

# Nucléoprotéines

**Acides nucléiques**

**Fraction protéique  
(protéine basique)**

ex : histones

*Hydrolyse enzymatique*

**Nucléotide**

*= unité de structure  
des acides nucléiques*

*Phosphatase*

**H<sub>3</sub>PO<sub>4</sub>**

**Nucléoside**

*Nucléosidase*

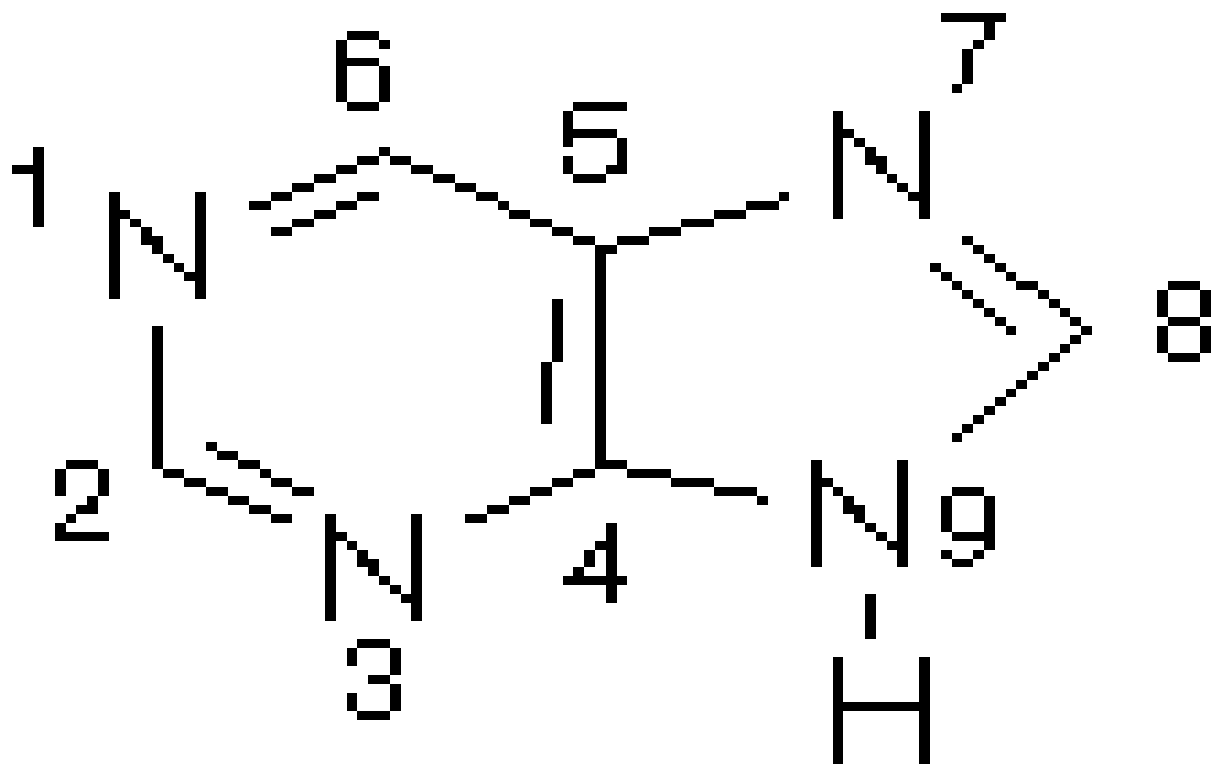
**Pentose**

(ribose,  
désoxyribose)

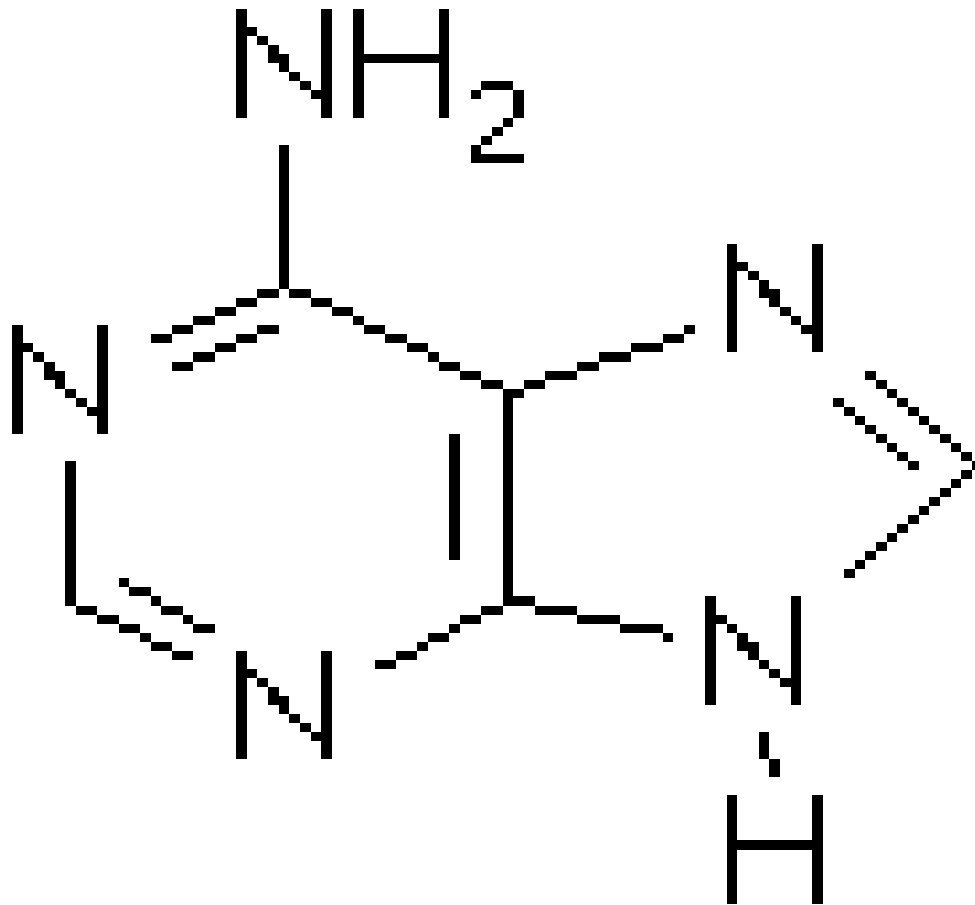
**Base cyclique**

(purique,  
pyrimidique)

