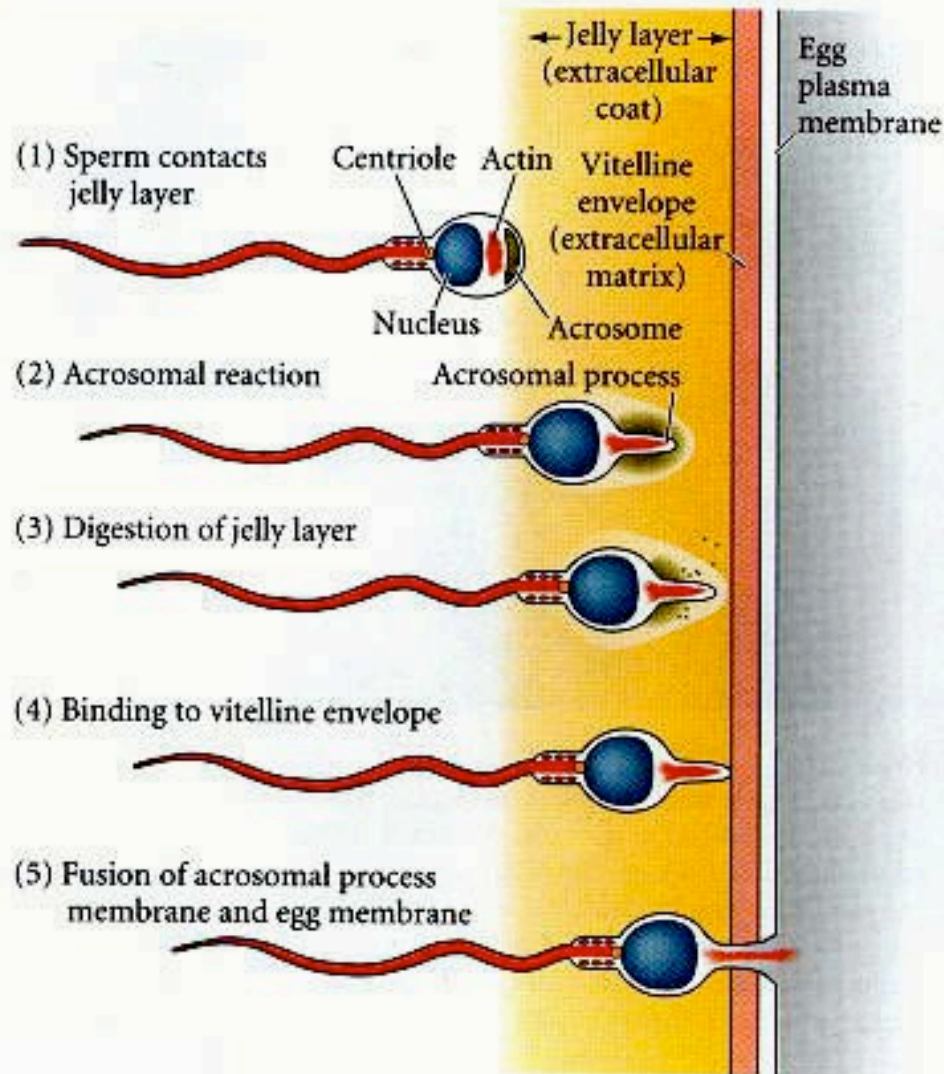
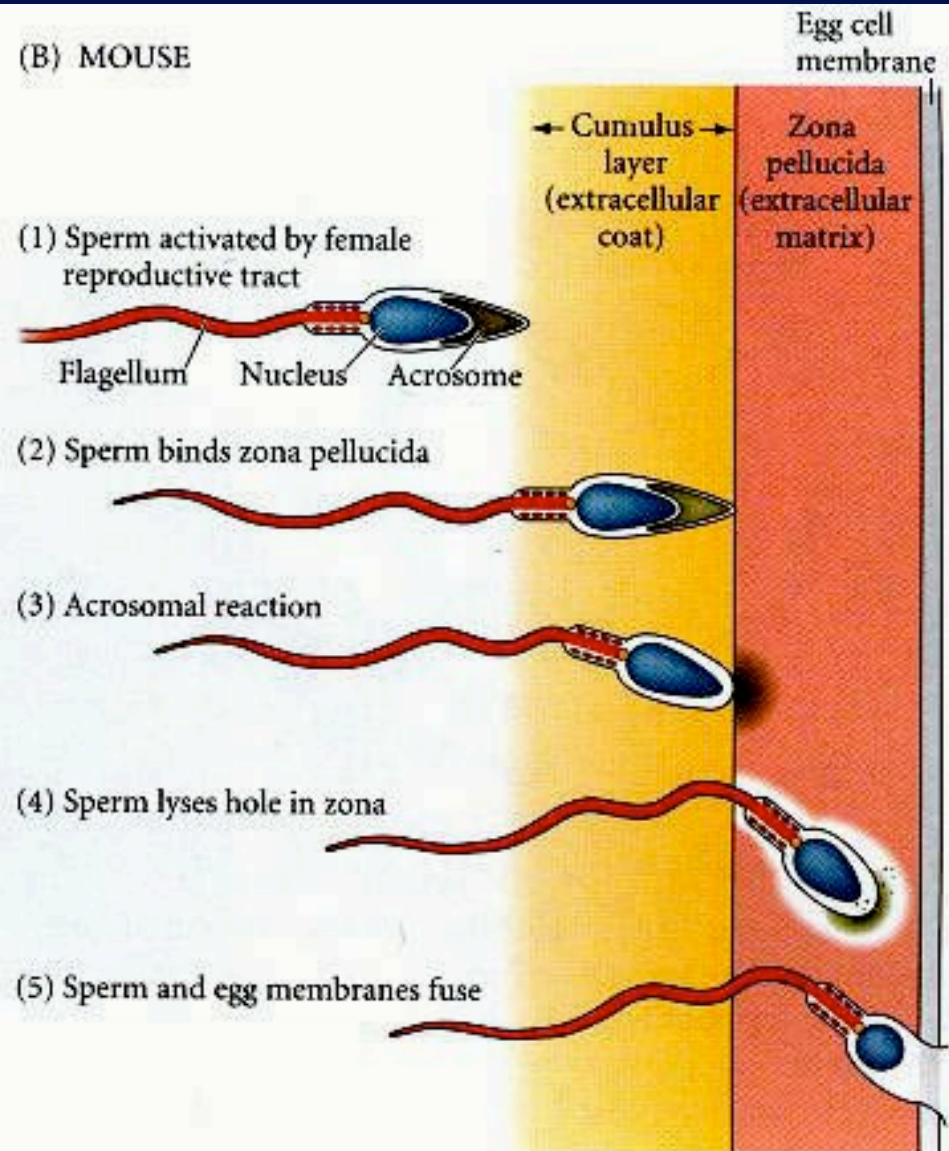


