

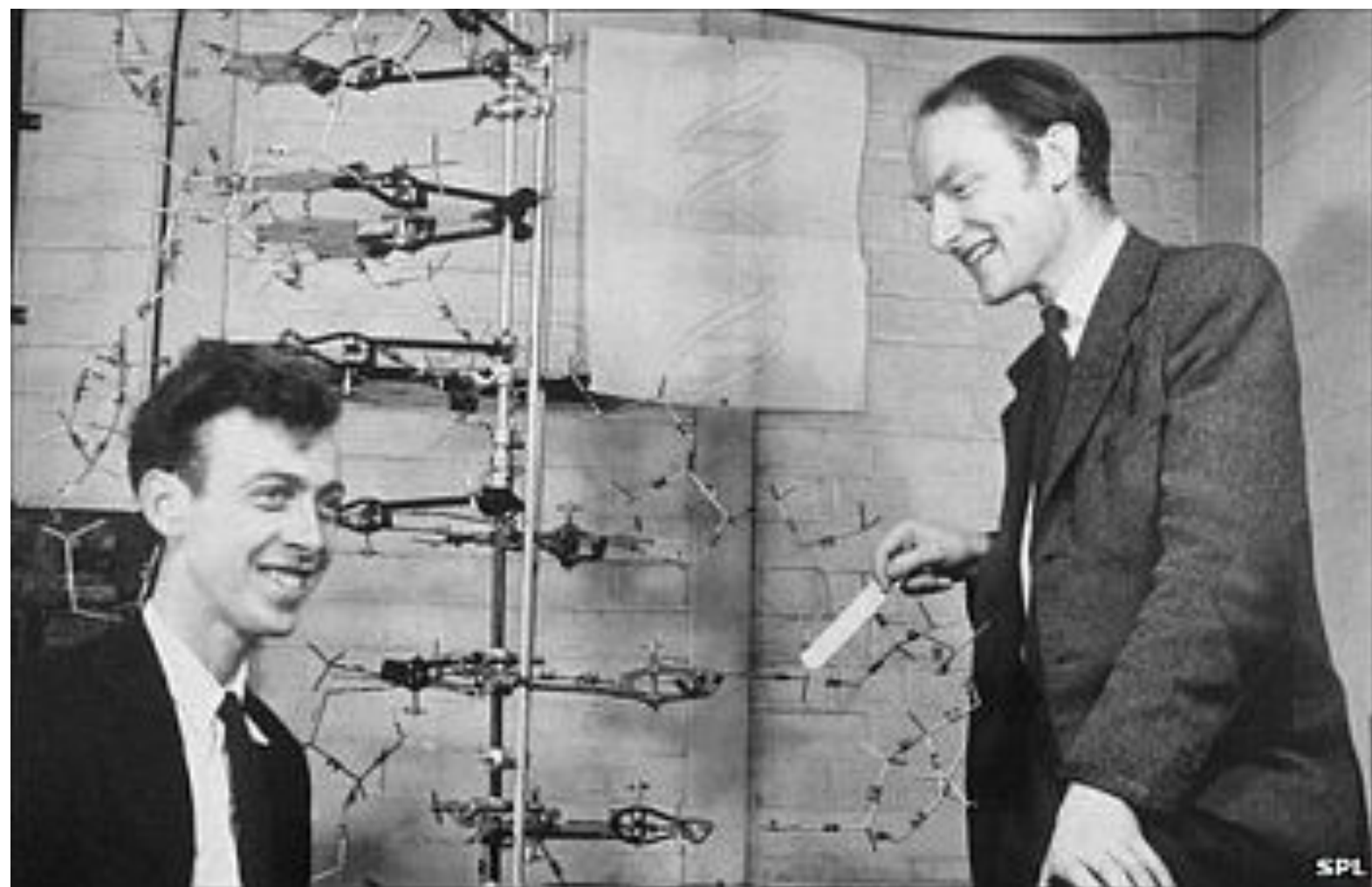


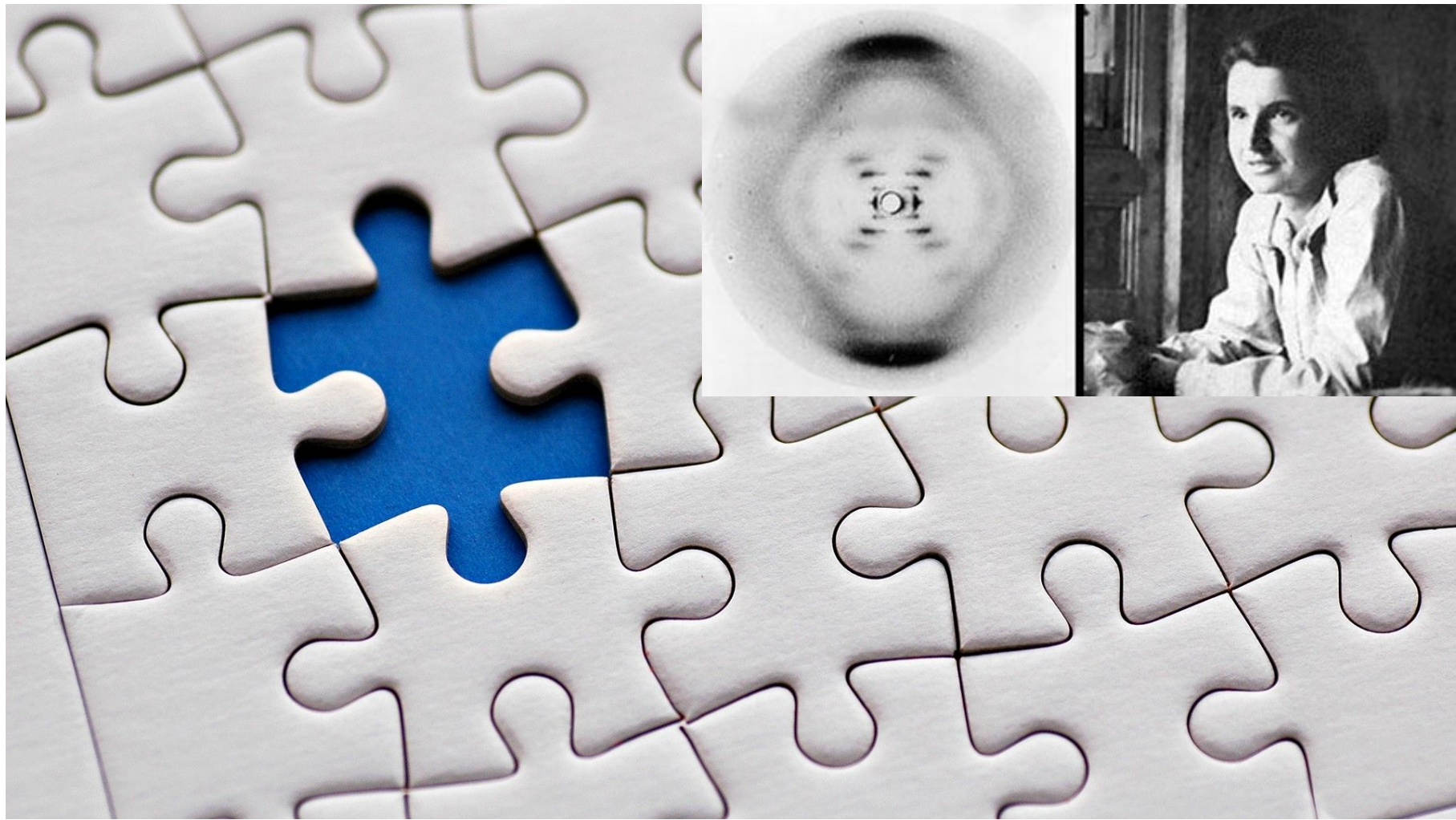
Ácidos Nucleicos

LGN0117 - Biologia Celular

Ácido Desoxirribonucleico

Deoxyribonucleic Acid (DNA)





Principais requisitos de uma molécula hereditária:

- ★ Habilidade em armazenar informação;
- ★ Habilidade de se replicar para a transmissão da informação;
- ★ Habilidade em mutar - mutações genéticas que conduzem à variabilidade genética.



