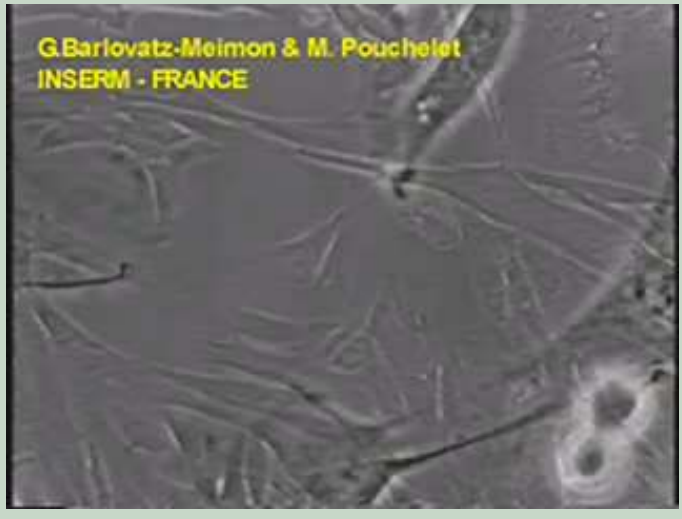
INTRODUCCION A LA BIOLOGIA CELULAR Y MOLECULAR

- BIOLOGIA CELULAR -
Citoesqueleto



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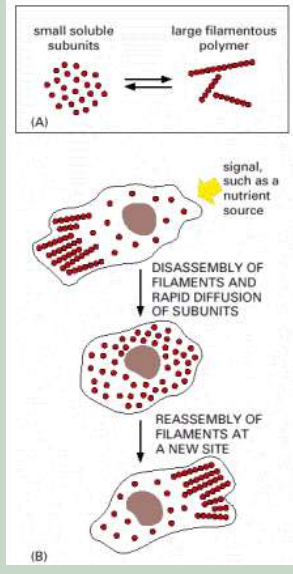

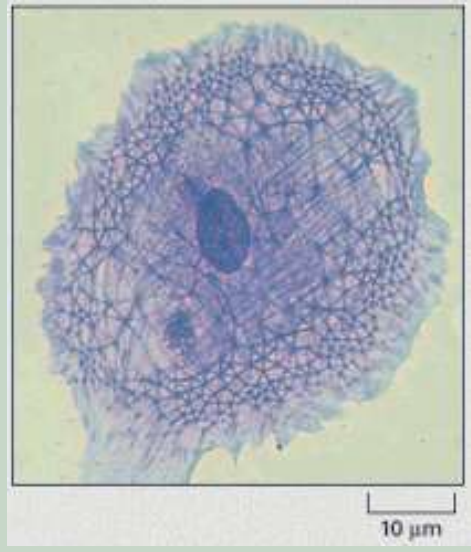

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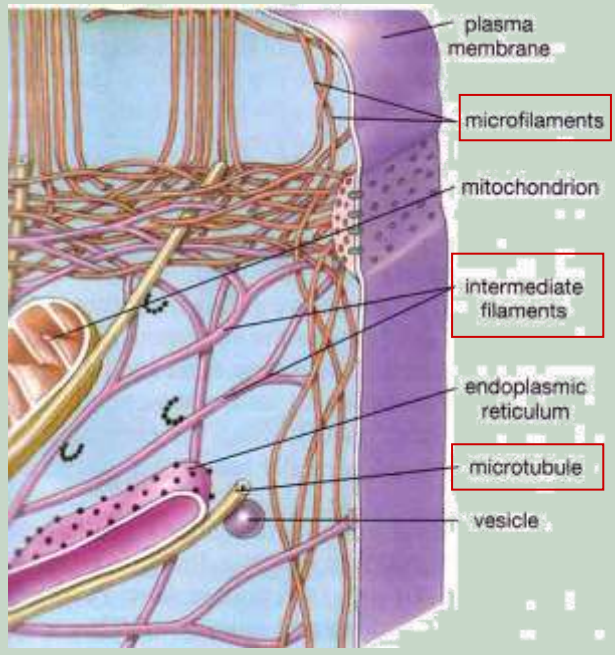
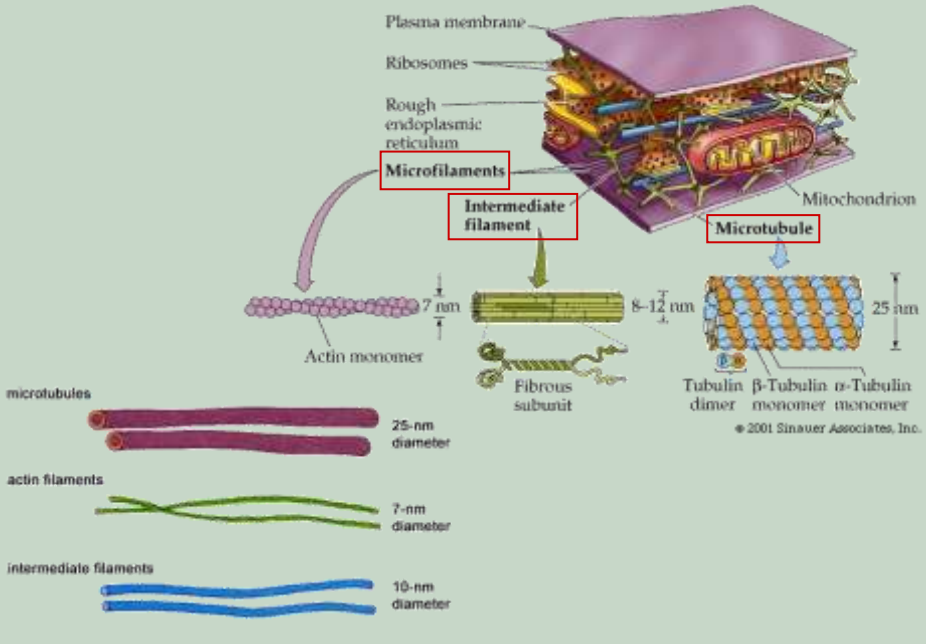
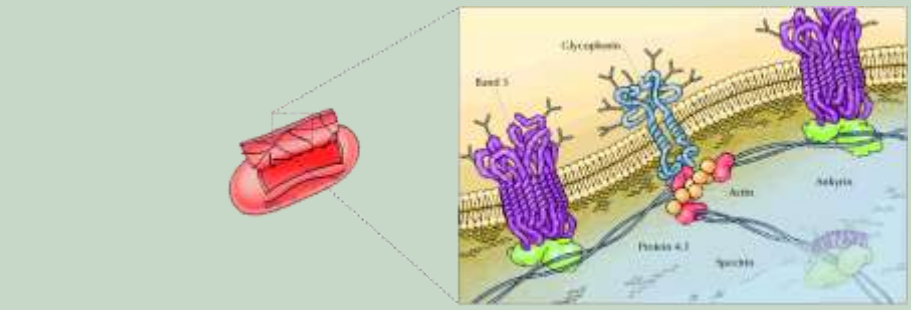
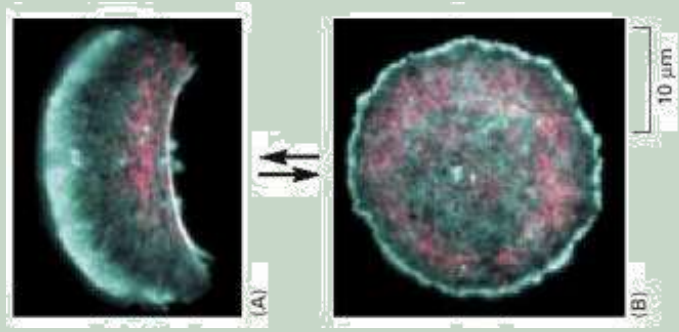