La fusione delle membrane nel riccio di mare

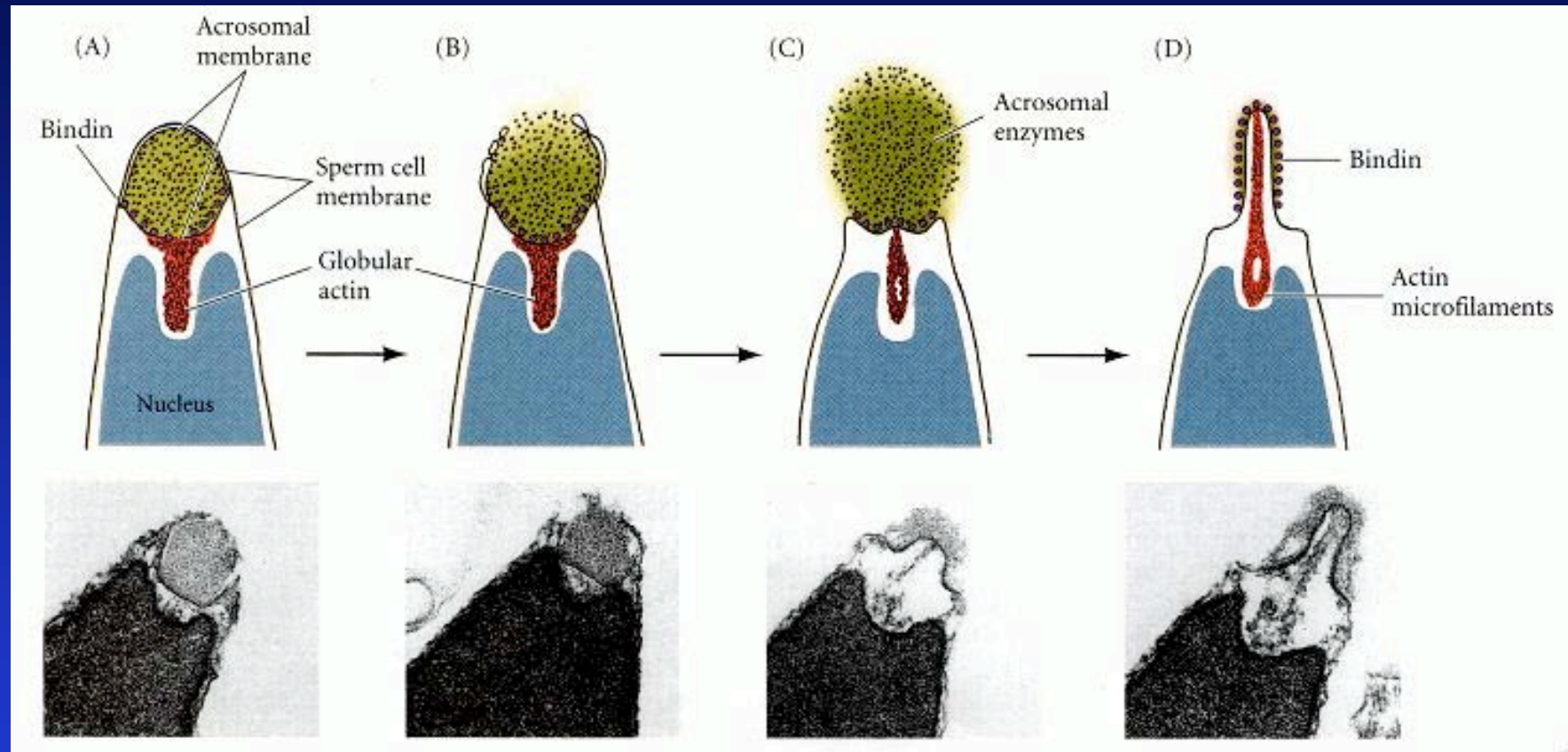
(A) SEA URCHIN



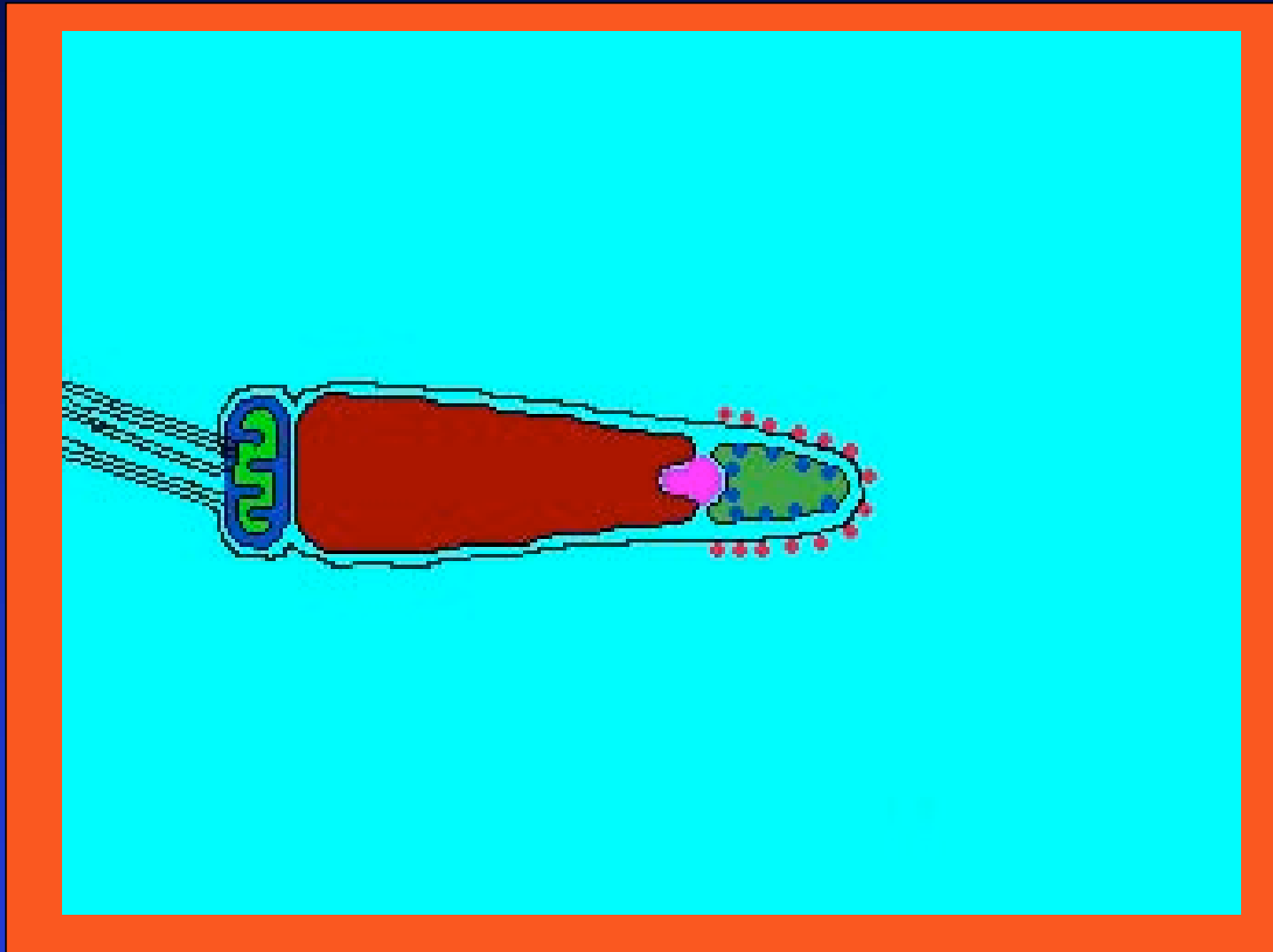
(B) MOUSE

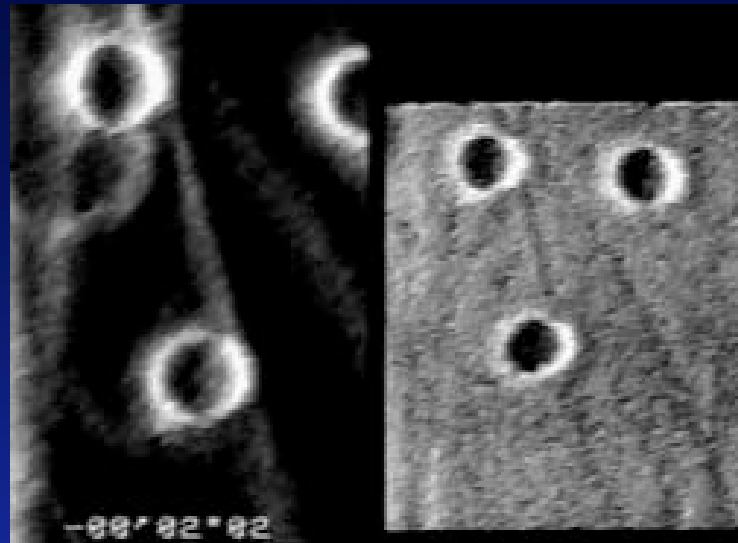


La reazione acrosomale nel riccio di mare

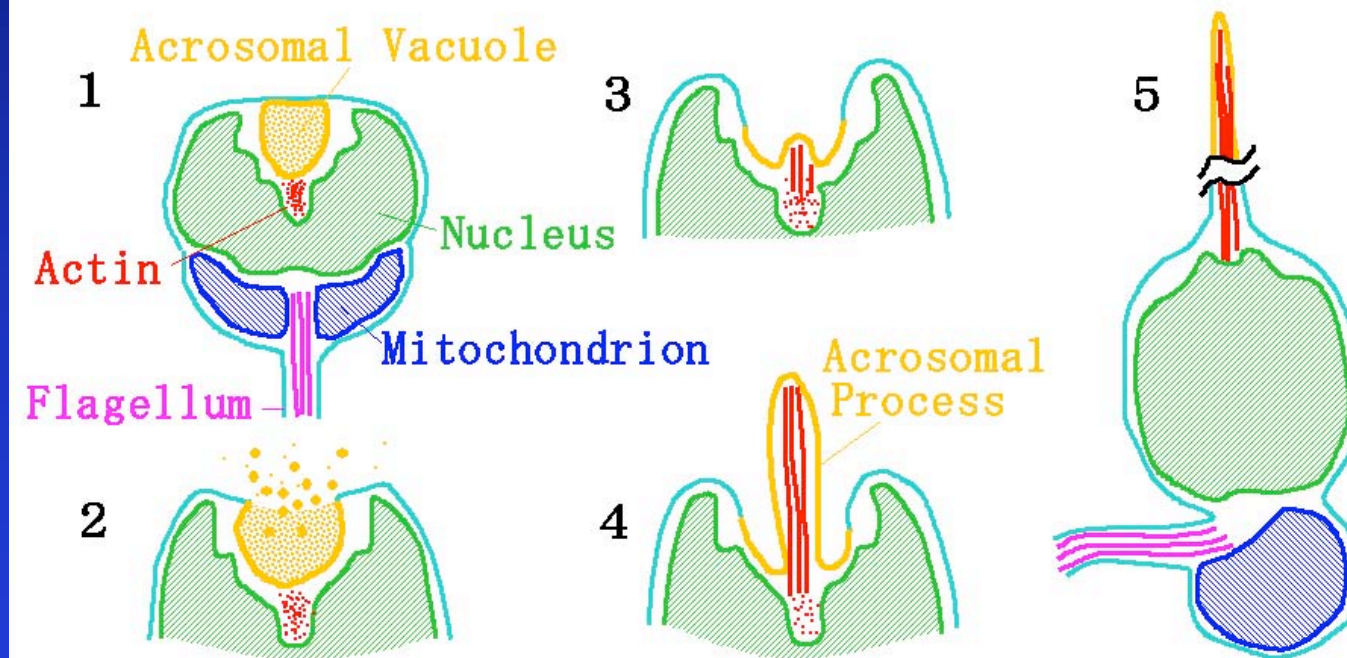


La reazione acrosomale in riccio di mare. II

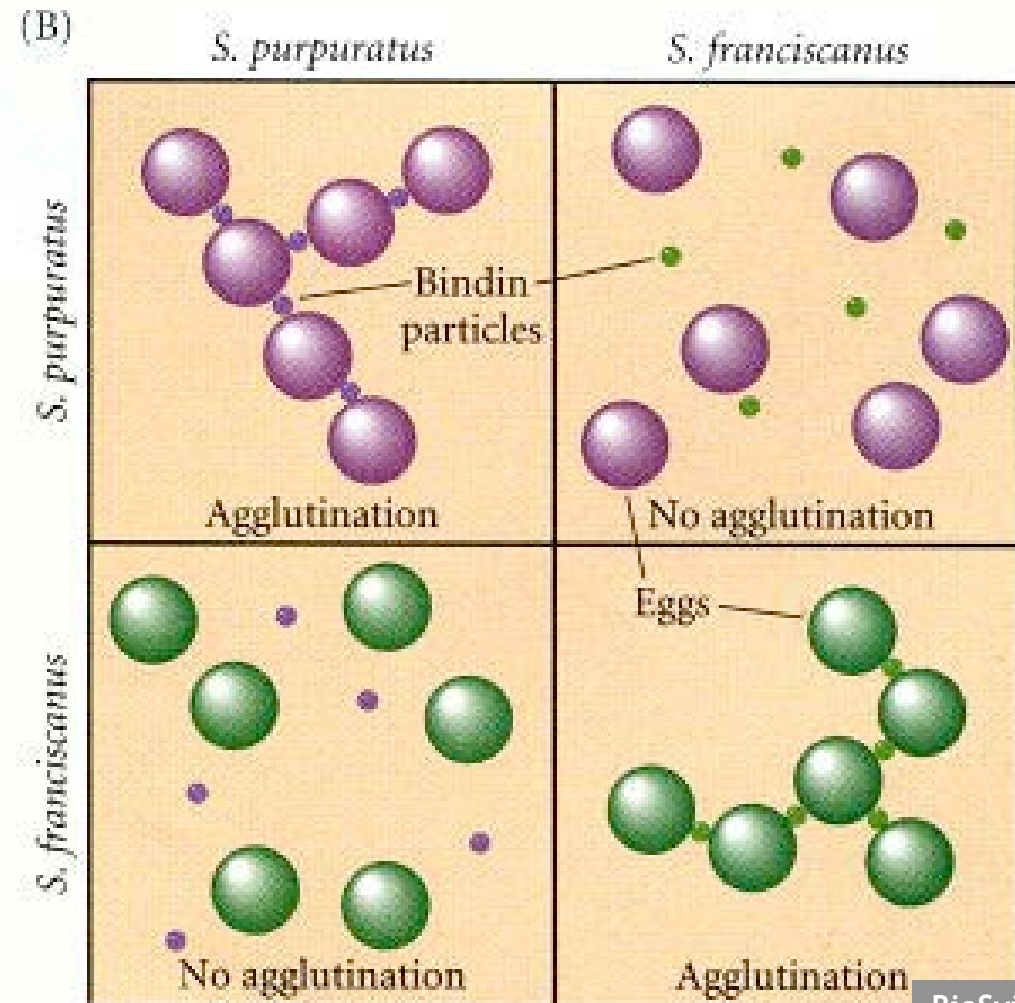
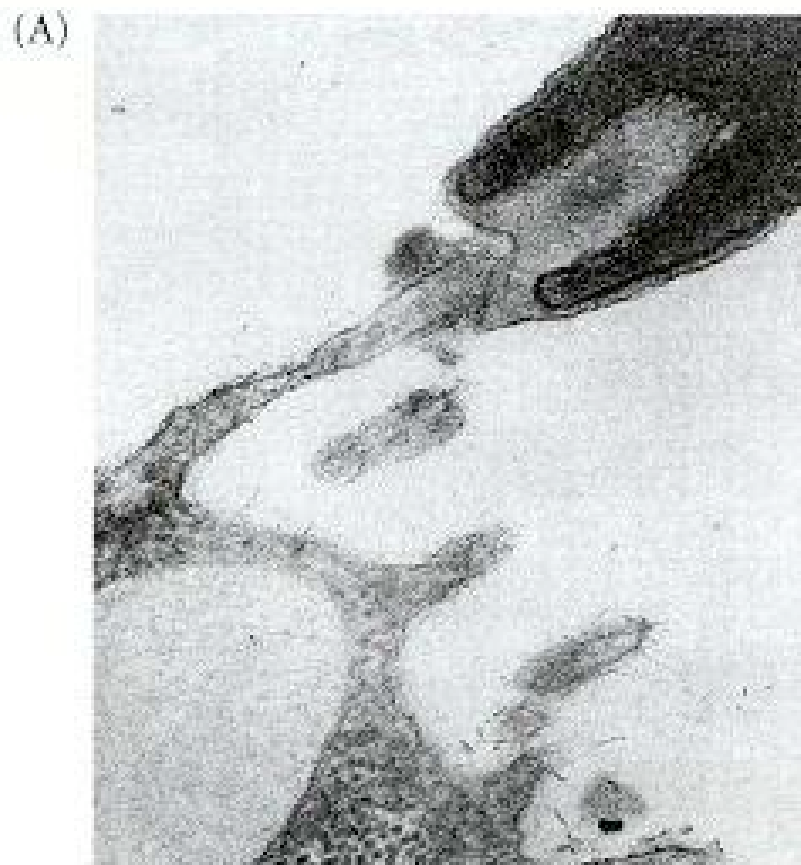




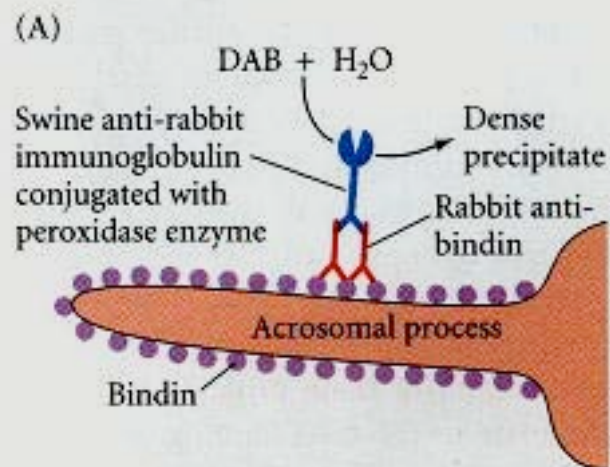
La reazione acrosomale in riccio di mare.III



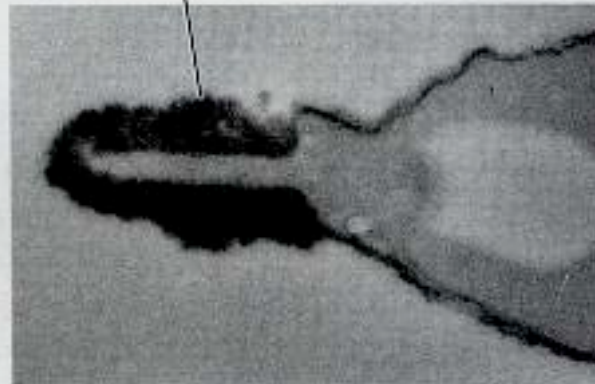
I legami specie-specifici dei processi acrosomali alla superficie dell'uovo in riccio di mare



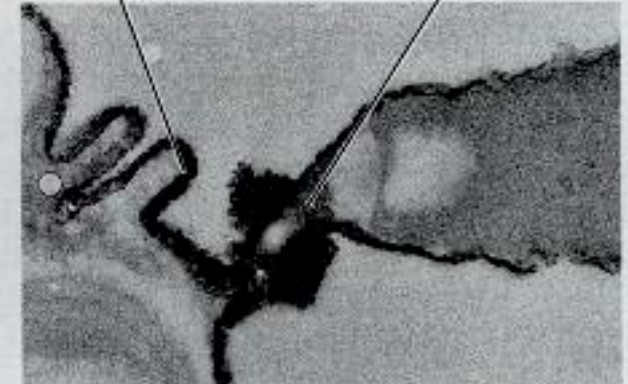
Localizzazione della *bindina* (o *ligandina*) sul processo acrosomale



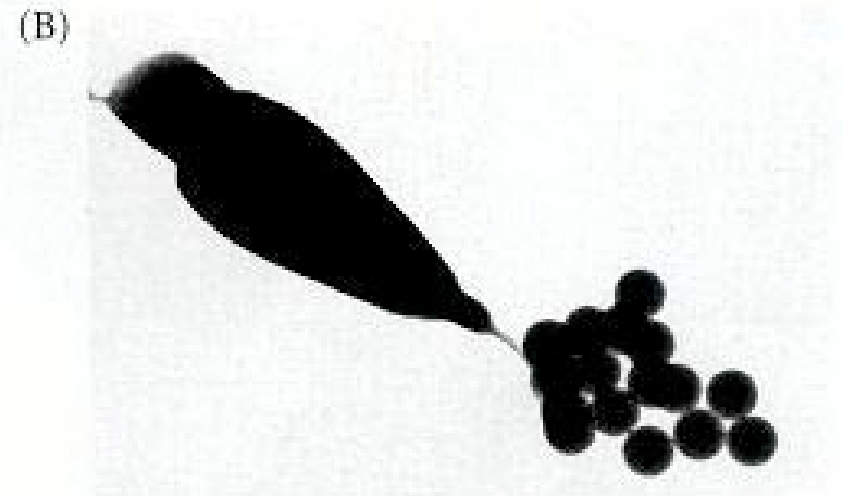
(B) DAB precipitate



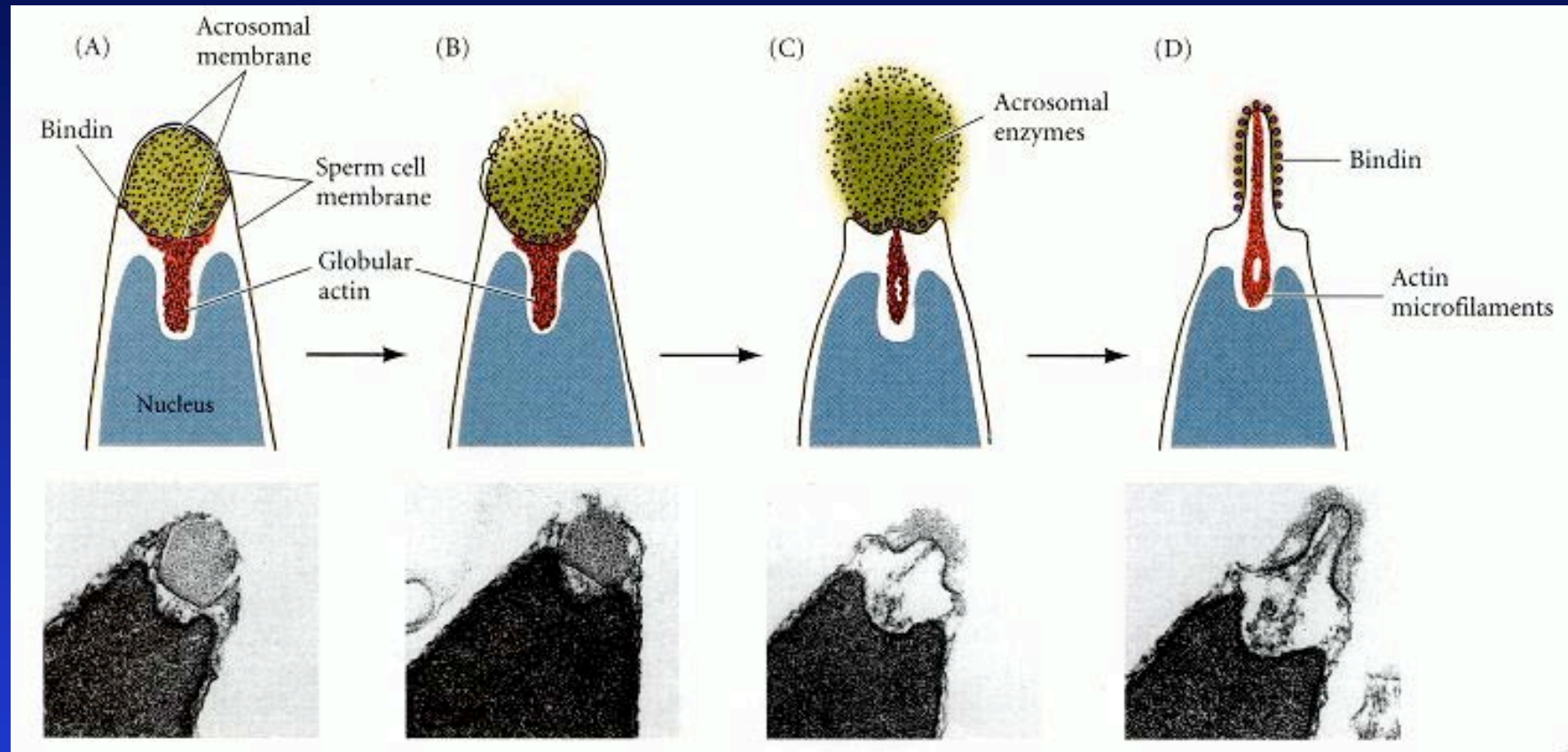
(C) Vitelline membrane of egg Acrosomal process