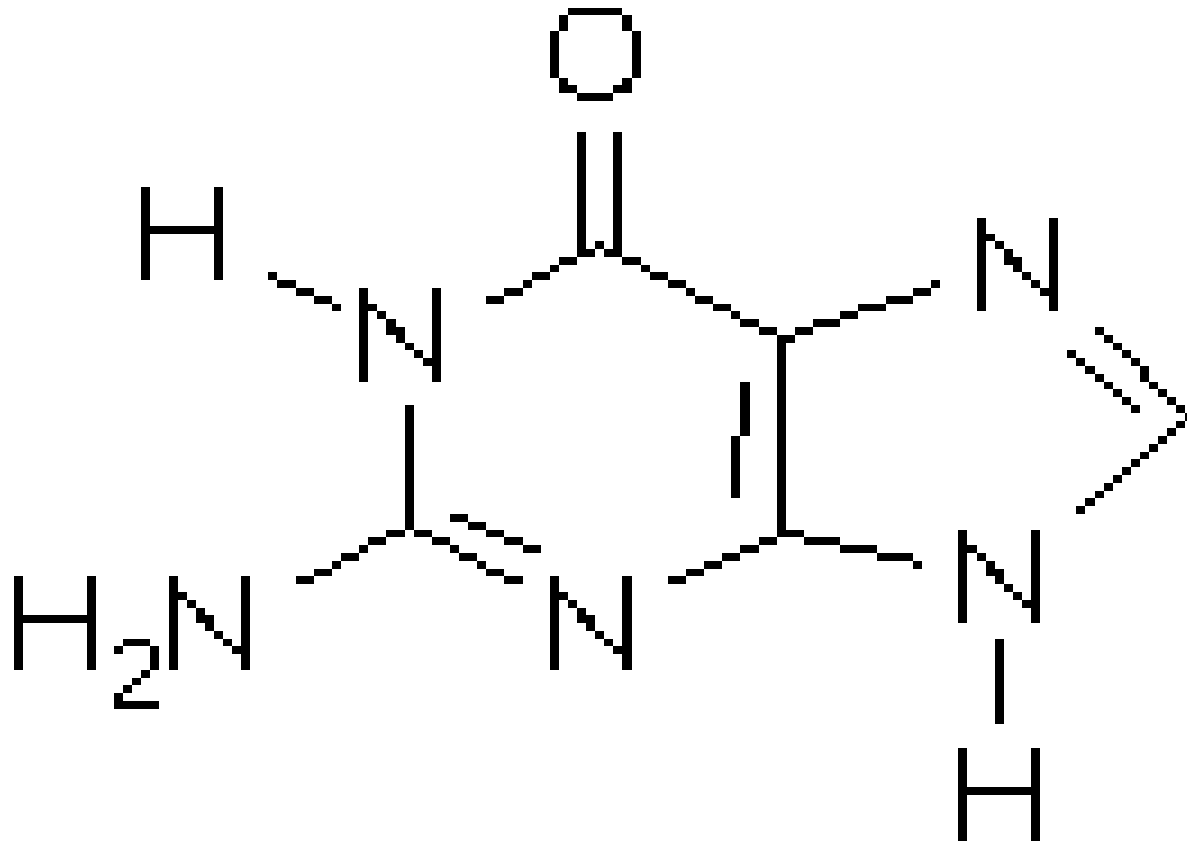
# Purine



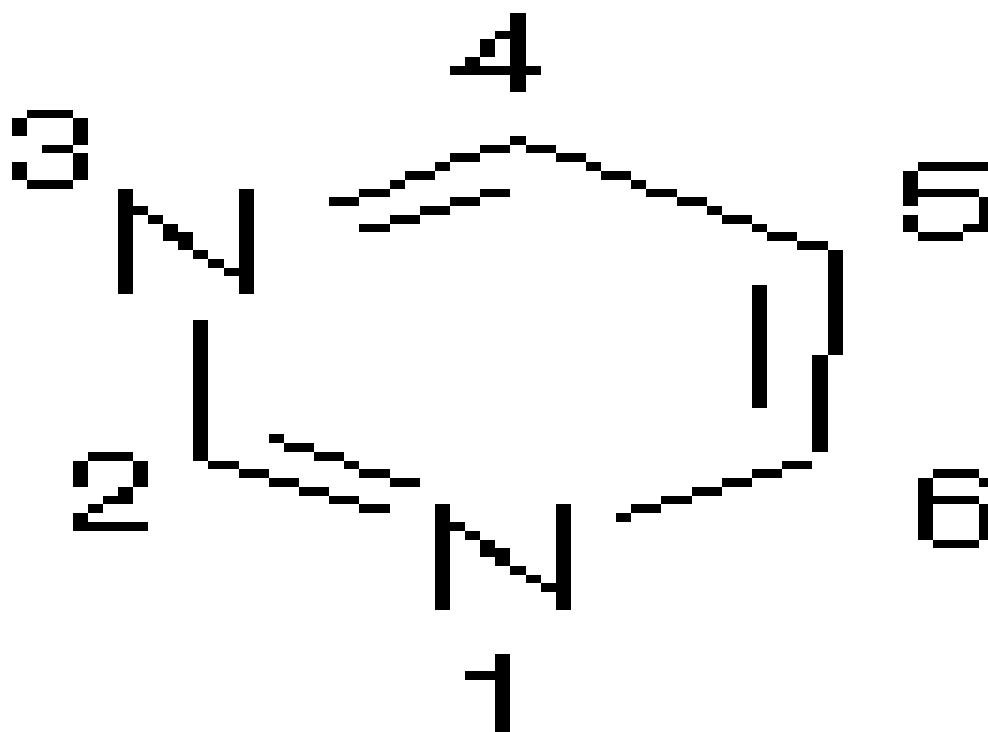
# Adénine (A) ou 6-amino-purine



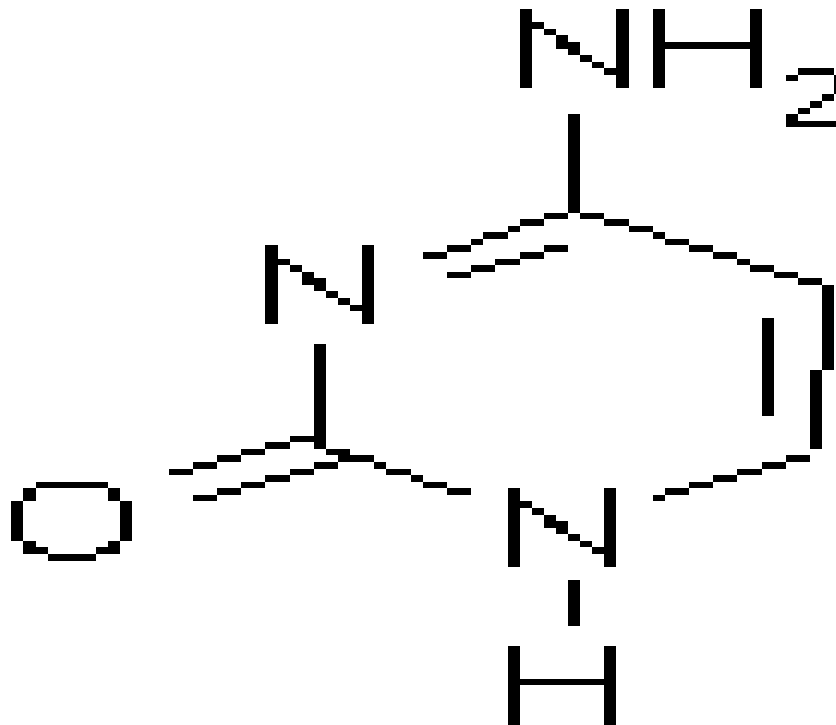
# Guanine (G) ou 2-amino-6-oxy-purine



# Pyrimidine

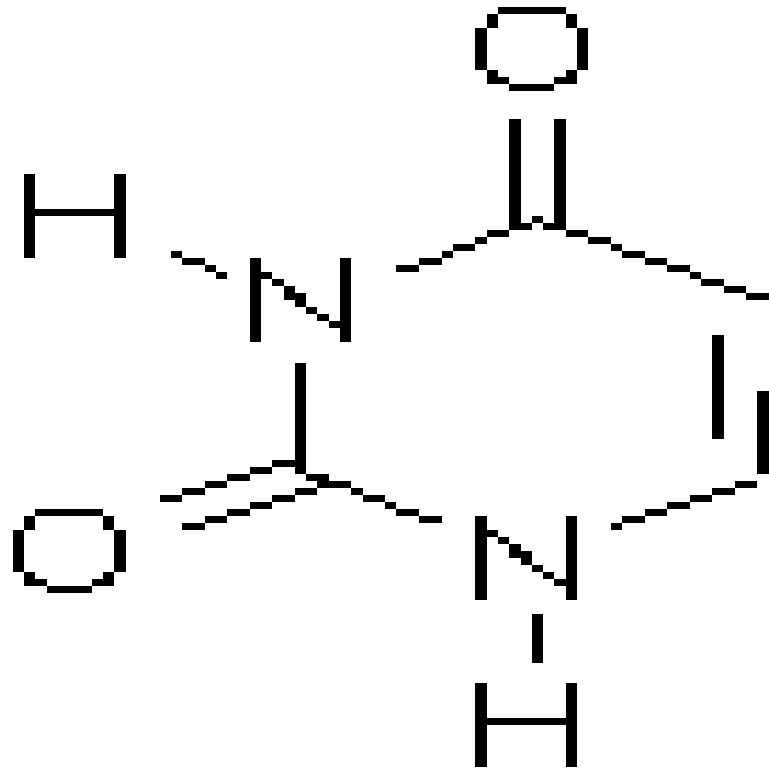


# Cytosine (C) 2-oxy-4-amino- pyrimidine



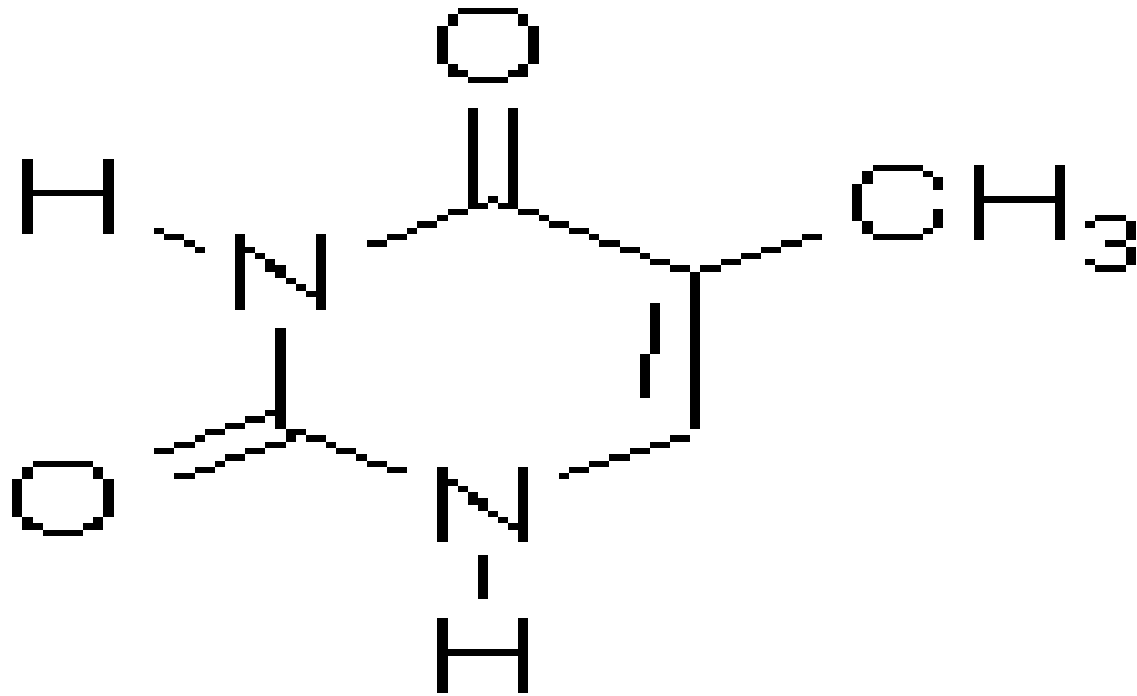
# Uracile (U)

## 2,4-dioxy-pyrimidine



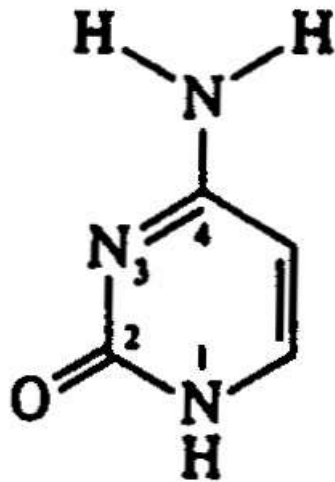
# Thymine (T)

