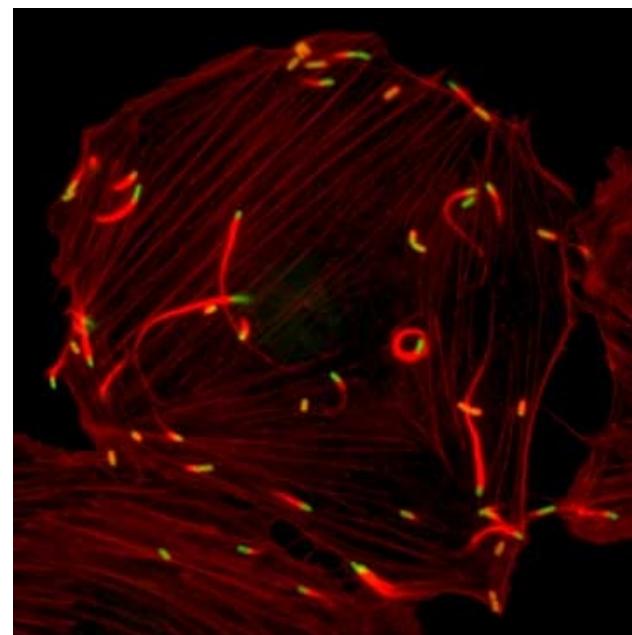


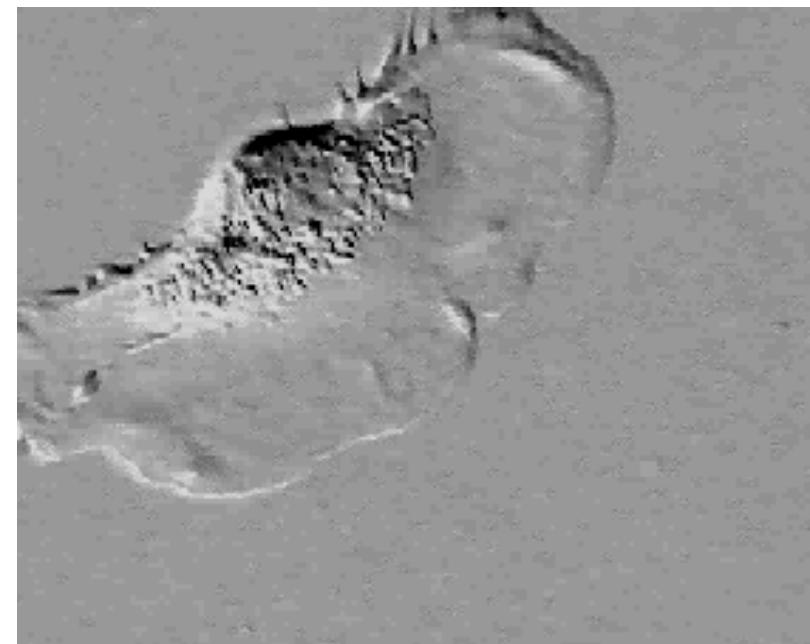
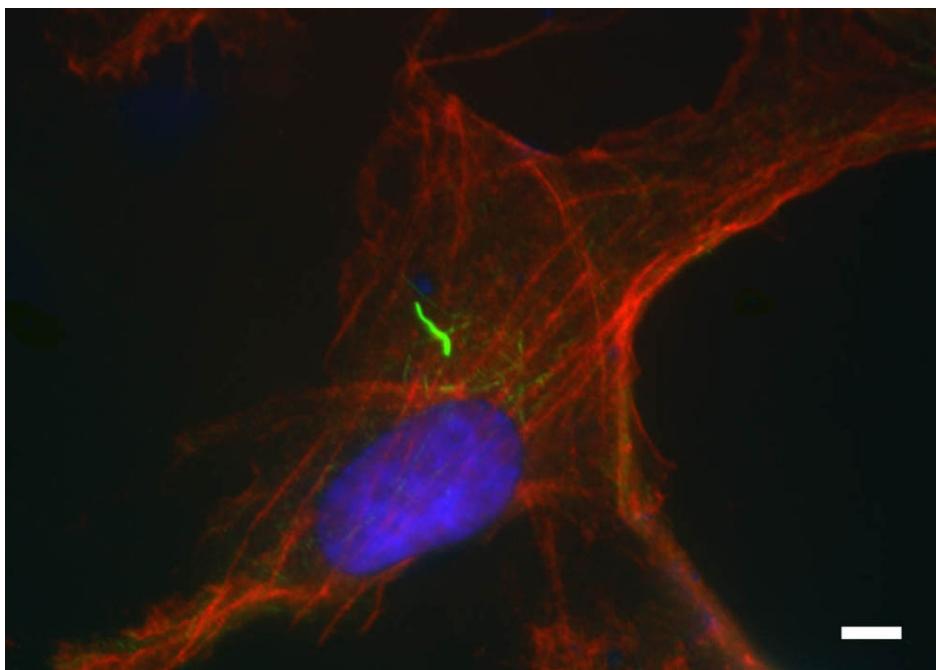
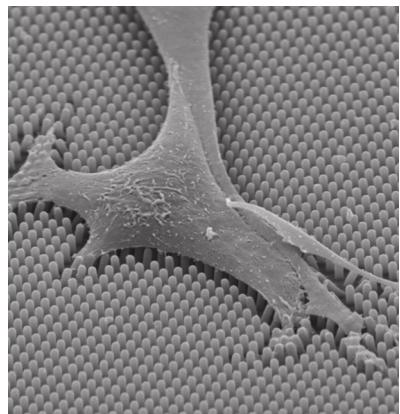
# *Bactéries*