Filamentos



Actina





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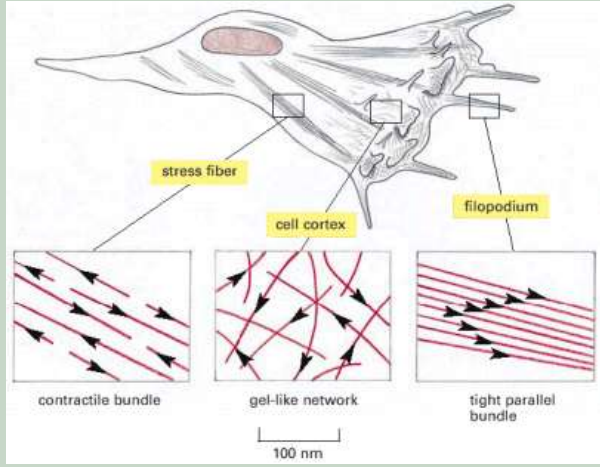

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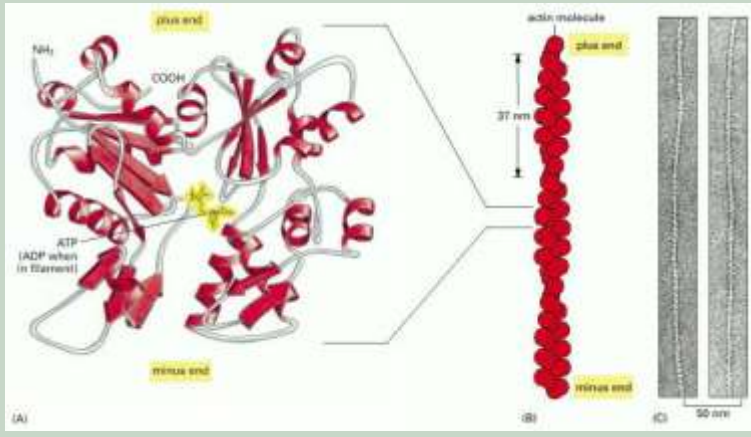
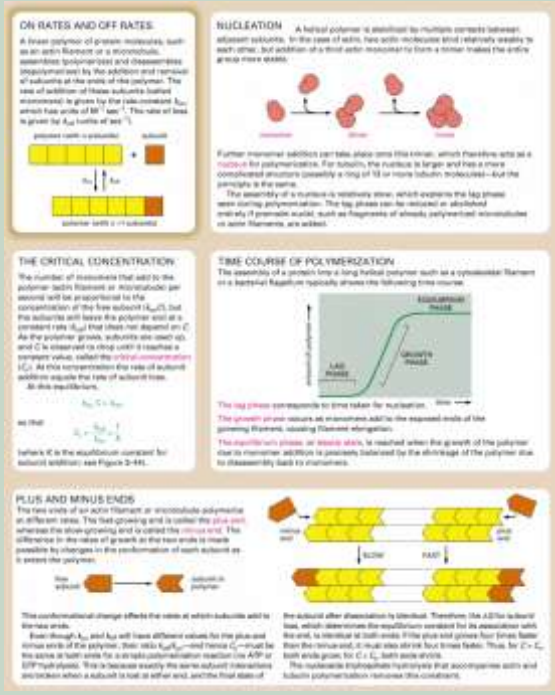
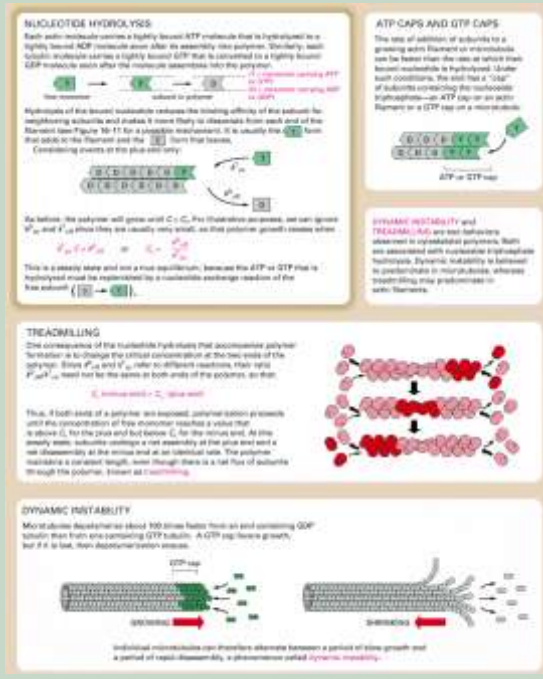
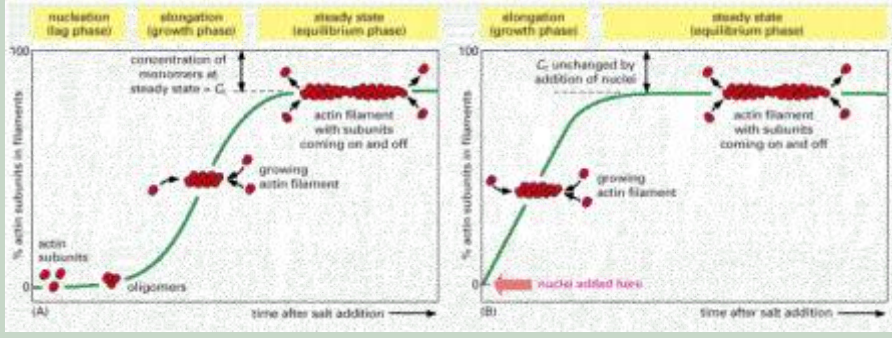

plus end
NH2
COOH
ATP
(ADP when
in filament)
minus end
(A)
actin molecule
plus end
37 nm
minus end
(B)
(C)
90 nm