2,4-dioxy-5-méthyl- pyrimidine

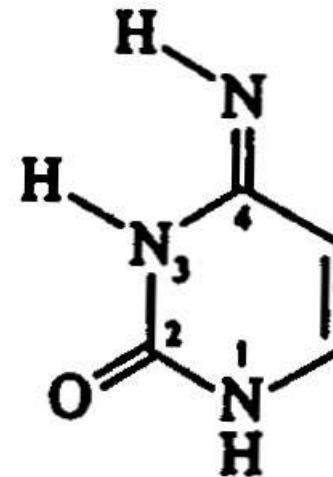




# Tautomérisation des bases

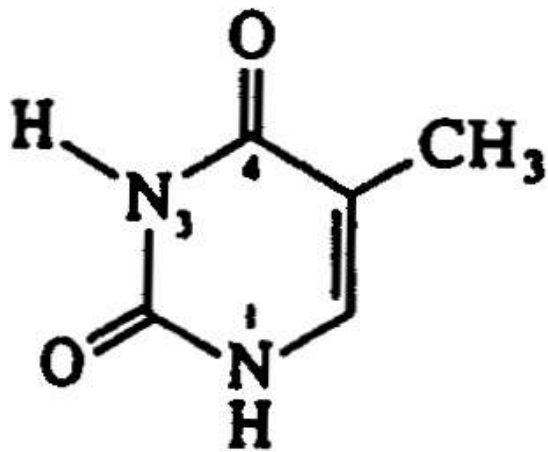


*Amino*

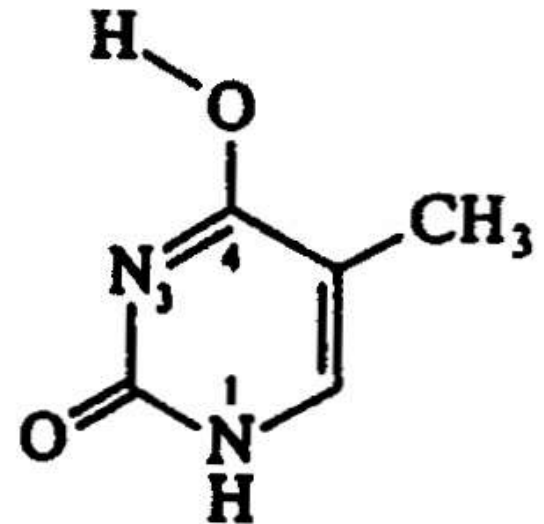


*Imino*

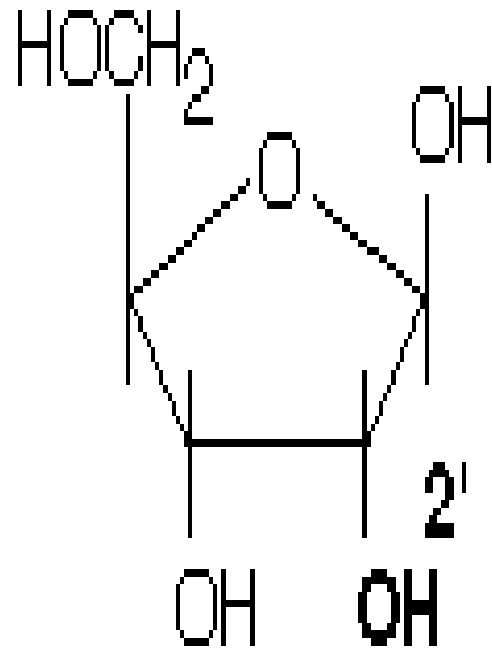
# Tautomérisation des bases



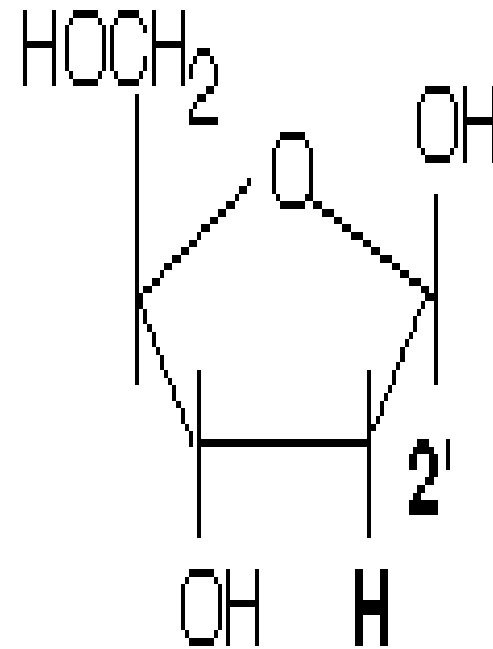
*Lactam*



*Lactim*

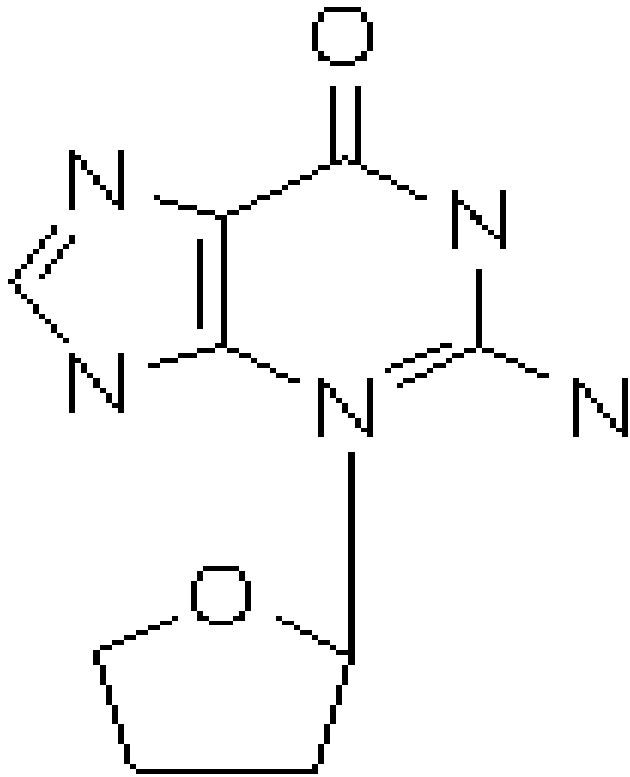


ARN :  $\beta$ -D-ribose

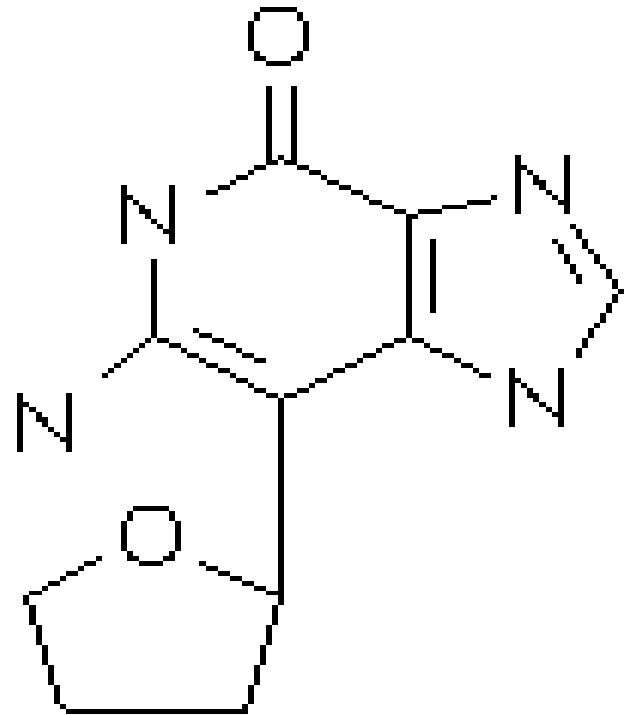


ADN :  $\beta$ -D-2'-désoxyribose

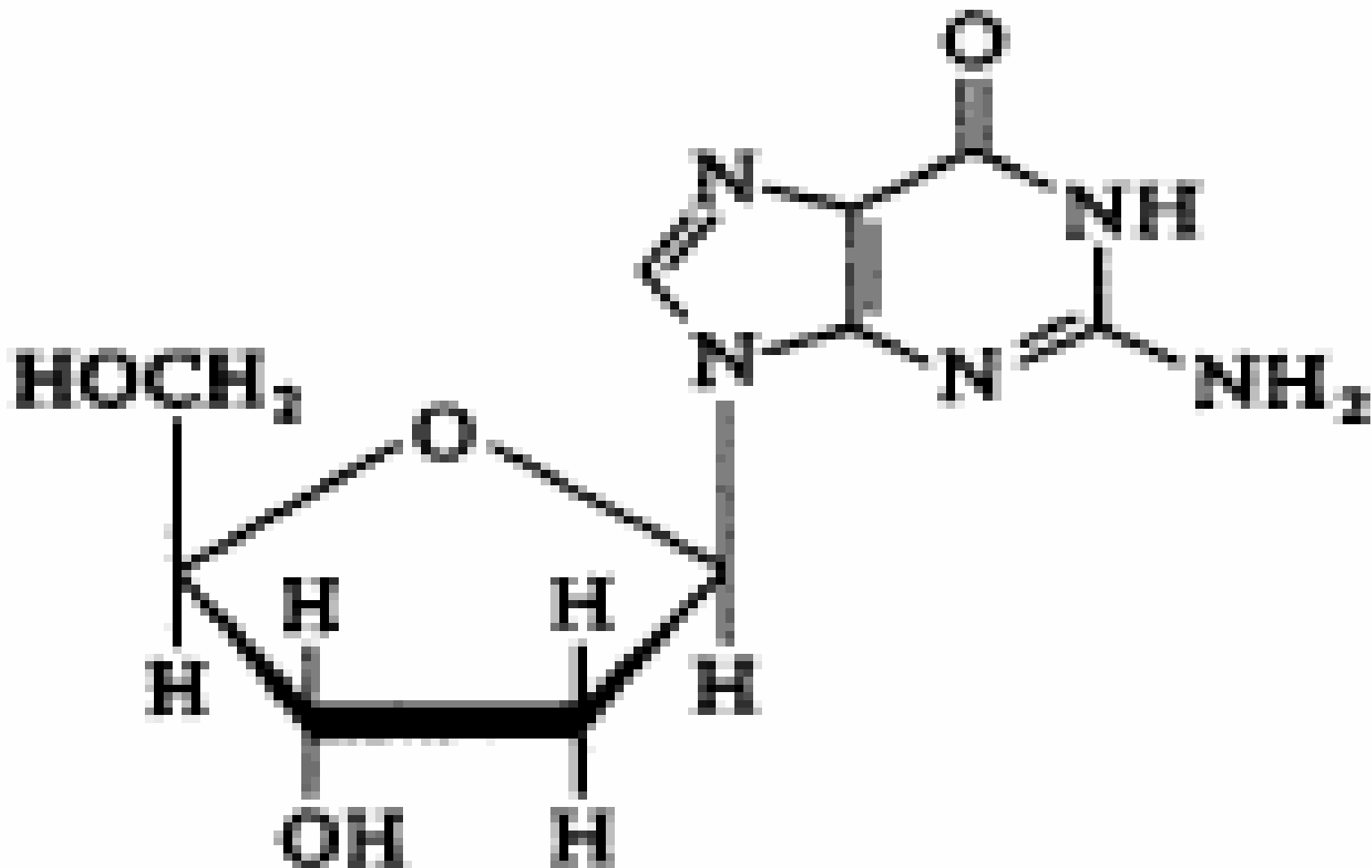
# FORMES ANTI ET SYN



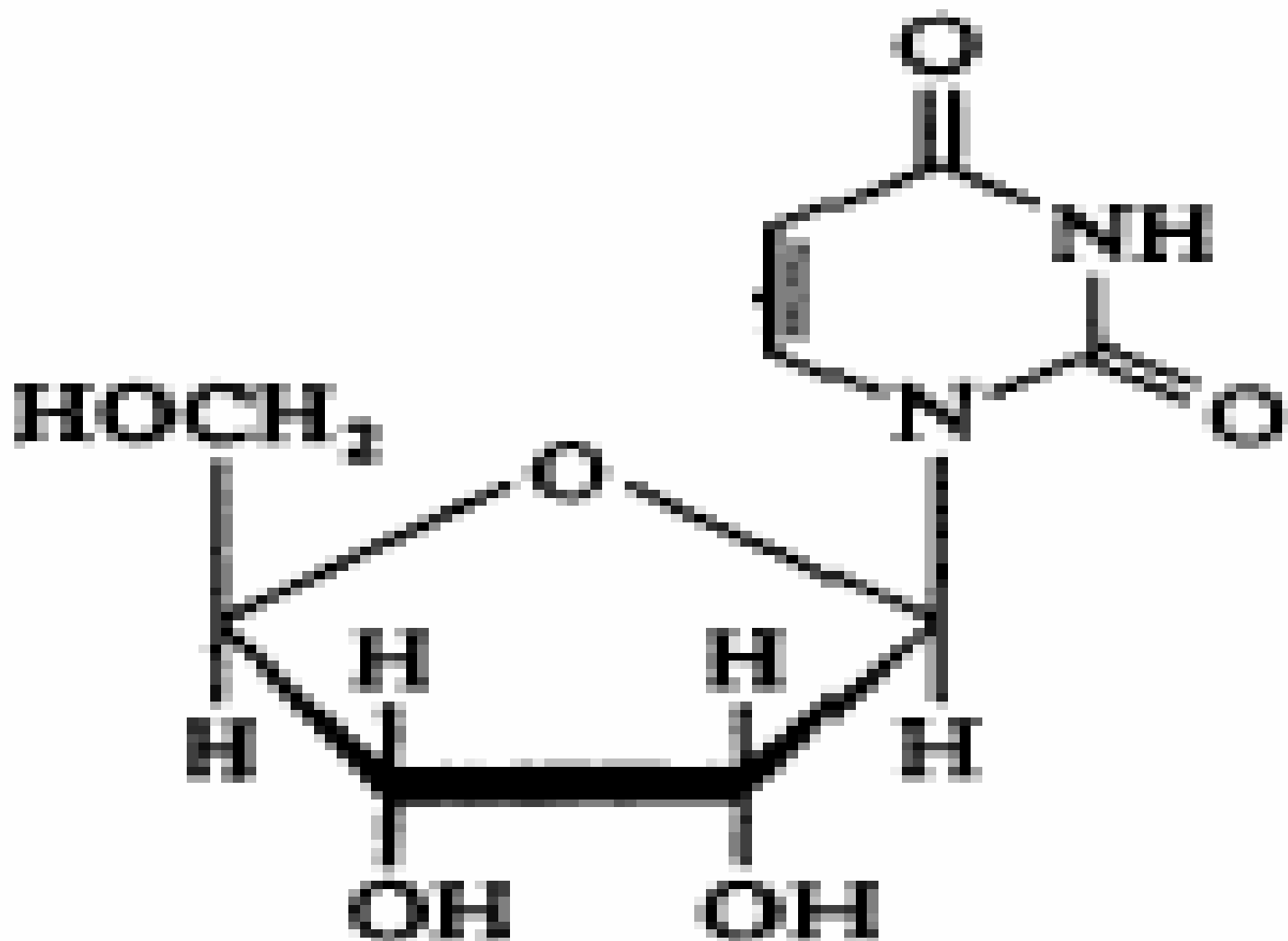
ANTI



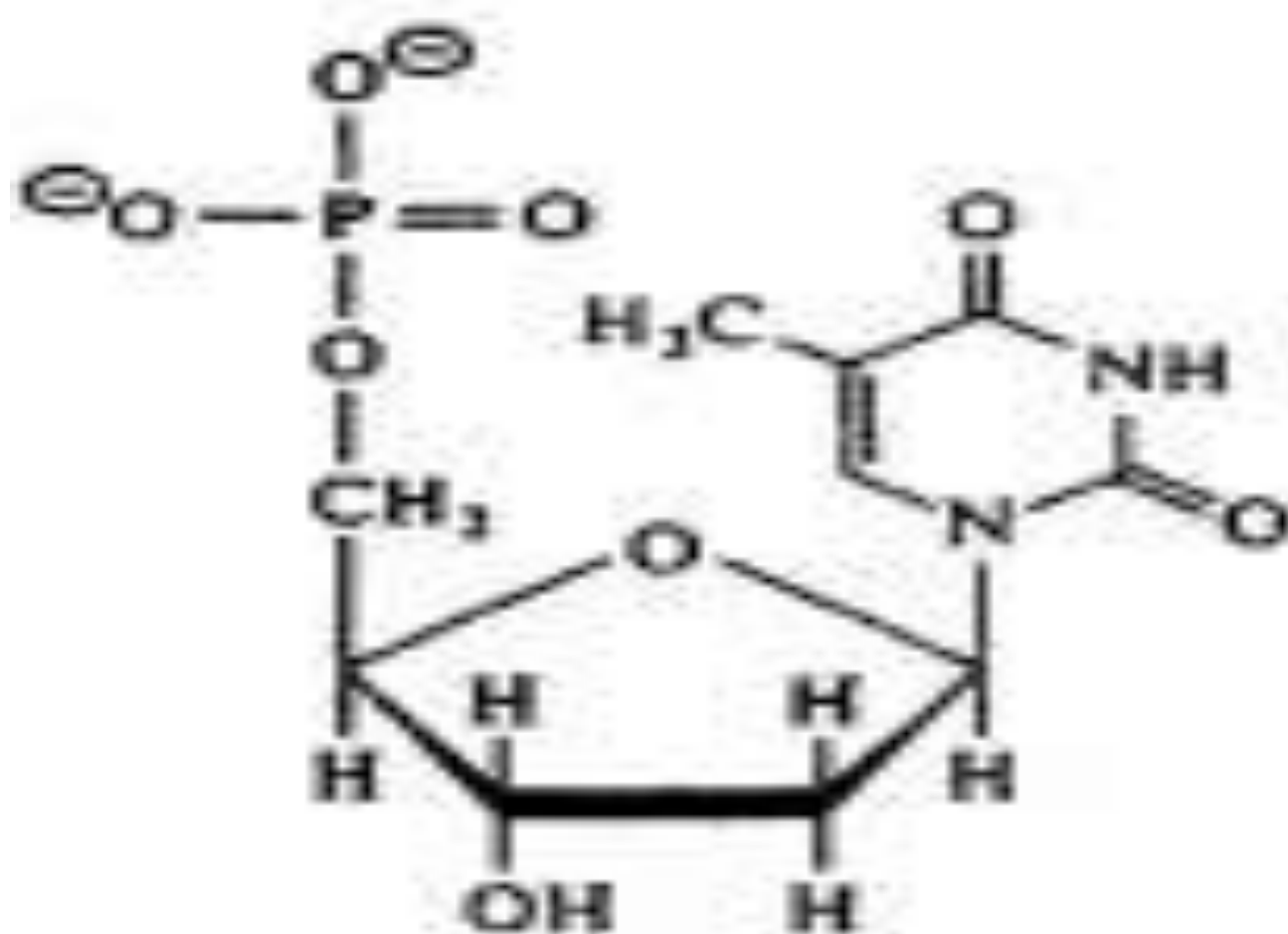
SYN



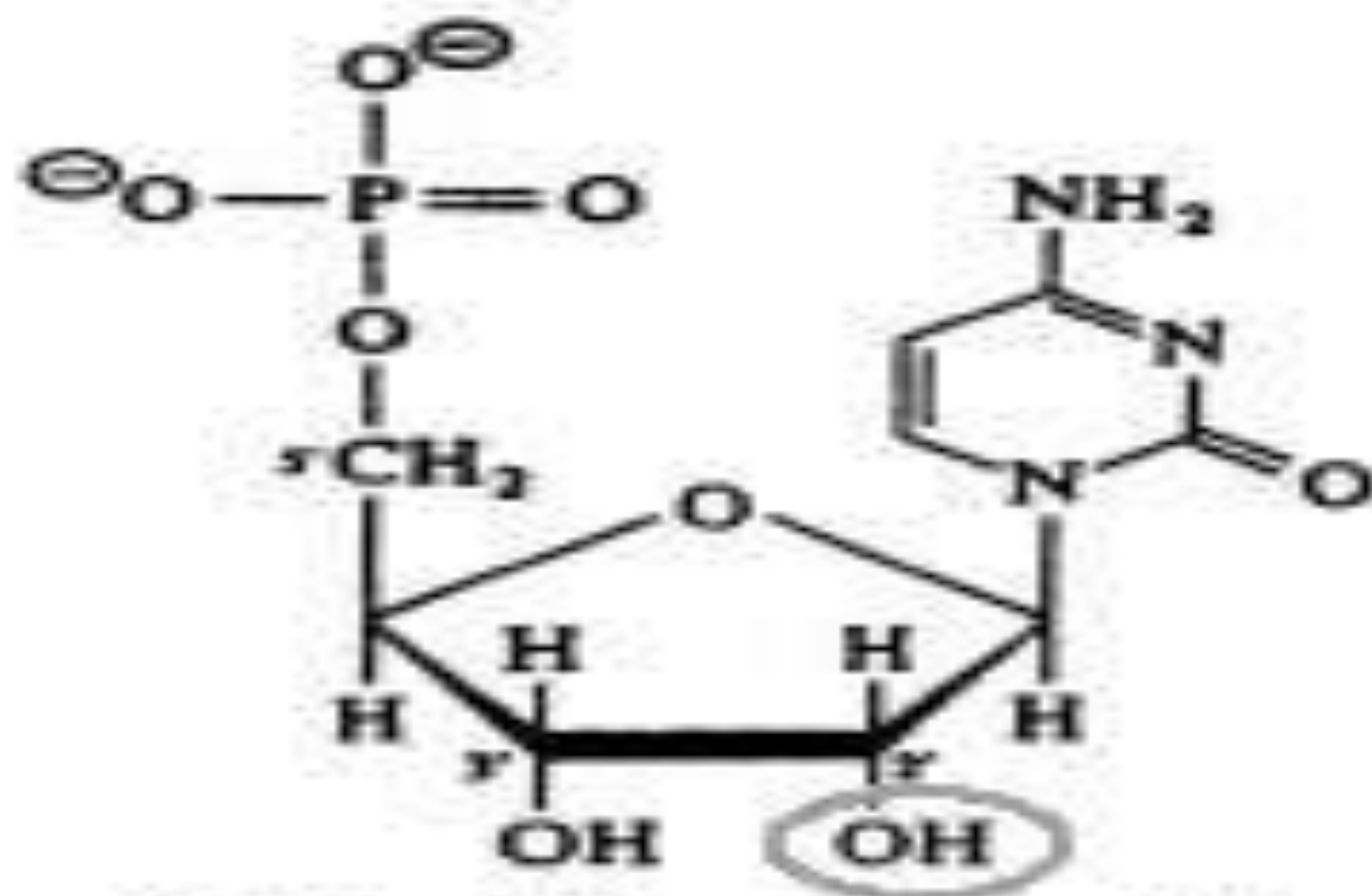
Deoxyguanosine



Uridine



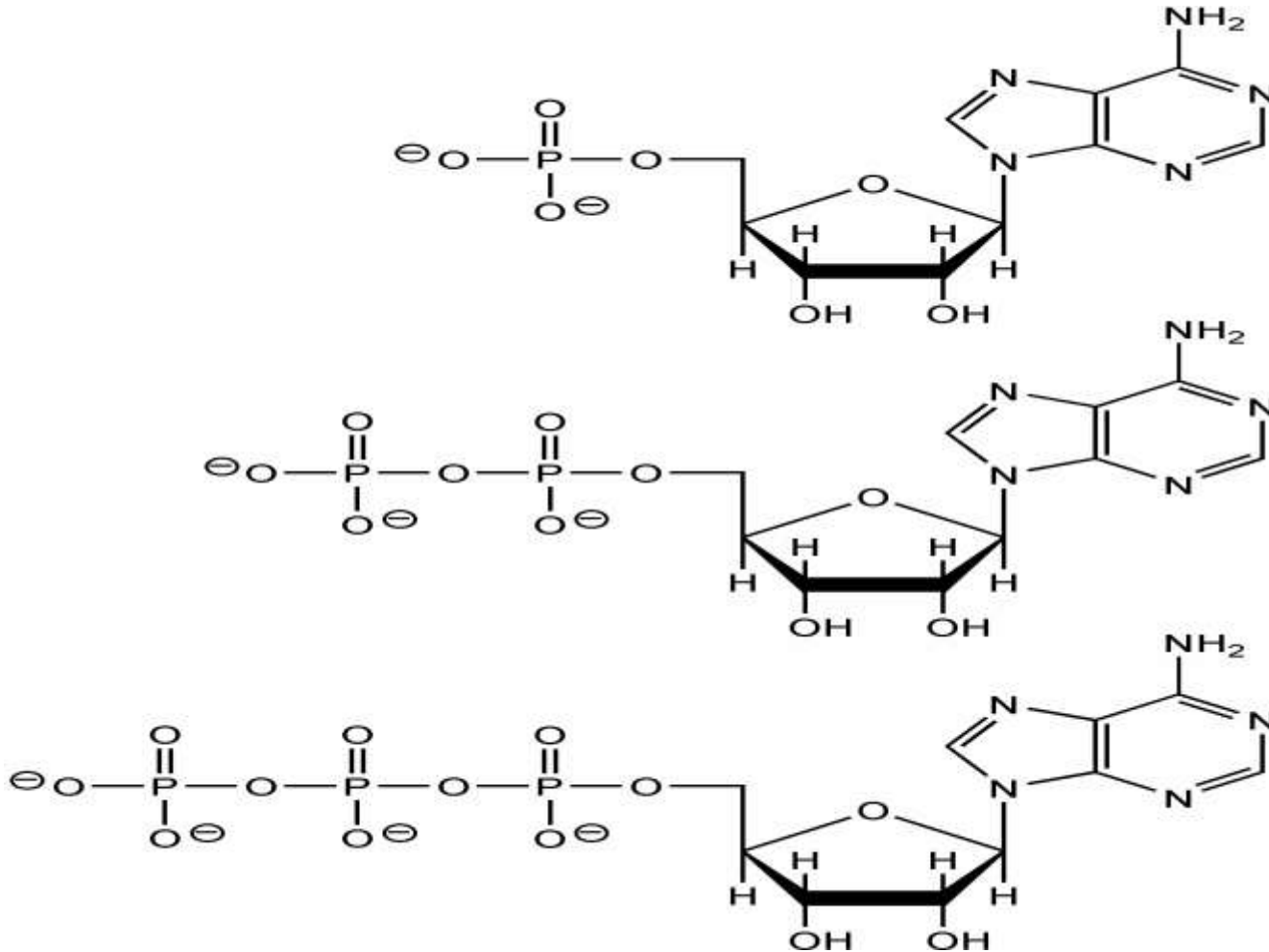
**2'-Deoxythymidine 5'-monophosphate  
(Deoxythymidylate, dTMP)**