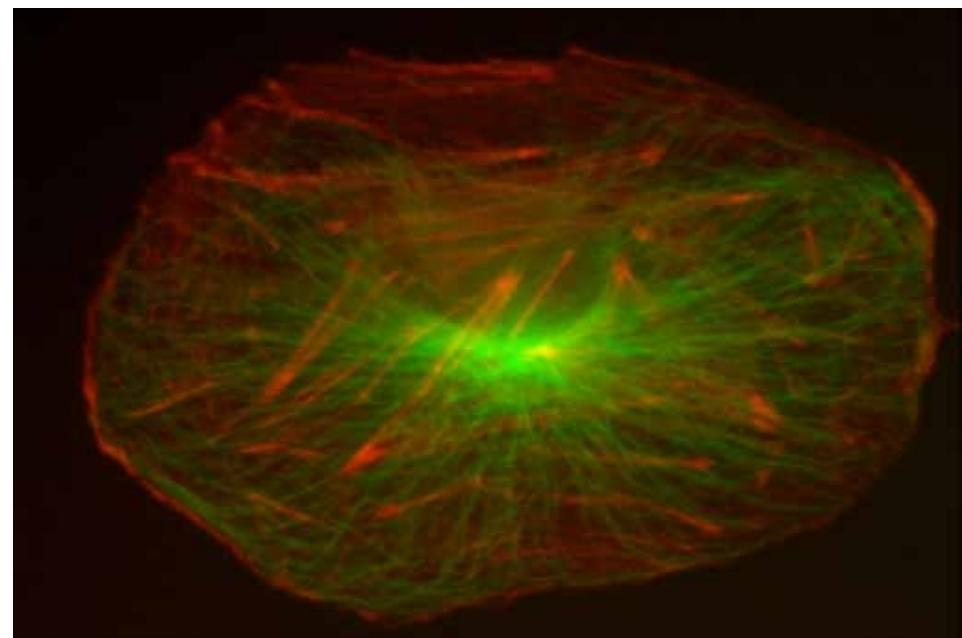
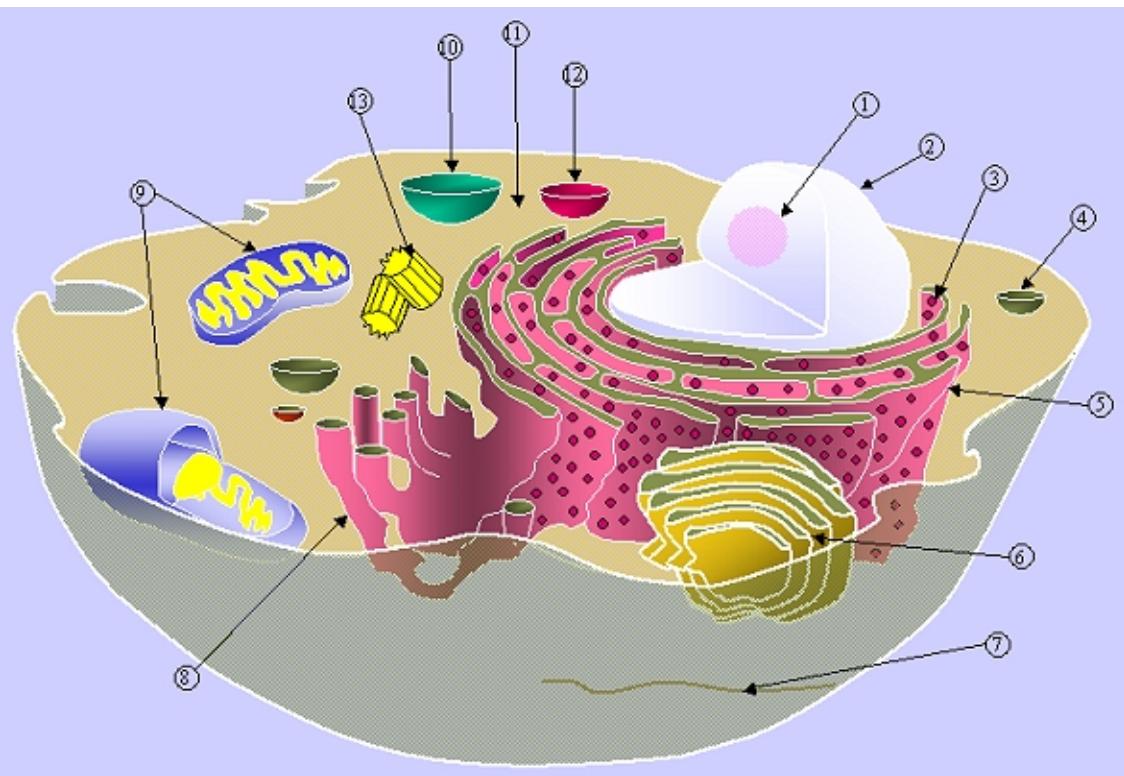
*E.coli*

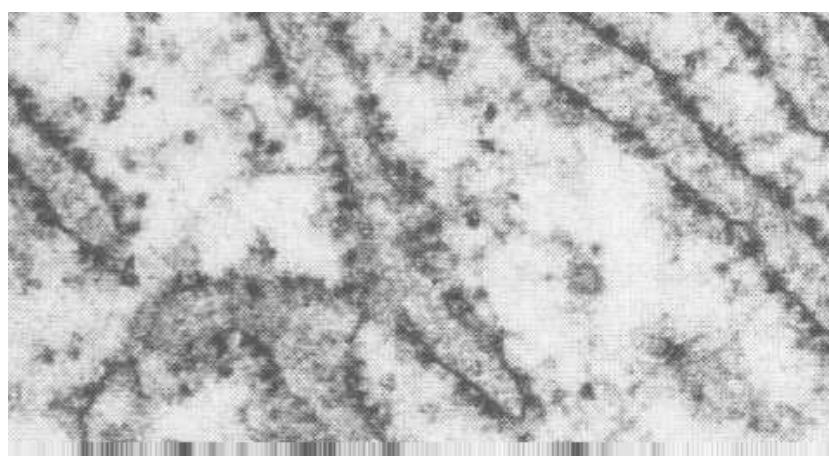
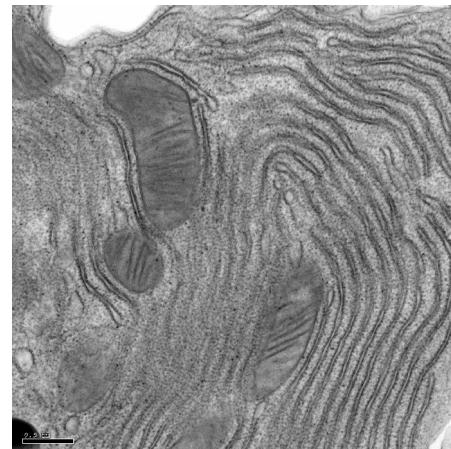
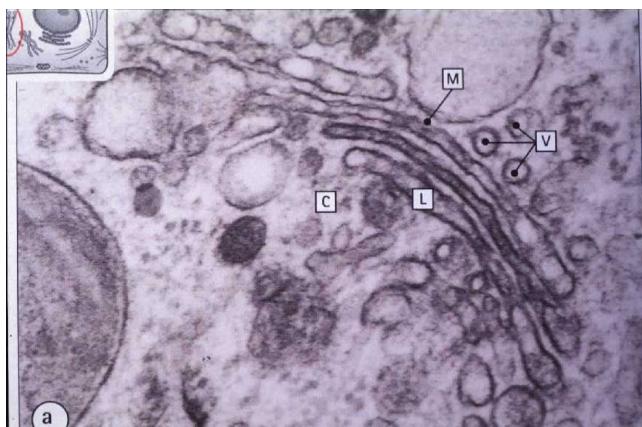