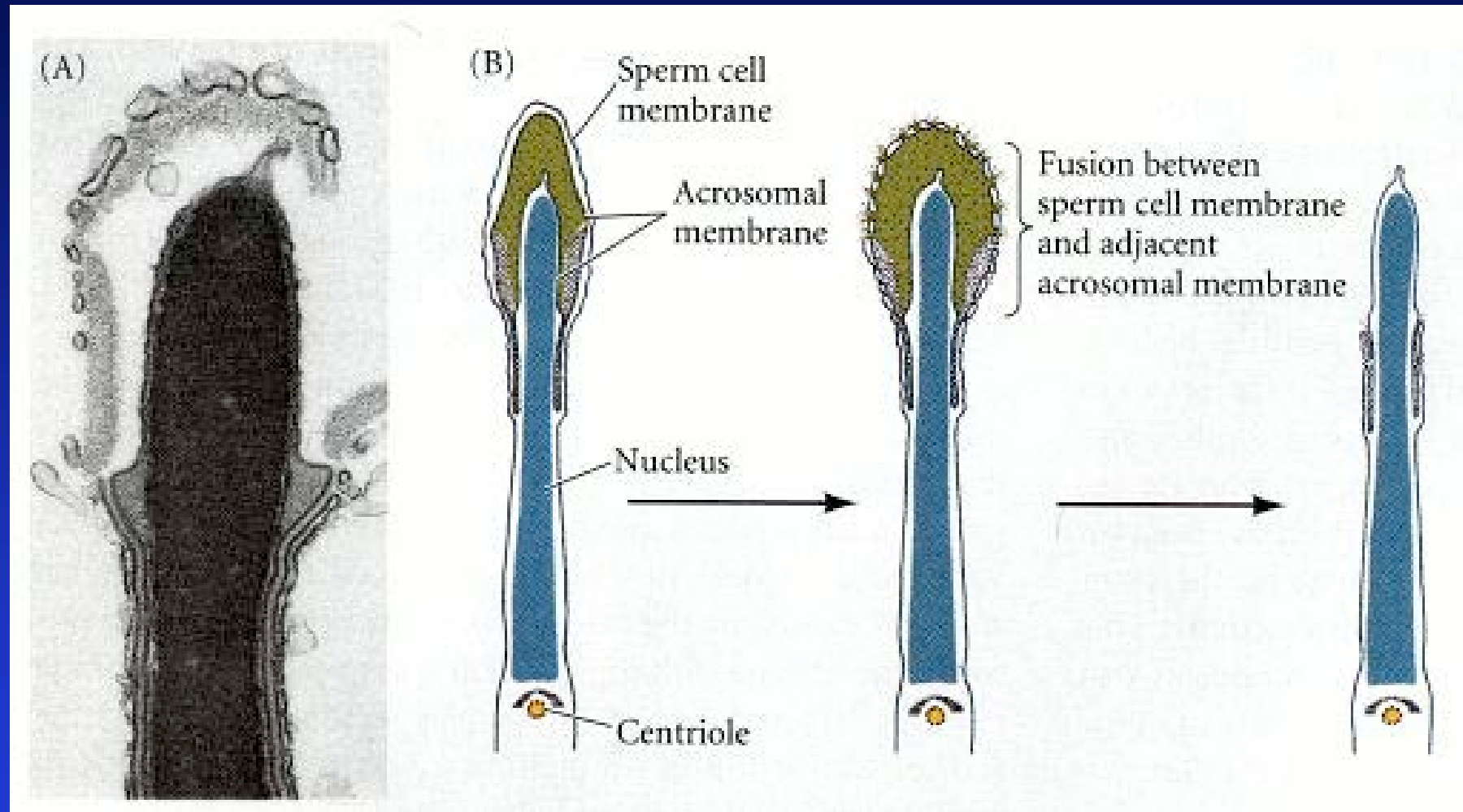
I recettori della *bindina* sull'uovo



La reazione acrosomale nel riccio di mare



La fusione delle membrane nel criceto



Uomo: 280 milioni---->>>> 200 vanno a bersaglio

1. Capacitazione e traslocazione

Traslocazione: motilità flagellare,
attività muscolare uterina.

Capacitazione: insieme di modificazioni fisiologiche
che permettono alla cellula spermatica di essere
competente alla fecondazione

Appena le cellule spermatiche raggiungono
l'**ampolla dell'ovidotto**, acquisiscono la competenza,
ma se si trattengono troppo nei dintorni,
la perdono.

Eventi della Capacitazione

Modifica della fluidita' della membrana spermatica

Rimozione di molecole di superficie: rimozione del blocco all'interazione con l'oocita

Perdita di ioni potassio: potenziale di membrana piu' negativo---->> propensione alla fusione

Fosforilazione proteica estesa

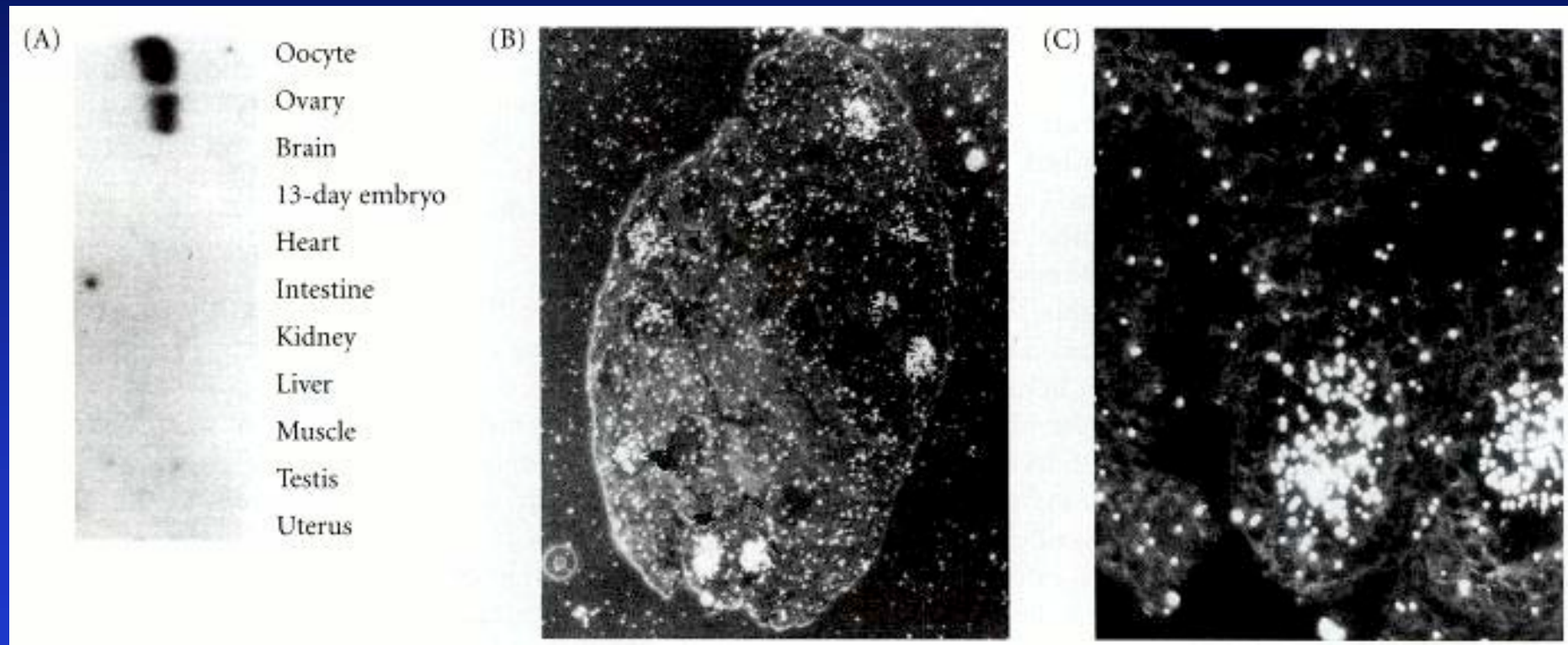
1. Iperattivazione e Chemiotassi

Iperattivazione: operata da fattori solubili presenti nell'ovidotto

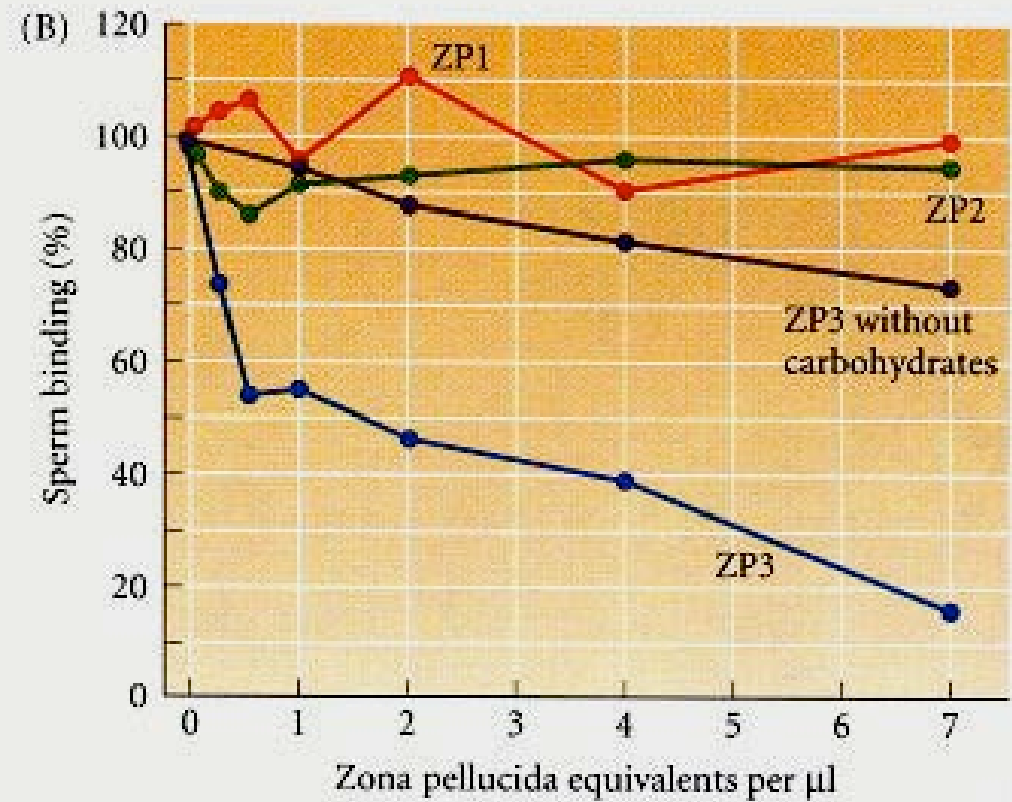
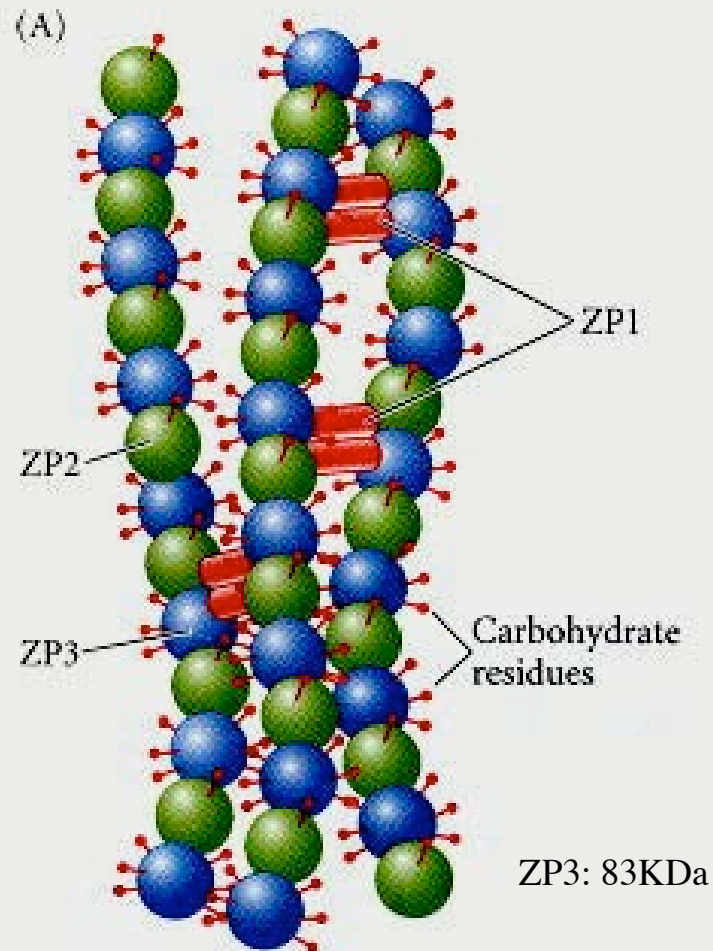
Chemiotassi: operata da fattori presenti nel fluido follicolare secreti da oociti in grado di essere fecondati (circa la metà in condizioni sperimentali).

Similitudine col peptide **RESACT** nel riccio di mare

Il gene ZP3 nello sviluppo dell'oocita



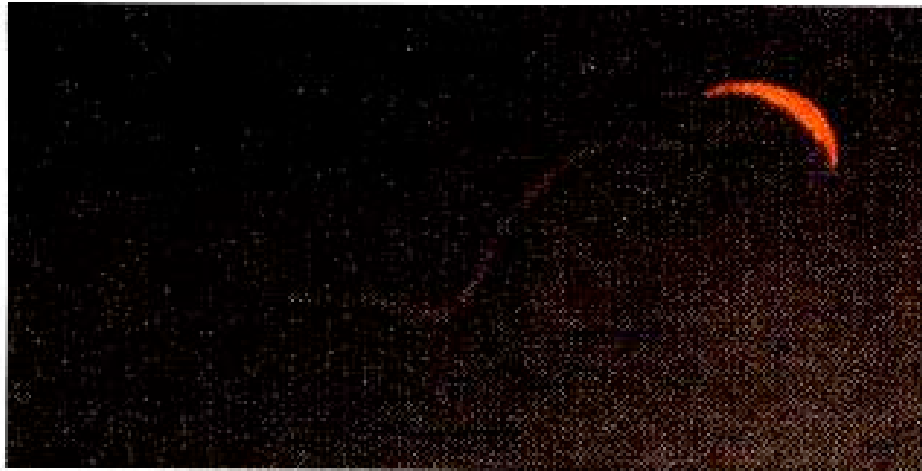
La proteina ZP3



Saggio di inibizione

La proteina spermatica che lega ZP3

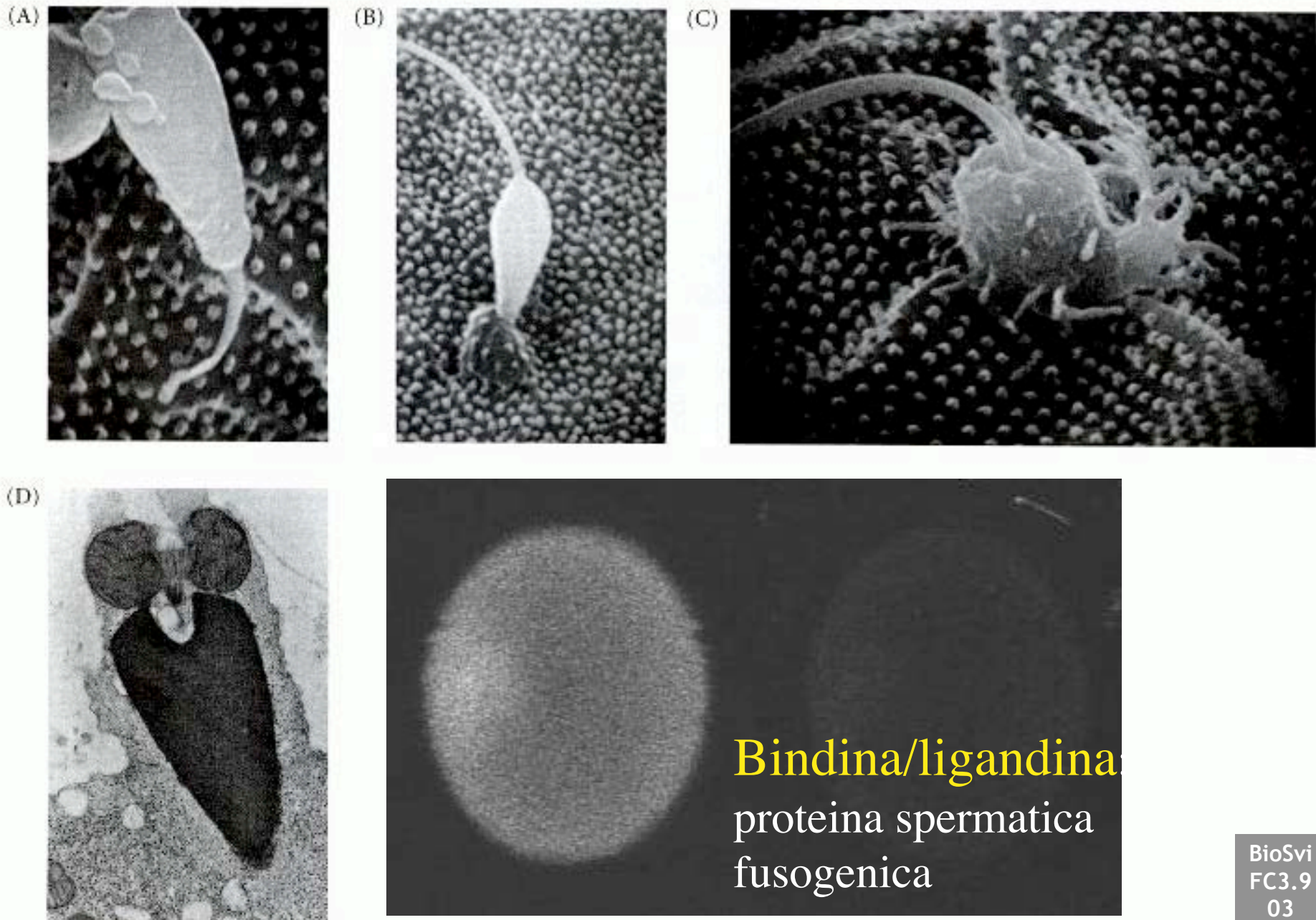
(A)

