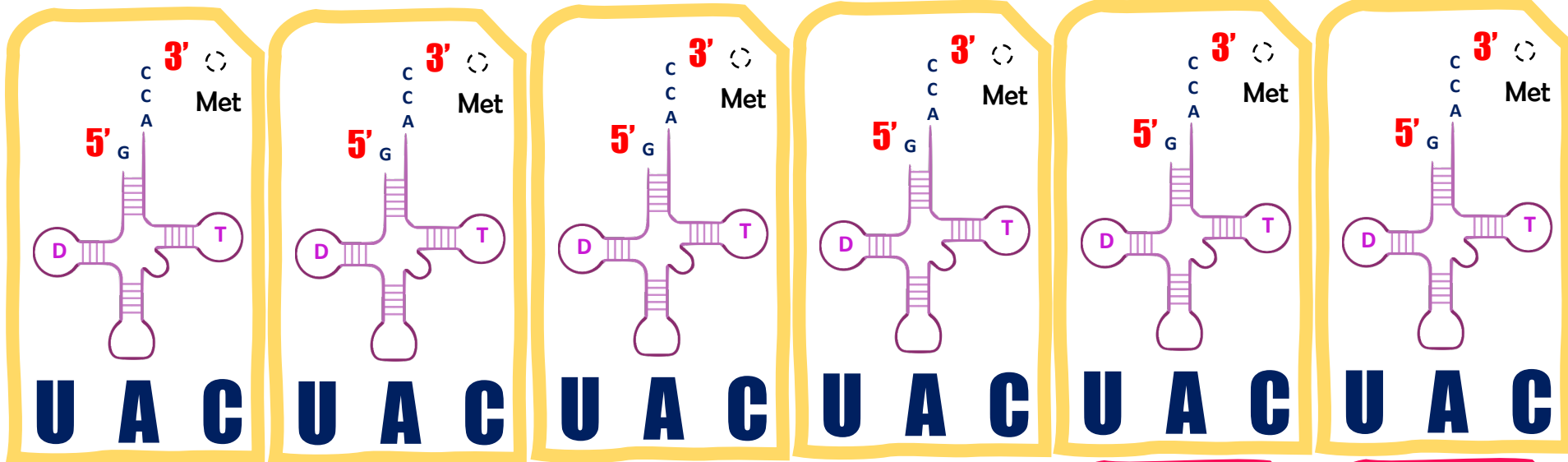
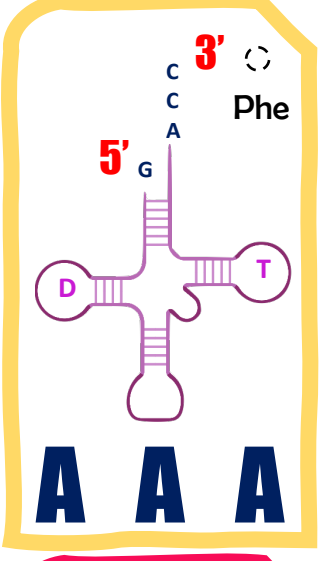
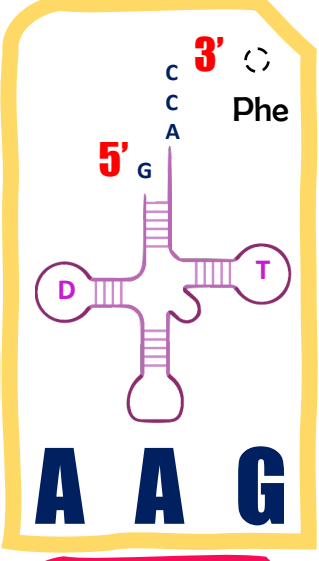
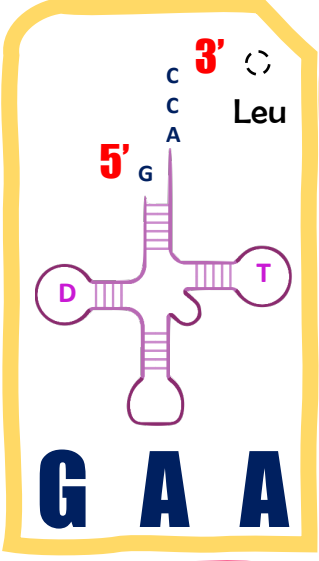
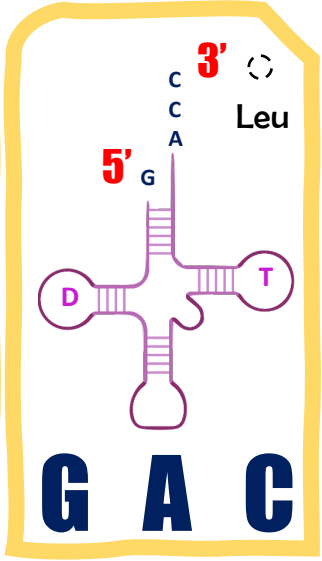
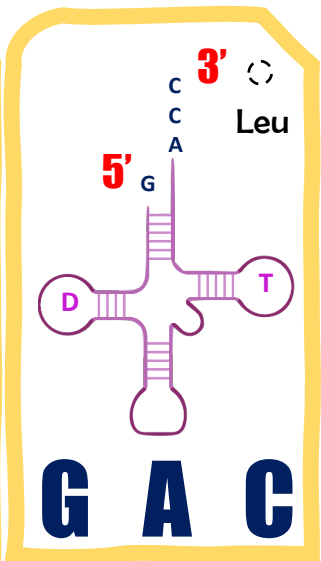
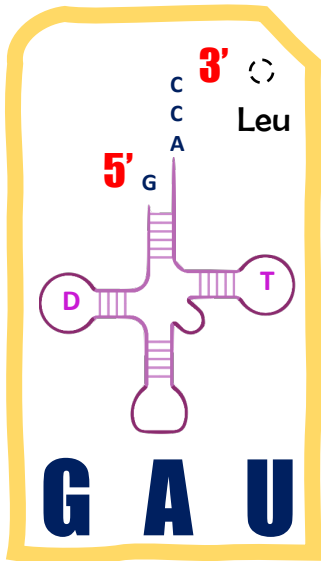