# *cellules*

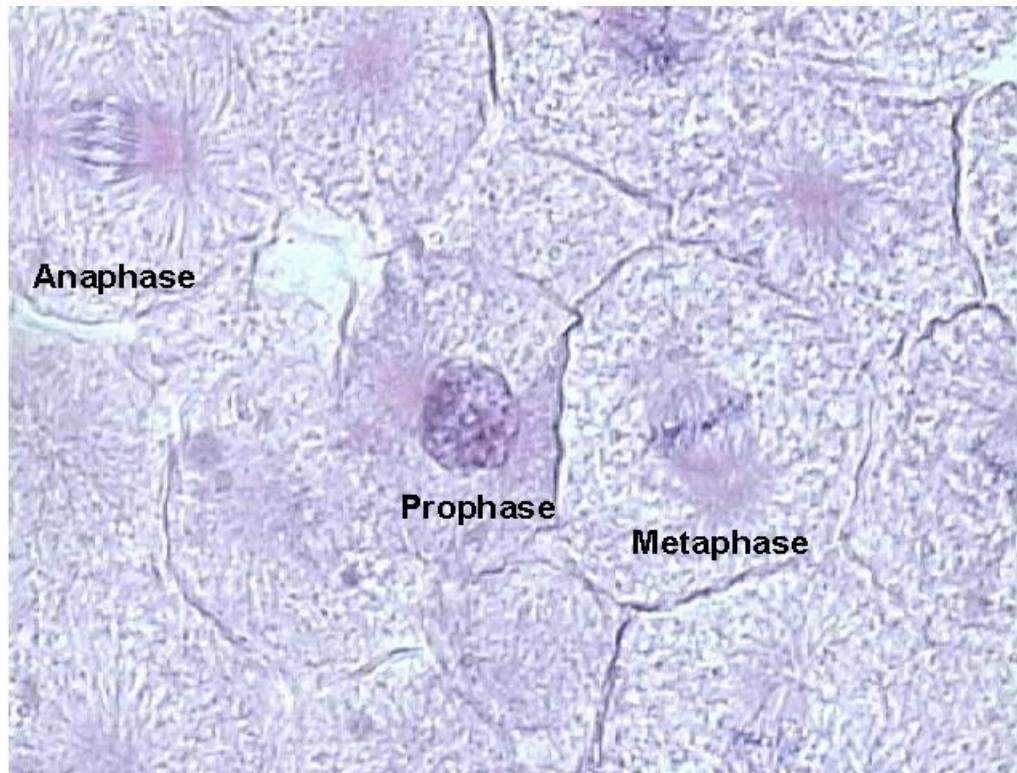


# *Structure interne de la cellule*

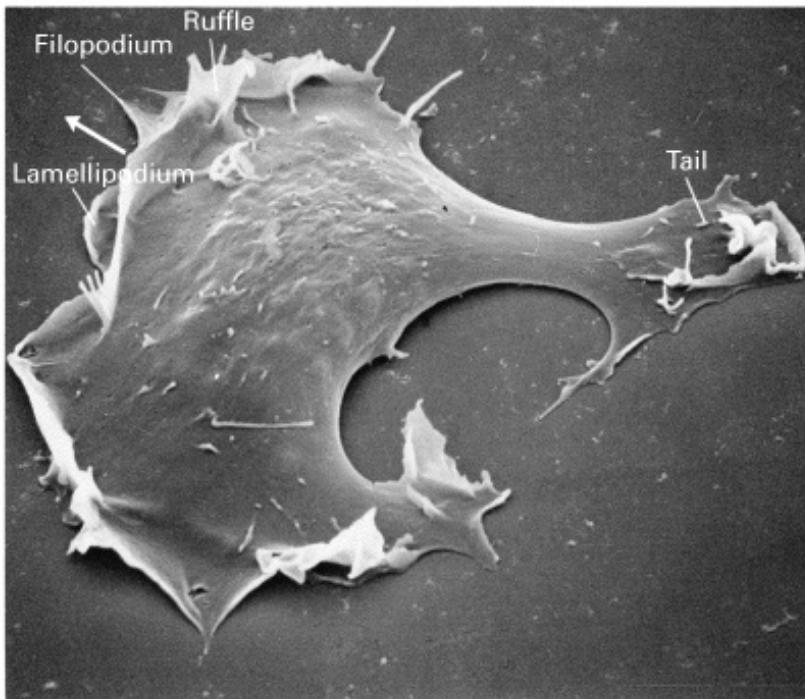




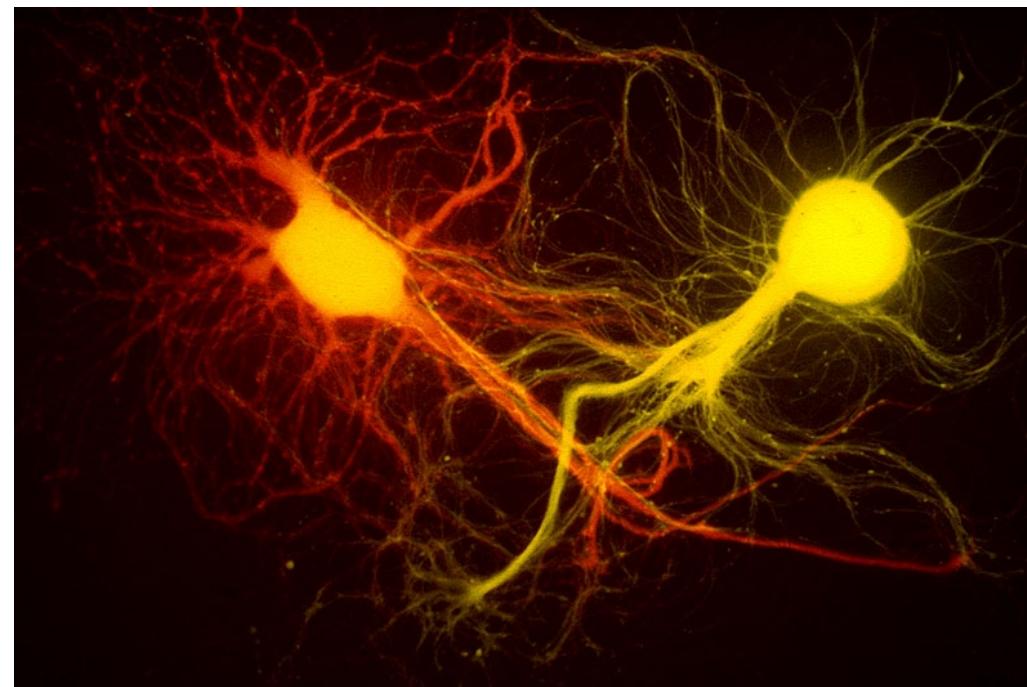
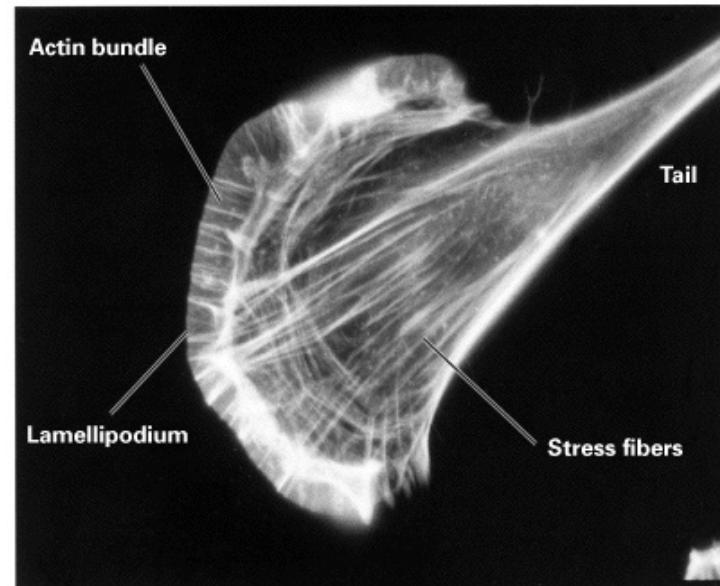
# *Mitose*