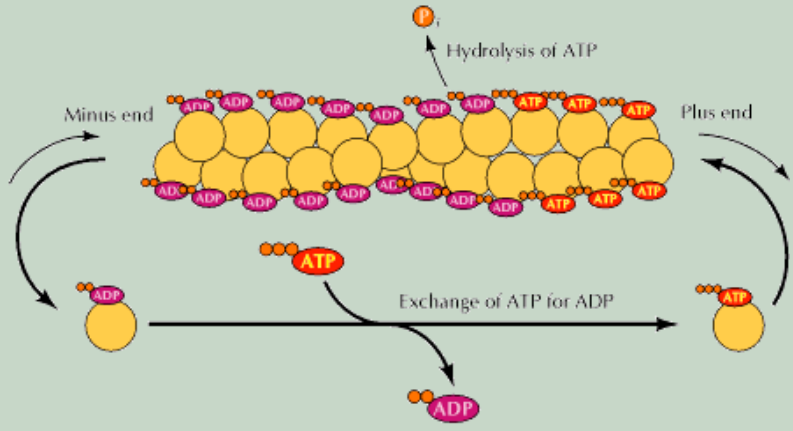

ON RATES AND OFF RATES
NUCLEATION
THE CRITICAL CONCENTRATION
TIME COURSE OF POLYMERIZATION
PLUS AND MINUS ENDS
SLOW
FAST



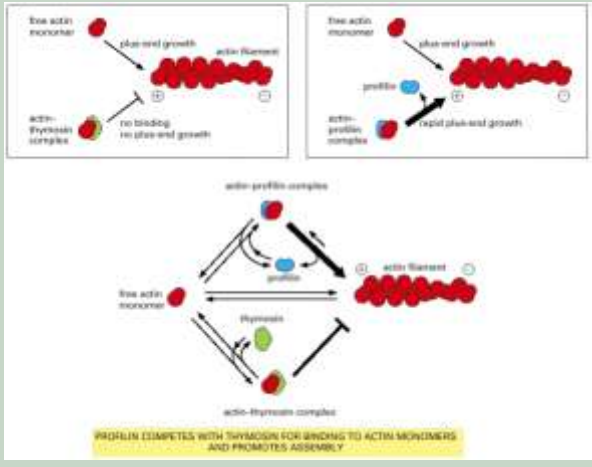
Inestabilidad Dinámica

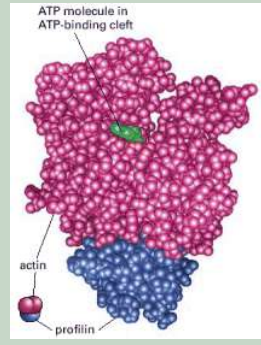


Inestabilidad Dinámica

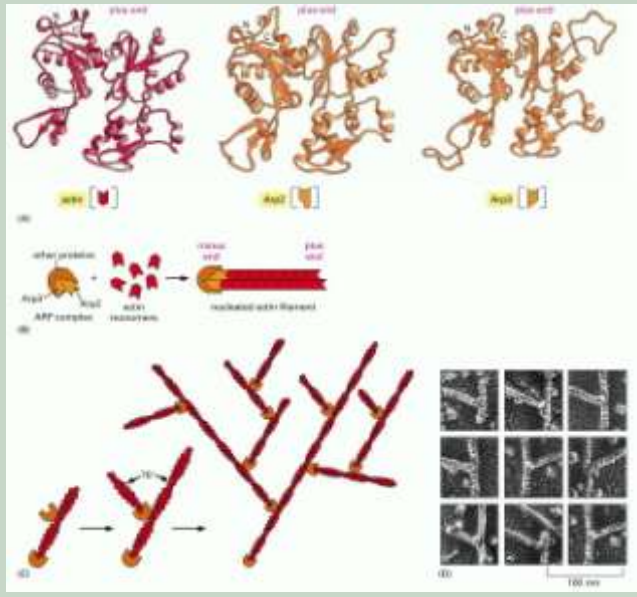


Regulación de la polimerización

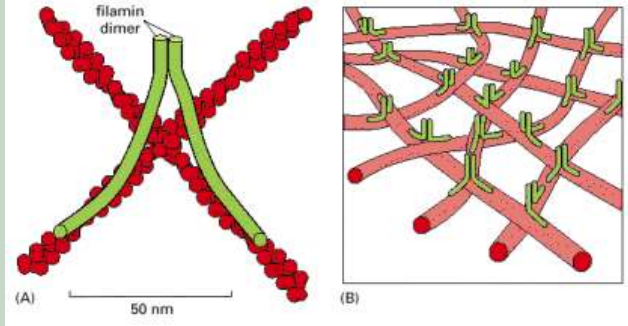




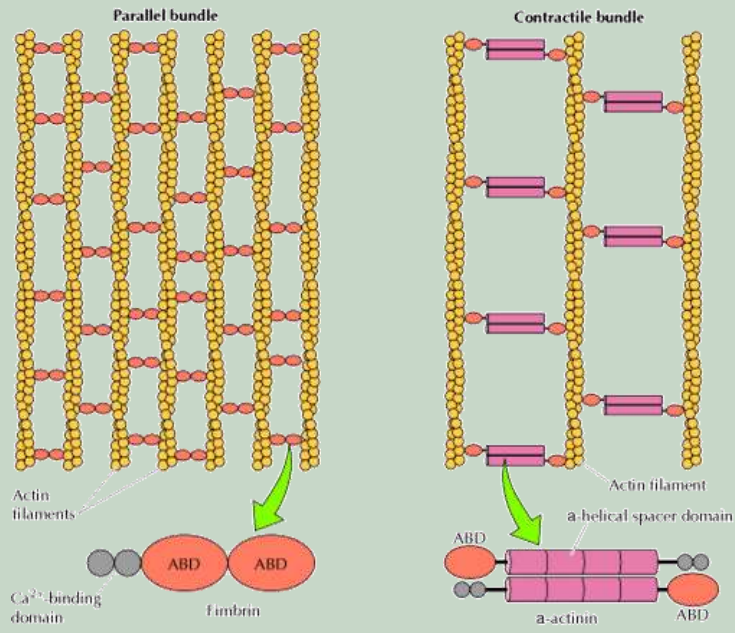
ARP



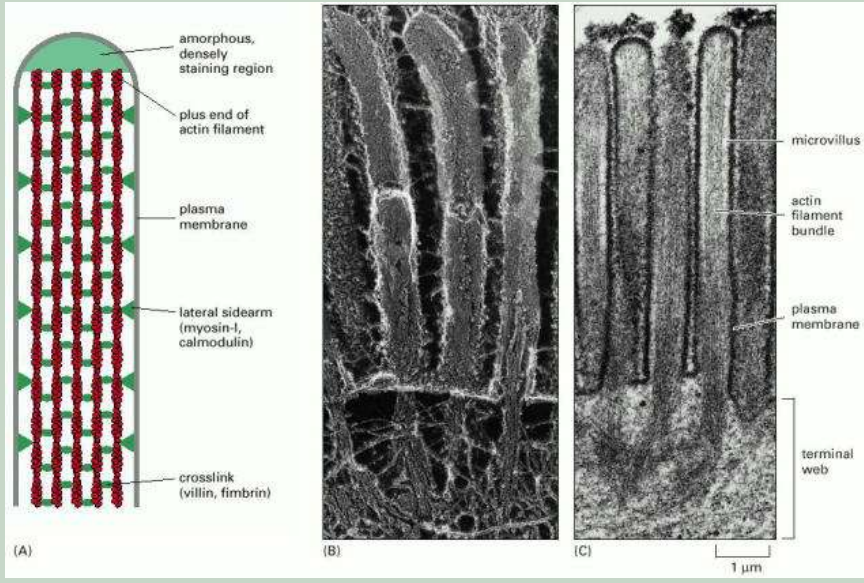
Filamina



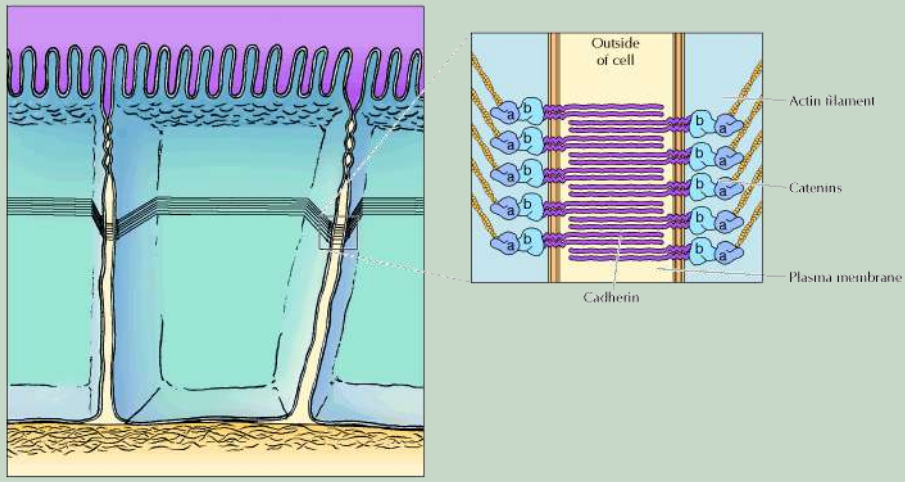
Haces de Actina



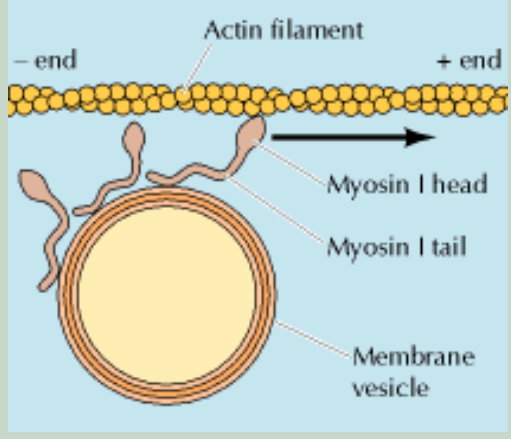
Microvellosidades



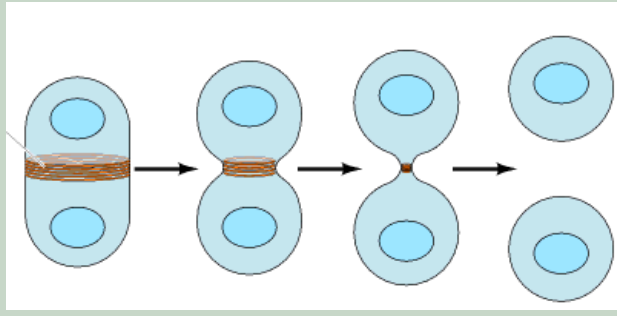
Uniones aderentes

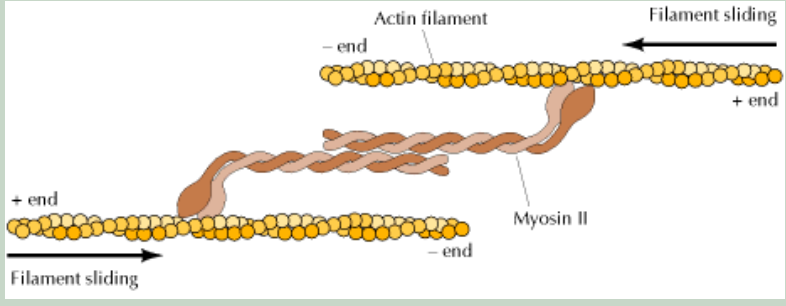