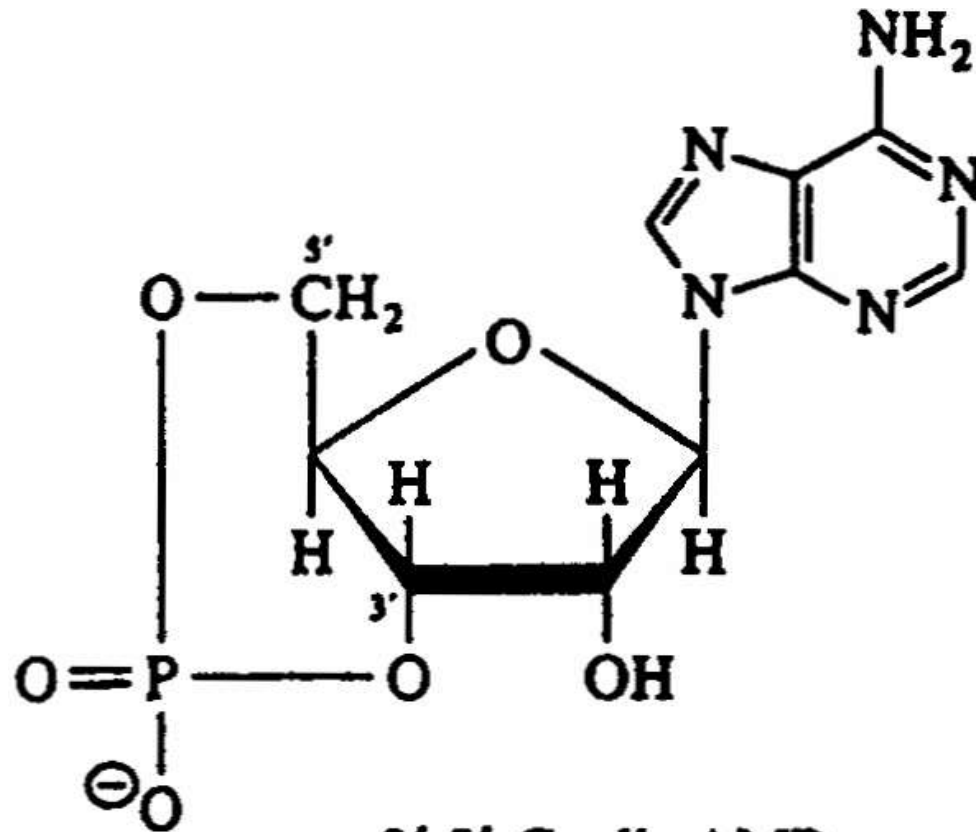
**Cytidine 5'-monophosphate  
(Cytidylate, CMP)**