Diagram illustrating the matching of tRNA anticodons (G U A) with mRNA codons (A U G) for Met. The anticodon sequence is G U A and the codon sequence is A U G.



V N C

C U A

C N C

C U G

C N C

C U G

N N C

C U U

C N N

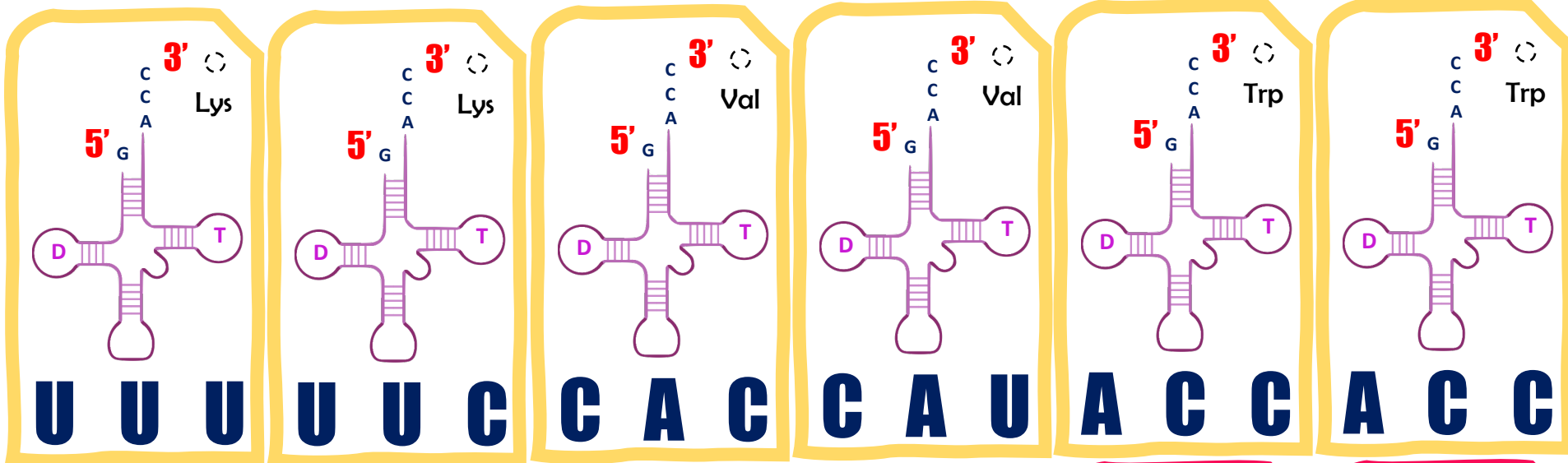
U U C

N N N

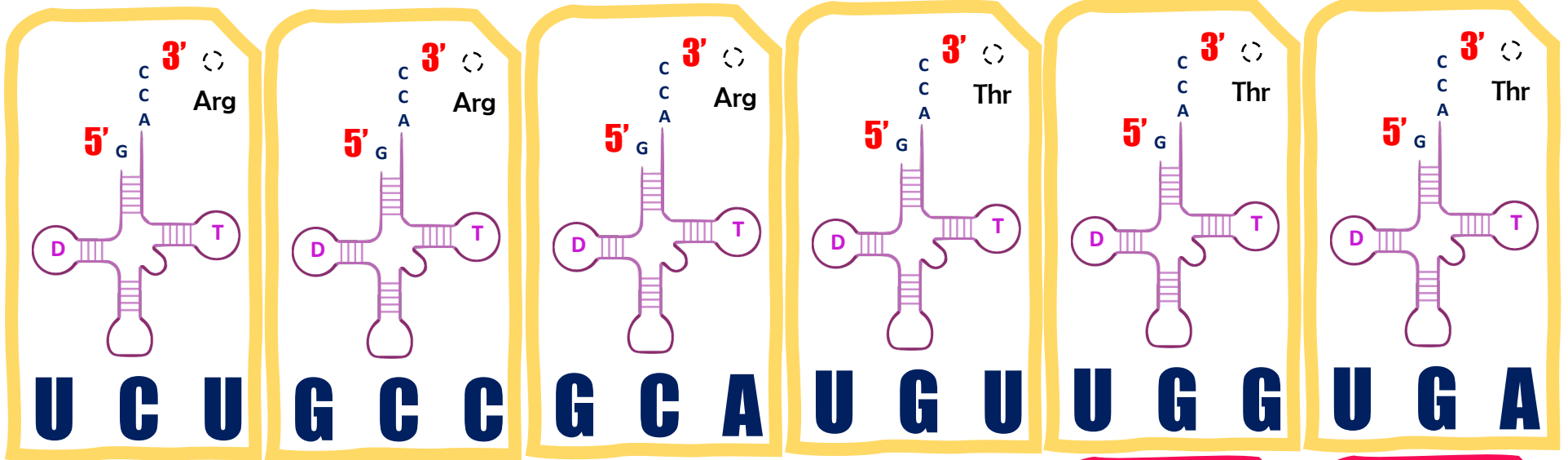
U U U

5' 5'