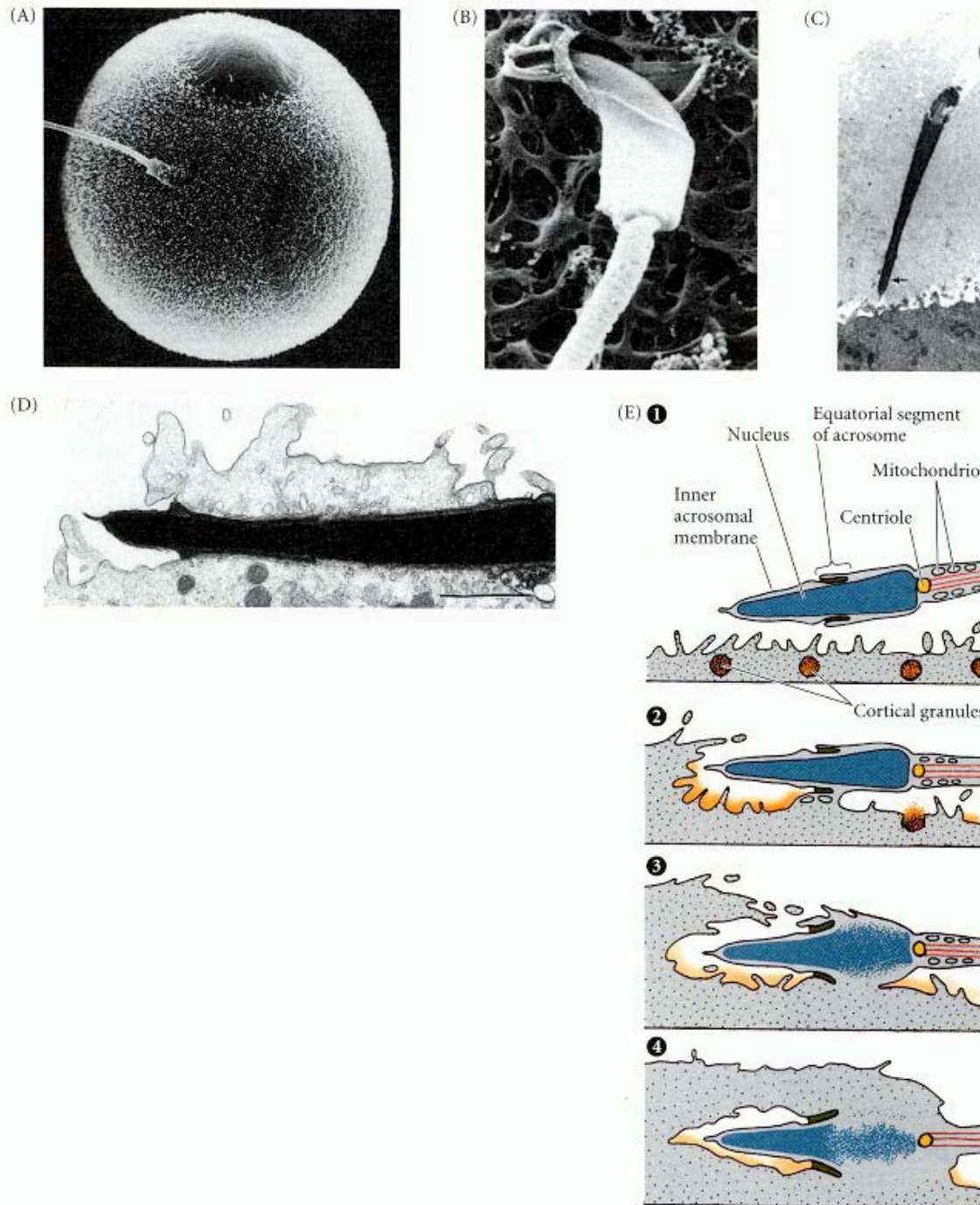


(B)



L'ingresso degli spermatozoi nell'uovo di riccio di mare

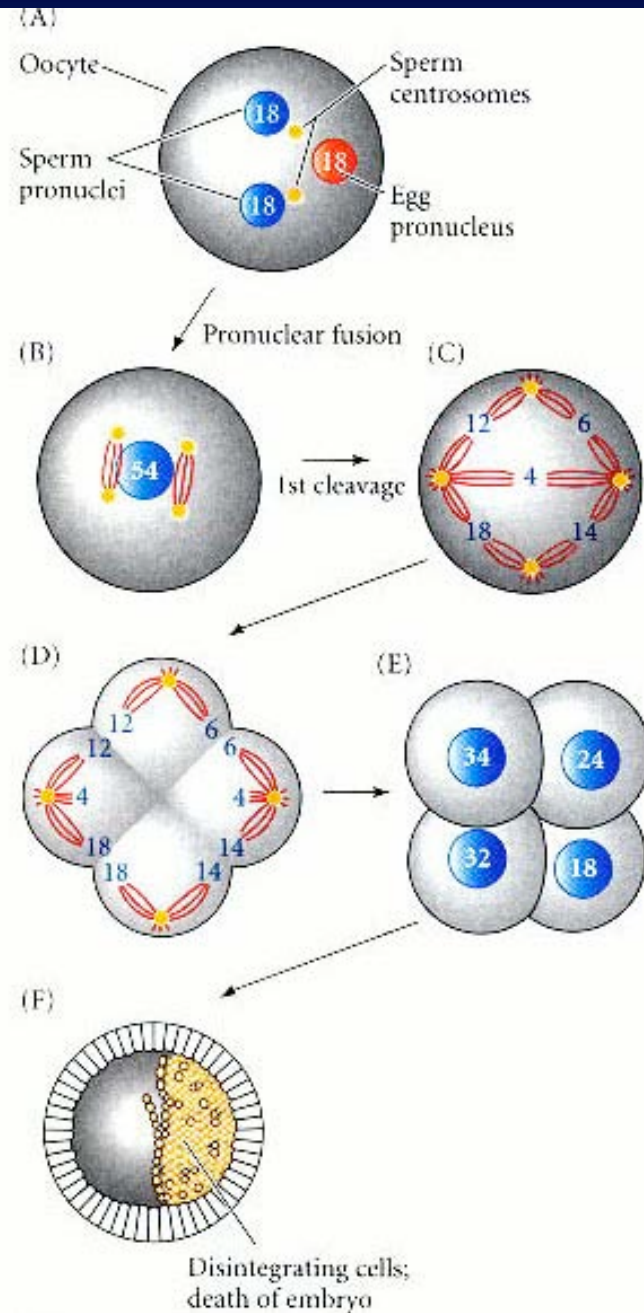




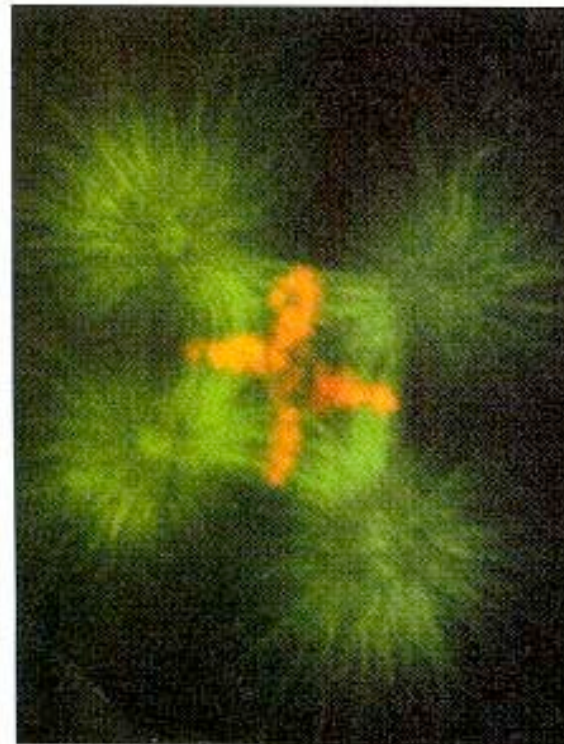
L'ingresso degli spermi nell'uovo dei mammiferi

Fertiline:
proteine spermatiche
fusogeniche

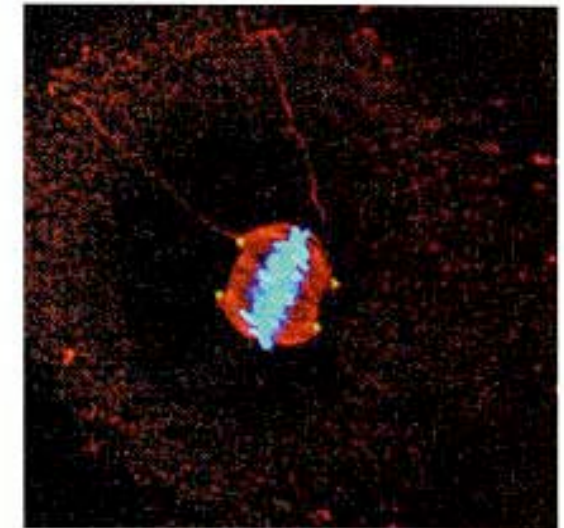
Lo sviluppo aberrante di un uovo di riccio di mare dispermico



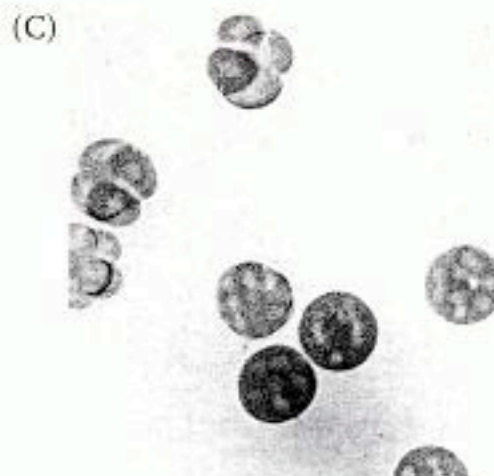
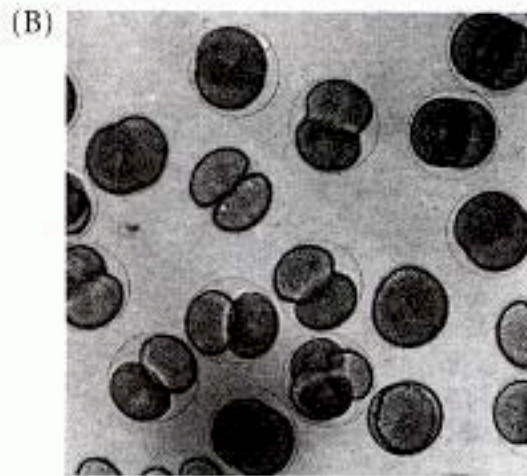
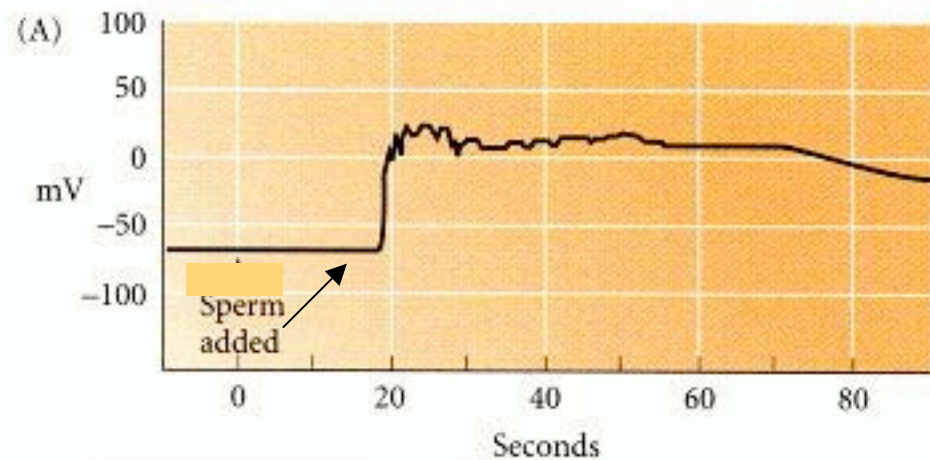
(G)



(H)



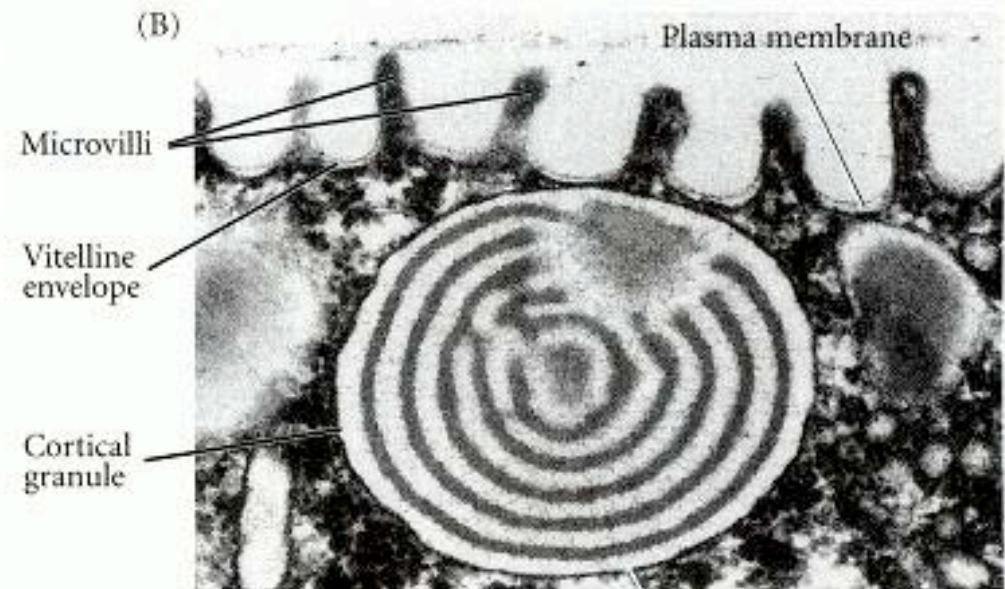
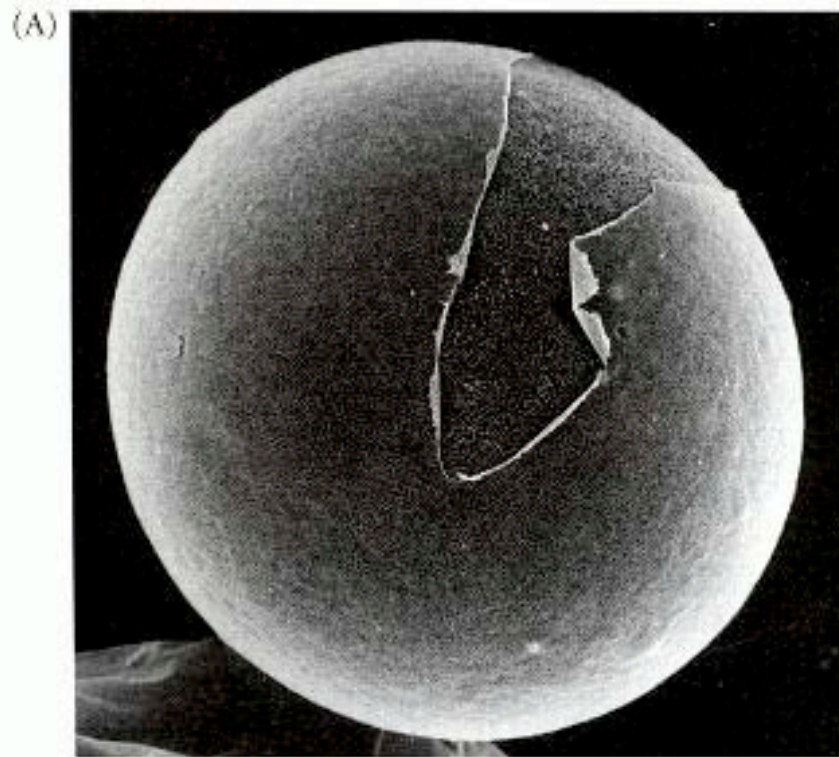
Il blocco rapido della polispermia