gettyimages
Ismael Alonso

Cada célula de um organismo tem um complemento de DNA

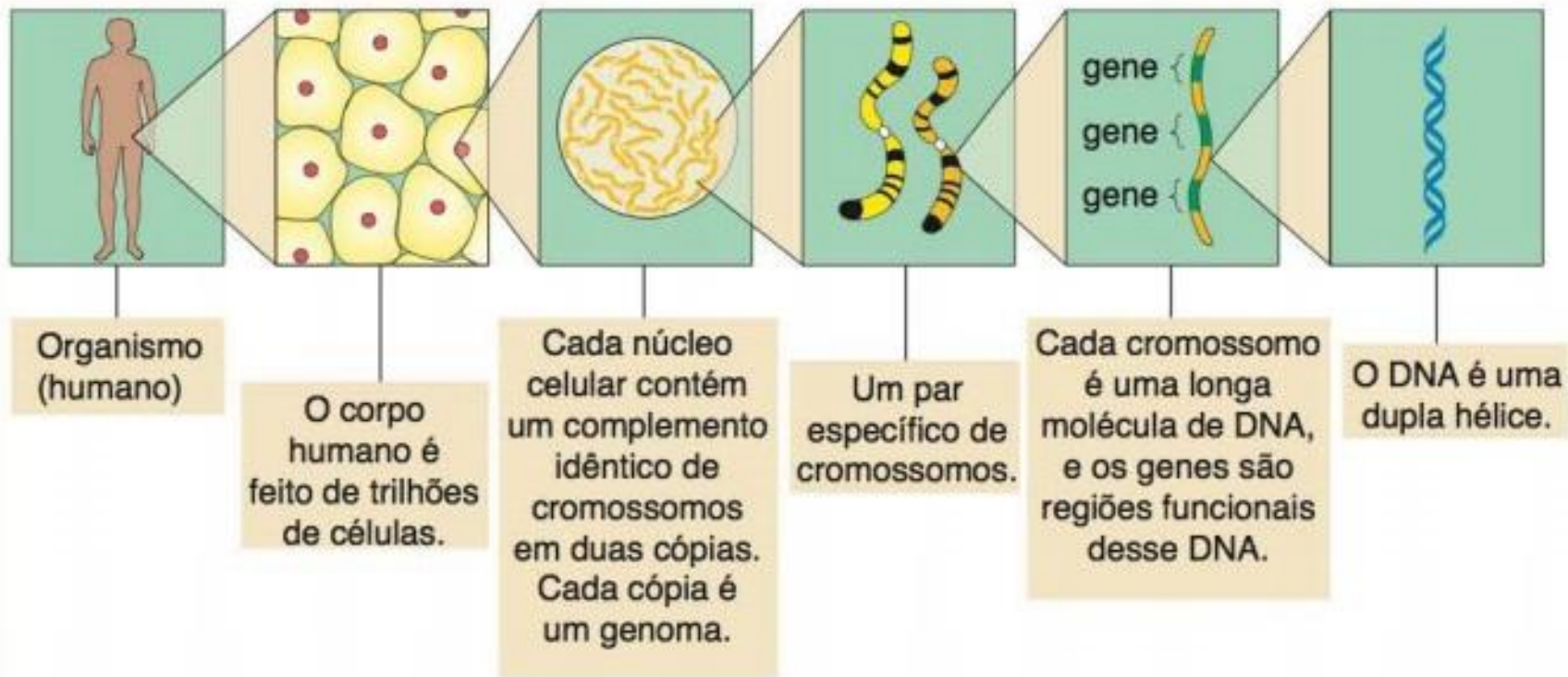