# AMP, ADP et ATP

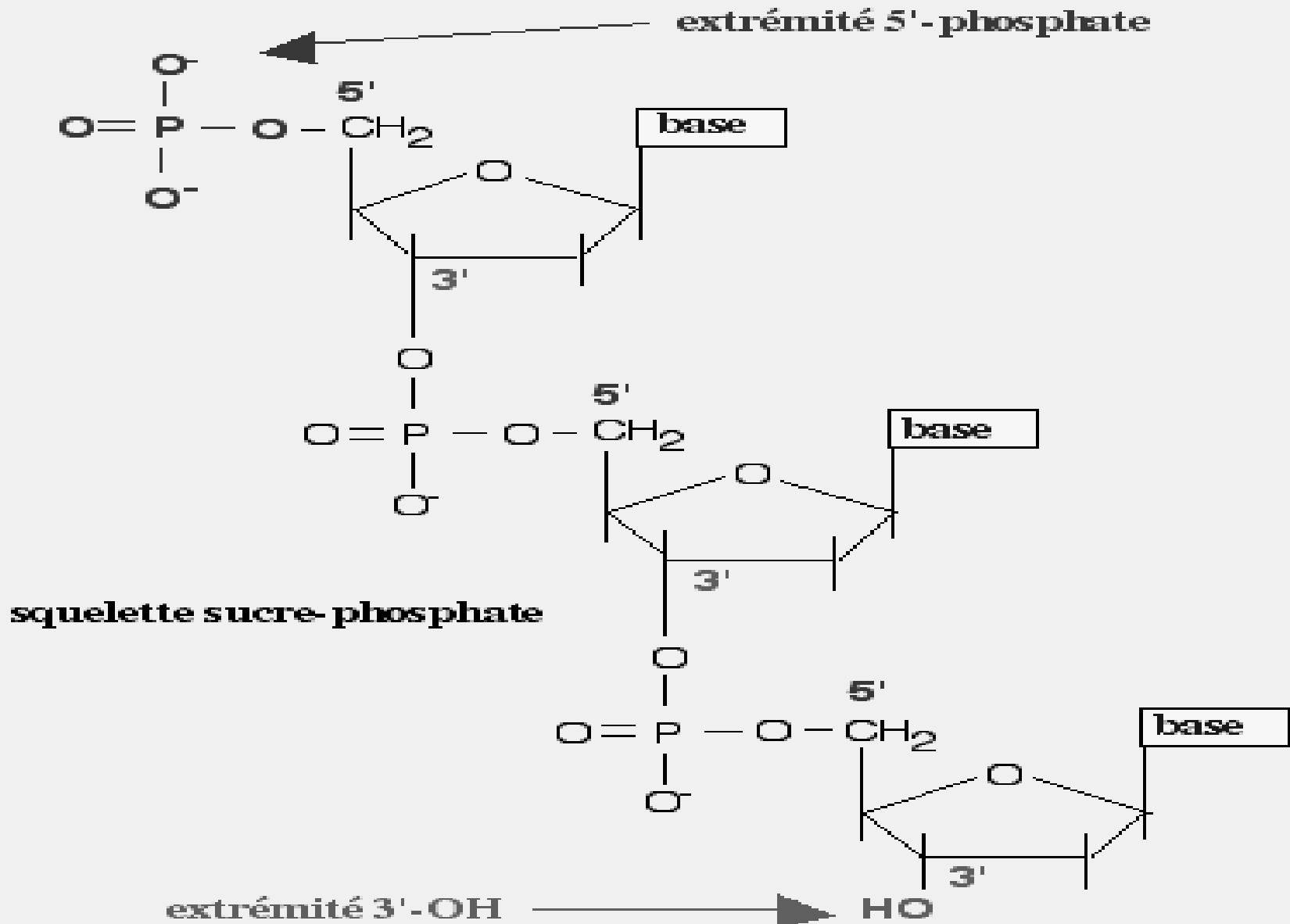


# AMP cyclique

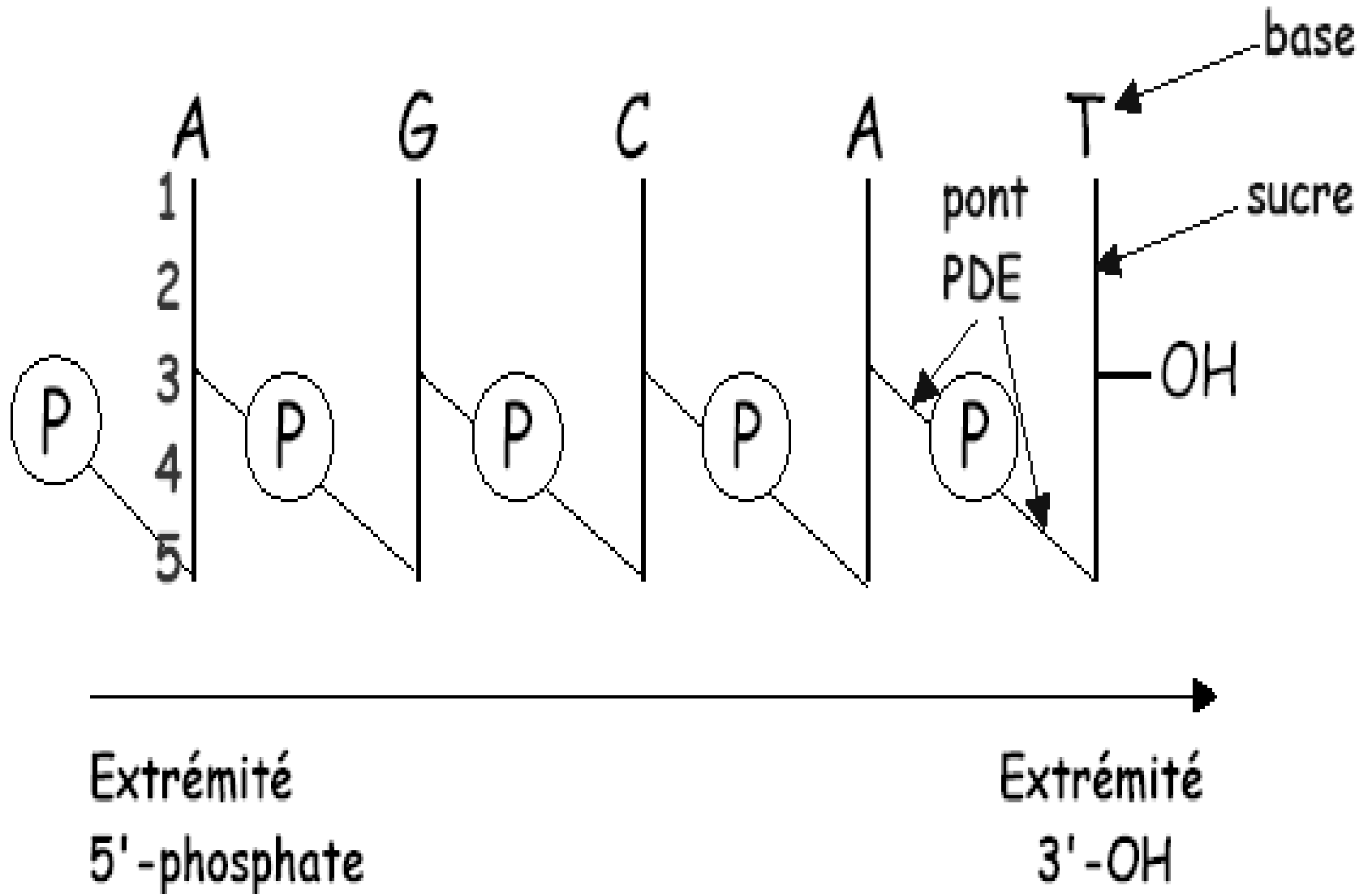


**3',5'-Cyclic AMP  
(cAMP)**

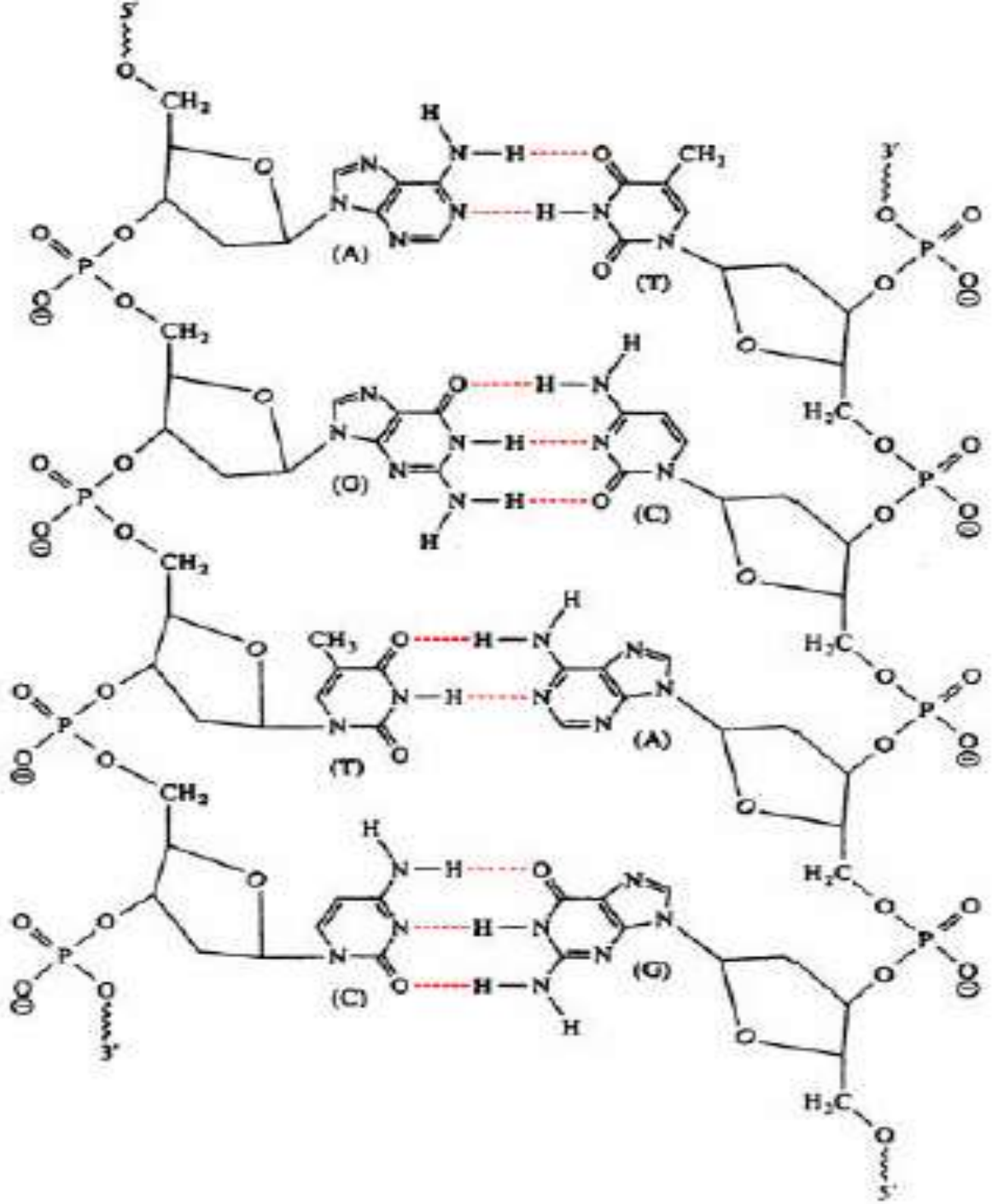
# STRUCTURE PRIMAIRE



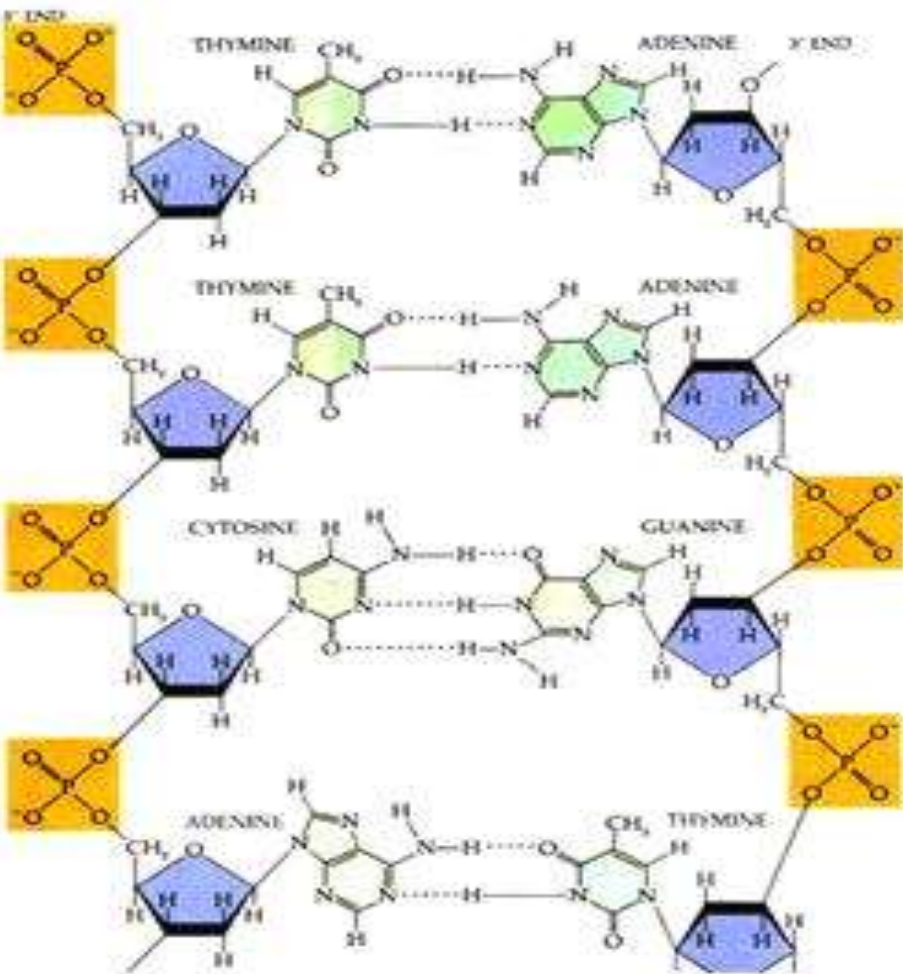
# REPRESENTATION SIMPLIFIEE



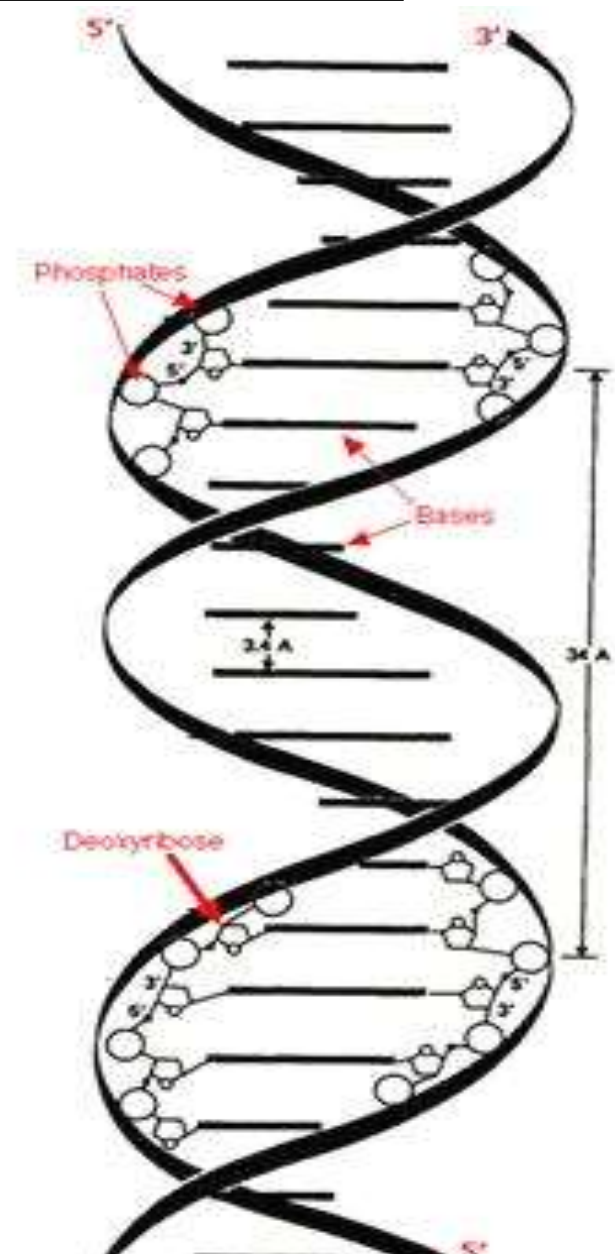