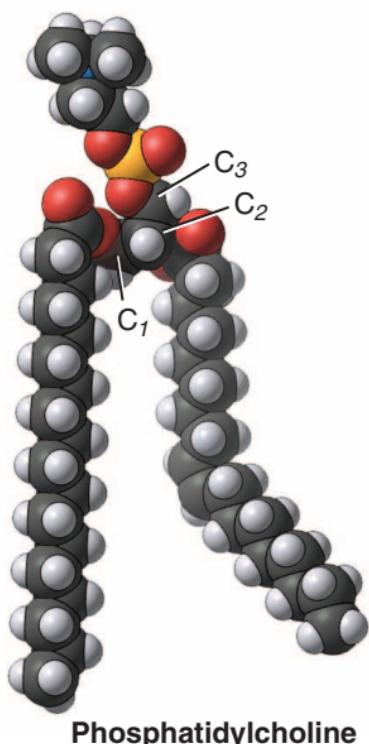
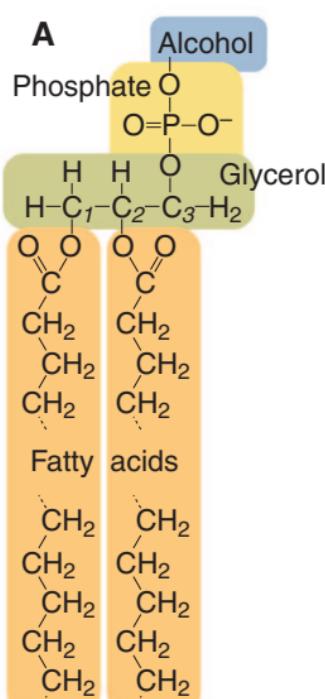


(a)

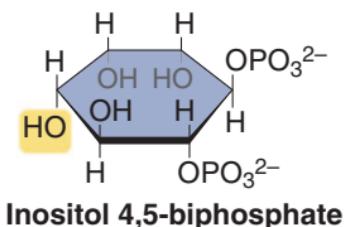
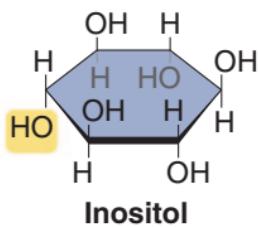
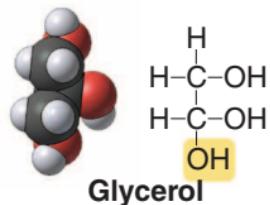
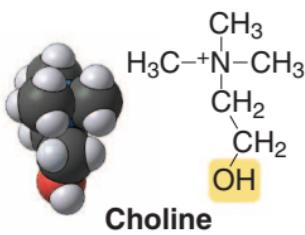
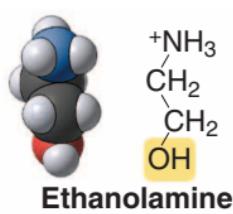


(b)

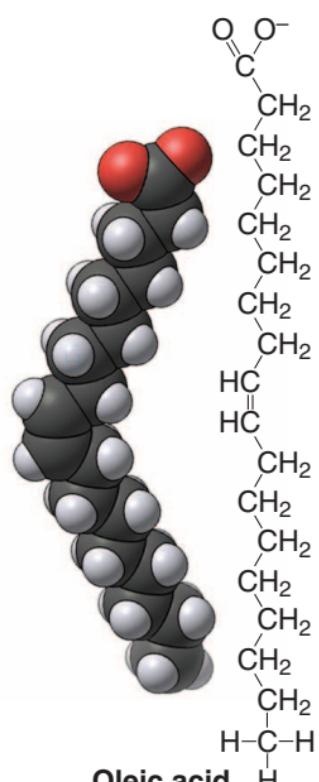
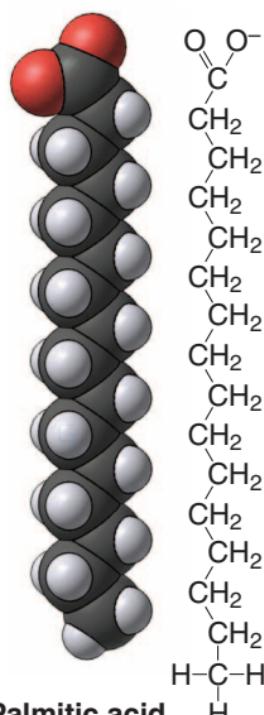


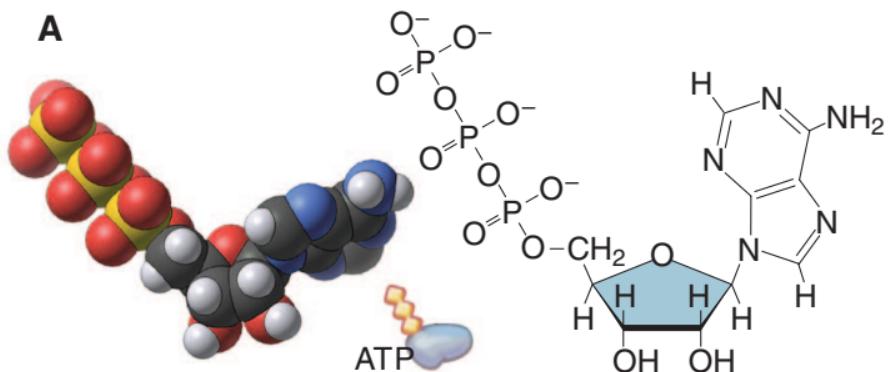
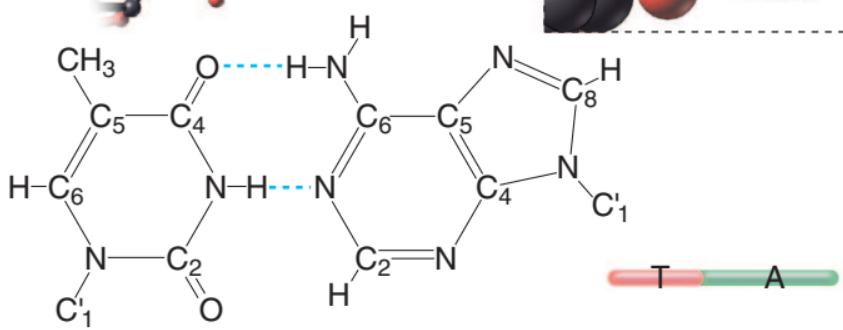
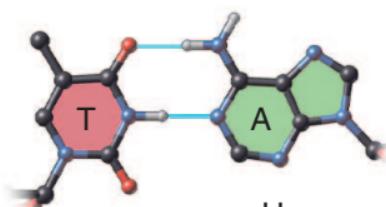
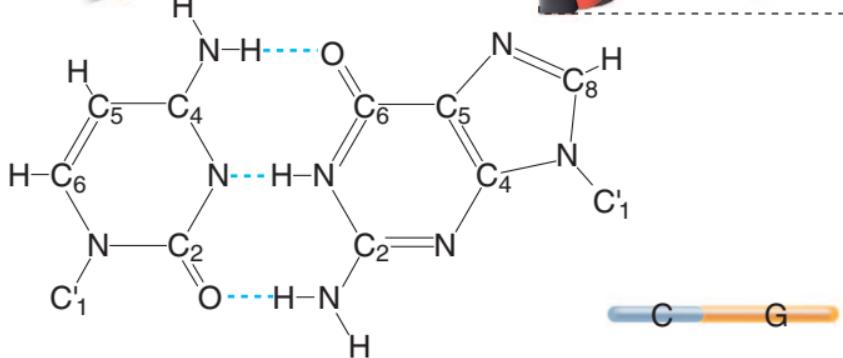
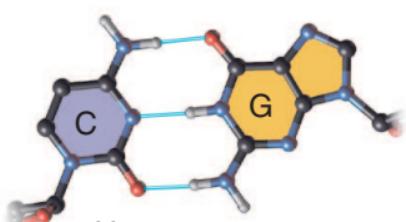
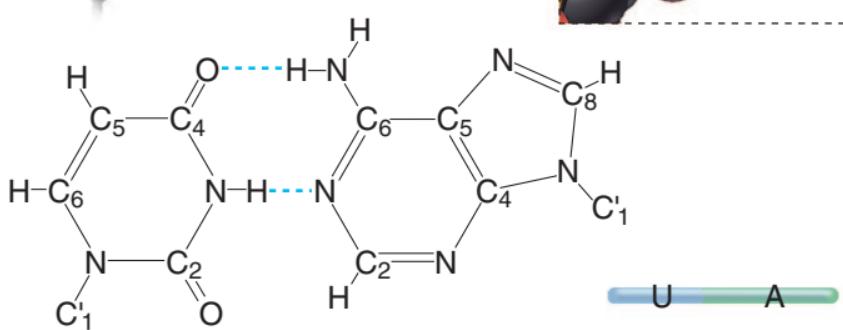
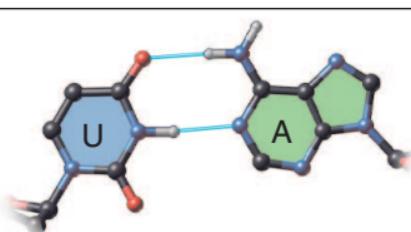