Miosina I



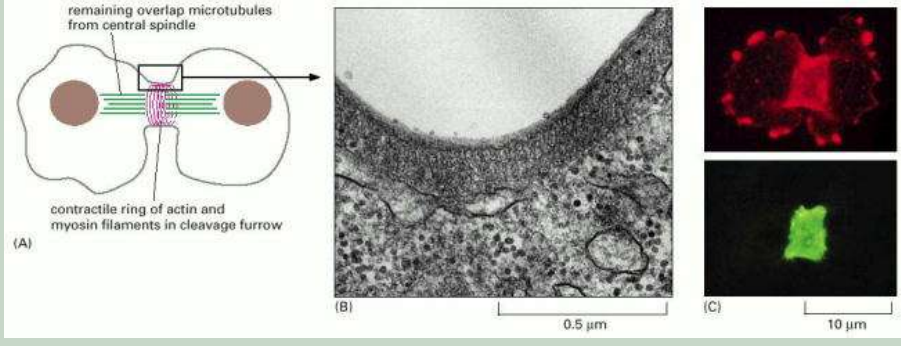
Miosina II

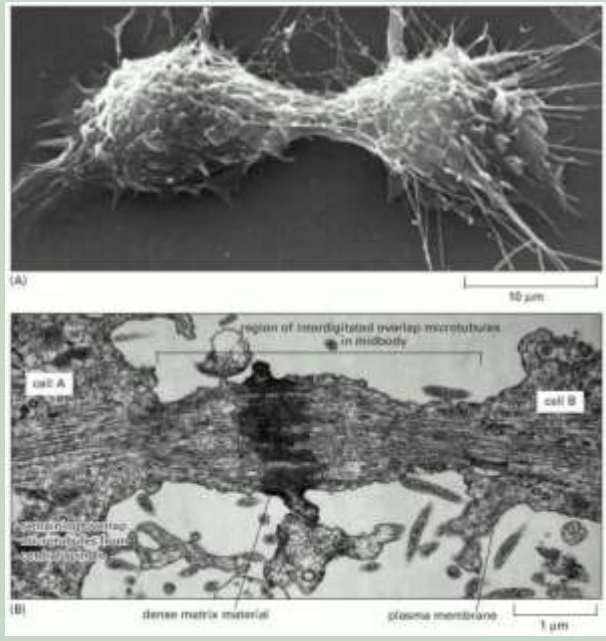




La actina y la miosina generan las fuerzas necesarias para la segmentación.

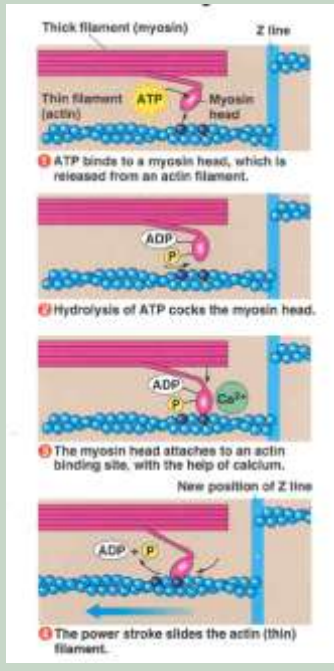
La segmentación se consigue mediante la contracción de un fino anillo compuesto principalmente por una formacíón superpuesta de filamentos de actina y de filamentos bipolares de miosina II.



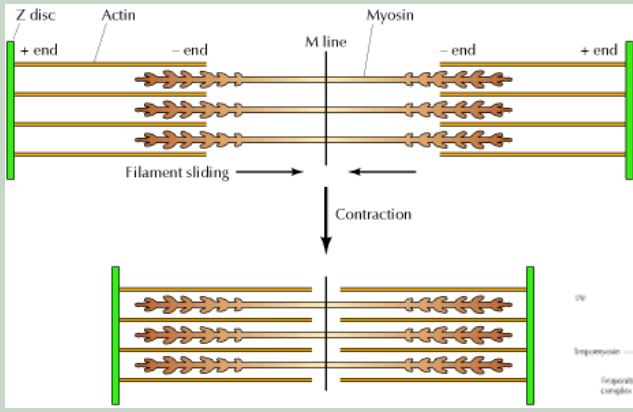


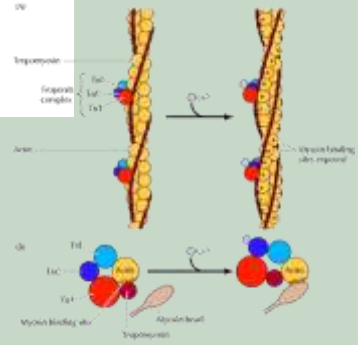
El anillo contráctil se elimina por completo al terminar la segmentación, cuando la membrana plasmática del surco de segmentación se estrecha formando el cuerpo medio, que permanece como un puente entre las dos células hijas.