# complémentarité des deux brins ADN



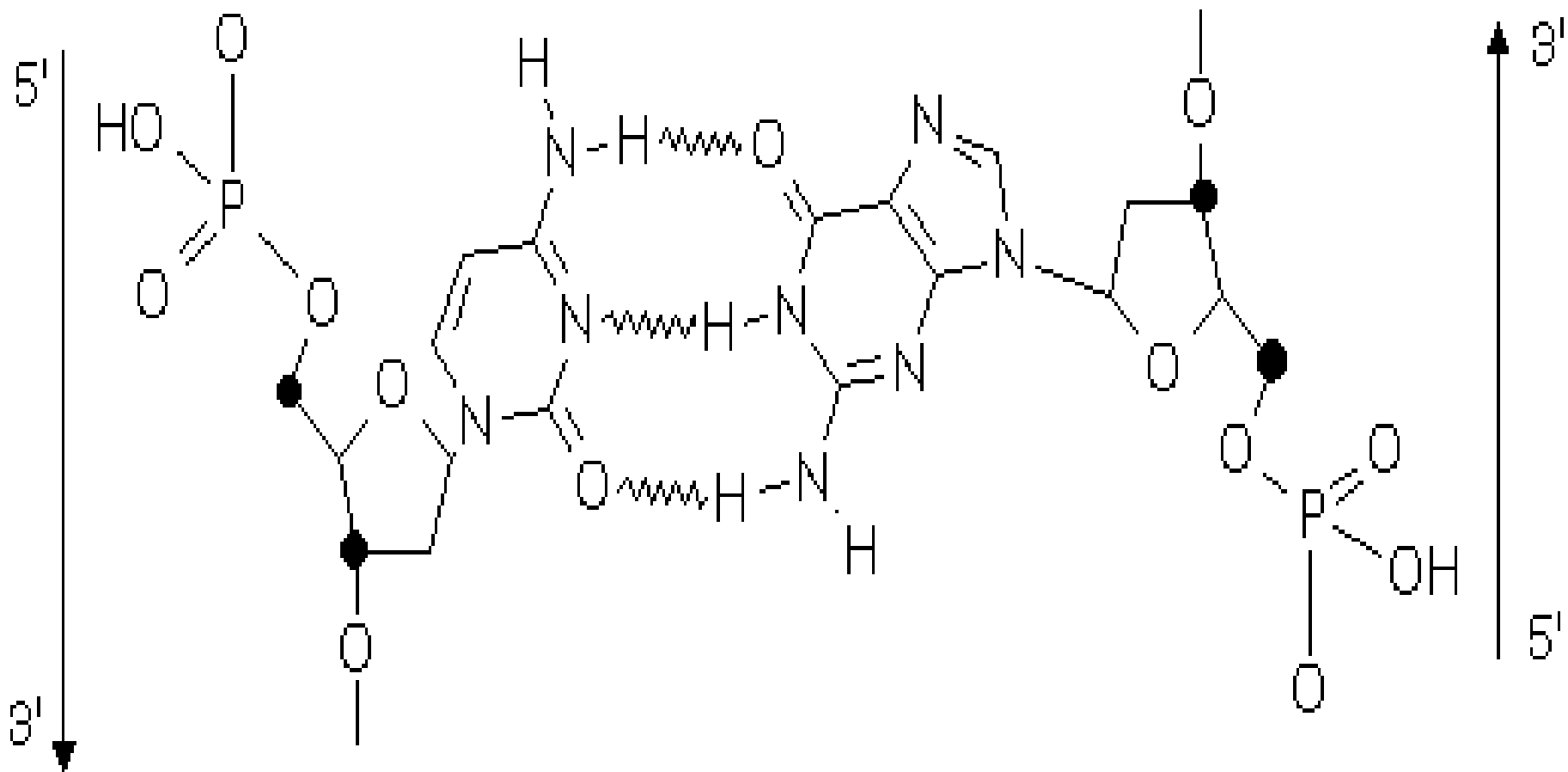
# STRUCTURE DE L'ADN



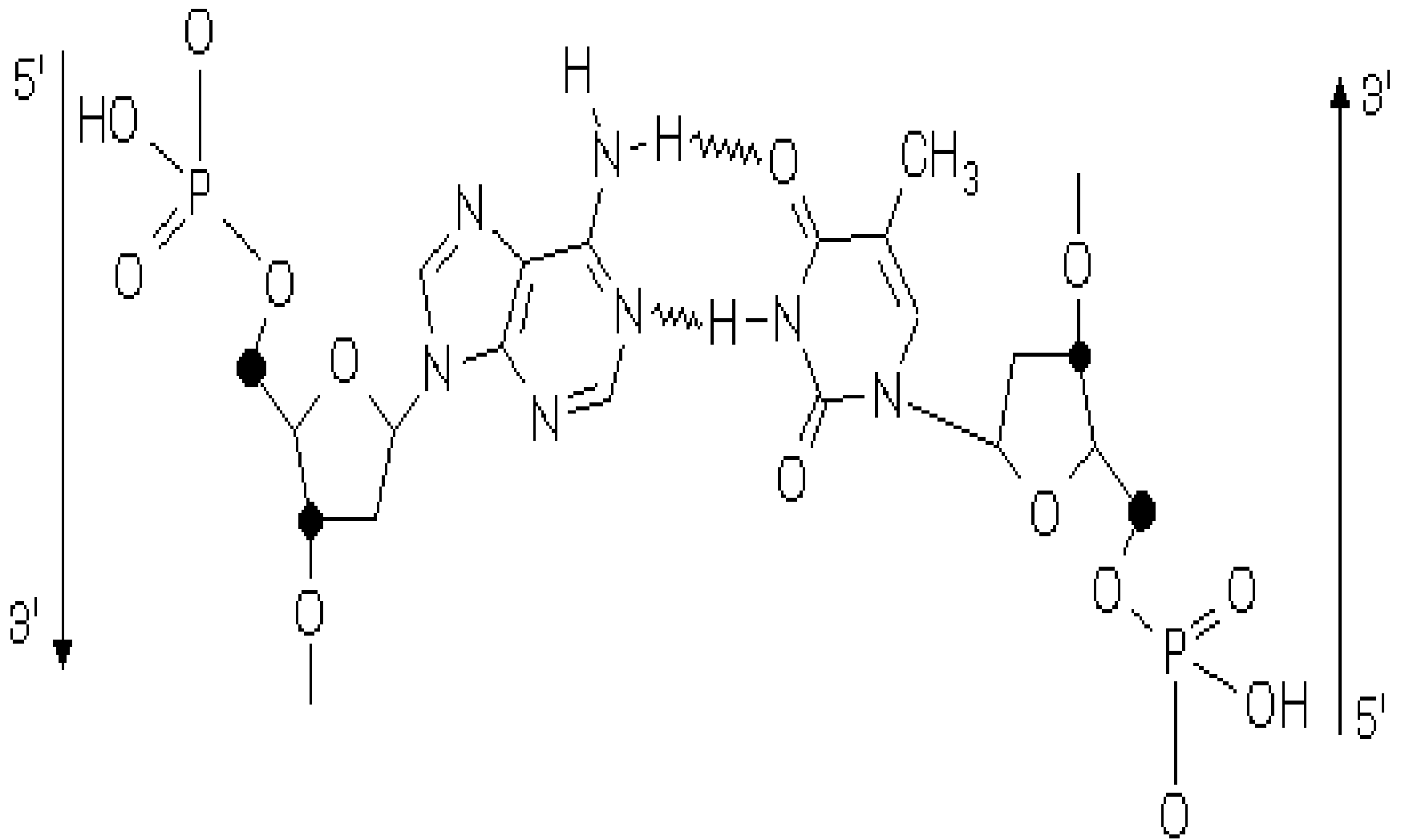
5' TO 3' DIRECTION



# APPARIEMENT C-G

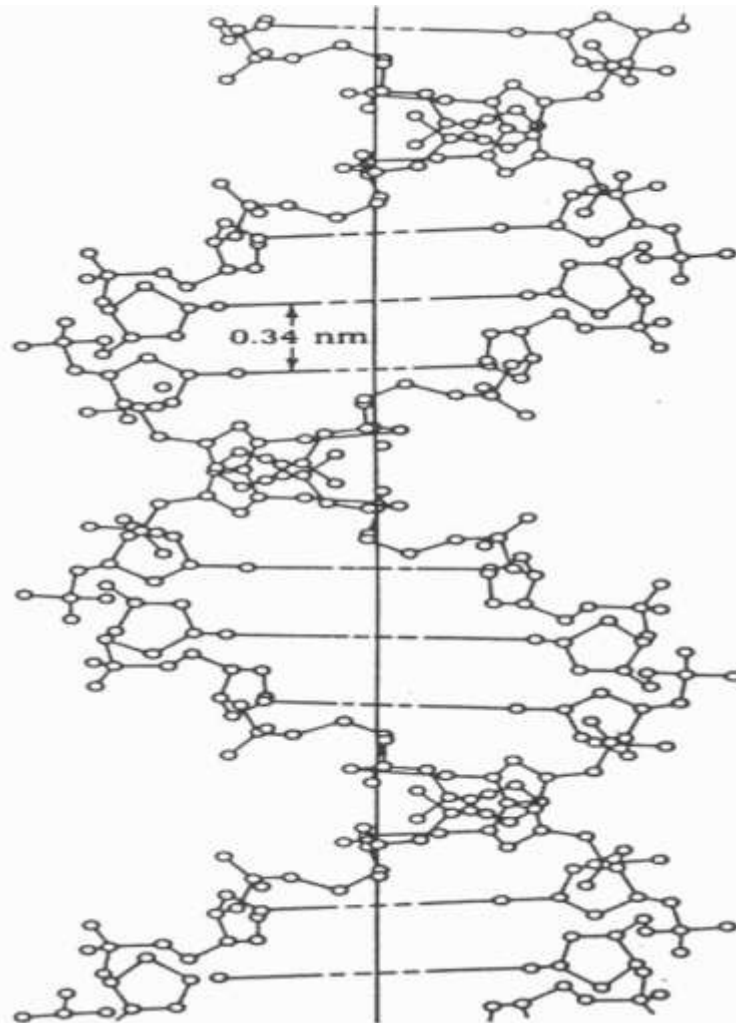
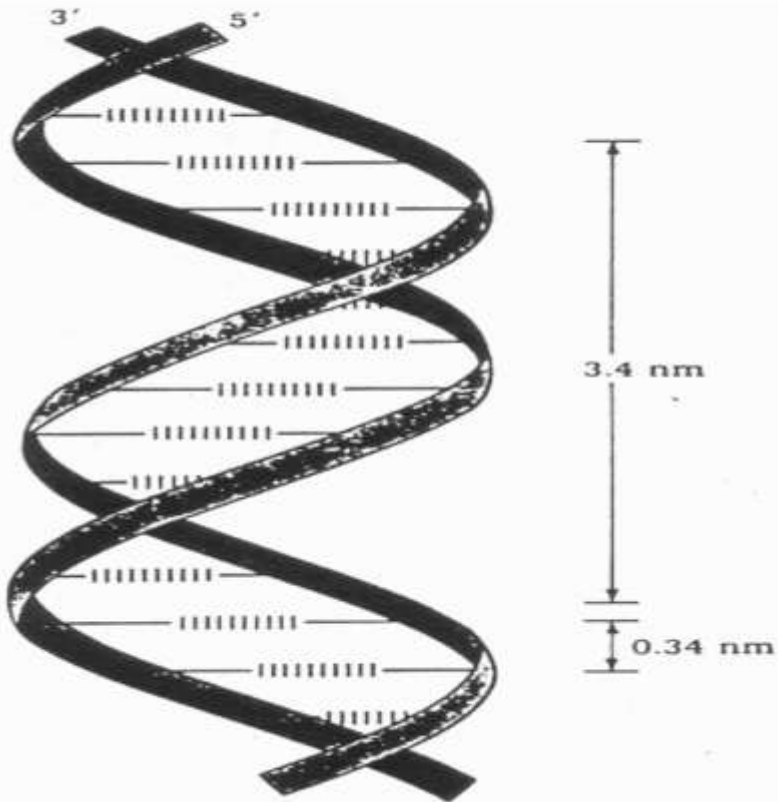