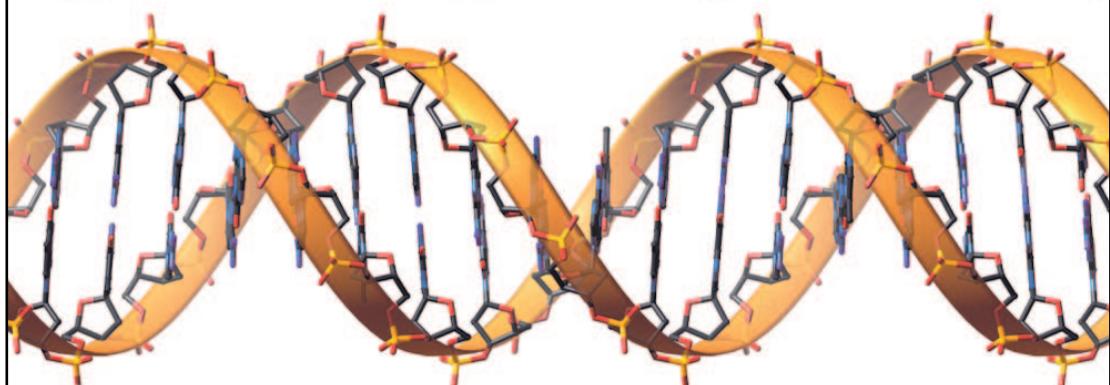
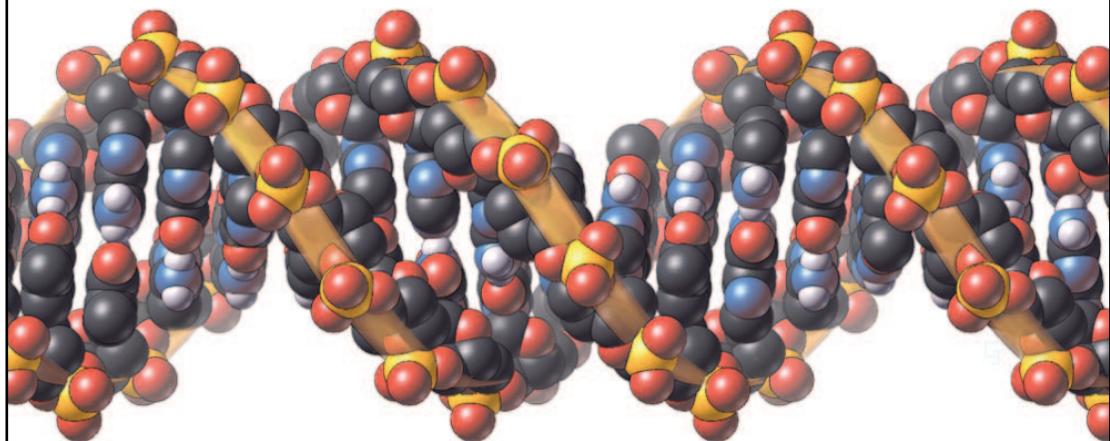
### B. Alcohols



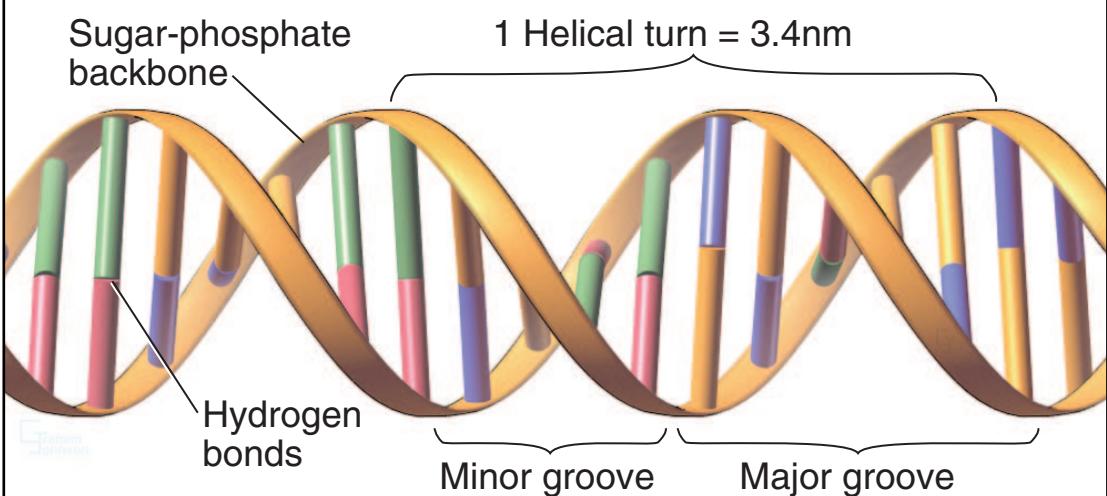
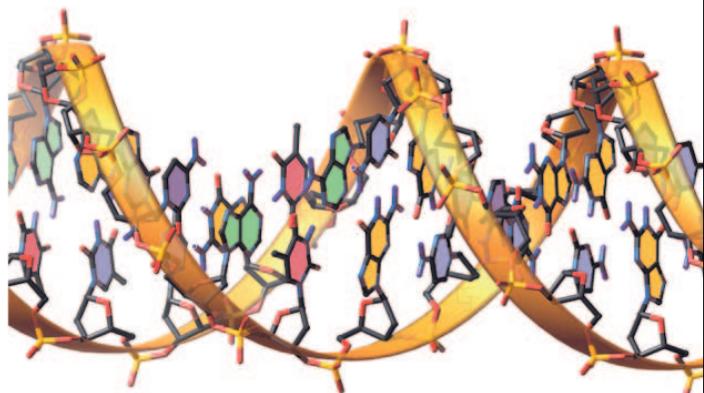
### C. Fatty acids