Contracción Muscular

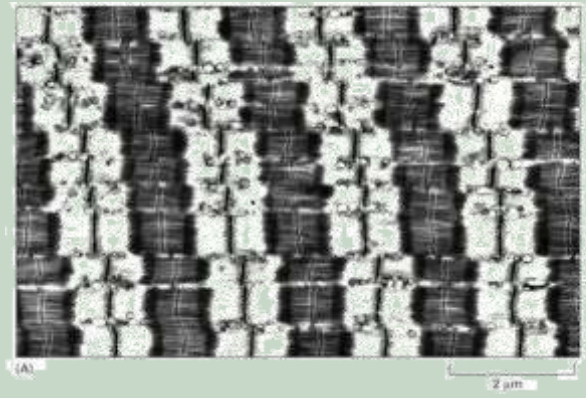


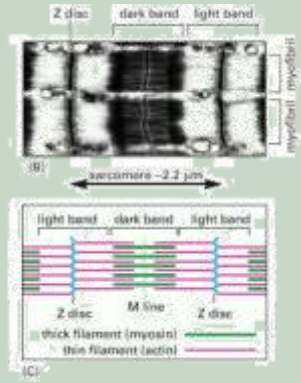
Contracción Muscular



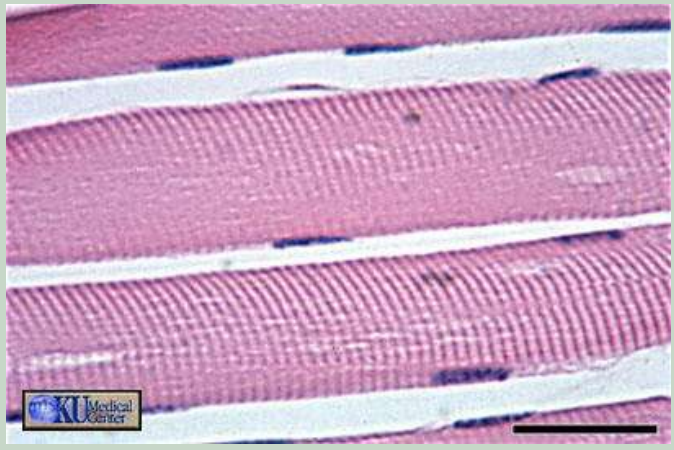


Sarcómero

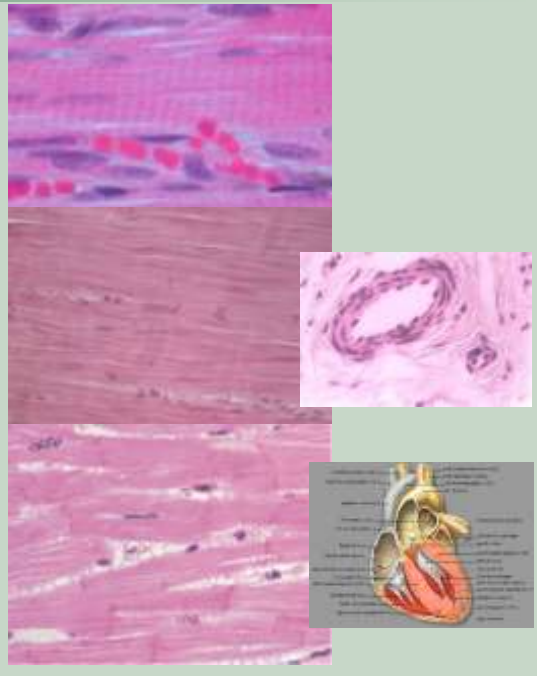




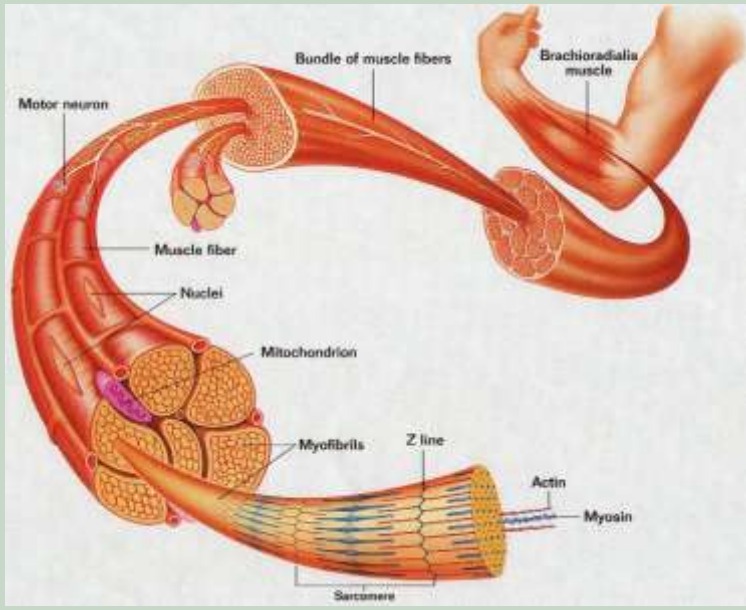
Miositos esqueléticos



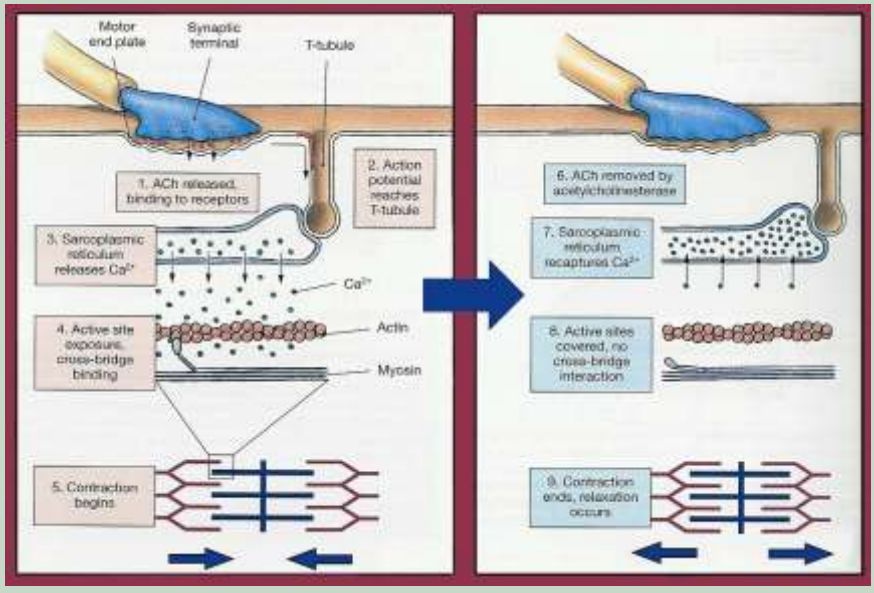
Músculos



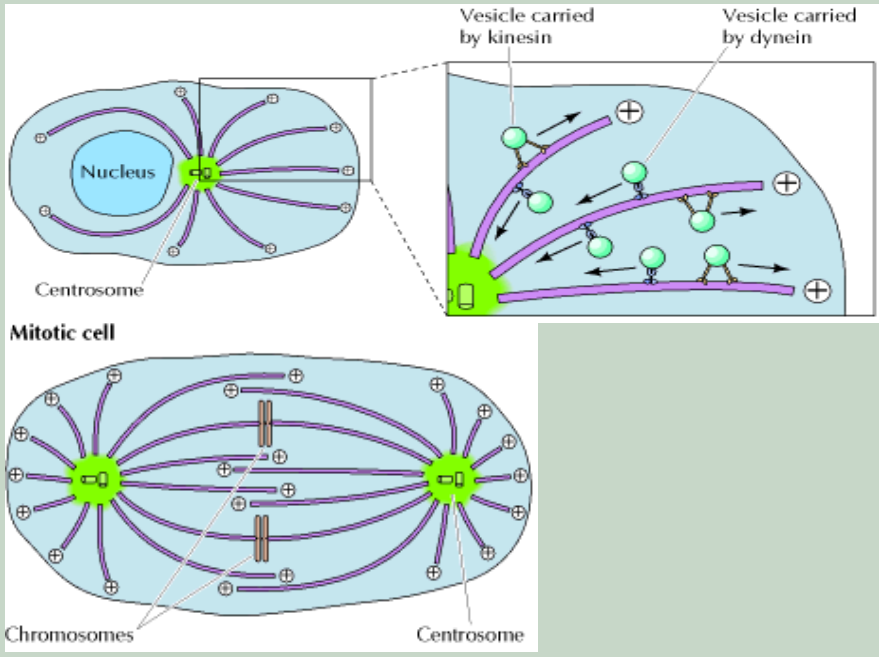
Músculo esquelético



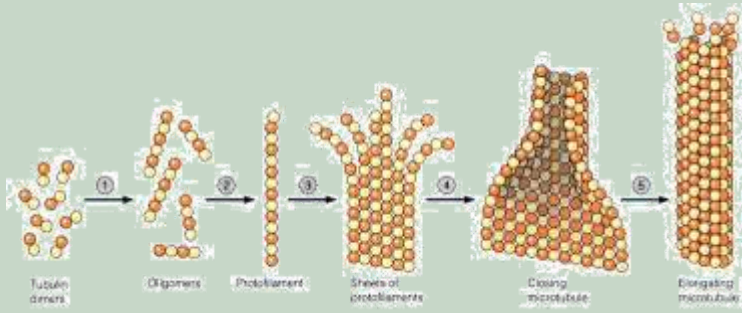
Placa neuromuscular



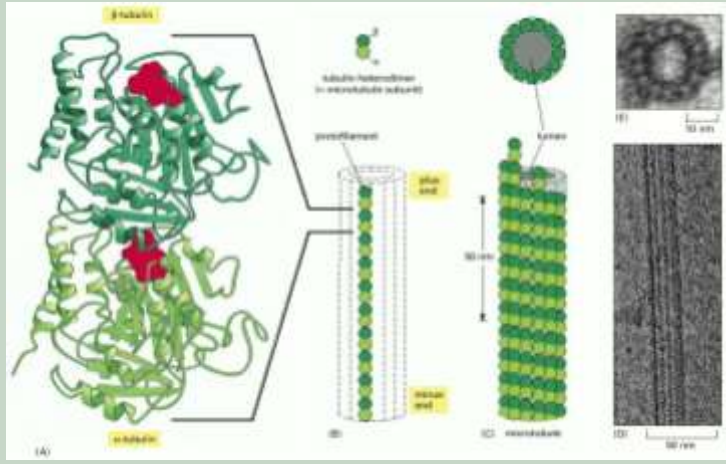
Microtúbulos