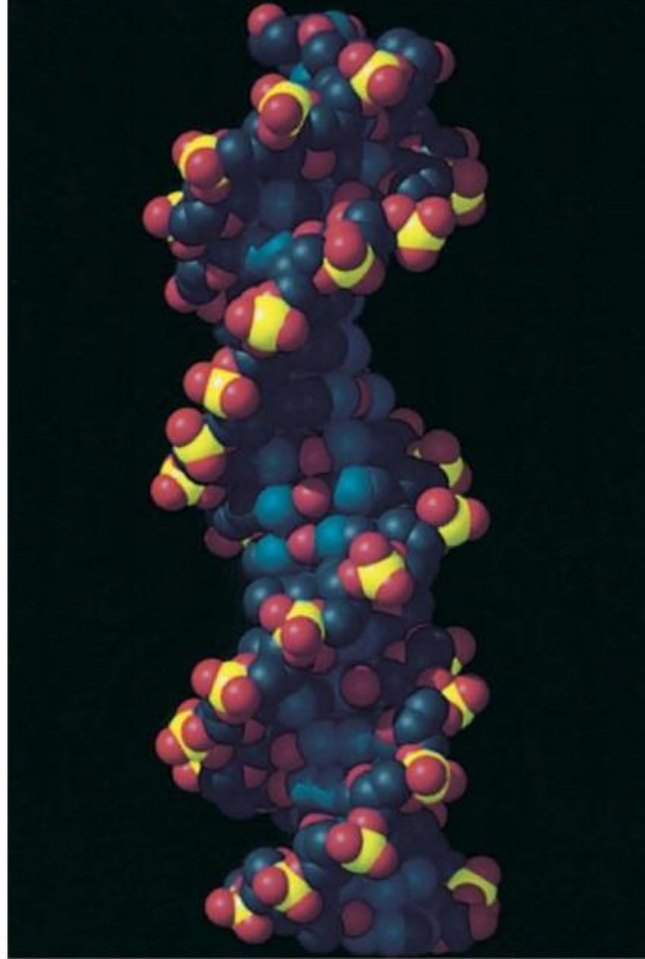
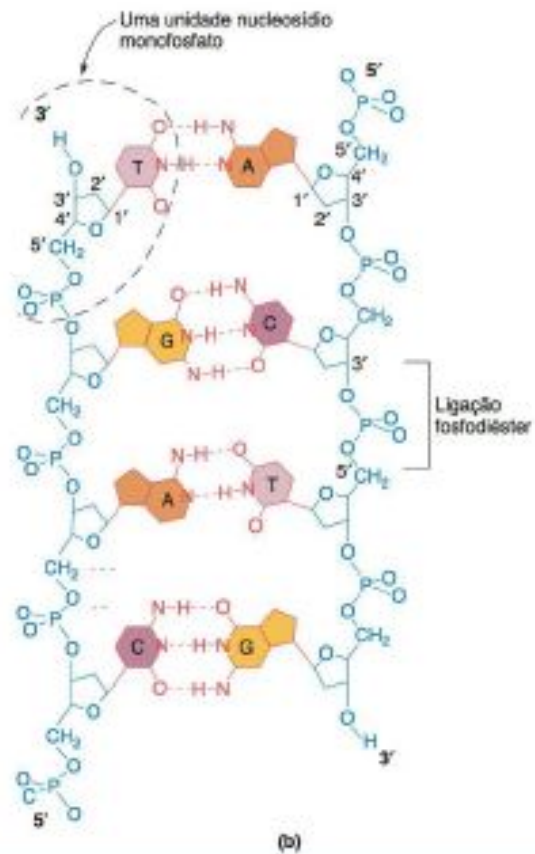
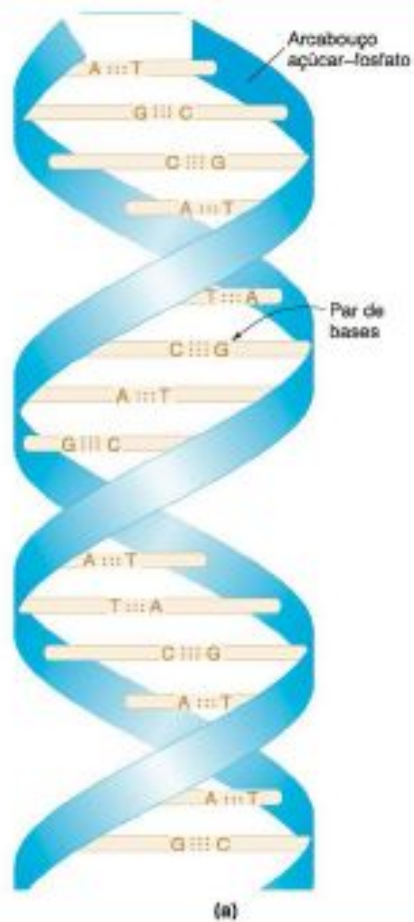