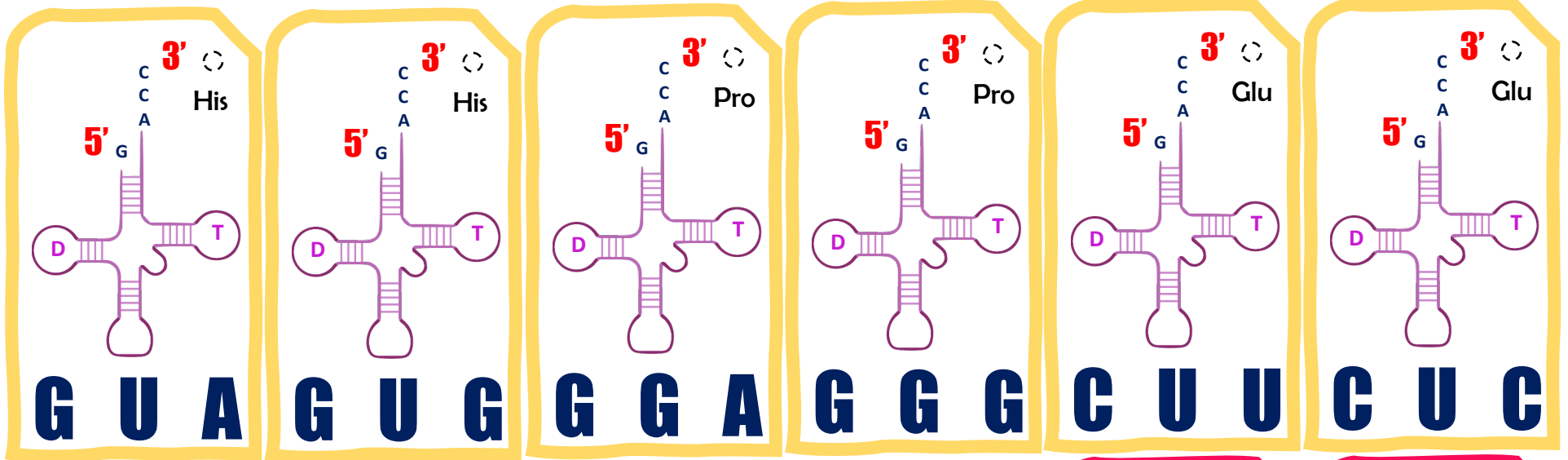
3' 3'



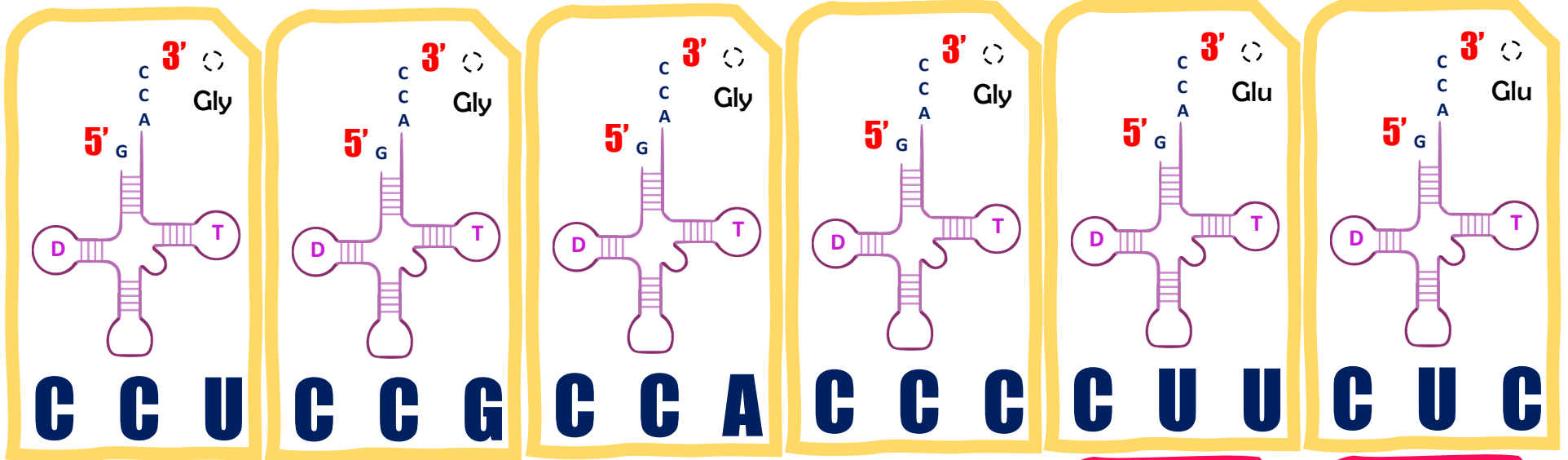
V V V	G V V	G U G	V U G	G G U	G G U
A A A	A A G	G U G	G U A	U G G	U G G