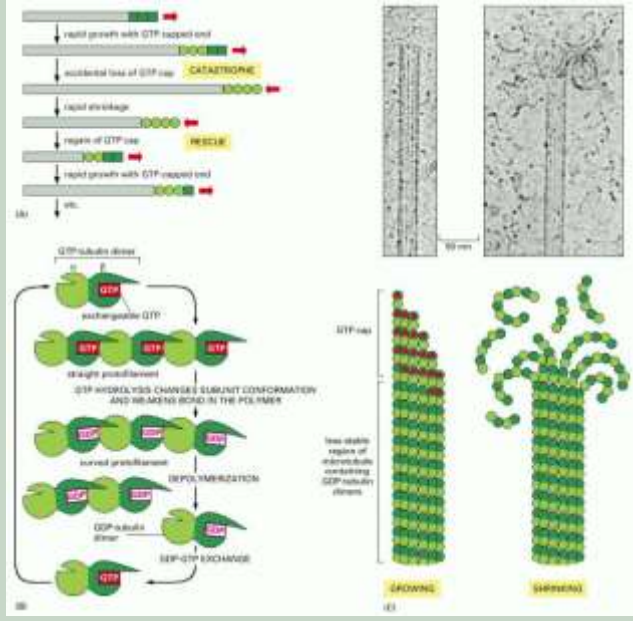
Microtúbulos



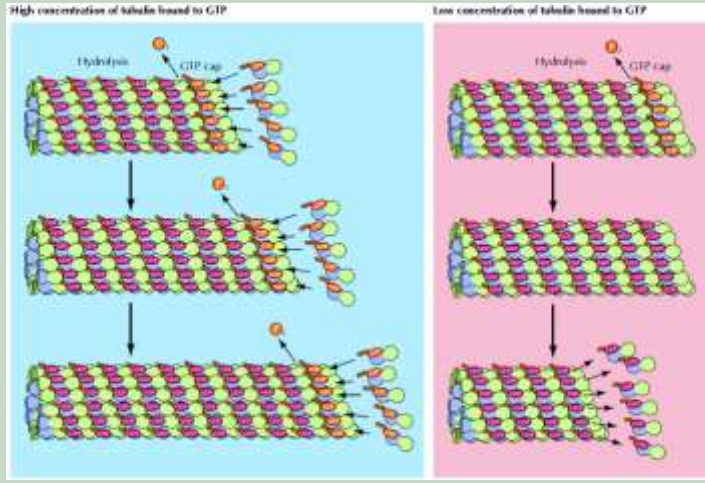
Microtúbulos



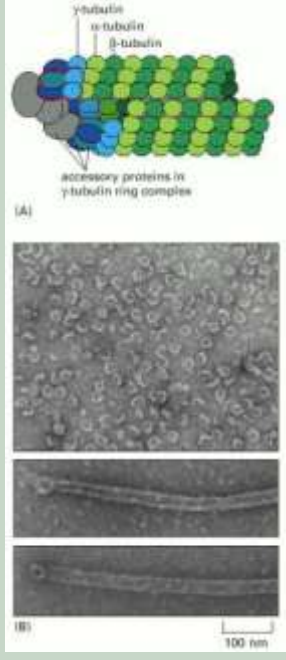
Inestabilidad dinámica

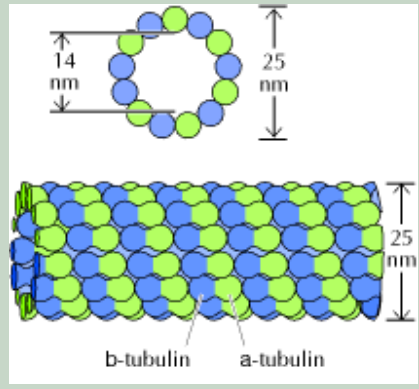


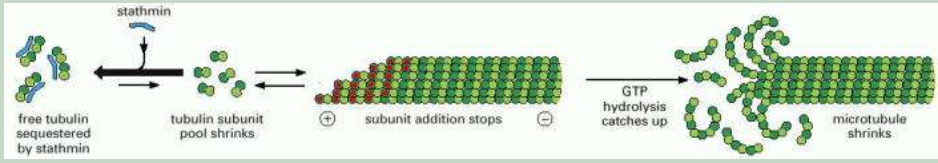
Inestabilidad dinámica



Inestabilidad dinámica







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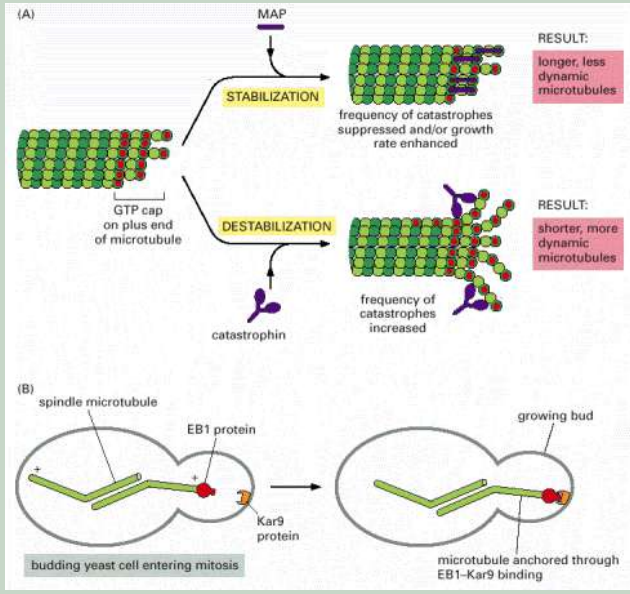
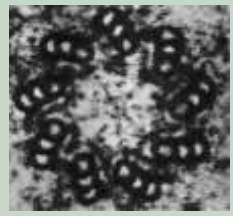
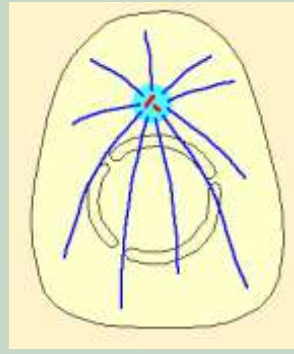
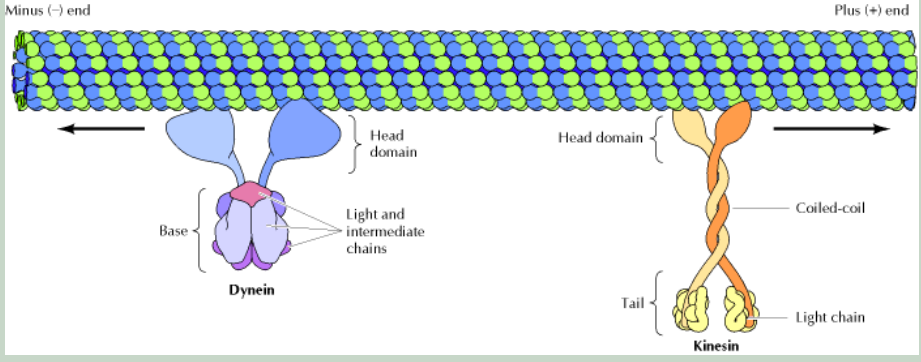