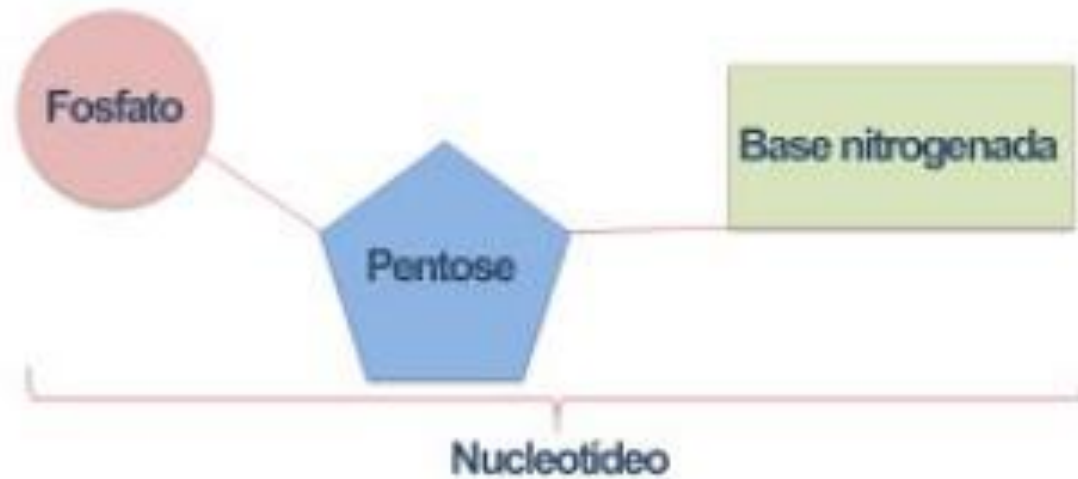
Figura 1.2 Ampliações sucessivas evidenciam o DNA de um organismo em foco.