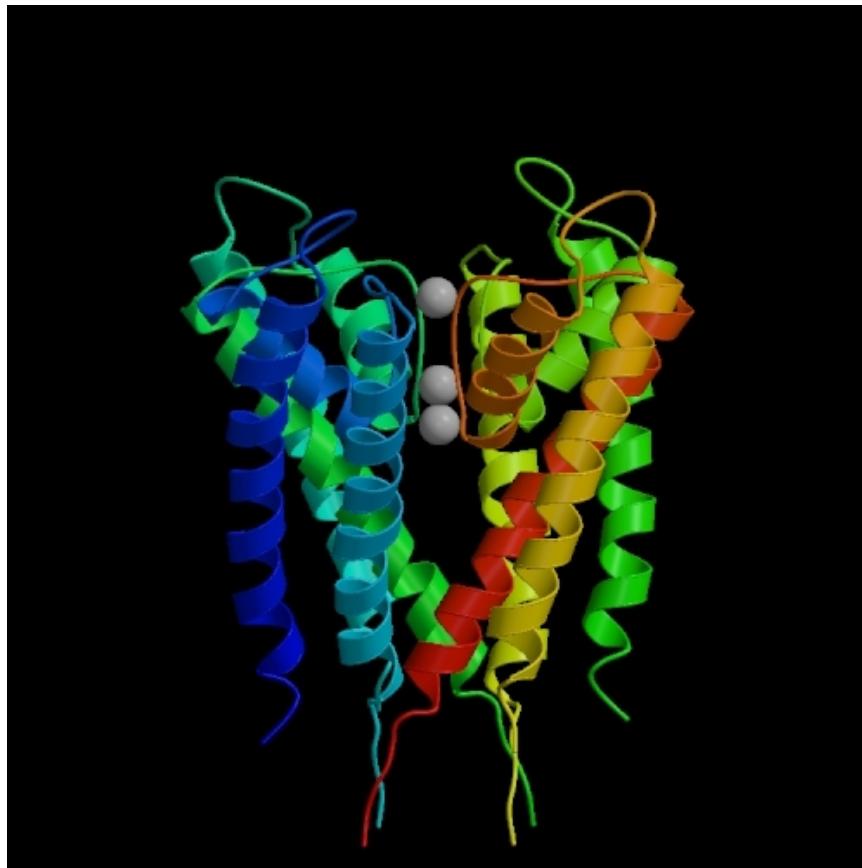
**A****B Pyrimidines Purines****C**



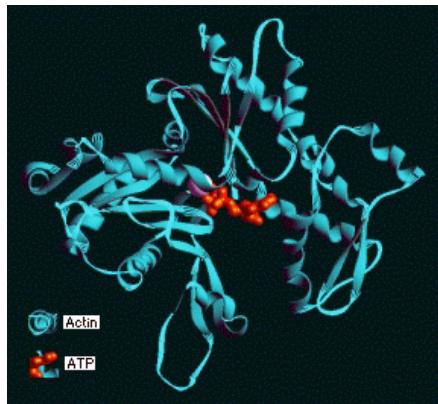
A  
T  
G  
C



# *Protéines*

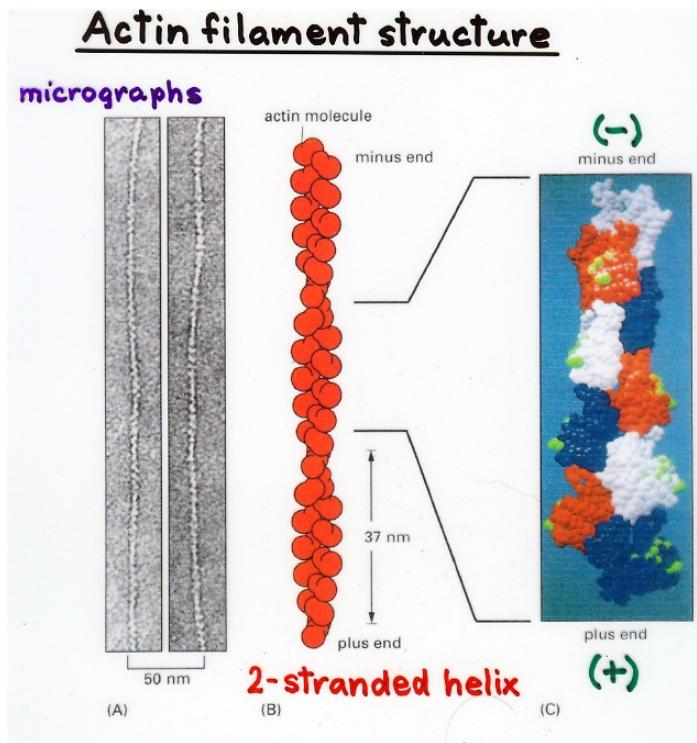


# *Actine*



Protéine globulaire polaire

Assemblage sous forme de filaments période 72nm

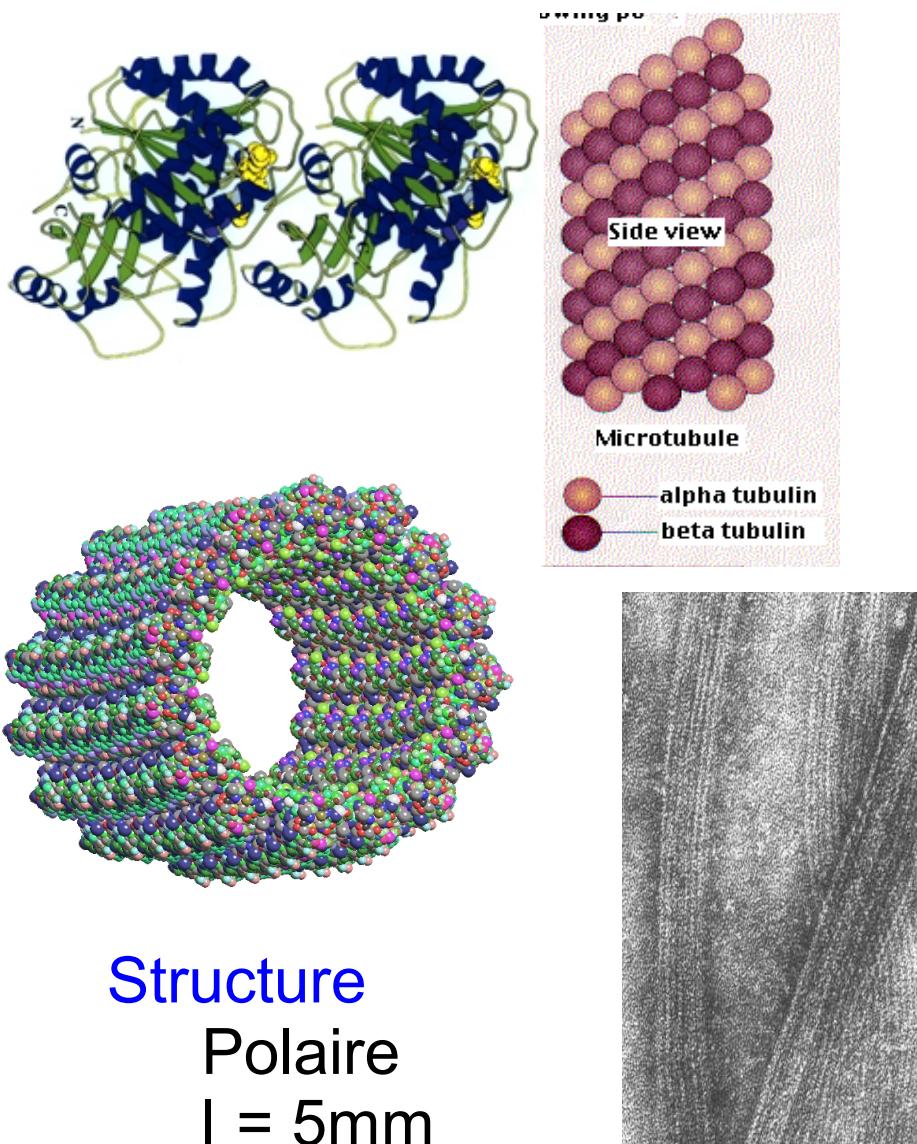


Filaments rigides  $l_p = 15 \mu\text{m}$