# APPARIEMENT A - T

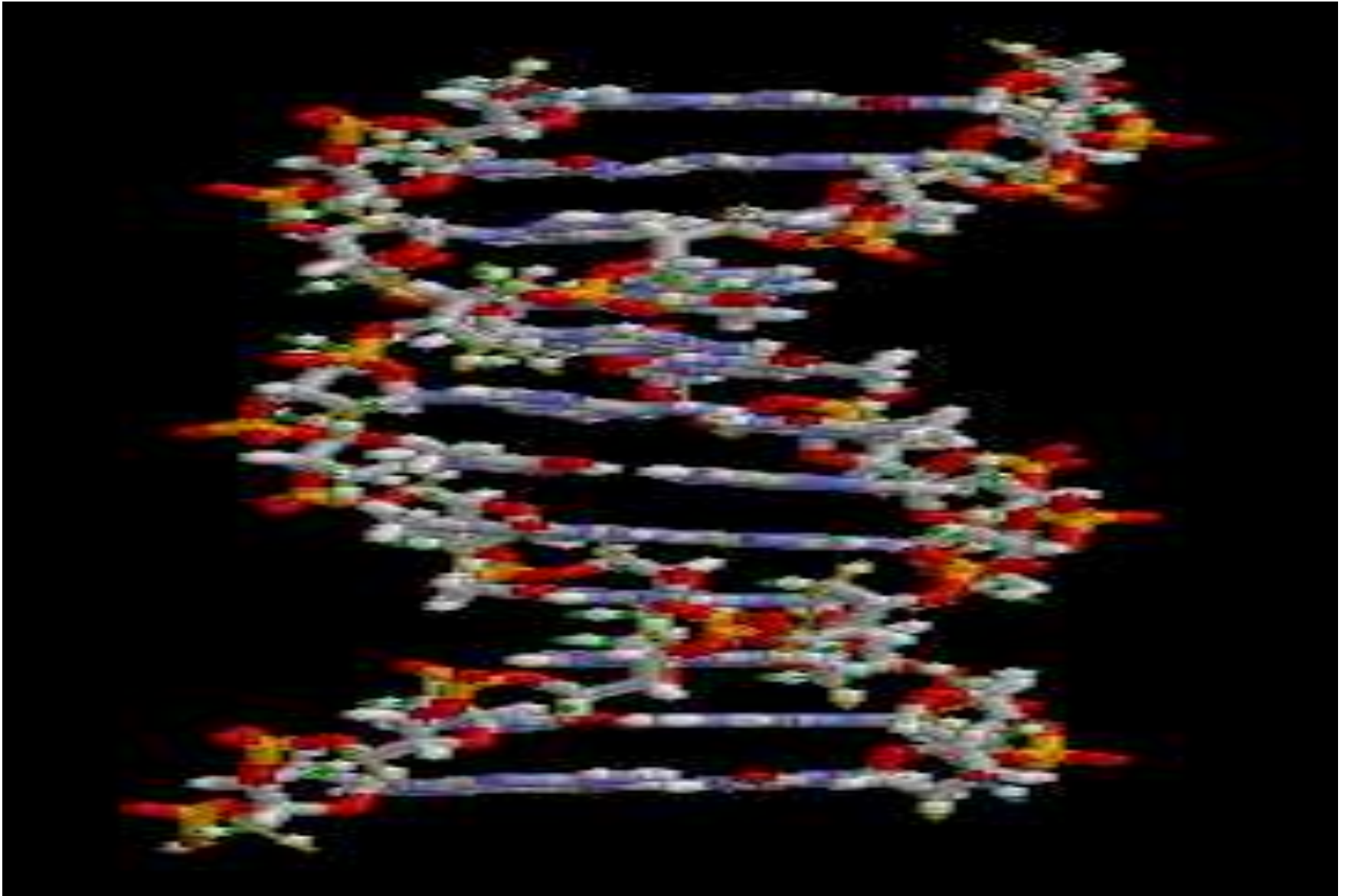




# STRUCTURE DE L'ADN



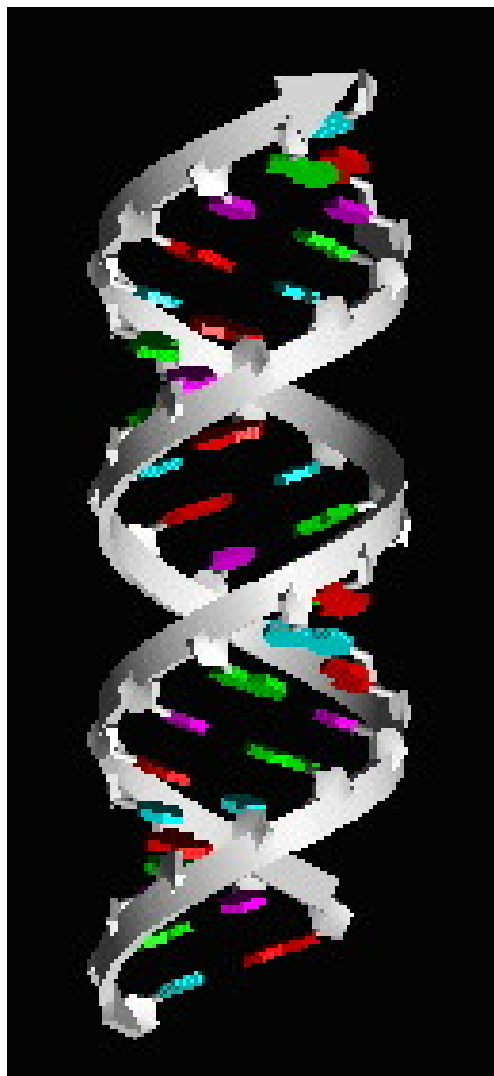
# ADN DROITE



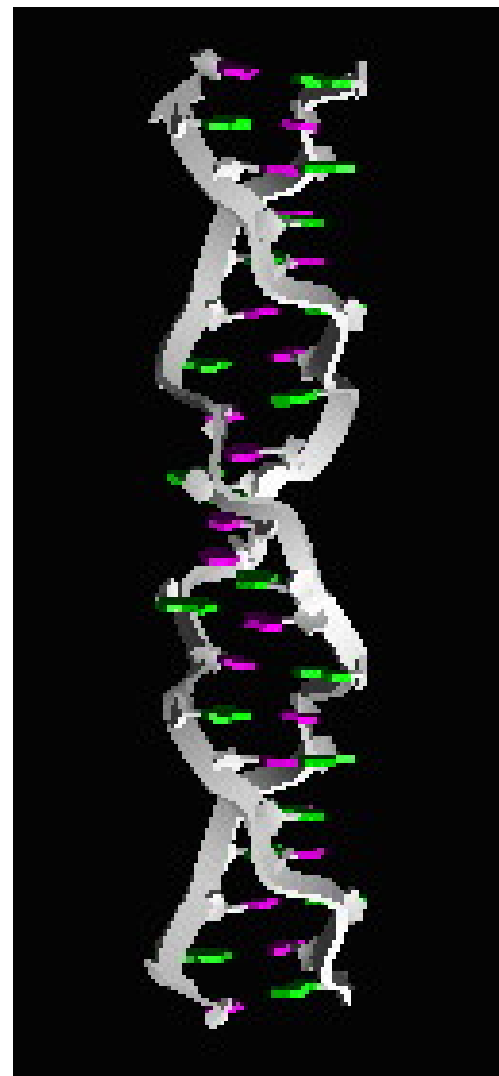
***ADN- B***



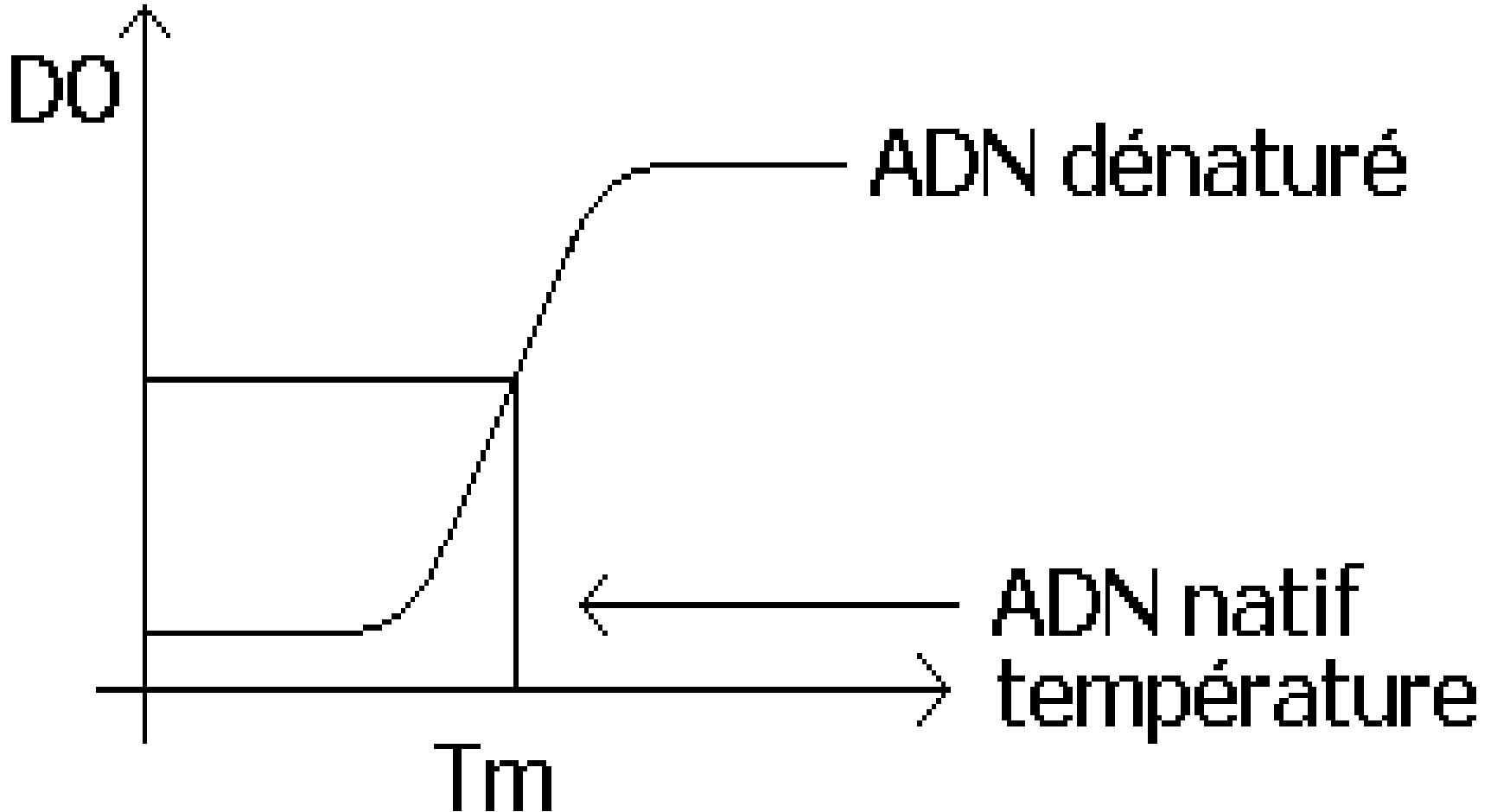
***ADN - A***

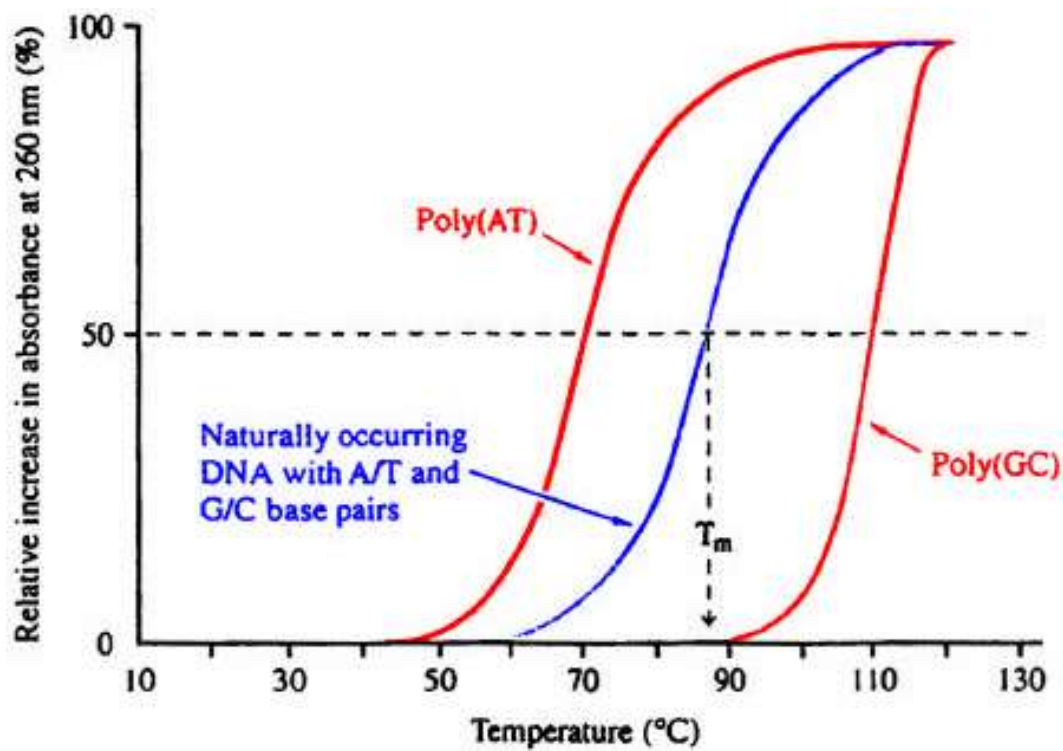


***ADN - Z***

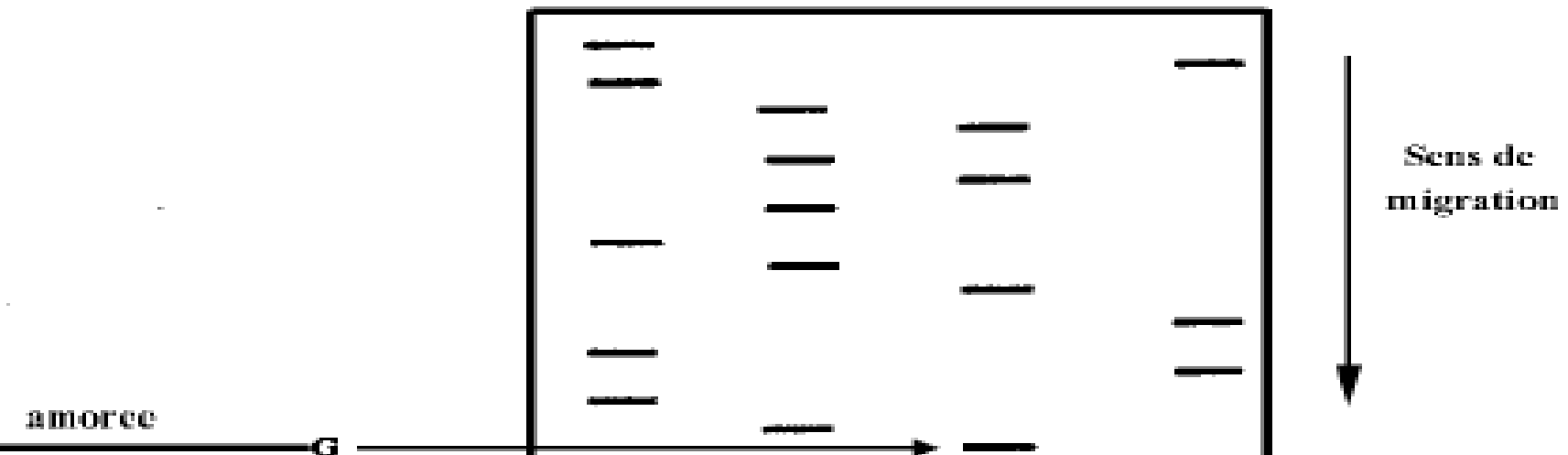
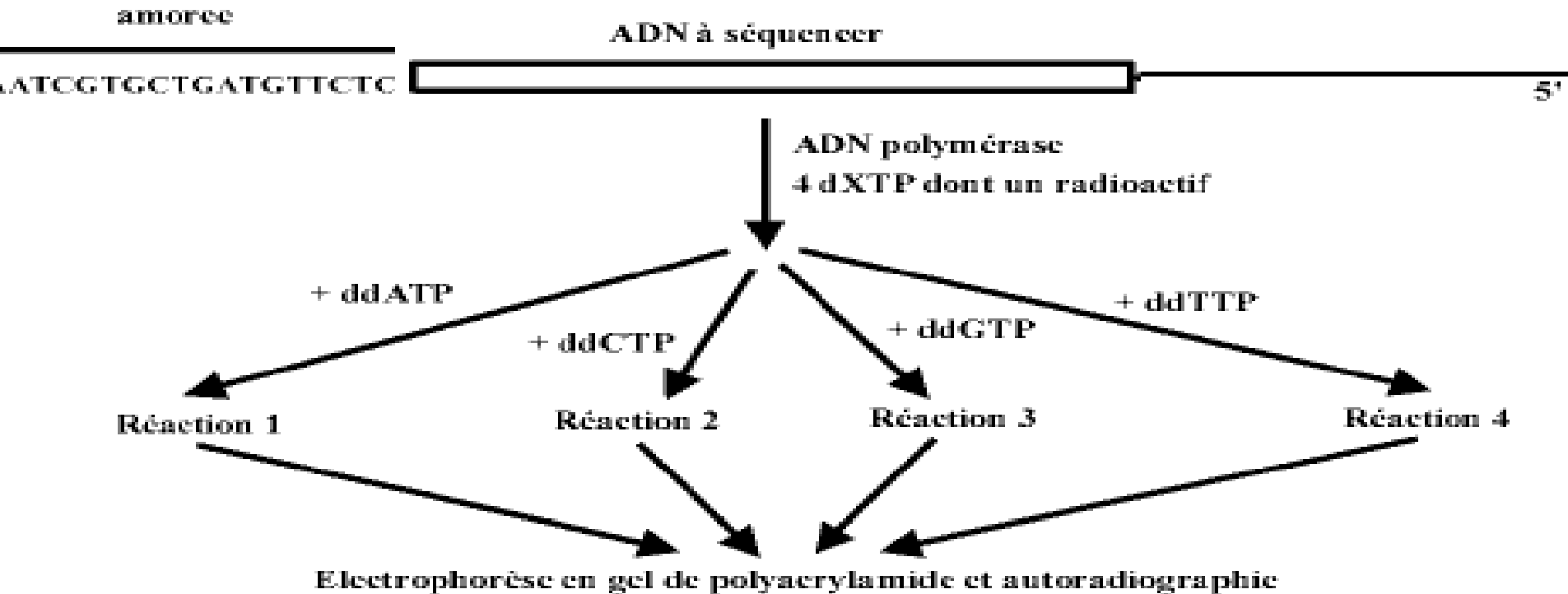