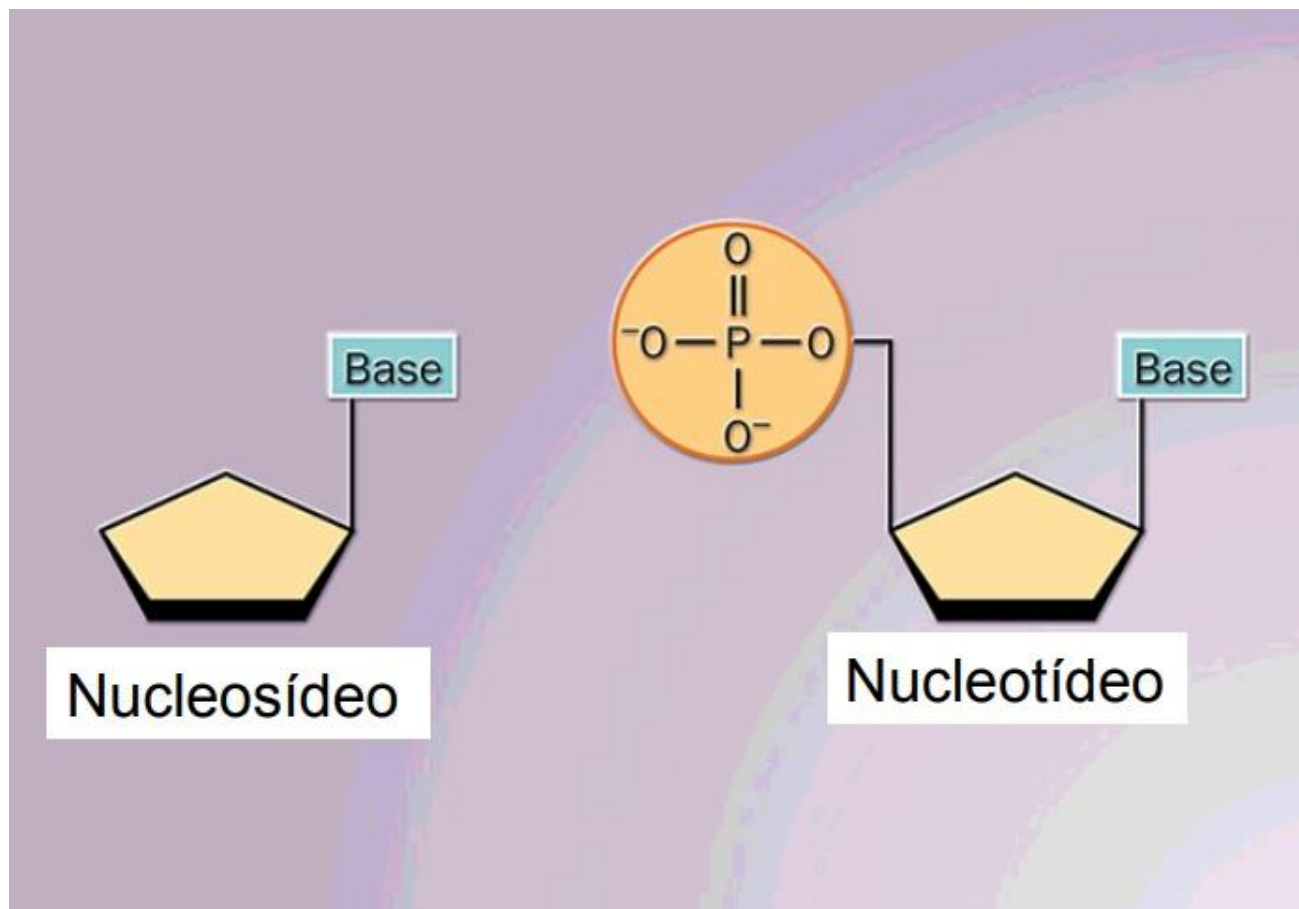


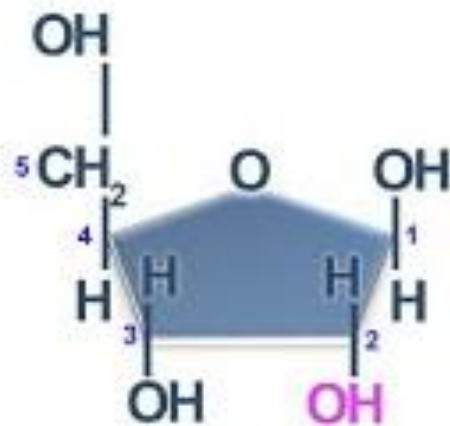
Modelo computadorizado do DNA. [Lawrence Berkeley National Laboratory.]

Estrutura do DNA









Ribose

RNA

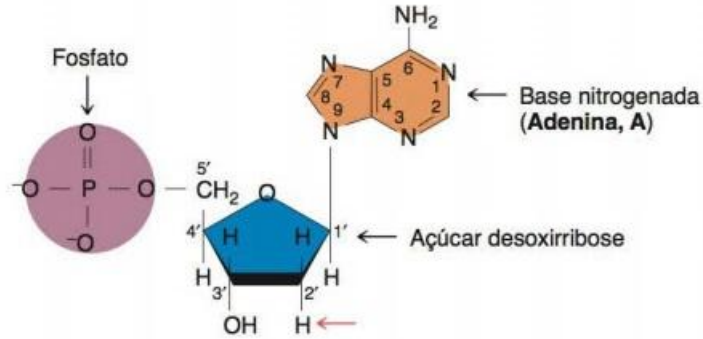


Desoxirribose

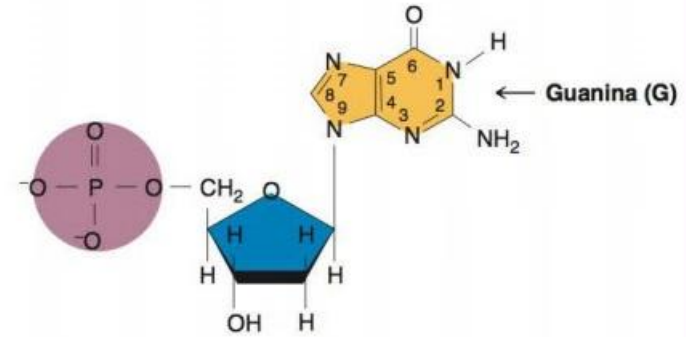
DNA

Estruturas dos quatro nucleotídeos do DNA

Nucleotídeos purínicos

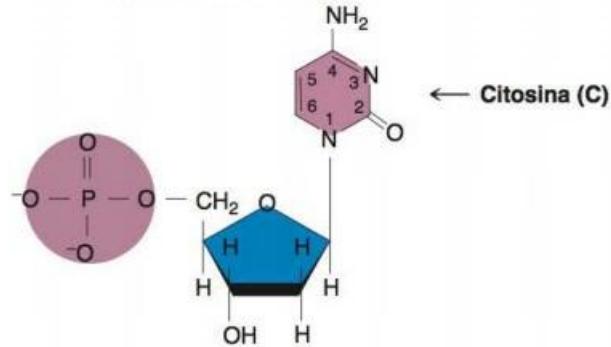


Desoxiadenosina 5'-monofosfato (dAMP)