Centríolos

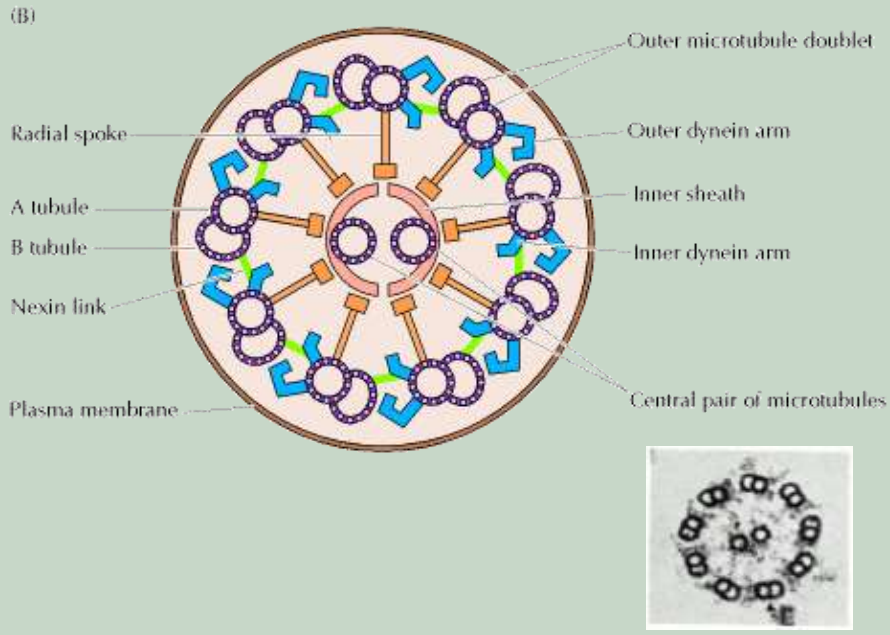




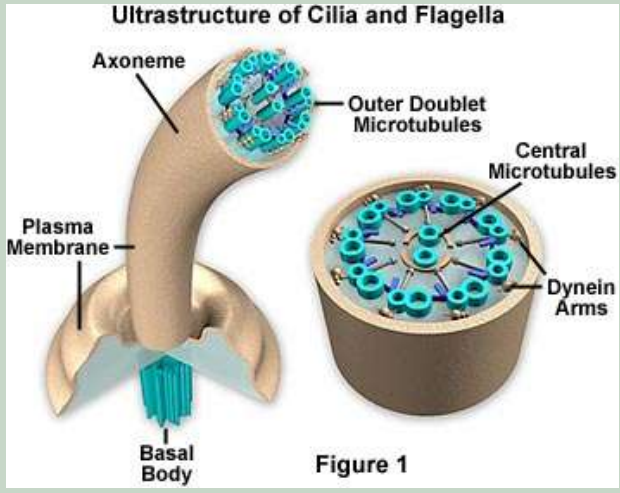
Dineínas y Quinesinas



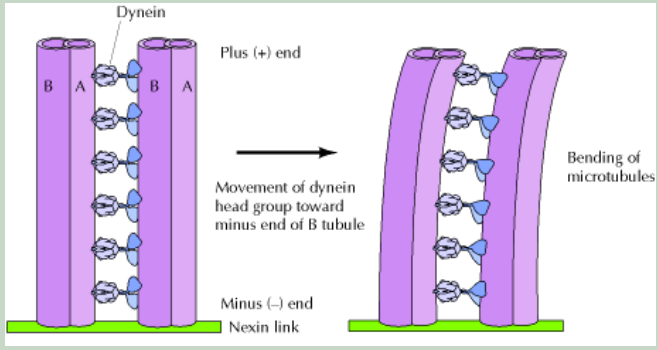
Cilias y Flagelos

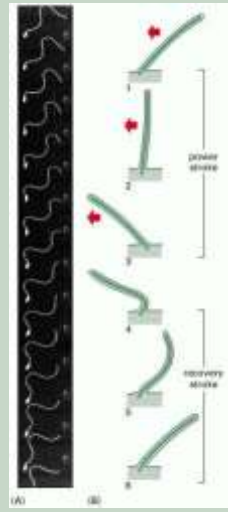


Cilias y Flagelos

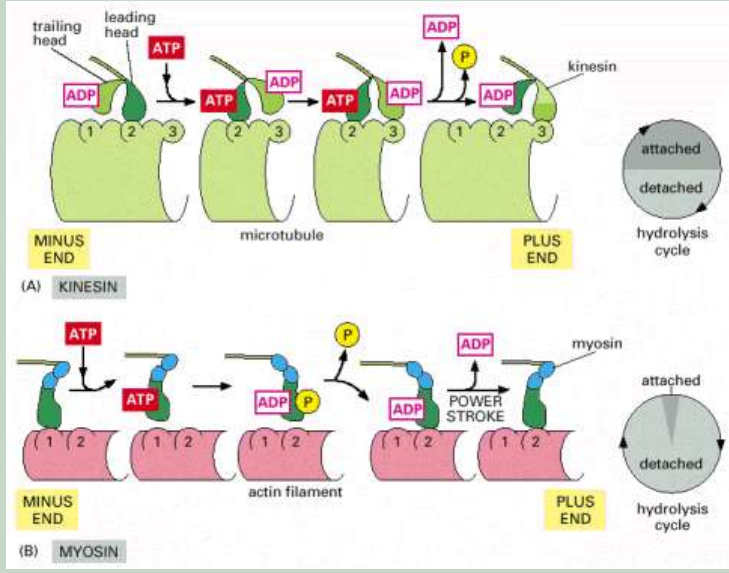


Cilias y Flagelos





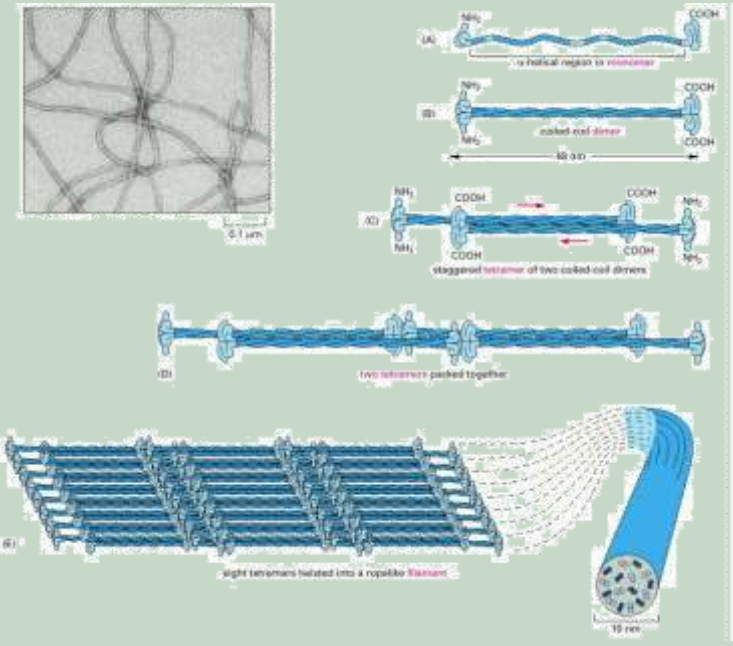
Miosina vs Quinesina



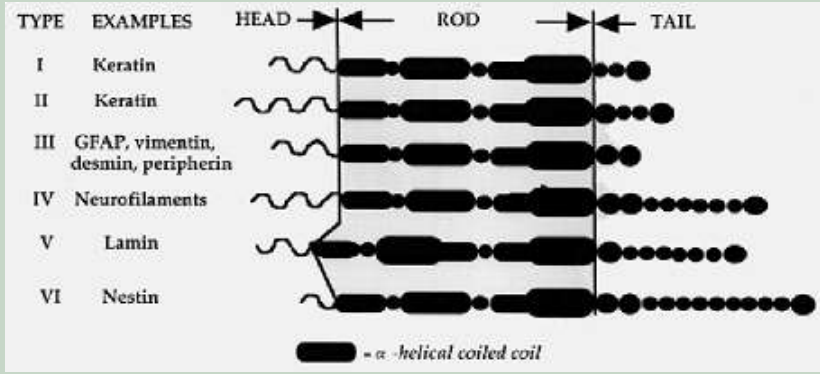
Filamentos intermedios

TYPES OF IF	COMPONENT POLYPEPTIDES	CELLULAR LOCATION
Nuclear	lamins A, B, and C	nuclear lamina (inner lining of nuclear envelope)
Vimentin-like	vimentin	many cells of mesenchymal origin
	desmin	muscle
	glial fibrillary acidic protein	glial cells (astrocytes and some Schwann cells)
	peripherin	some neurons
Epithelial	type I keratins (acidic) }	epithelial cells and their derivatives (e.g., hair and nails)
	type II keratins (basic) }	
Axonal	neurofilament proteins (NF-L, NF-M, and NF-H)	neurons