<p>A G A</p> <hr/> <p>A G A</p>	<p>G G C</p> <hr/> <p>C G G</p>	<p>U G C</p> <hr/> <p>C G U</p>	<p>A C A</p> <hr/> <p>A C A</p>	<p>C C A</p> <hr/> <p>A C C</p>	<p>U C A</p> <hr/> <p>A C U</p>
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<p>U A C</p> <hr/> <p>C A U</p>	<p>C A C</p> <hr/> <p>C A C</p>	<p>U C C</p> <hr/> <p>C C U</p>	<p>C C C</p> <hr/> <p>C C C</p>	<p>A A G</p> <hr/> <p>G A A</p>	<p>G A G</p> <hr/> <p>G A G</p>
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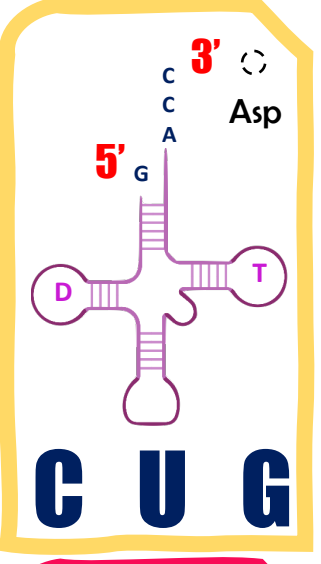
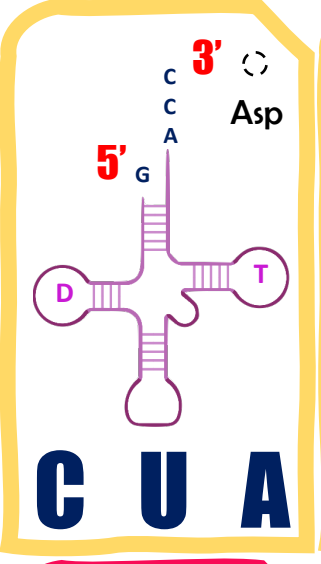
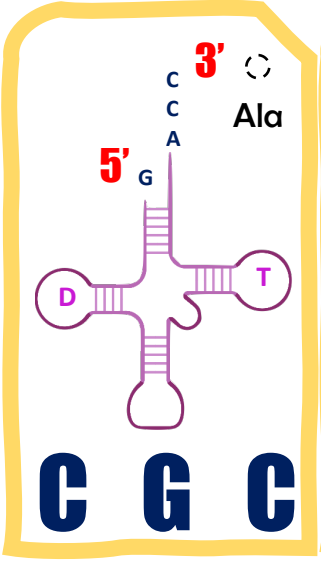
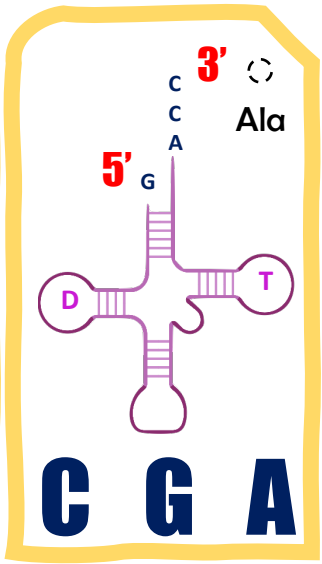
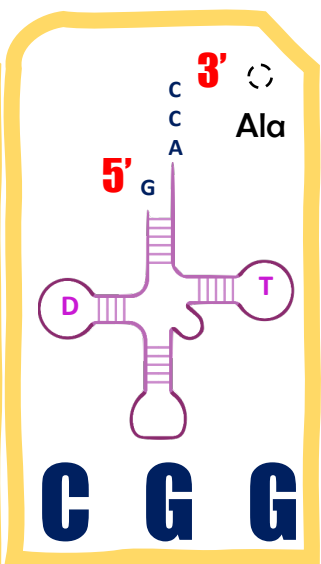
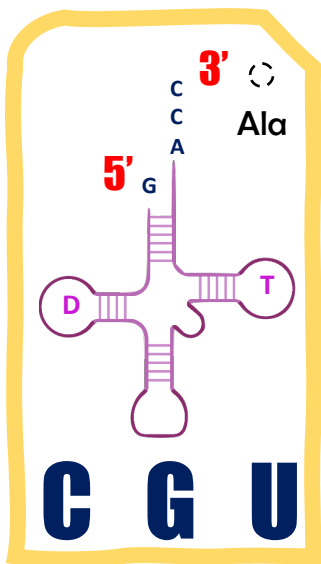


A G G	C G G	U G G	G G G	A A G	G A G
G G A	G G C	G G U	G G G	G A A	G A G



5' 5'

3' 3'