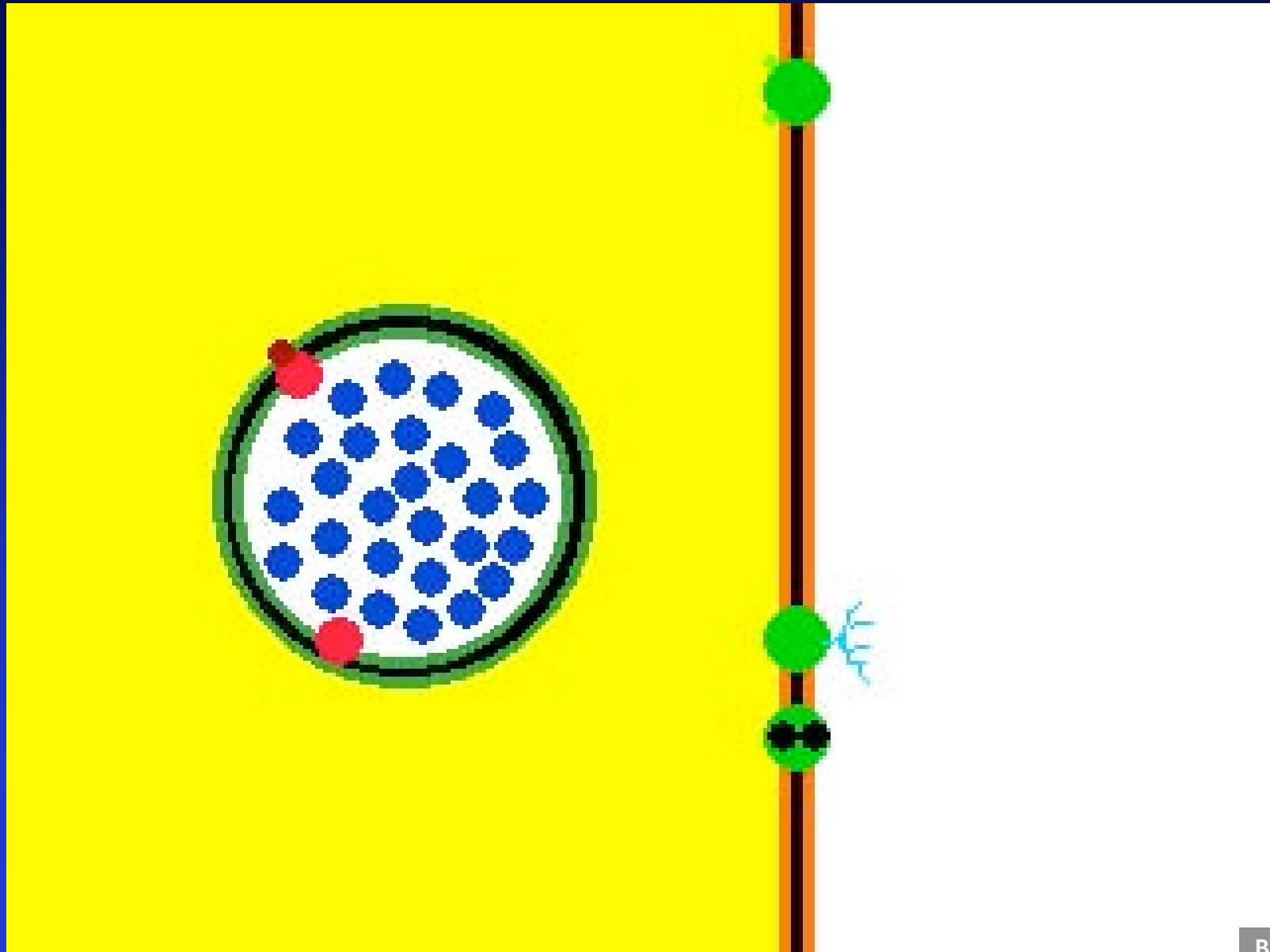
(D)

Na ⁺ (mM)	Percentage of polyspermic eggs
490	22
360	26
120	97
50	100

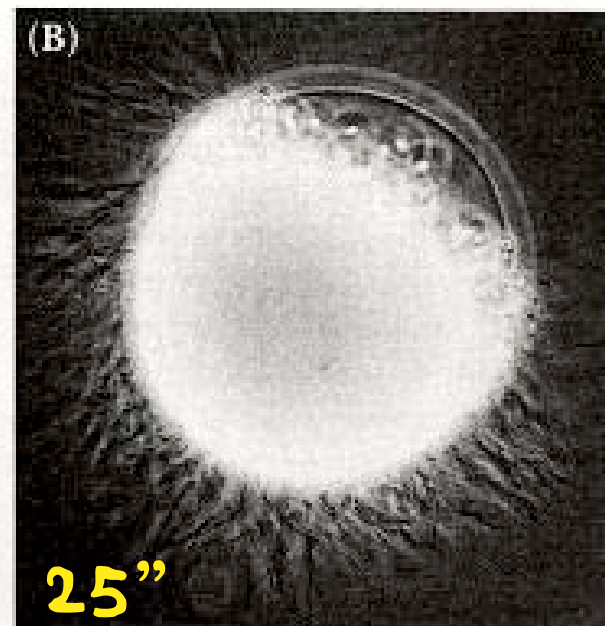
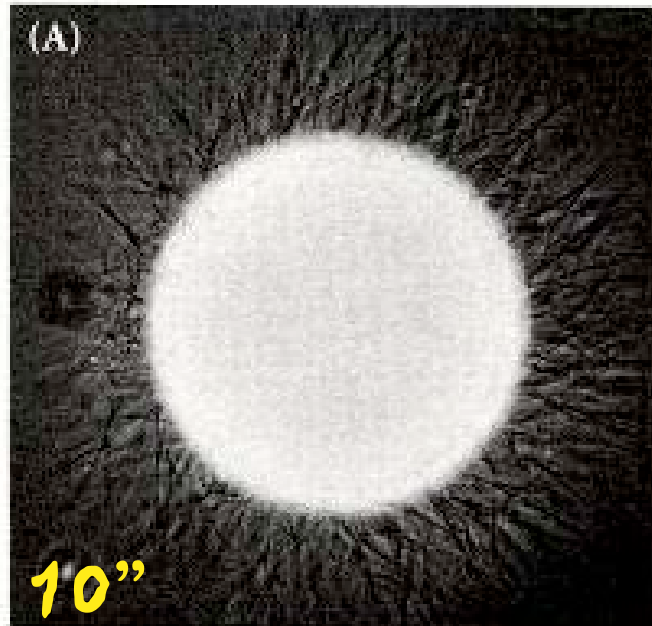
Superficie dell'uovo di riccio di mare



L'esocitosi dei granuli corticali.III



Formazione dell'involucro di fecondazione e rimozione dell'eccesso di sperma



Superficie dell'uovo di riccio di mare: I granuli corticali

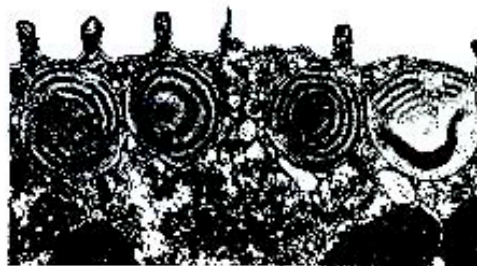
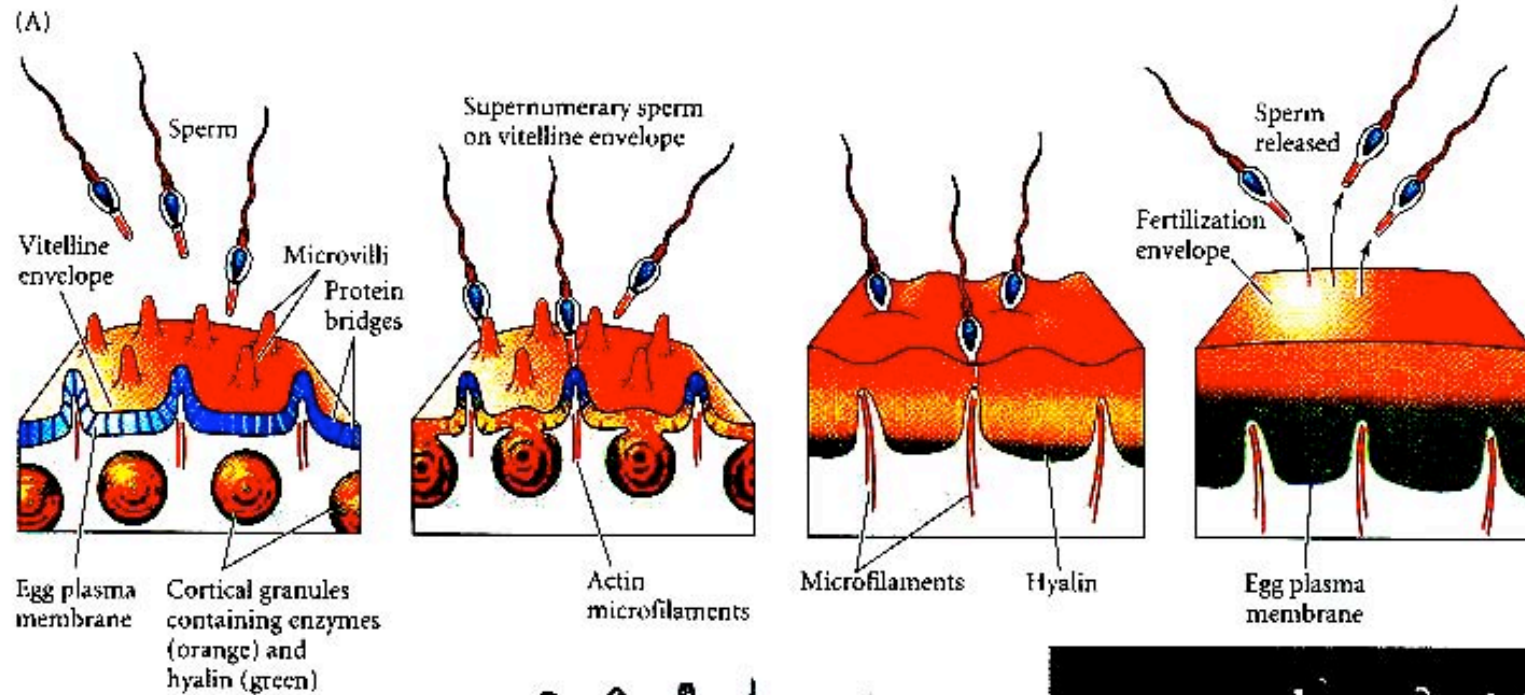


Contenuto dei granuli corticali

- | | |
|-----------------------|--|
| 1. Proteasi | a. Taglio delle proteine che
connettono MV a MP

b. Taglio dei recettori della
bindina |
| 2. Mucopolisaccaridi | Gradiente osmotico |
| 3. Enzima perossidasi | Rinforzo della MF mediante legame
trasversale sui residui tirosinici |
| 4. Proteina ialina | Rivestimento interno dell'uovo |

L'esocitosi dei granuli corticali



(B)



(C)

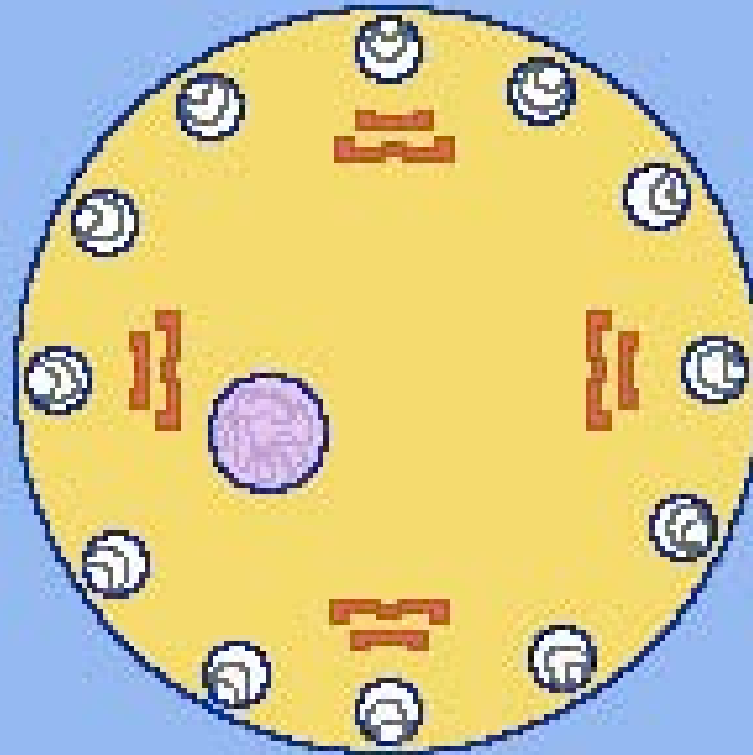


(D)

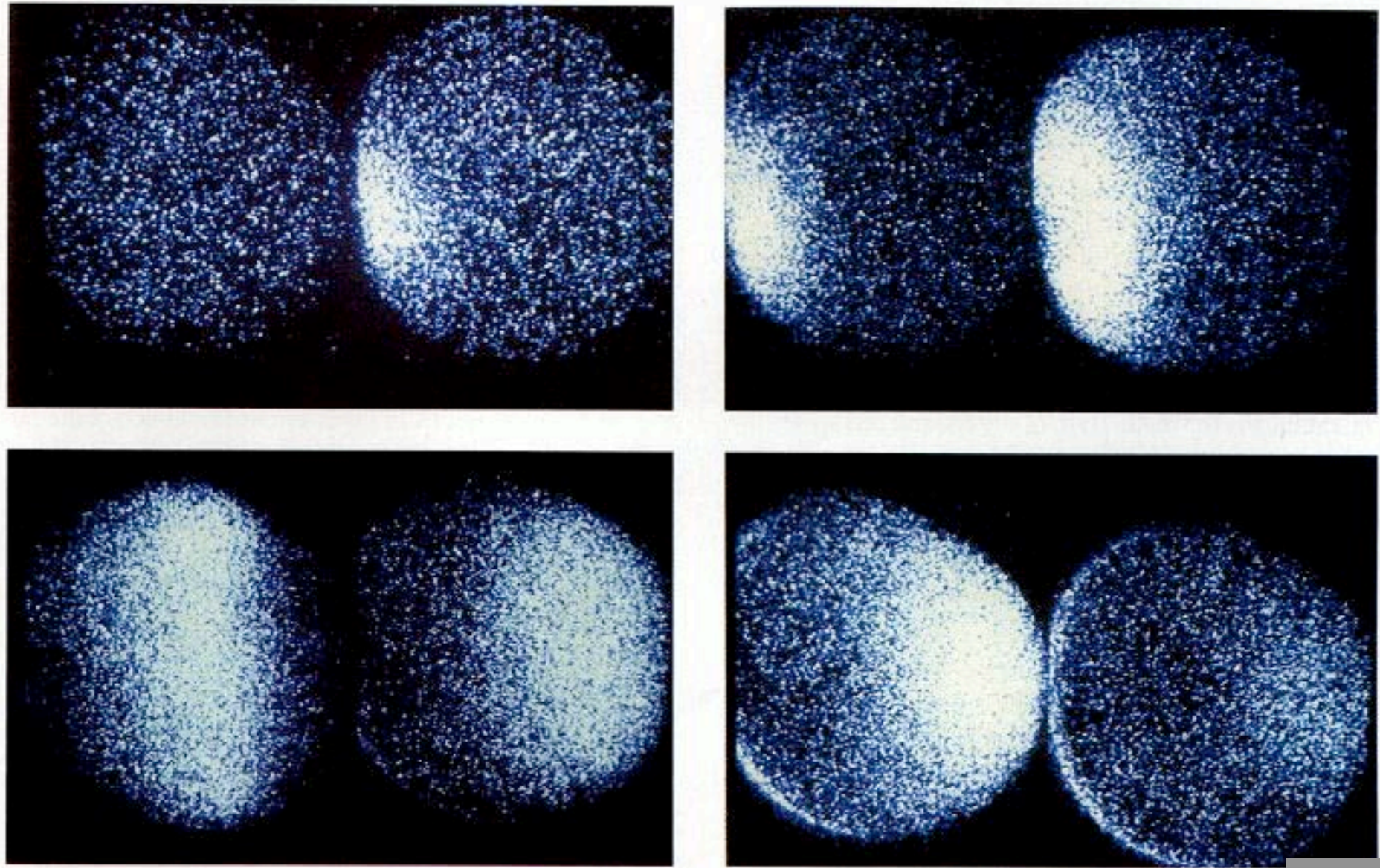


(E)