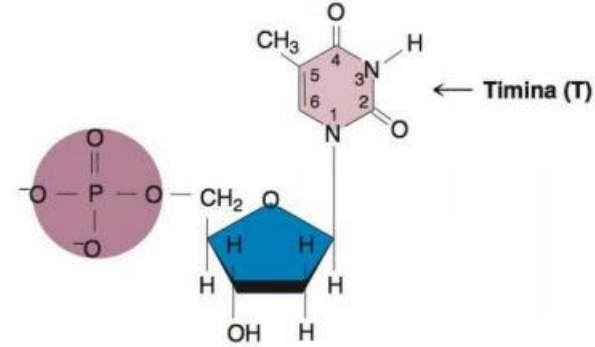


Desoxiguanosina 5'-monofosfato (dGMP)

Nucleotídeos pirimidínicos



Desoxicitidina 5'-monofosfato (dCMP)

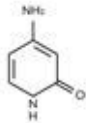


Desoxitimidina 5'-monofosfato (dTMP)

Animação: https://www.youtube.com/watch?v=o_-6JXLYS-k

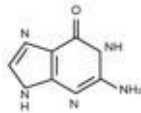
Ácido Ribonucleico

Ribonucleic Acid (RNA)



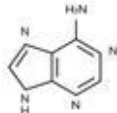
Cytosine

C



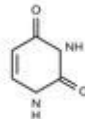
Guanine

G



Adenine

A



Uracil

U



Nucleobases

Nitrogenous base pair

Sugar-phosphate backbone

RNA

Ribonucleic acid

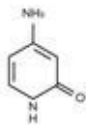


DNA

Deoxyribonucleic acid

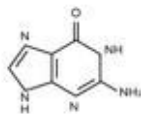
C

Cytosine



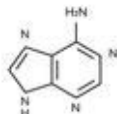
G

Guanine



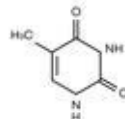
A

Adenine



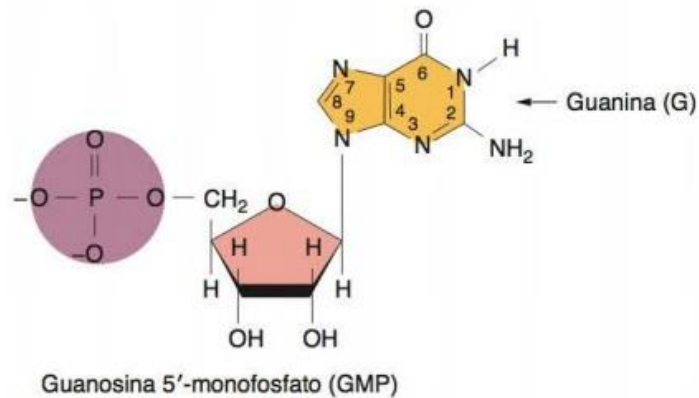
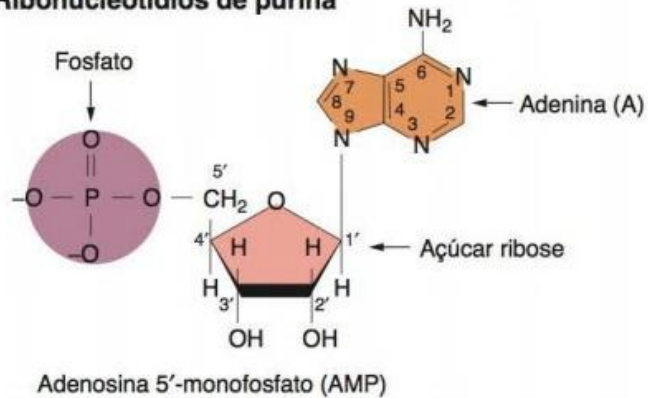
T

Thymine

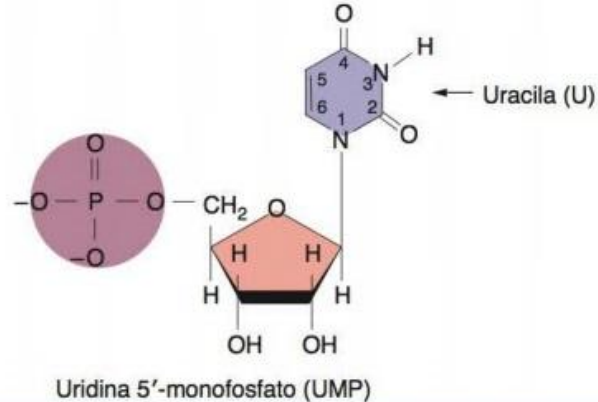
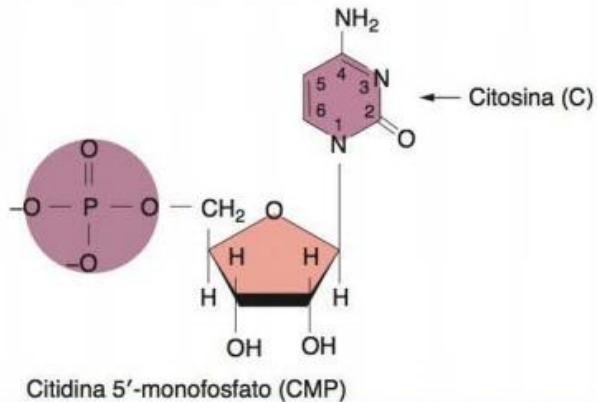