V G G
G C A

G G G
G C C

U G G
G C U

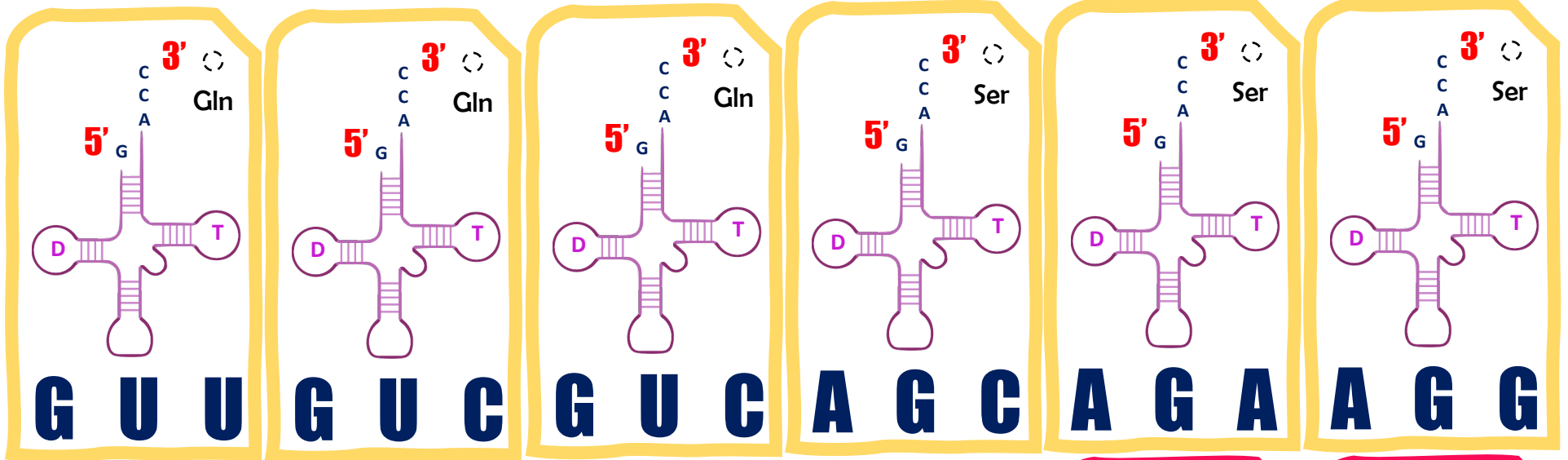
G G G
G C G

U V G
G A U

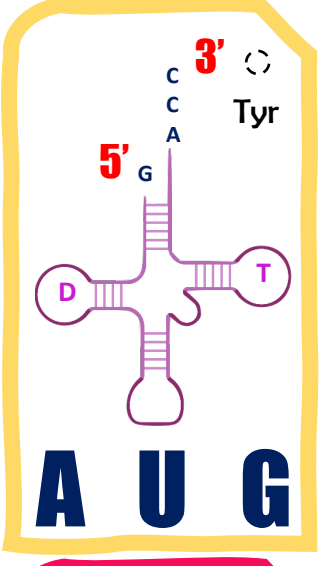
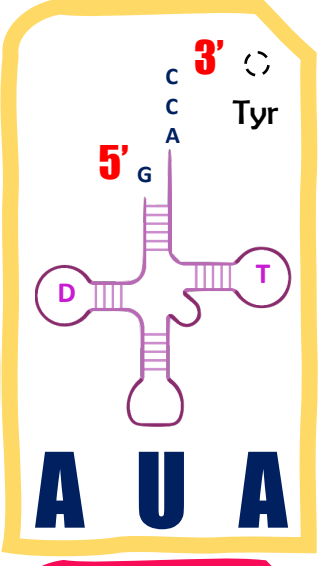
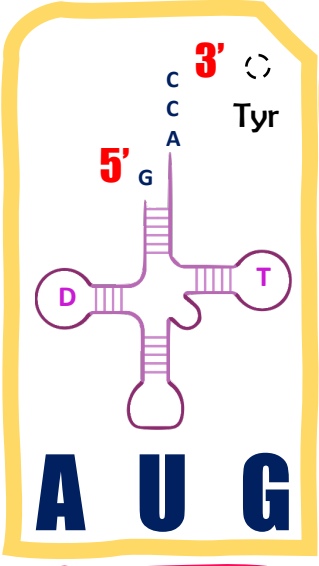
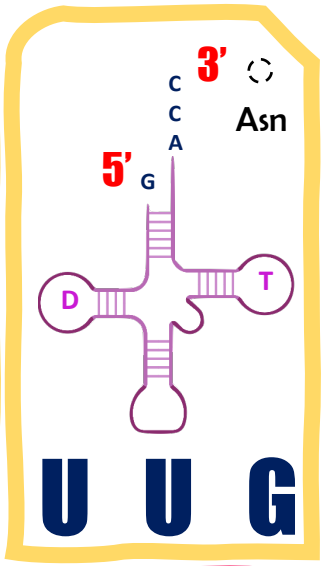
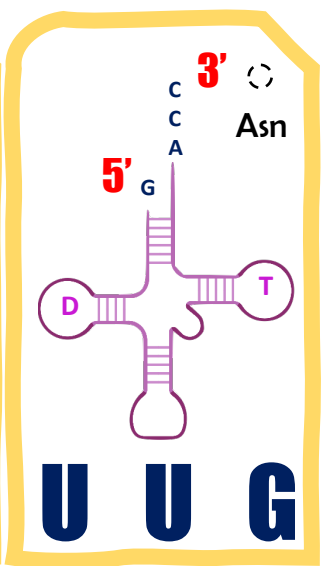
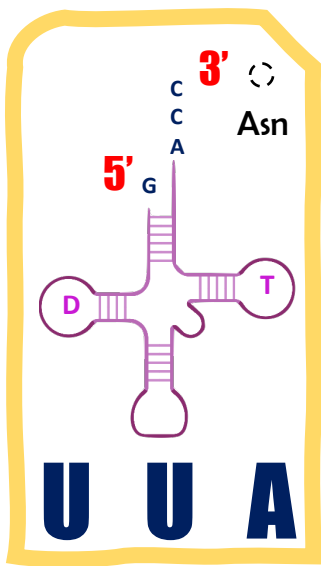
G V G
G A C