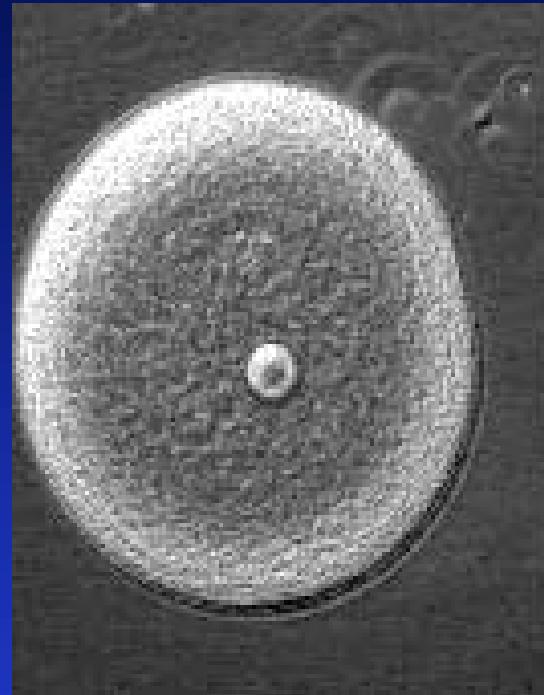
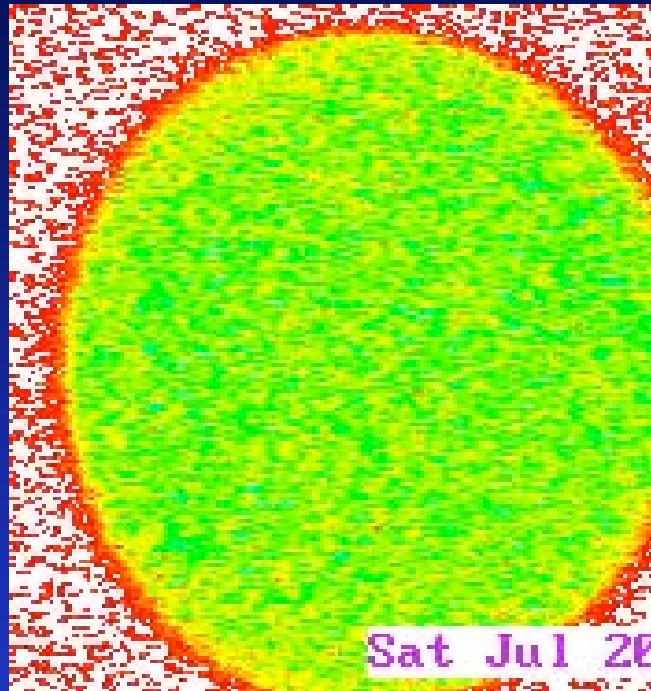
Riassunto degli eventi alla fecondazione



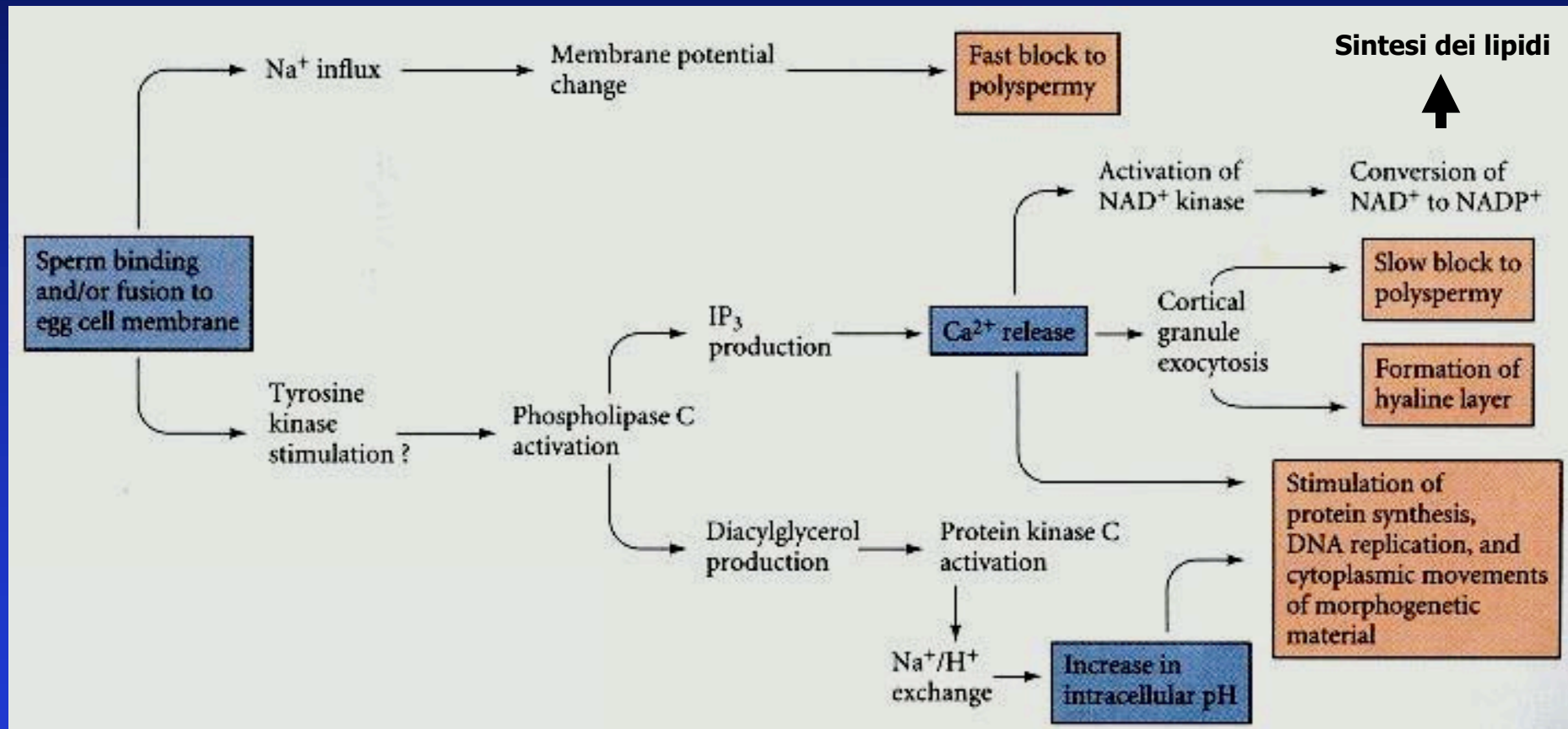
Il rilascio intracitoplasmatico del calcio in fecondazione



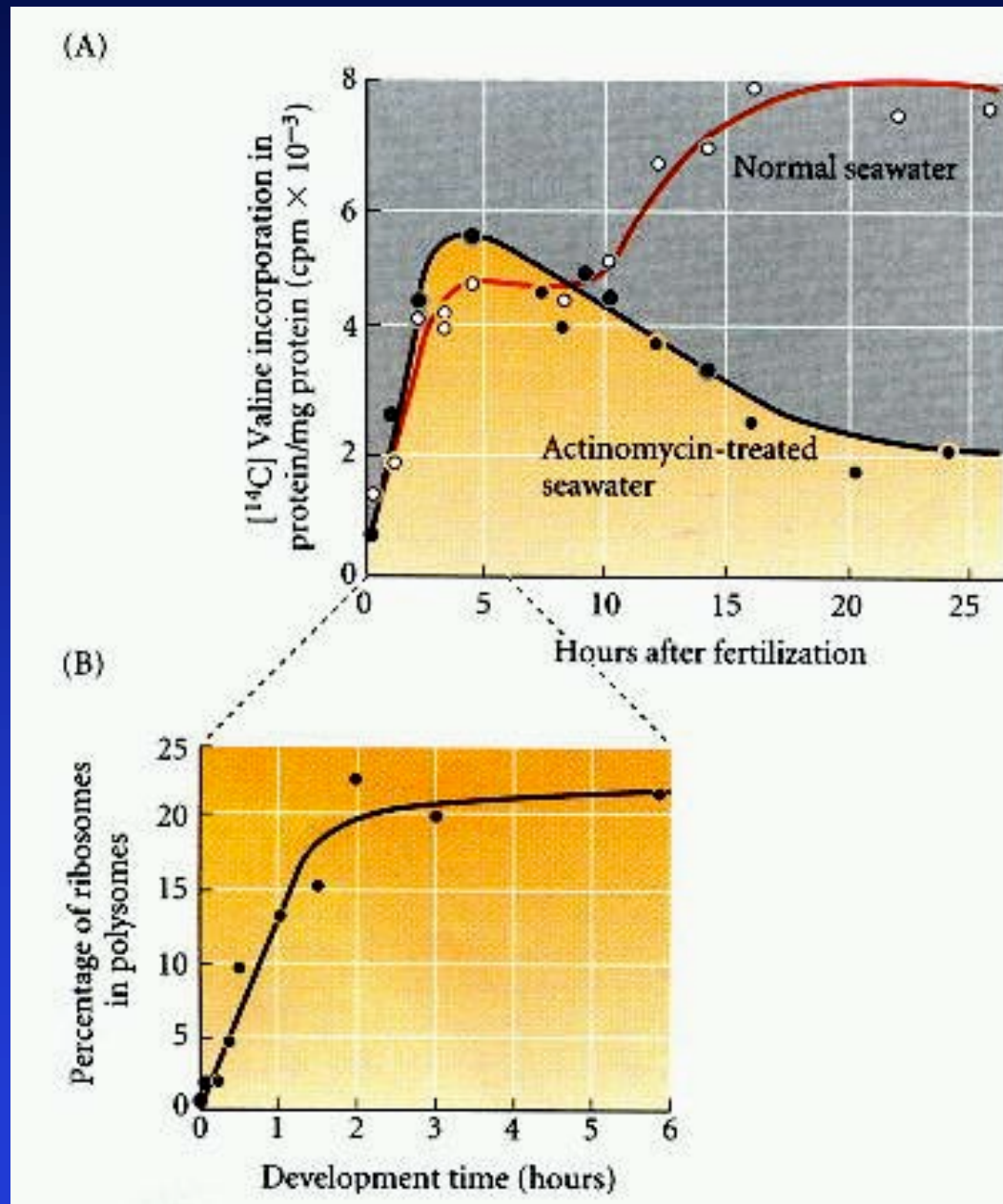
Il rilascio intracitoplasmatico del calcio in fecondazione.II



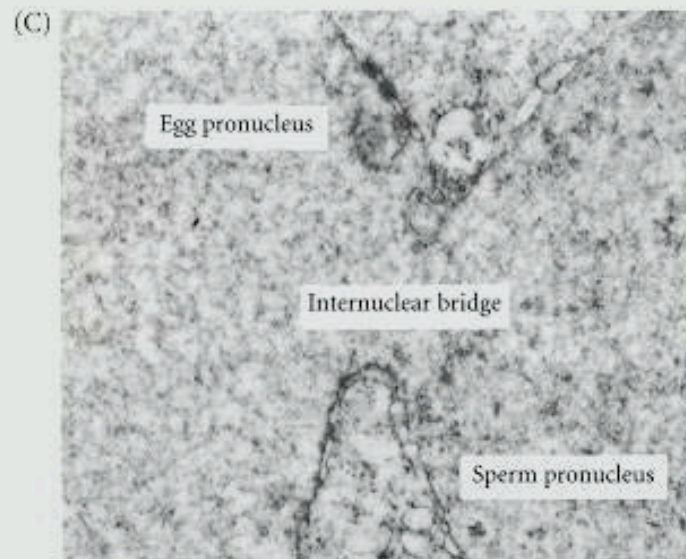
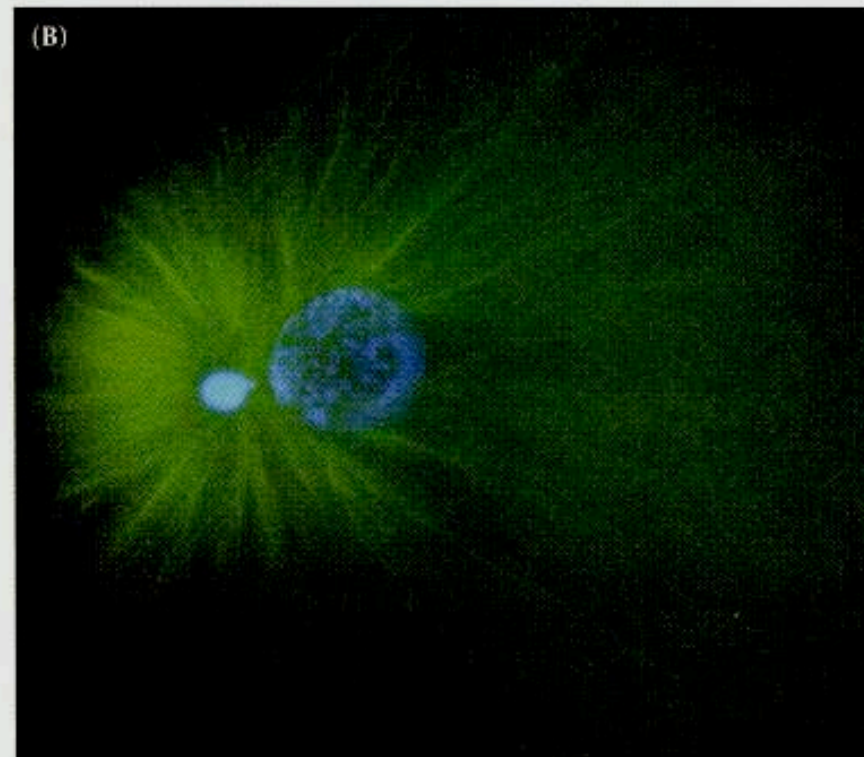
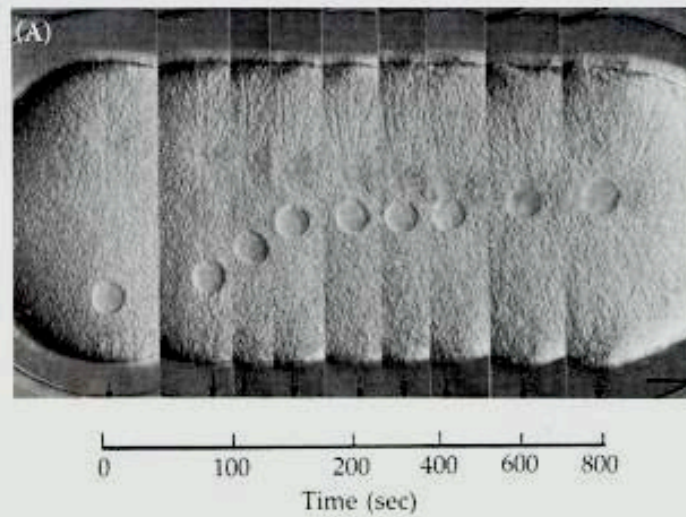
L'attivazione dell'uovo di riccio di mare