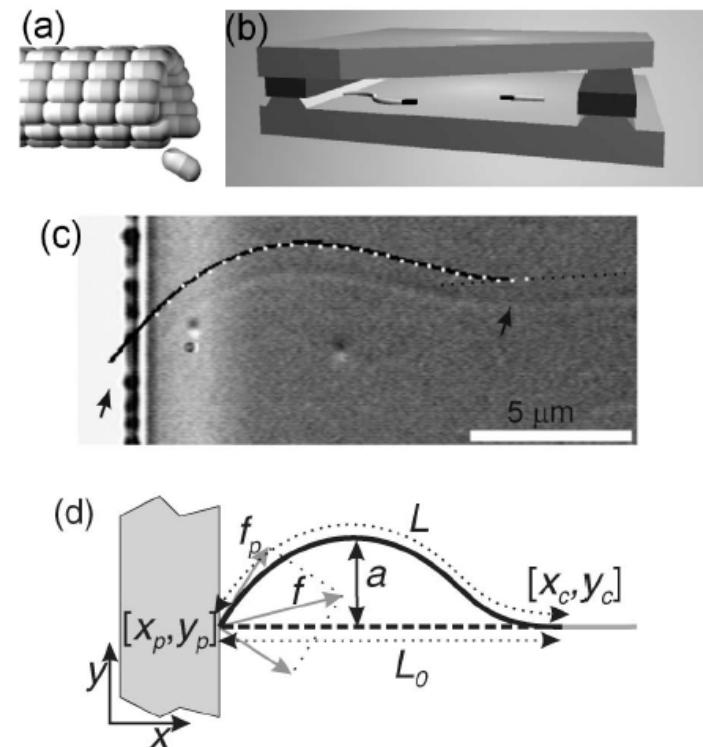
Filaments polaires

Treadmilling

# *Microtubules*



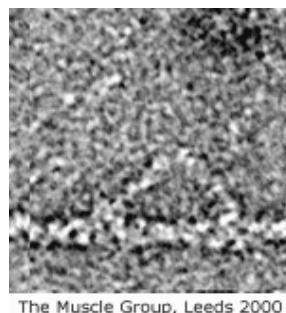
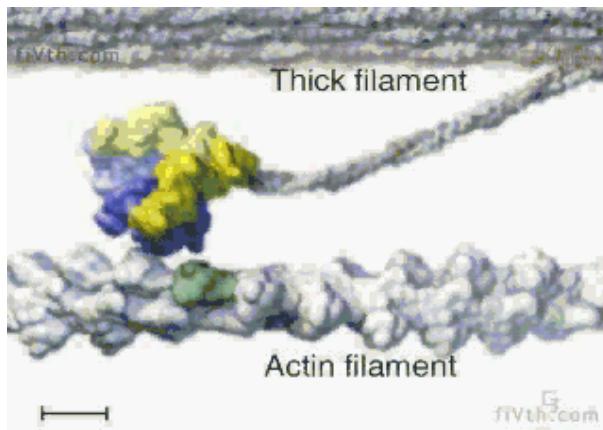
Structure  
Polaire  
 $|_p = 5\text{mm}$



Dogterom  
Production de force par  
polymerisation

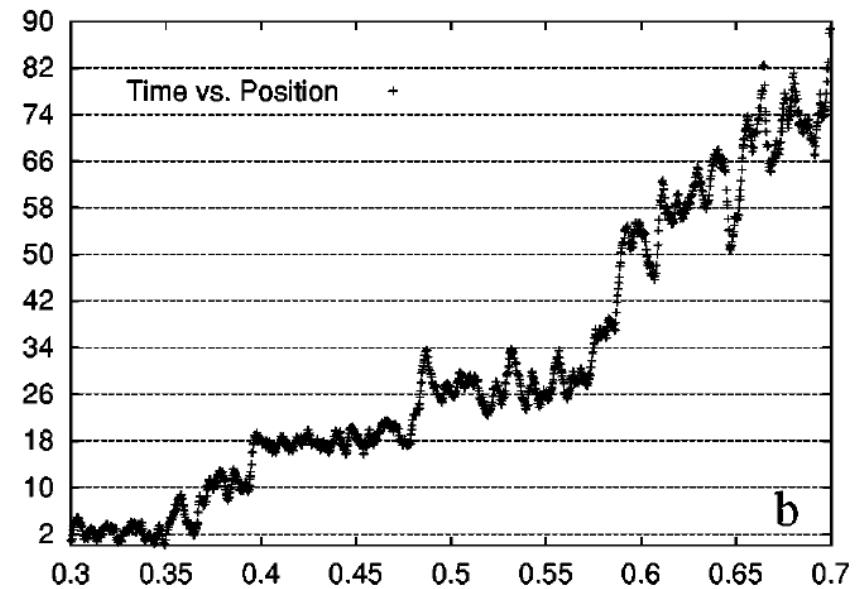
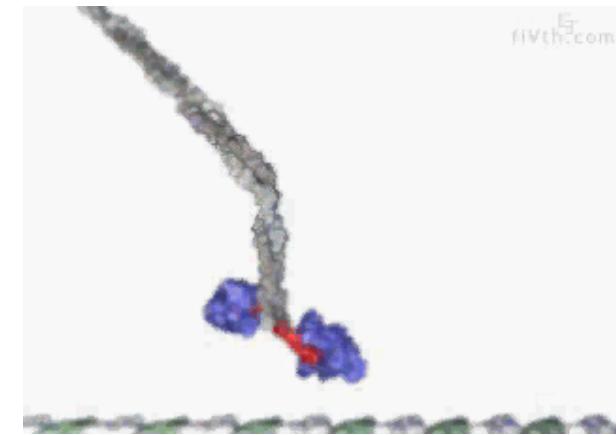
quelques pN