5' 5'

3' 3'



<p>A A C</p> <hr/> <p>C A A</p>	<p>G A C</p> <hr/> <p>C A G</p>	<p>G A C</p> <hr/> <p>C A G</p>	<p>G C U</p> <hr/> <p>U C G</p>	<p>U C U</p> <hr/> <p>U C U</p>	<p>C C U</p> <hr/> <p>U C C</p>
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U A A
A A U

C A A
A A C

C A A
A A C

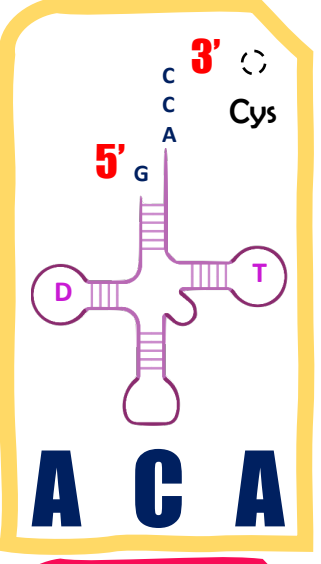
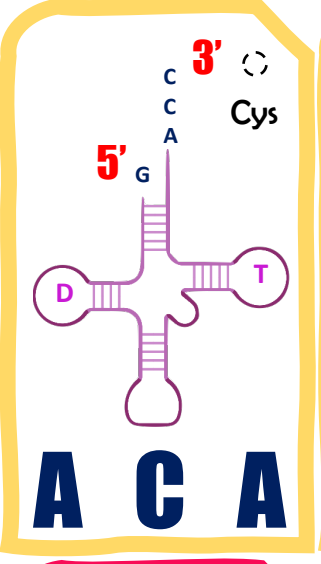
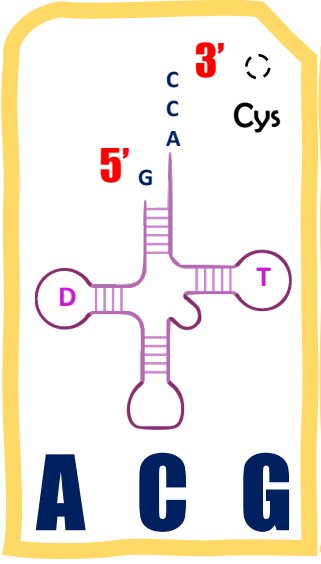
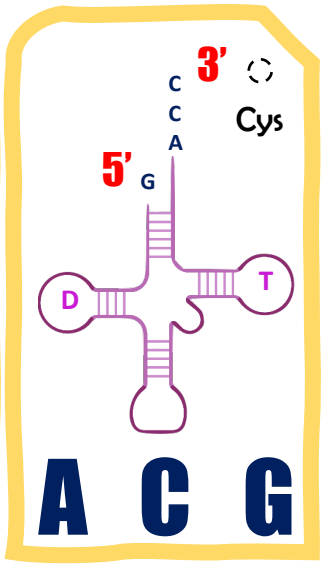
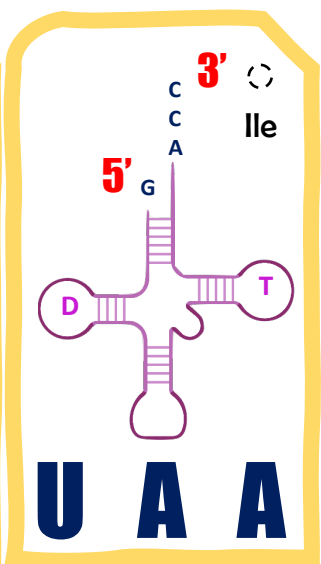
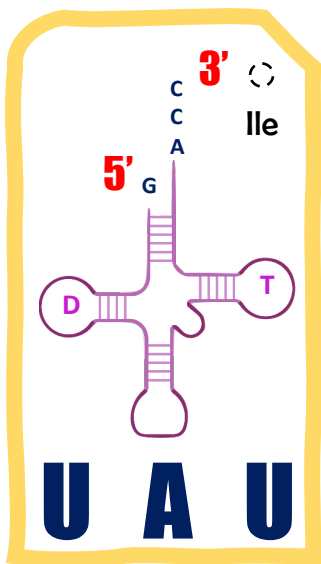
C A U
U A C

U A U
U A U

C A U
U A C

5' 5'

3' 3'