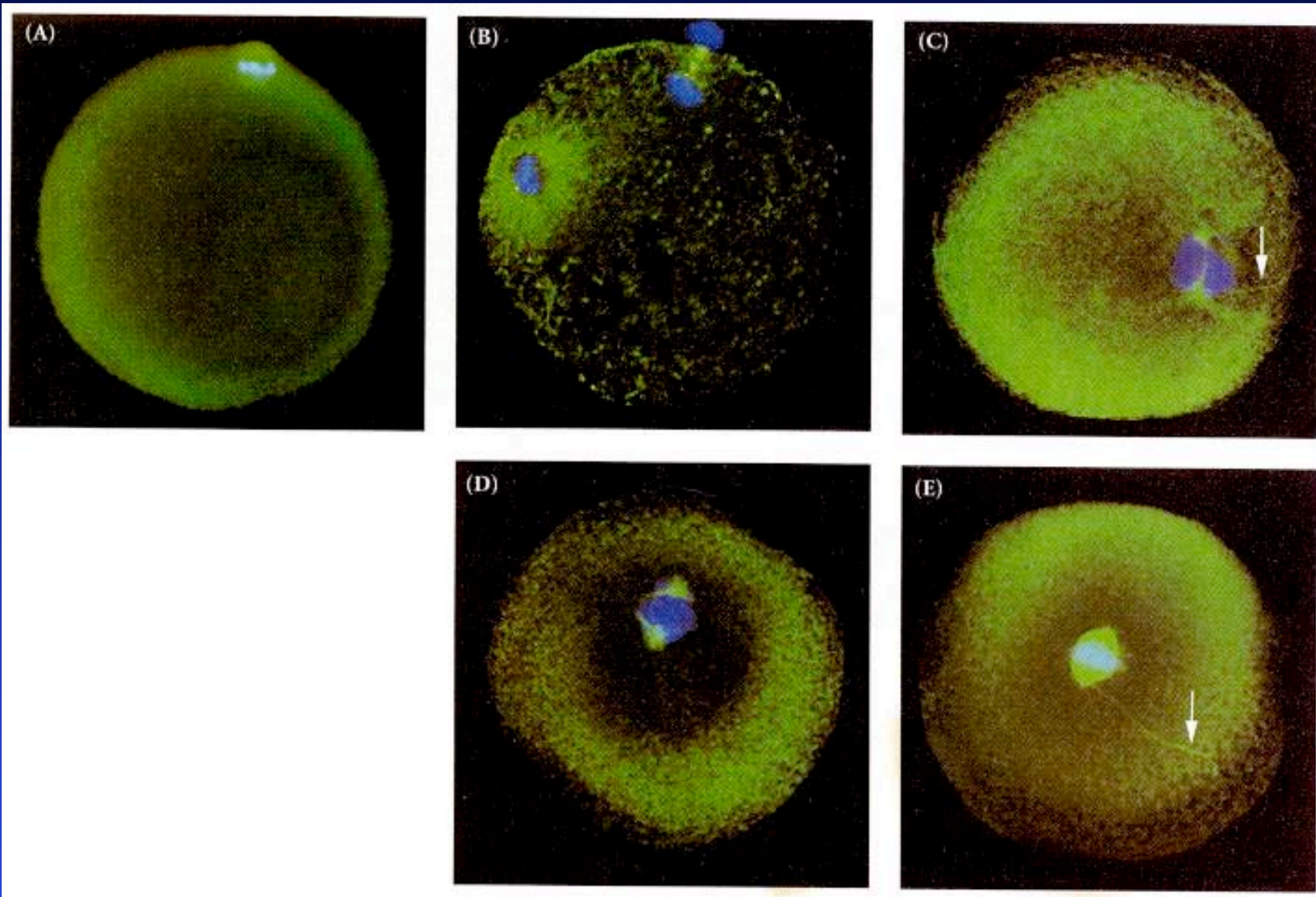
L'oocita sintetizza proteine a partire da mRNA materni



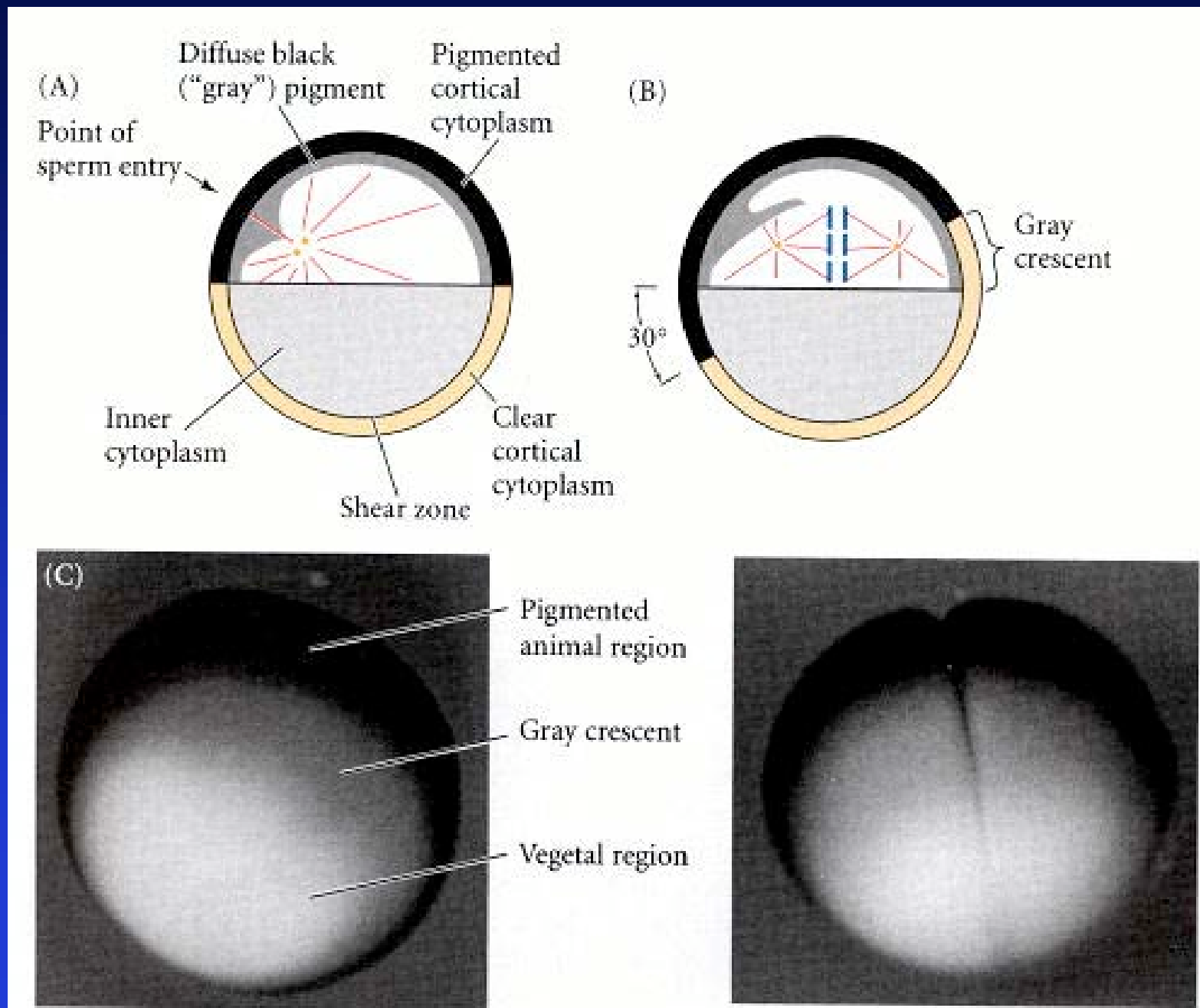
La fase nucleare nella fecondazione



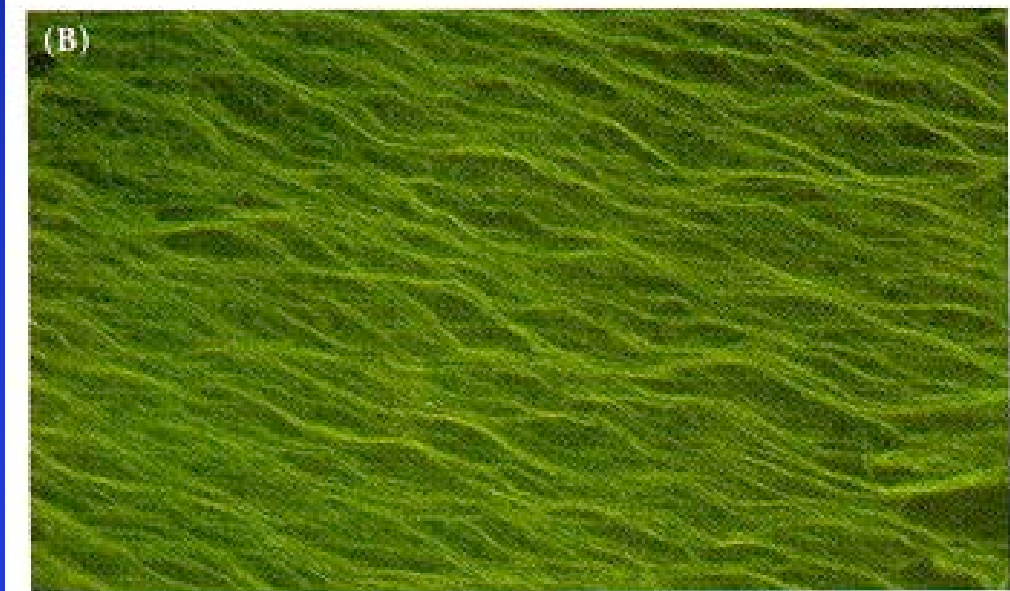
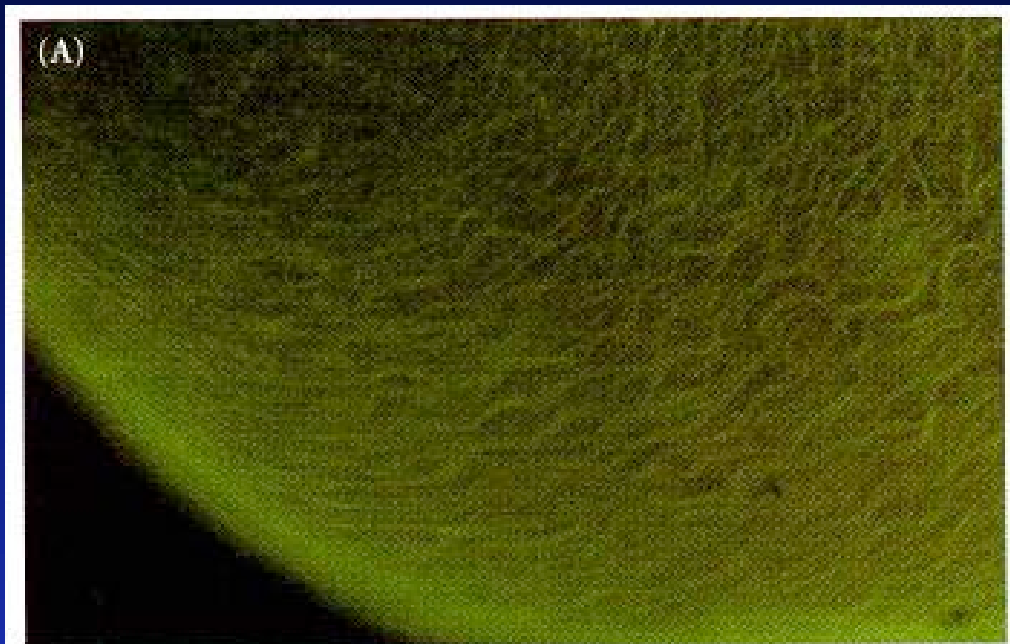
I movimenti del pronucleo umano



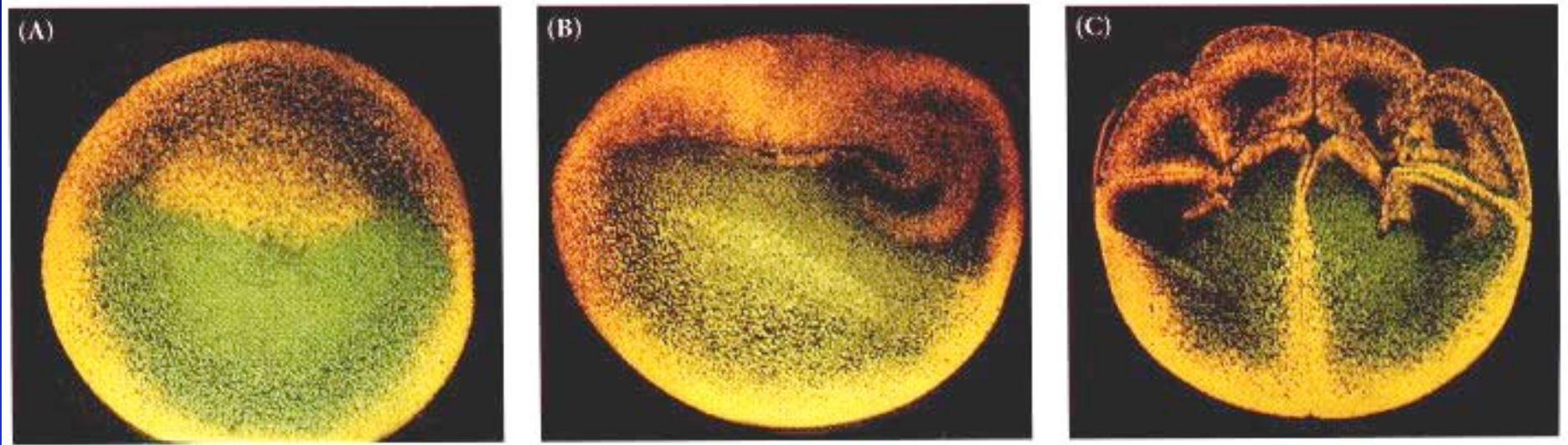
La riorganizzazione del citoplasma nell'oocita fecondato