# *Moteurs moléculaires*



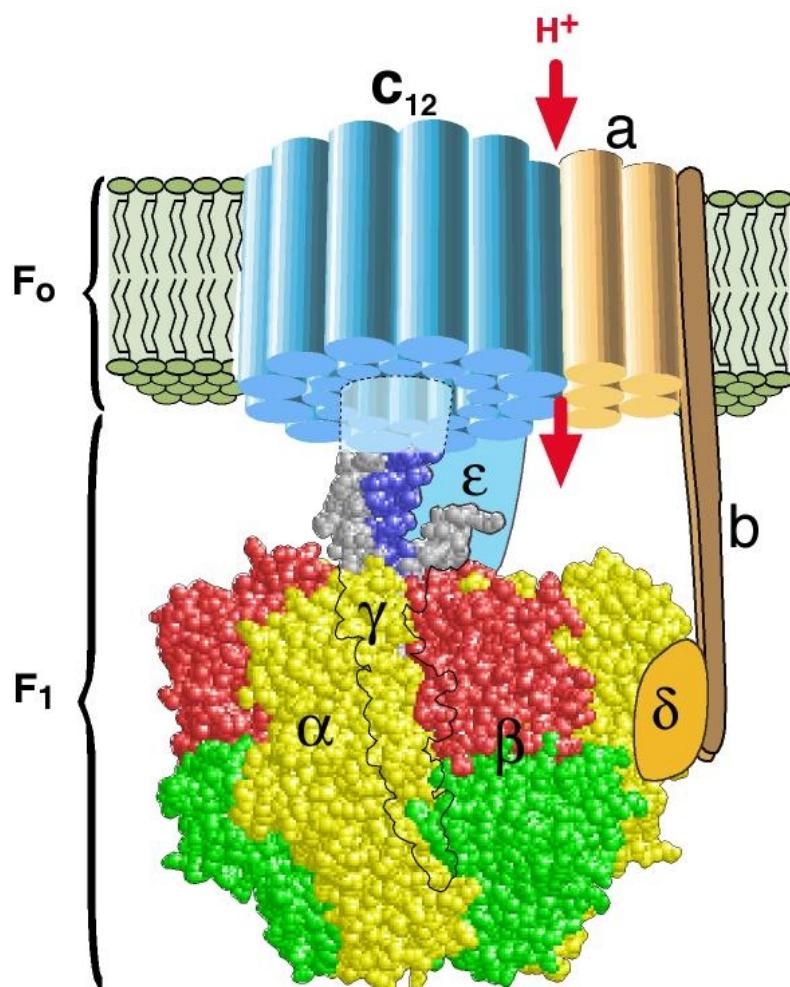
Myosines

Vale

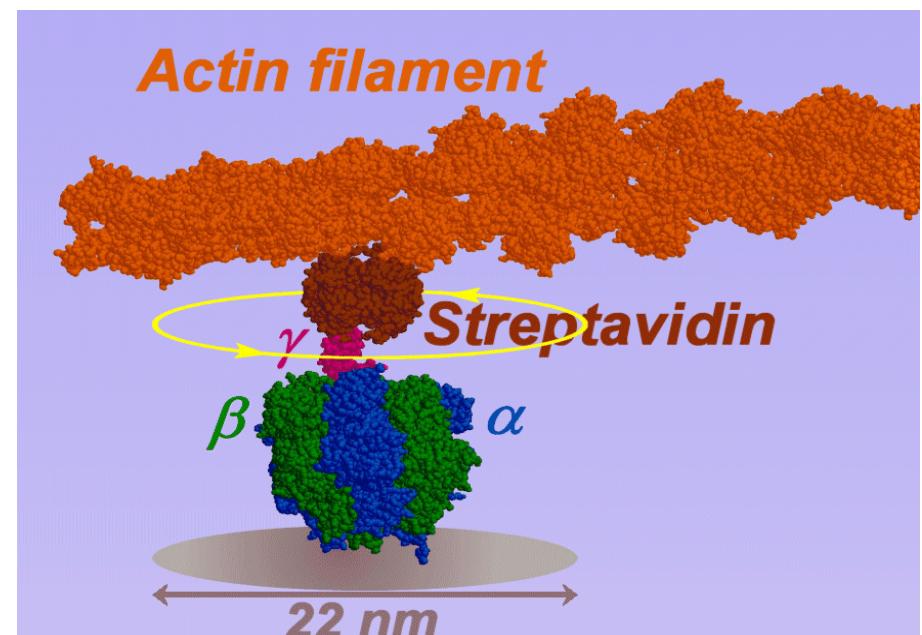


Kinésines  
G Cappelle

# *Moteur rotatif: ATP-synthase*



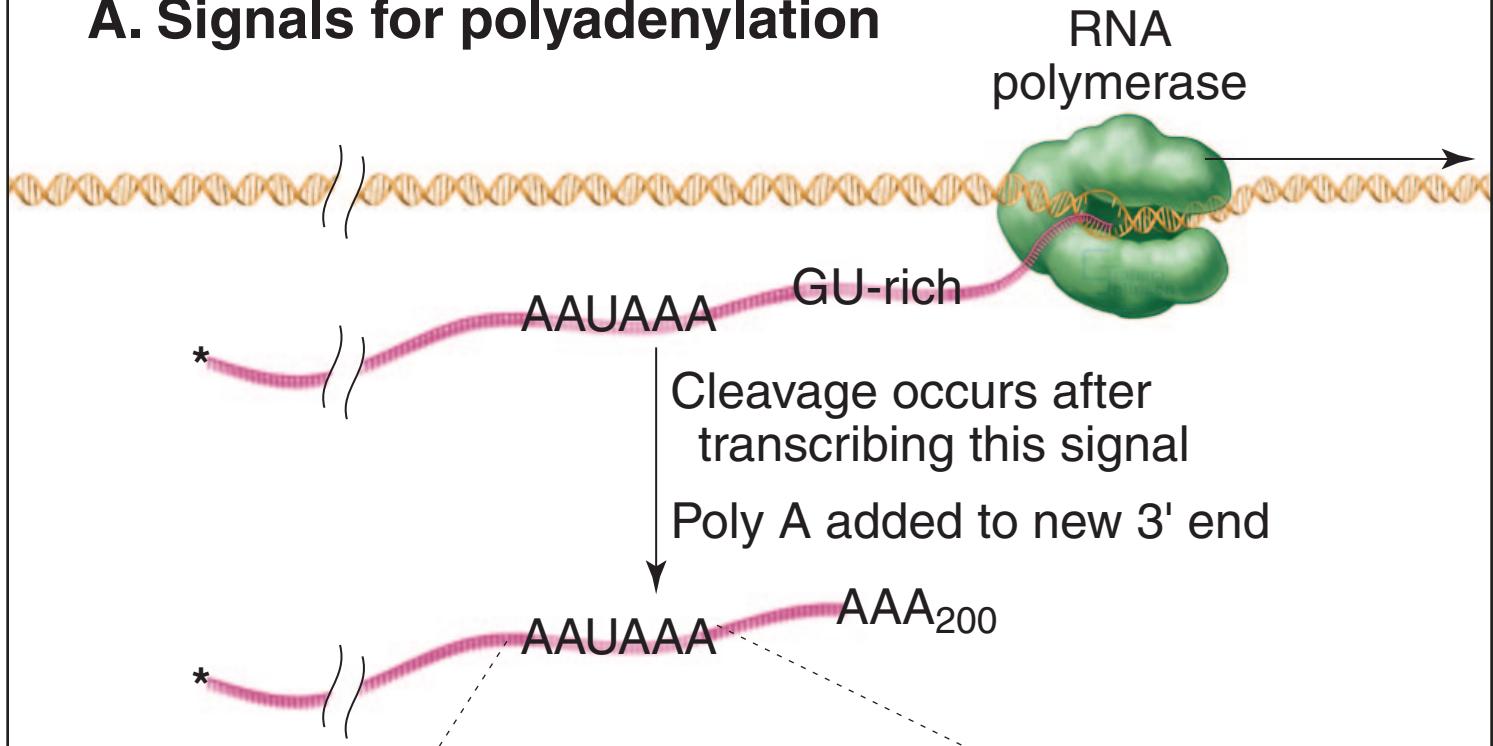
H. Wang and G. Oster (1998). Nature 396:279-282.



Kinosita



## A. Signals for polyadenylation



## B. Frequency (%) of residues in animals

97 98 100 100 100 97

A A U A A A