A U A

A U A

U U A

A U U

C G U

U G C

C G U

U G C

U G U





U G U

U G U

U G U

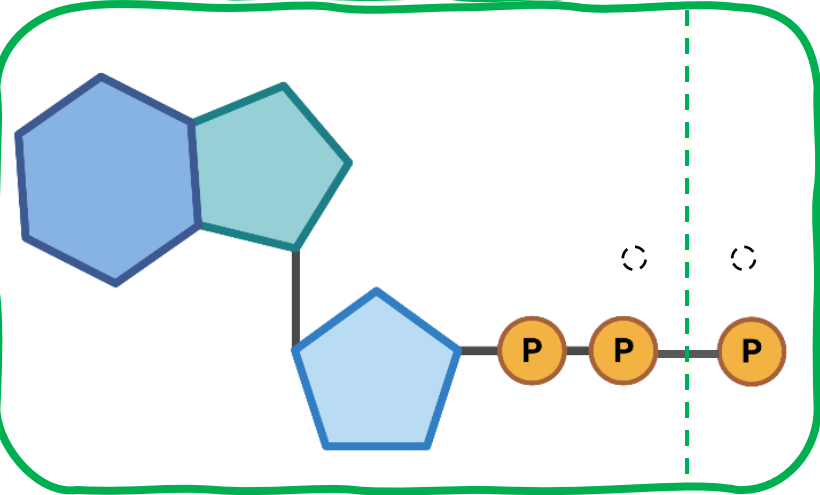
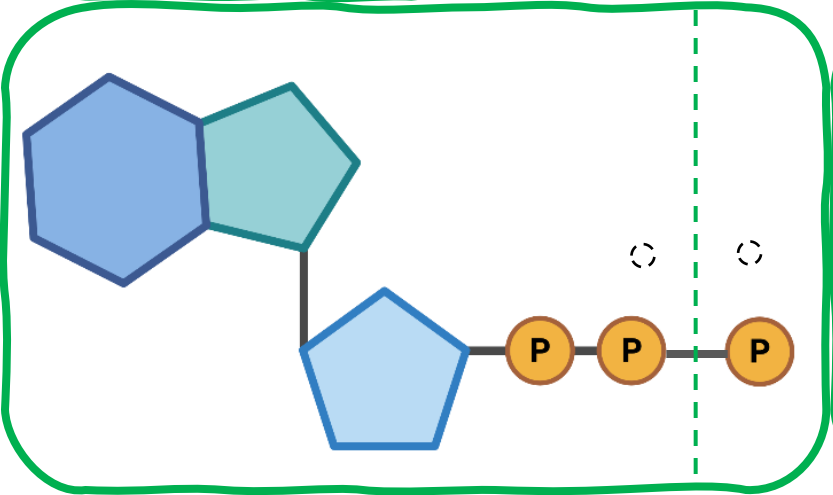
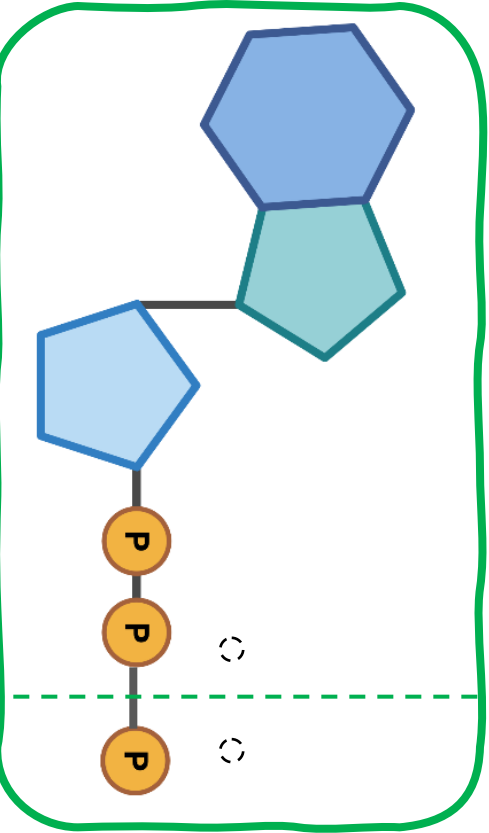
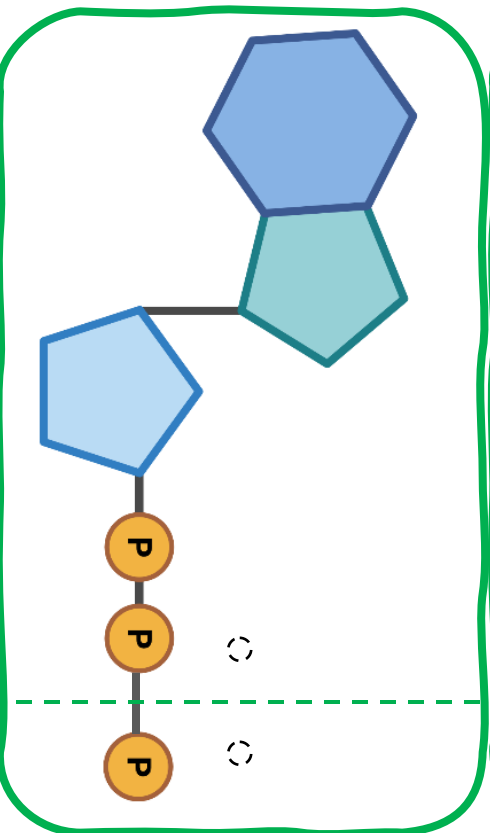
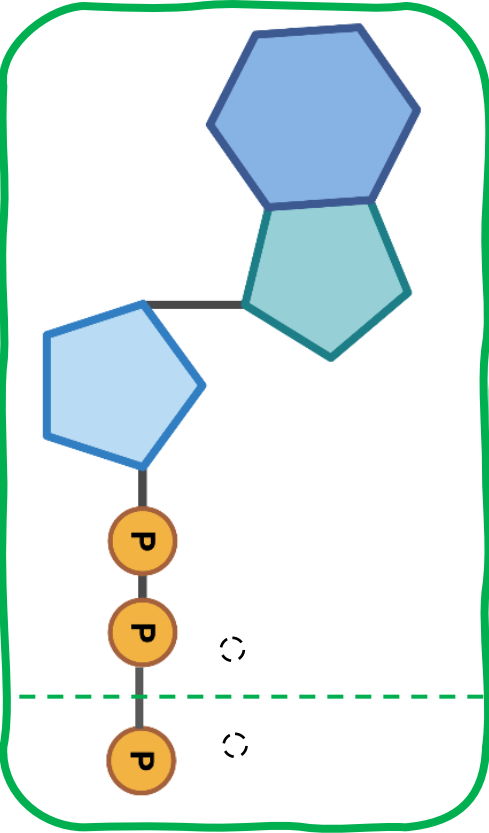
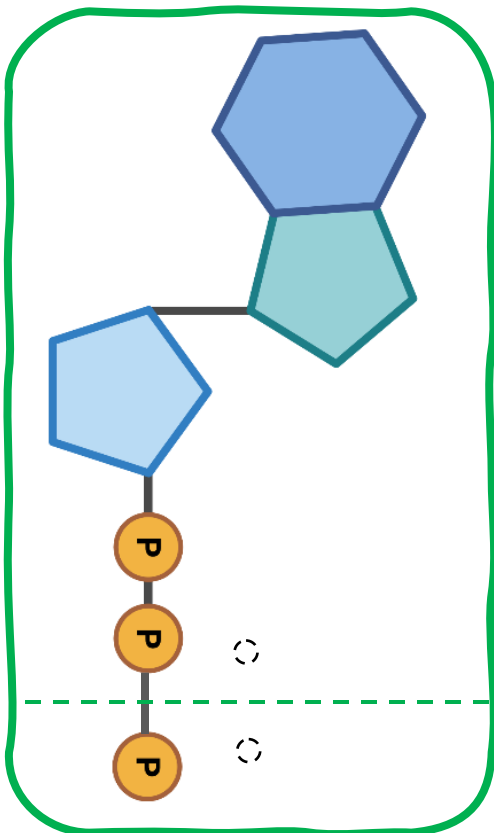
5' 5'