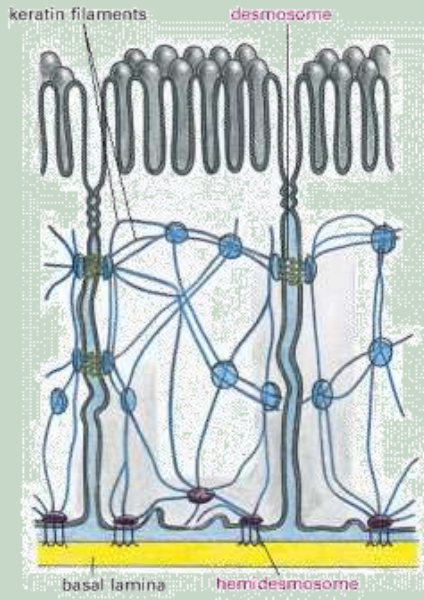
Filamentos intermedios



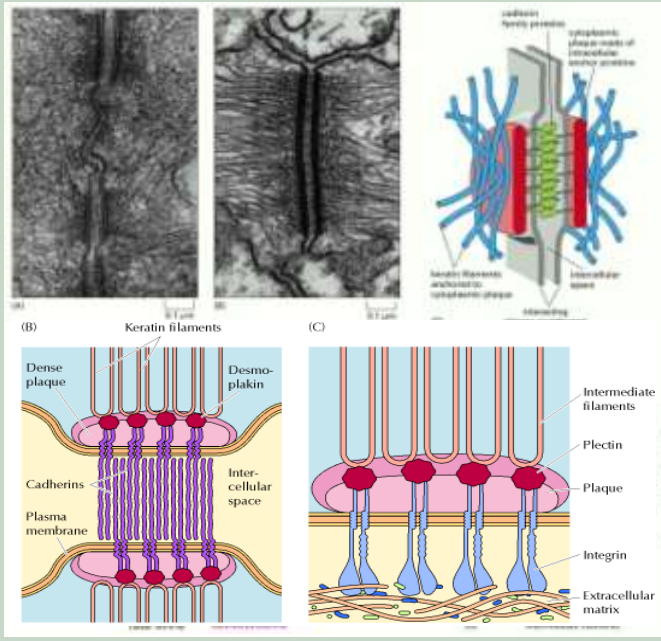
Filamentos intermedios



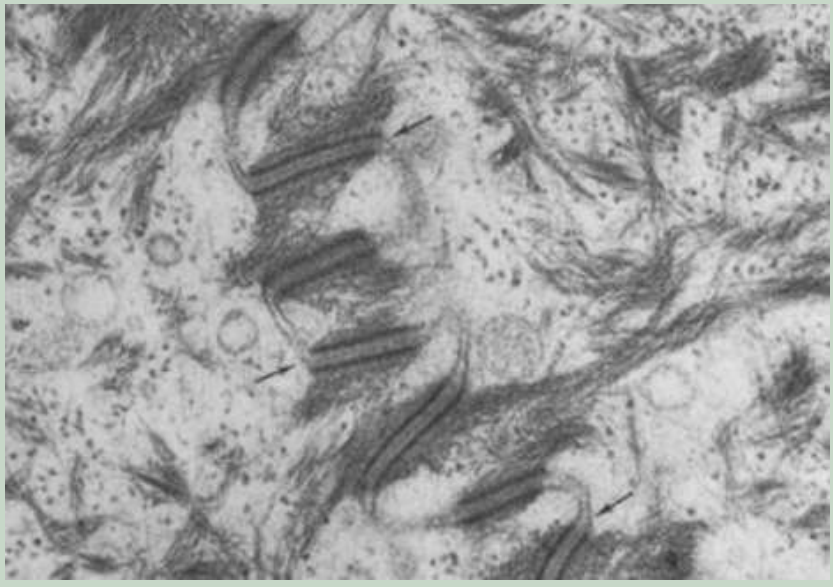
Desmosomas y Hemidesmosomas



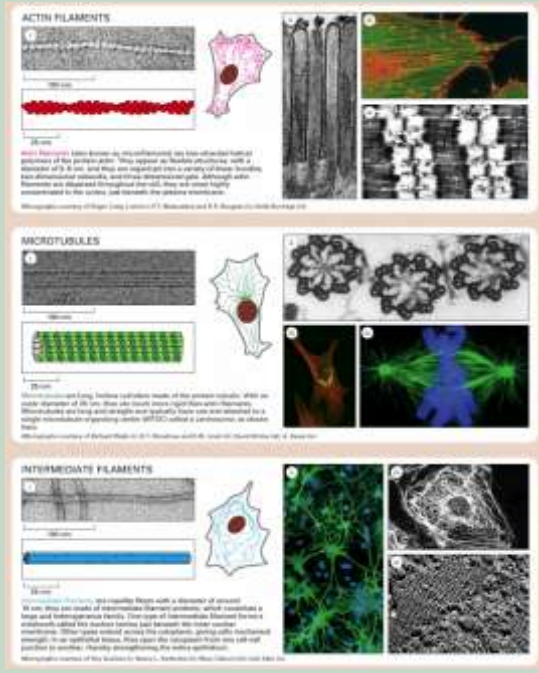
Desmosomas y Hemidesmosomas



Desmosomas



Citoesqueleto



Drogas y citoesqueleto

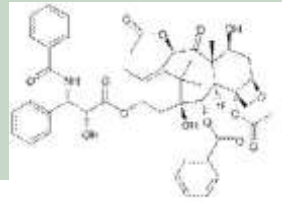


Table 16-2. Drugs That Affect Actin Filaments and Microtubules

ACTIN-SPECIFIC DRUGS	
Phalloidin	binds and stabilizes filaments
Cytochalasin	caps filament plus ends
Swinholide	severs filaments
Latrunculin	binds subunits and prevents their polymerization
MICROTUBULE-SPECIFIC DRUGS	
Taxol	binds and stabilizes microtubules
Colchicine, colcemid	binds subunits and prevents their polymerization
Vinblastine, vincristine	binds subunits and prevents their polymerization
Nocodazole	binds subunits and prevents their polymerization