Os quatro ribonucleotídeos encontrados no RNA

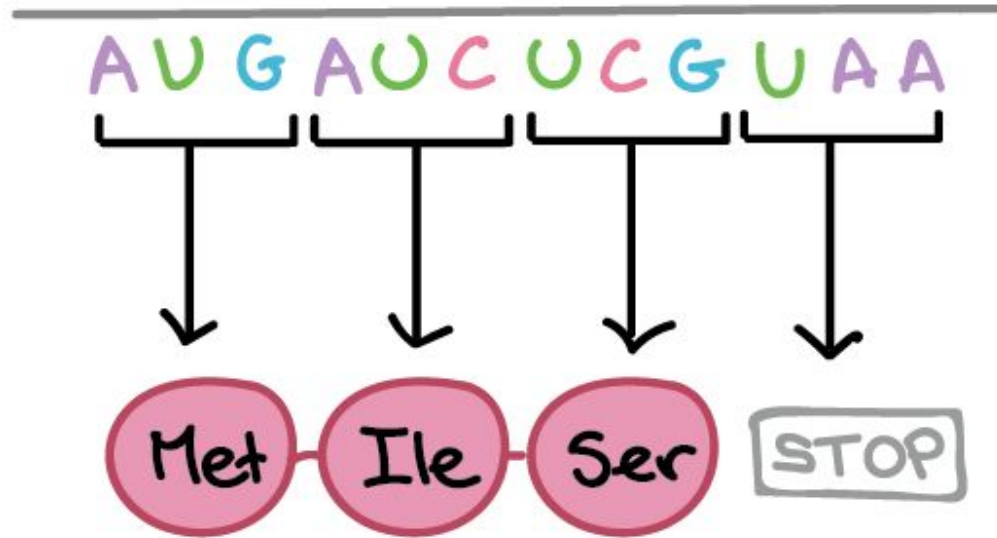
Ribonucleotídeos de purina



Ribonucleotídeos de pirimidina



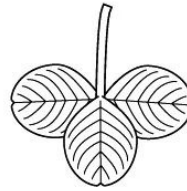
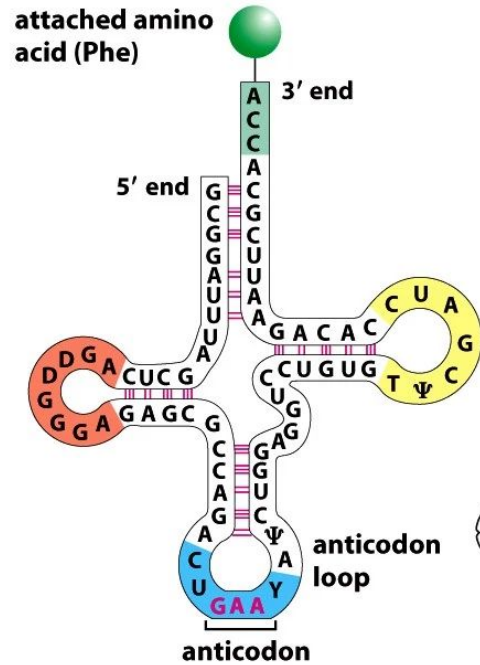
mRNA



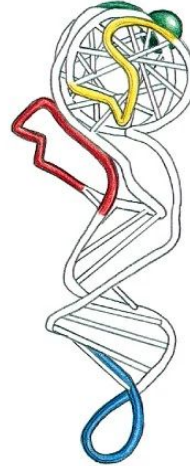
mRNA

Polypeptide

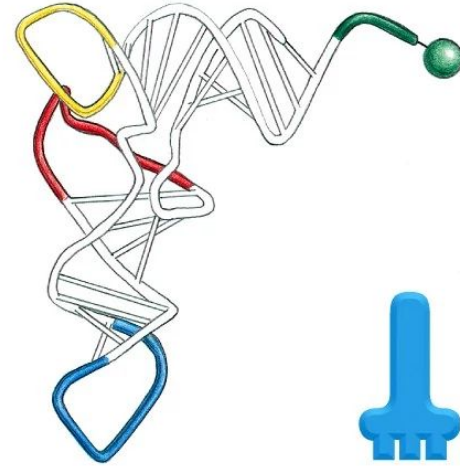
tRNA



a cloverleaf



(B)