3' 3'

					
A C U	A C U	A U U	A U U	A U C	A U C

A G U	A G U	A A U	A A U	G A U	G A U
U G A	U G A	U A A	U A A	U A G	U A G





La RuBisCO
es lo más 

○	Pro	○	○	Pro	○
○	Pro	○	○	Met	○
○	Met	○	○	Lys	○
○	Met	○	○	Lys	○
○	Lys	○	○	Met	○
○	His	○	○	Met	○
○	Trp	○	○	His	○
○	Trp	○	○	His	○
○	Leu	○	●	Phe	●
○	Leu	○	●	Phe	●
○	Trp	○	○	Arg	○
○	Met	○	○	Arg	○
○	Arg	○	○	Leu	○
○	Arg	○	○	Leu	○
○	Met	○	○	Arg	○
○	Met	○	○	Met	○
○	Val	○	○	Thr	○
○	Val	○	○	Thr	○
○	Thr	○	●	Phe	●
○	Thr	○	○	Val	○

○	Thr	○	○	Val	○
○	Thr	○	●	Phe	●
○	Val	○	○	Thr	○
○	Val	○	○	Thr	○
○	Met	○	○	Met	○
○	Met	○	○	Arg	○
○	Arg	○	○	Leu	○
○	Arg	○	○	Leu	○
○	Met	○	○	Arg	○
○	Trp	○	○	Arg	○
○	Leu	○	○	Phe	○
○	Leu	○	○	Phe	○
○	Trp	○	○	His	○
○	Trp	○	○	His	○
○	His	○	○	Met	○
○	Lys	○	○	Met	○
○	Met	○	○	Lys	○
○	Met	○	○	Lys	○
○	Pro	○	○	Met	○
○	Pro	○	○	Pro	○

Ile	Ile
Ala	Ala
Asp	Asp
Asp	Asp
Gln	Gln
Gln	Gln
Ala	Ala
Ala	Ala
Asn	Asn
Asn	Asn
Ala	Ala
Ala	Ala
Gly	Gly
Glu	Glu
Gly	Gly
Gly	Gly
Gln	Gln
Glu	Glu
Gly	Gly
Gly	Gly

Ile	Ile
Ile	Ile
Asn	Asn
Asn	Asn
Tyr	Tyr
Tyr	Tyr
Gln	Gln
Gln	Gln
Tyr	Tyr
Tyr	Tyr
Asp	Asp
Cys	Cys
Ser	Ser
Ser	Ser
Cys	Cys
Cys	Cys
Ser	Ser
Ser	Ser
Cys	Cys
Cys	Cys

○	Gly	○	○	Cys	○
○	Gly	○	○	Cys	○
○	Glu	○	○	Ser	○
○	Glu	○	○	Ser	○
○	Gly	○	○	Cys	○
○	Gly	○	○	Cys	○
○	Glu	○	○	Ser	○
○	Gly	○	○	Ser	○
○	Ala	○	○	Cys	○
○	Ala	○	○	Asp	○
○	Asn	○	○	Tyr	○
○	Asn	○	○	Tyr	○
	Ala		○	Gln	○
	Ala		○	Gln	○
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