# Action de la température

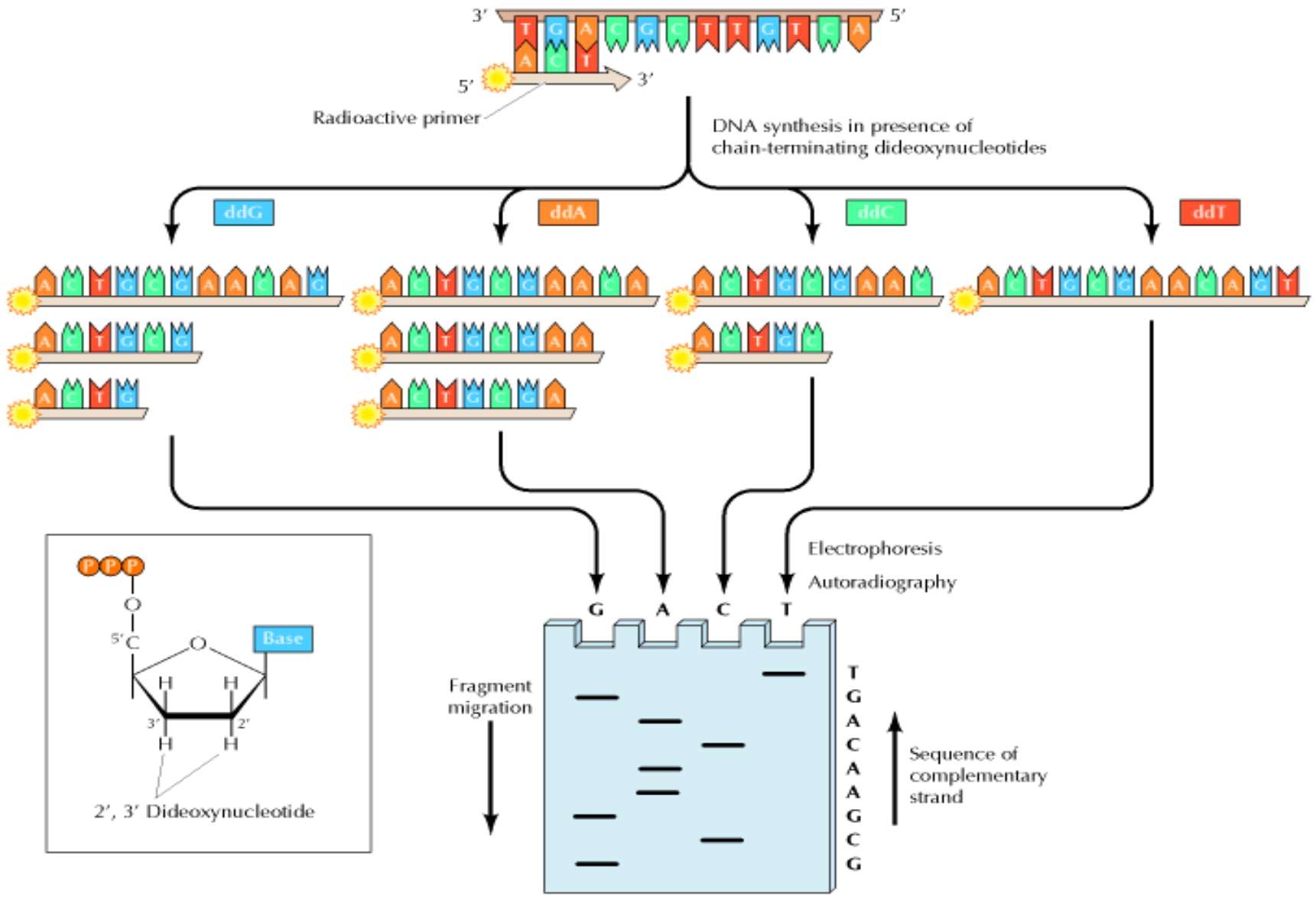




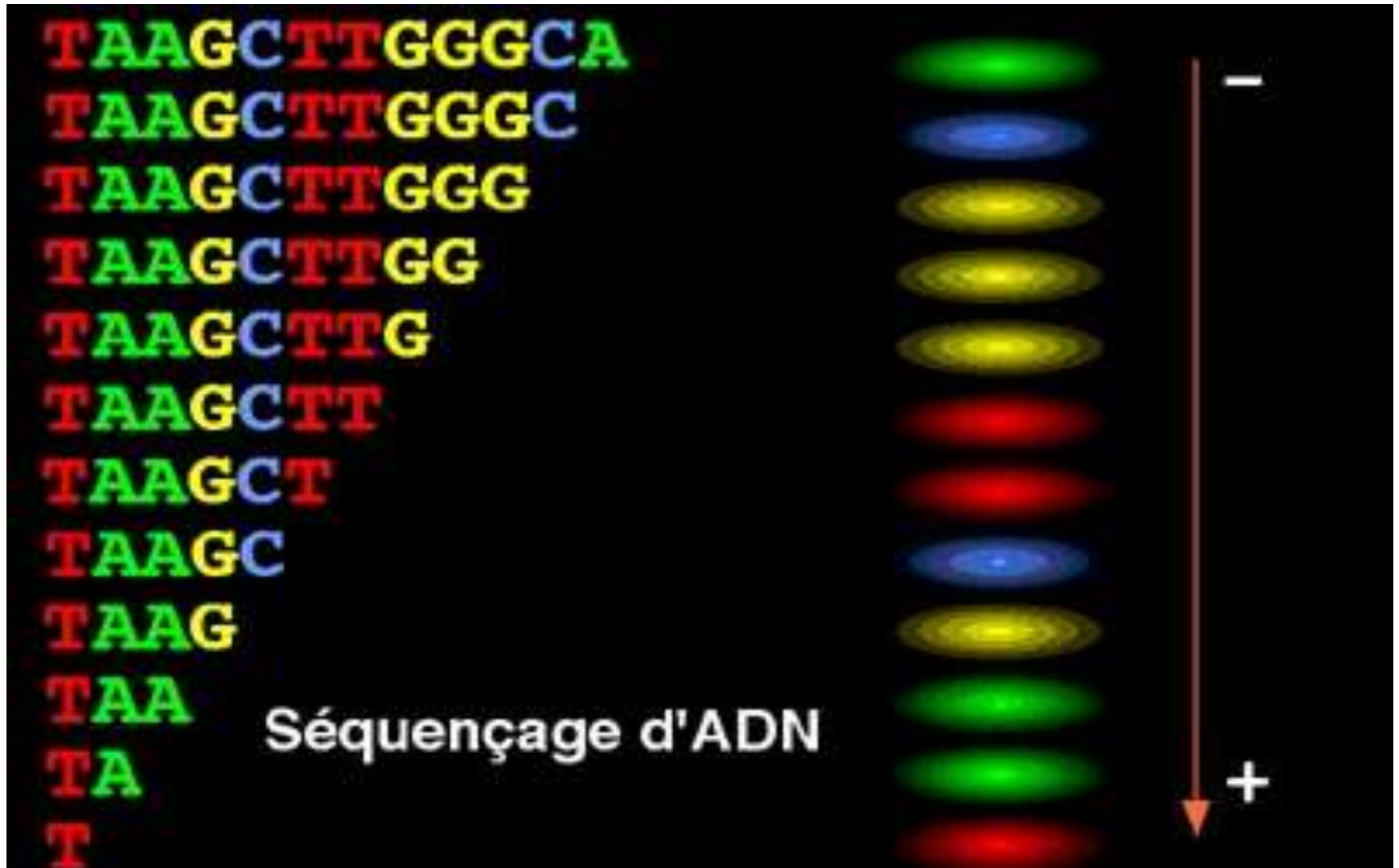
# Méthode de Sanger



# Méthode de Sanger



# ELECTROPHORESE

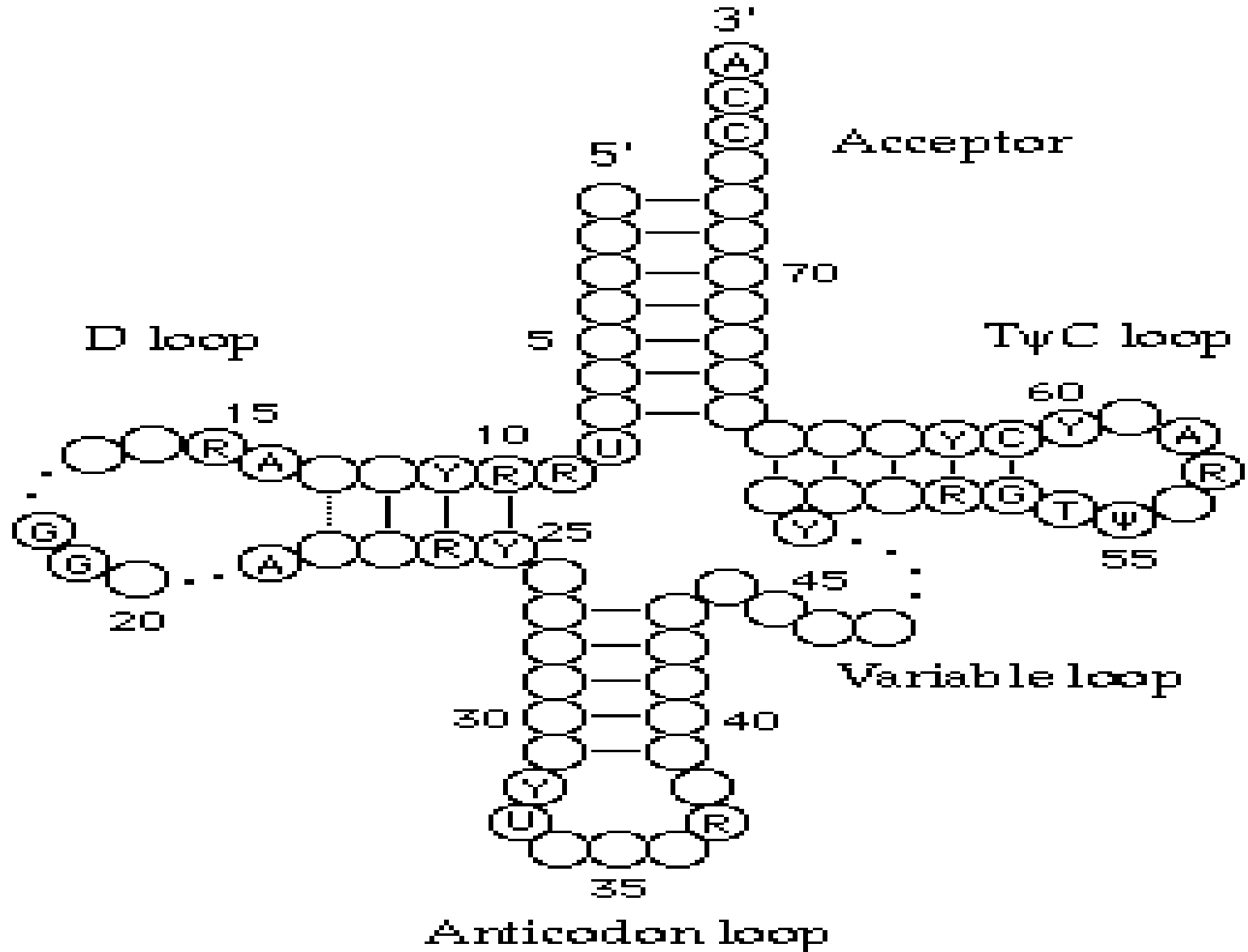




# Les différents types d'ARN

- ARNs ribosomiques (rRNA) 82% des ARNs totaux
- ARNs de transfert (tRNA) 16%
- ARNs messagers (mRNA) 2%
- Petits ARNs nucléaires (moins de 1%)

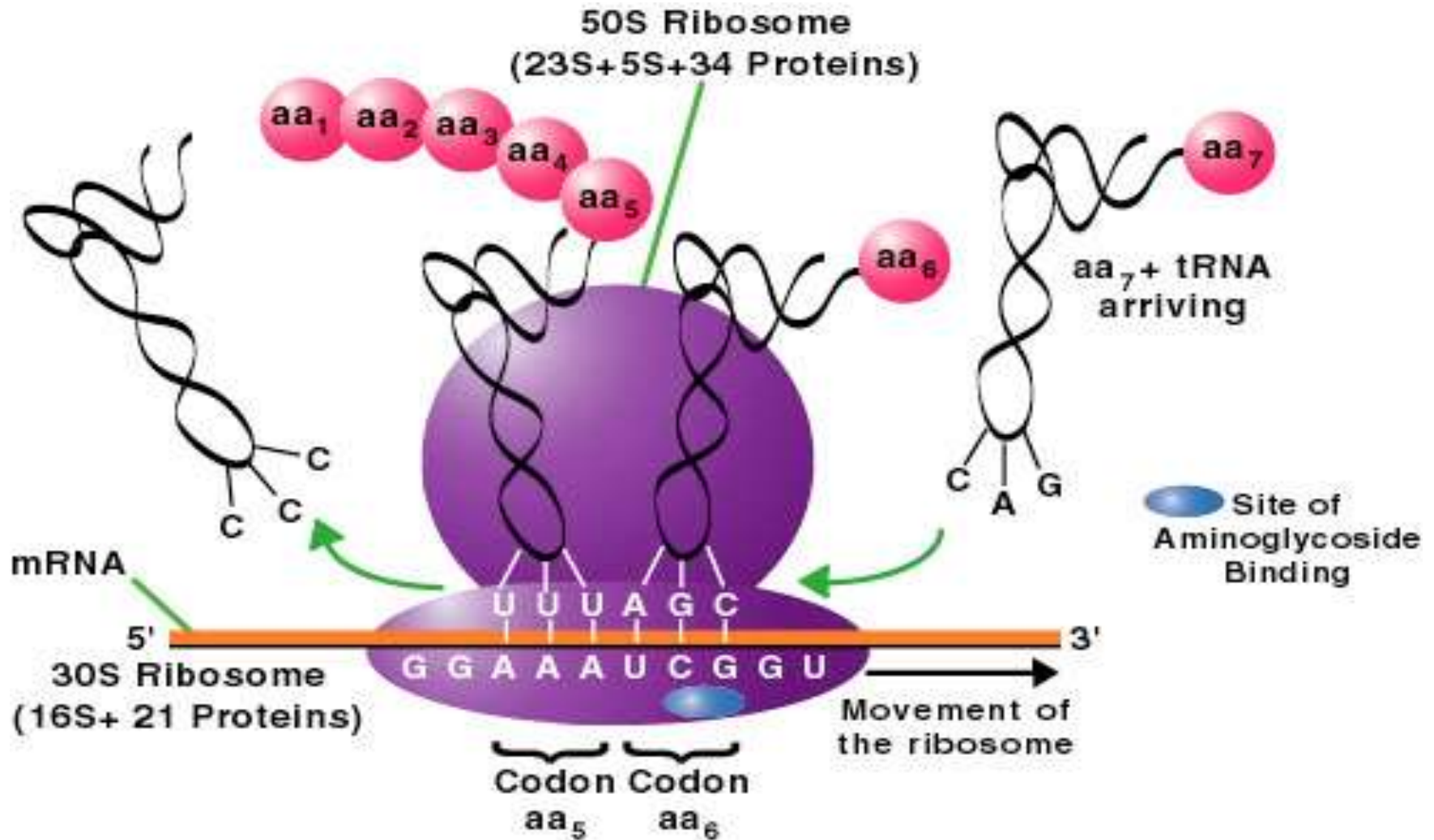
# Structure d'un ARN t



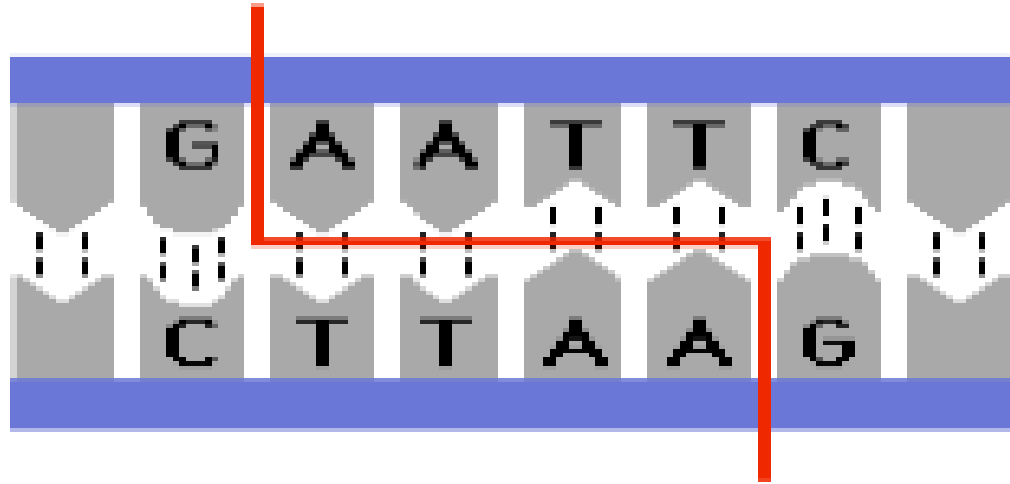
# Conformation de l'ARNt



# Rôle de l'ARNt

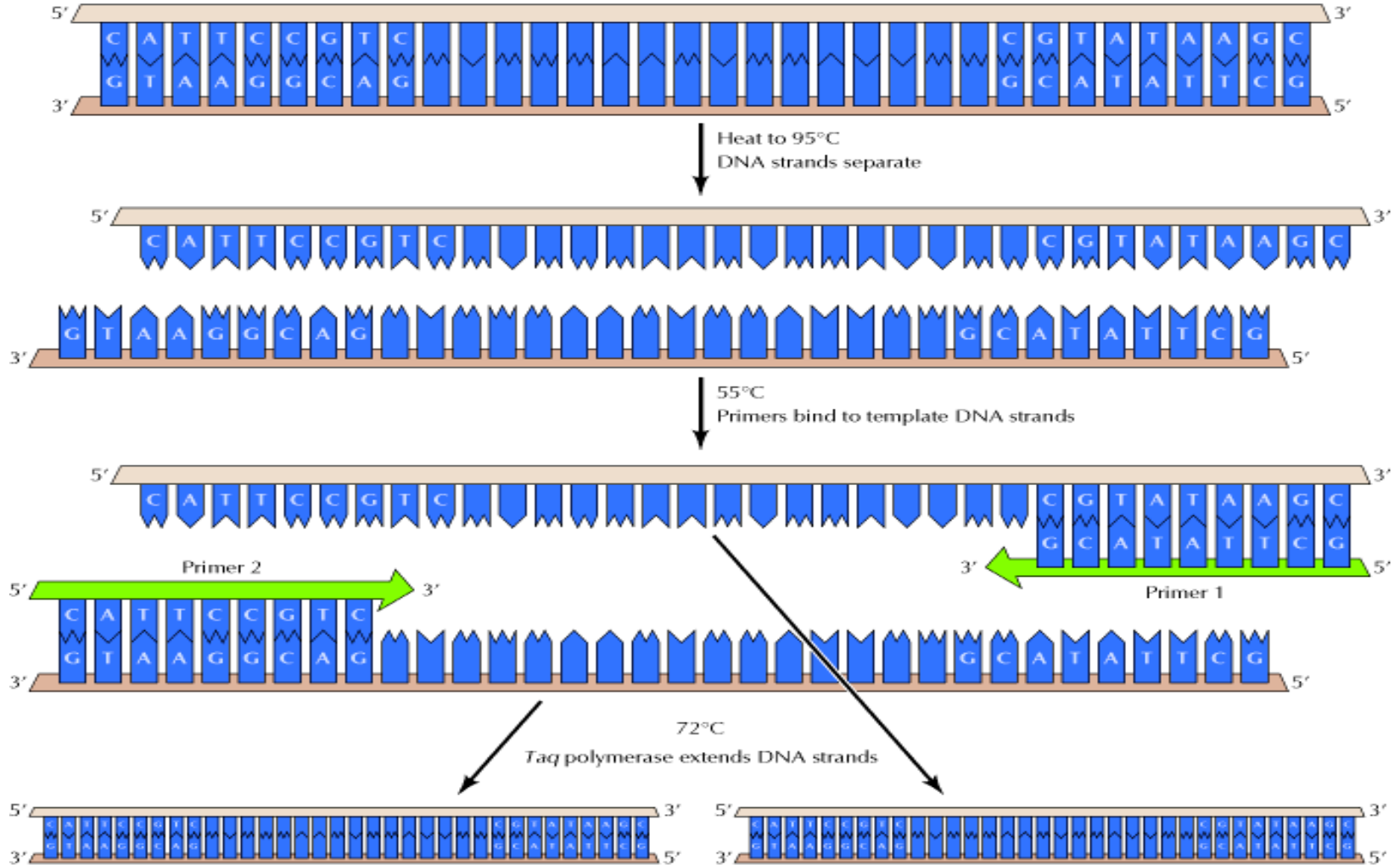


# Eco R15 (enzyme de restriction)



# LA PCR

Starting DNA



# Drépanocytose (anémie falciforme)

β-globine normale (A)

β-globine drépanocytaire(S)

			mutation					
ADN	GGA	CTC	CTC	→	GGA	CAC	CTC	ADN
	CCT	GAG	GAG		CCT	GTG	GAG	

ARN	CCU	GAG	GAG		CCU	GUG	GAG	ARN
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protéine normale	Pro <sub>5</sub>	Glu <sub>6</sub>	Glu <sub>7</sub>		Pro <sub>5</sub>	Val <sub>6</sub>	Glu <sub>7</sub>	protéine mutée
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**CTGACTCCTGAGGAGAAGTCT**  
sonde de la β-globine normale

**CTGACTCCTGTGGAGAAGTCT**  
sonde de l'anémie falciforme