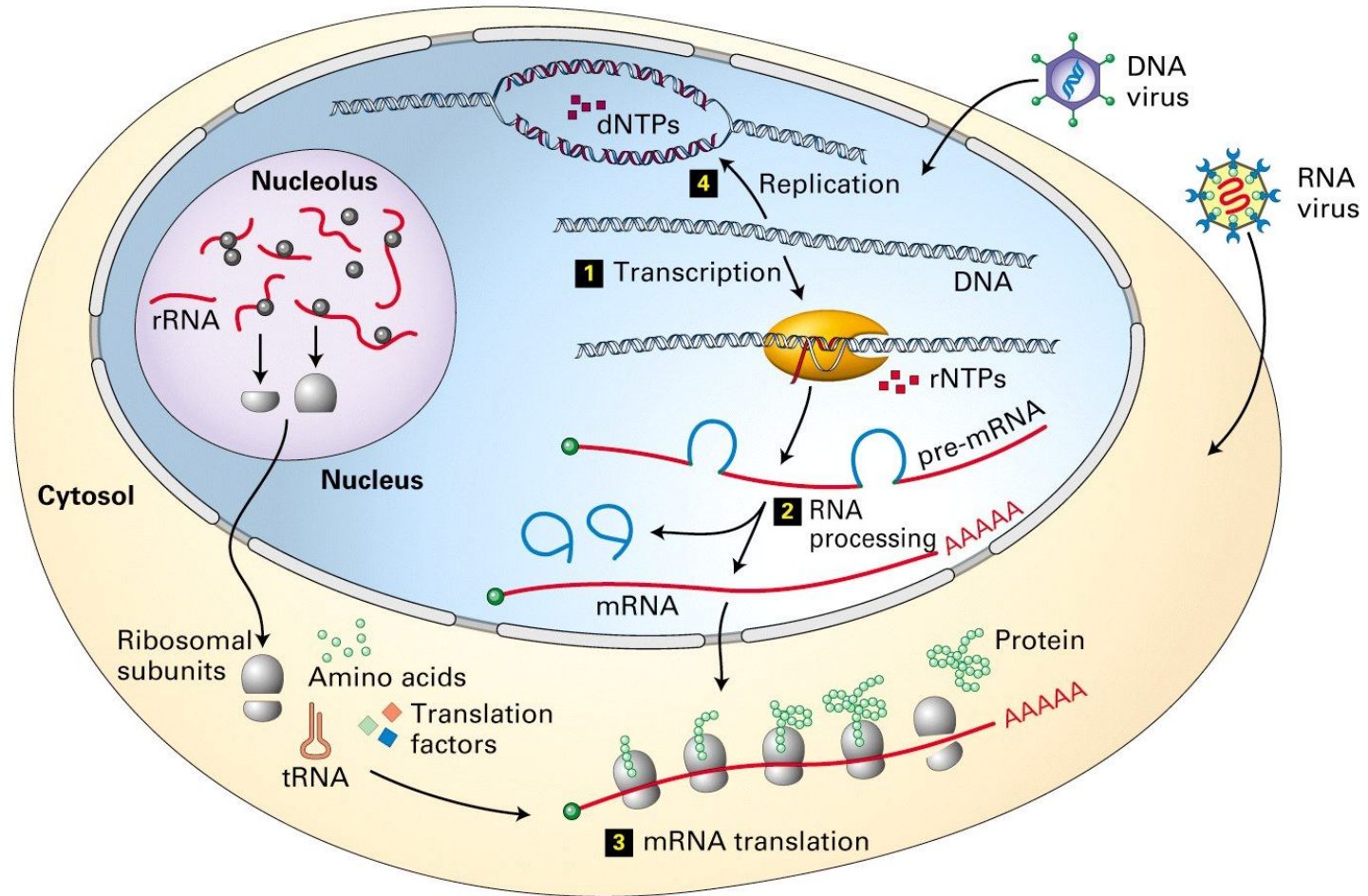
(C)



(E)

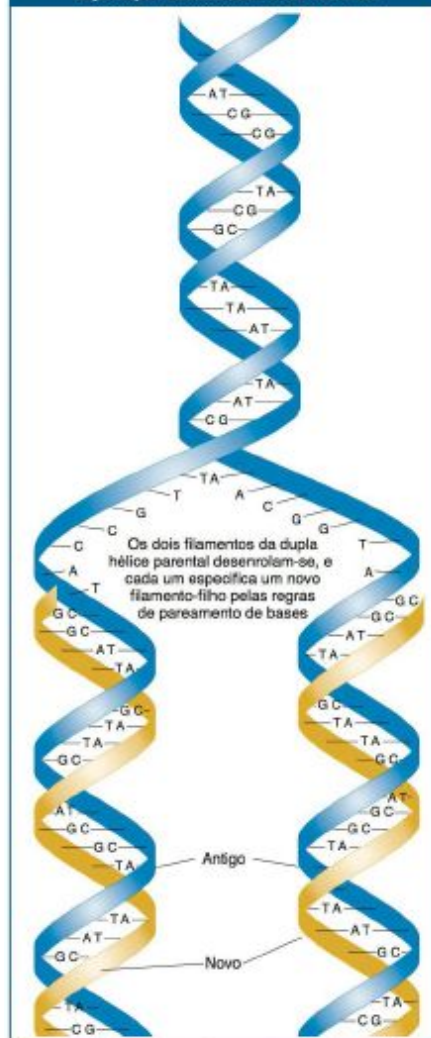


Dogma Central



Replicação do DNA

Replicação semiconservativa do DNA



Animação: <https://www.youtube.com/watch?v=TNKWgcFPHqw>

Desafio:

Montagem da dupla hélice do DNA