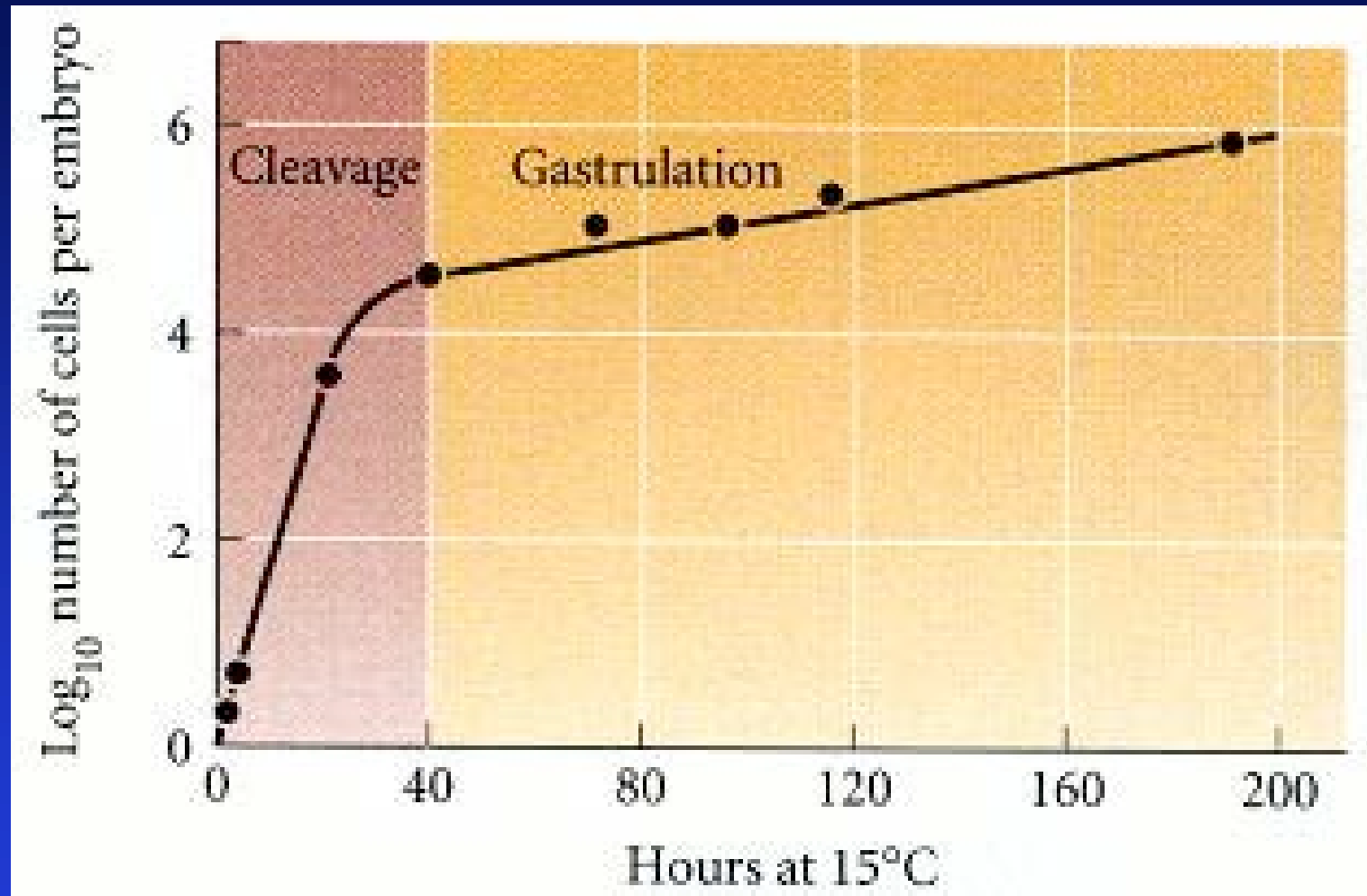
Estensione dei microtubuli lungo l'asse dorso-ventrale



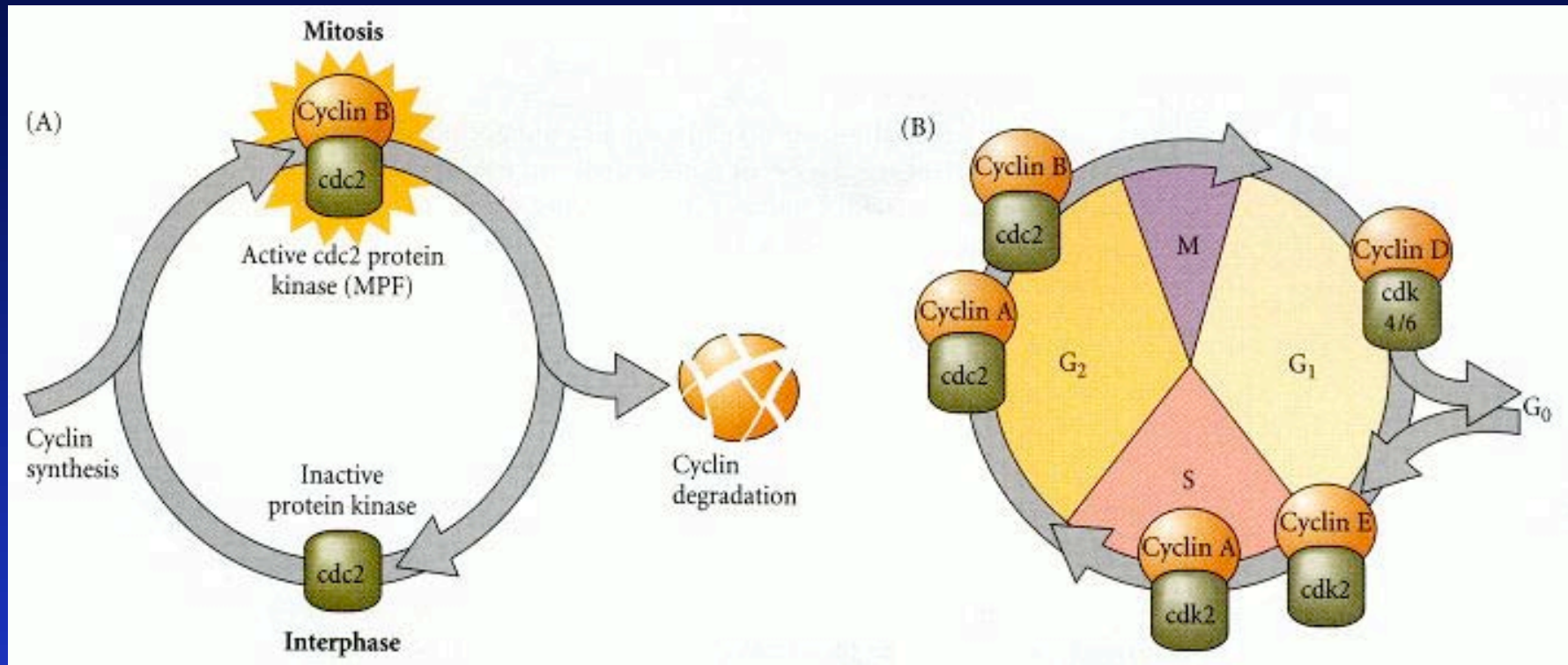
Riarrangiamenti citoplasmatici negli anfi



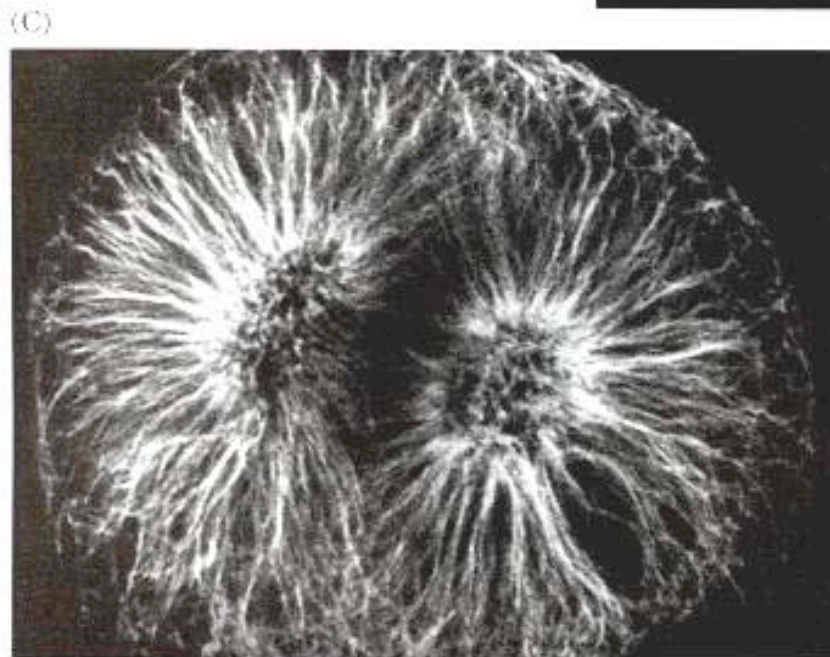
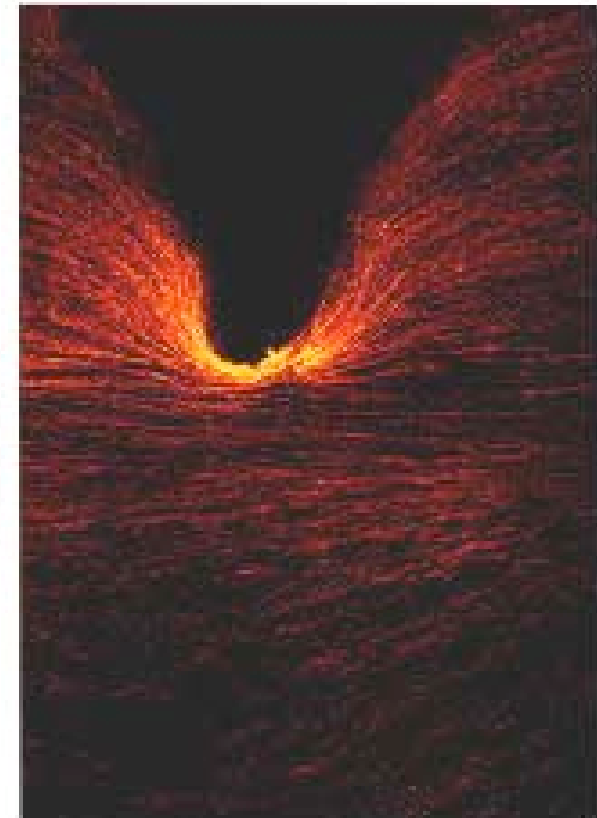
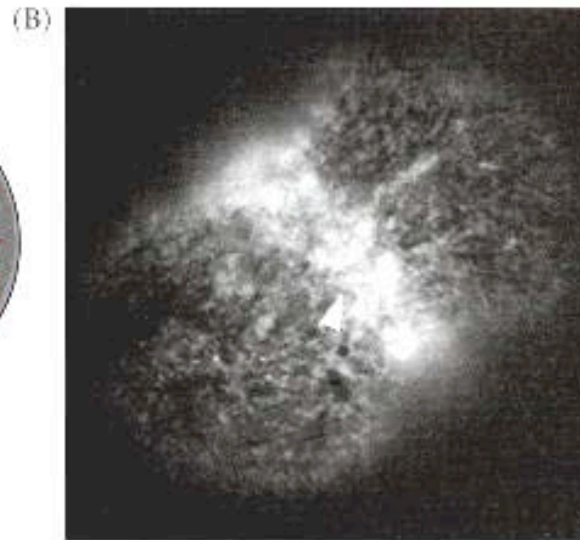
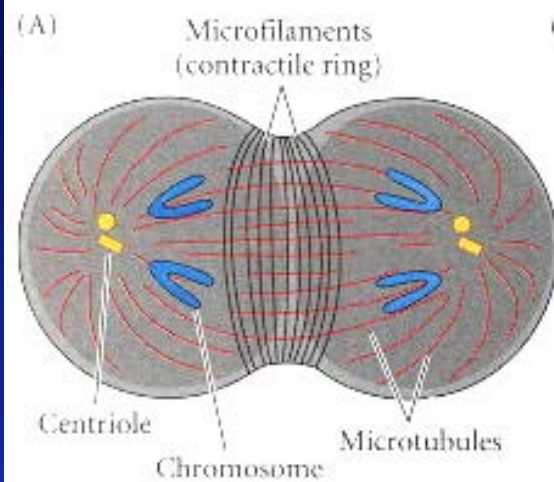
La moltiplicazione cellulare durante lo sviluppo degli anfibi



Il ciclo cellulare delle cellule somatiche e dei blastomeri



Il ruolo dei microtubuli e dei microfilamenti nella divisione



Le varie modalita' di segmentazione

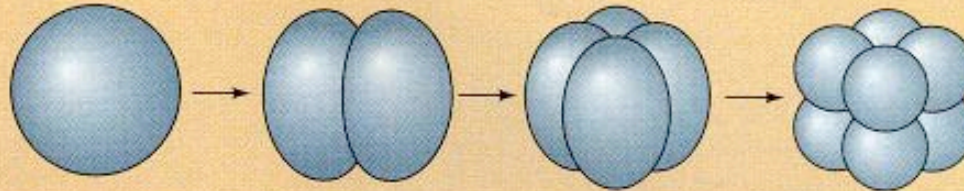
I. HOLOBLASTIC (COMPLETE CLEAVAGE)

A. Isolecithal

(Sparse, evenly distributed yolk)

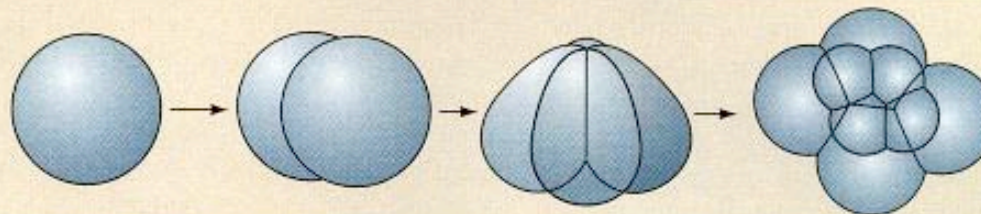
1. Radial

Echinoderms, amphioxus



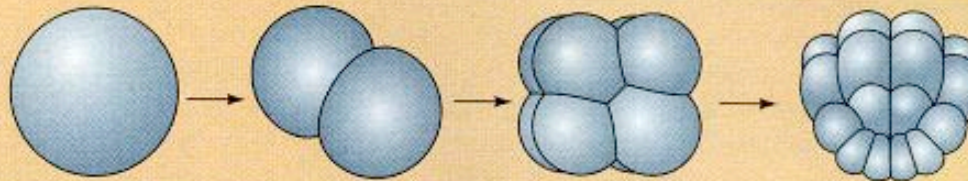
2. Spiral

Annelids, molluscs,
flatworms



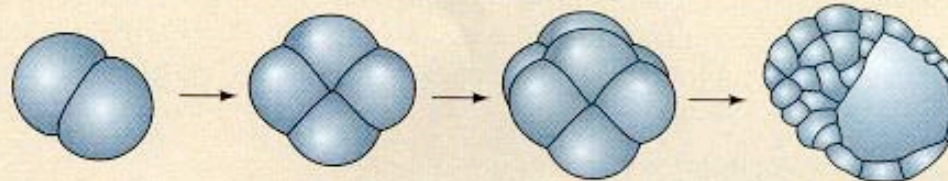
3. Bilateral

Tunicates



4. Rotational

Mammals, nematodes

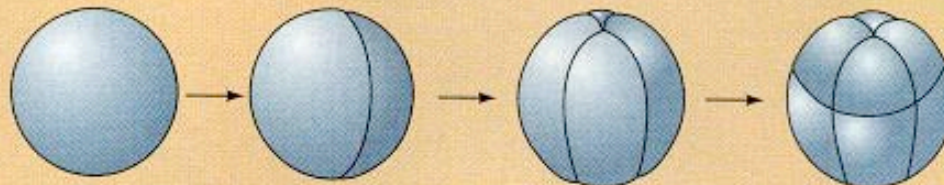


B. Mesolecithal

(Moderate vegetal yolk disposition)

Radial

Amphibians



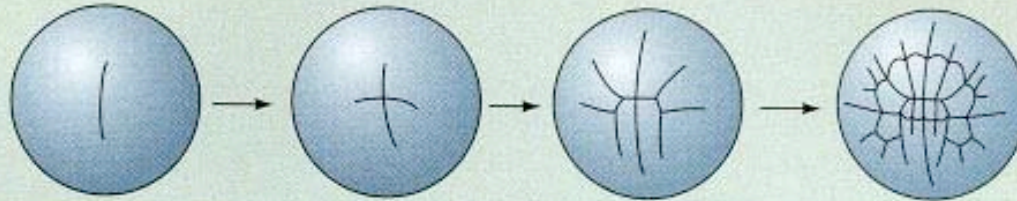
Le varie modalita' di segmentazione

II. MEROBLASTIC (INCOMPLETE CLEAVAGE)

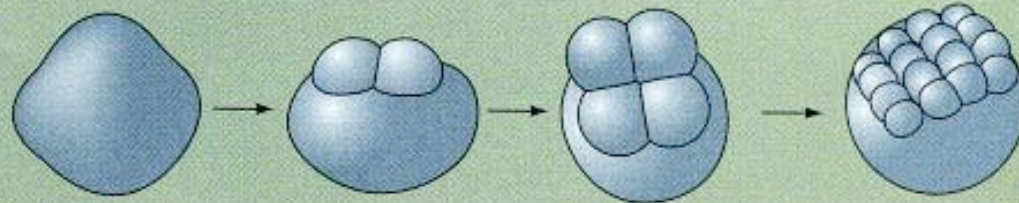
A. Telolecithal

(Dense yolk throughout most of cell)

1. Bilateral
Cephalopod molluscs



2. Discoidal
Fish, reptiles, birds



B. Centrolecithal

(Yolk in center of egg)

- Superficial
Most insects

