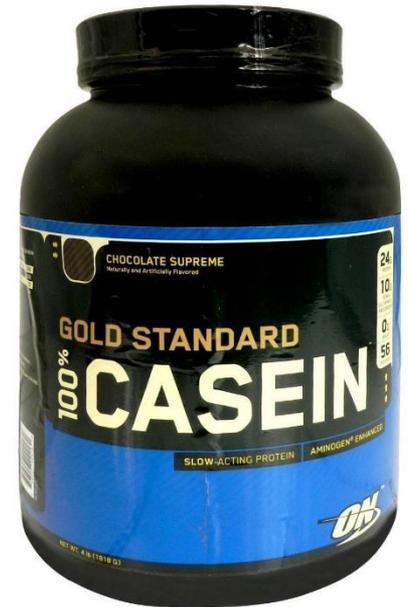
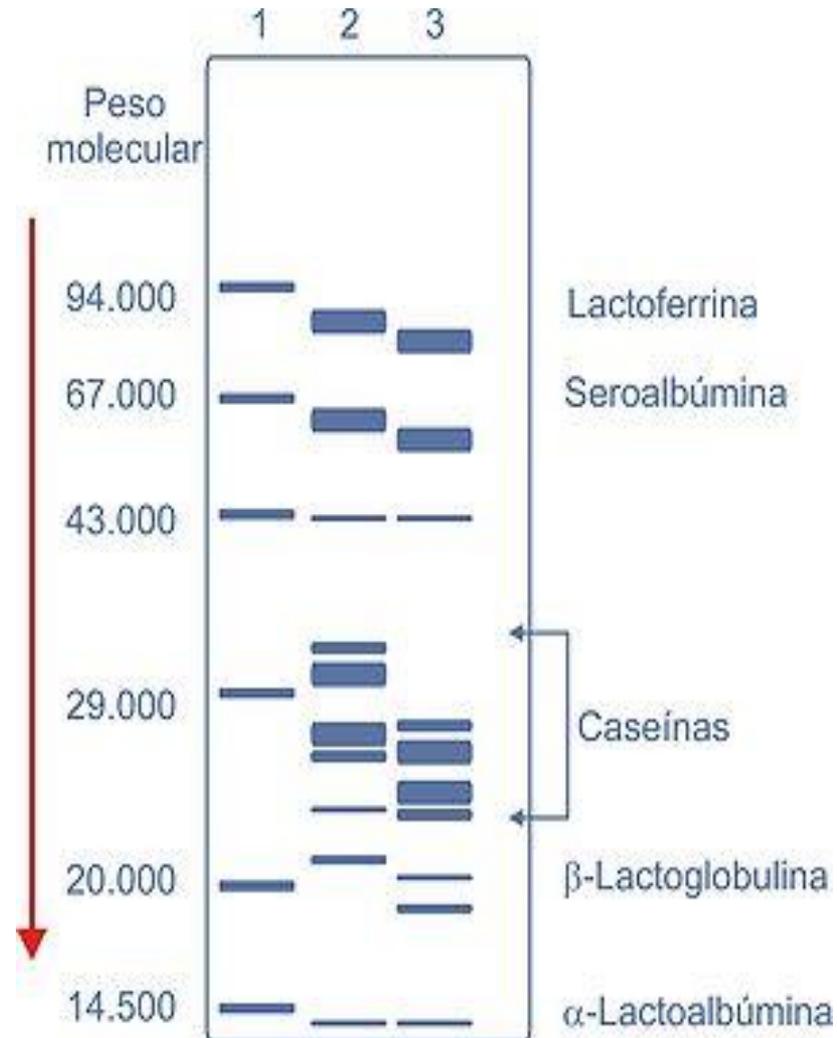




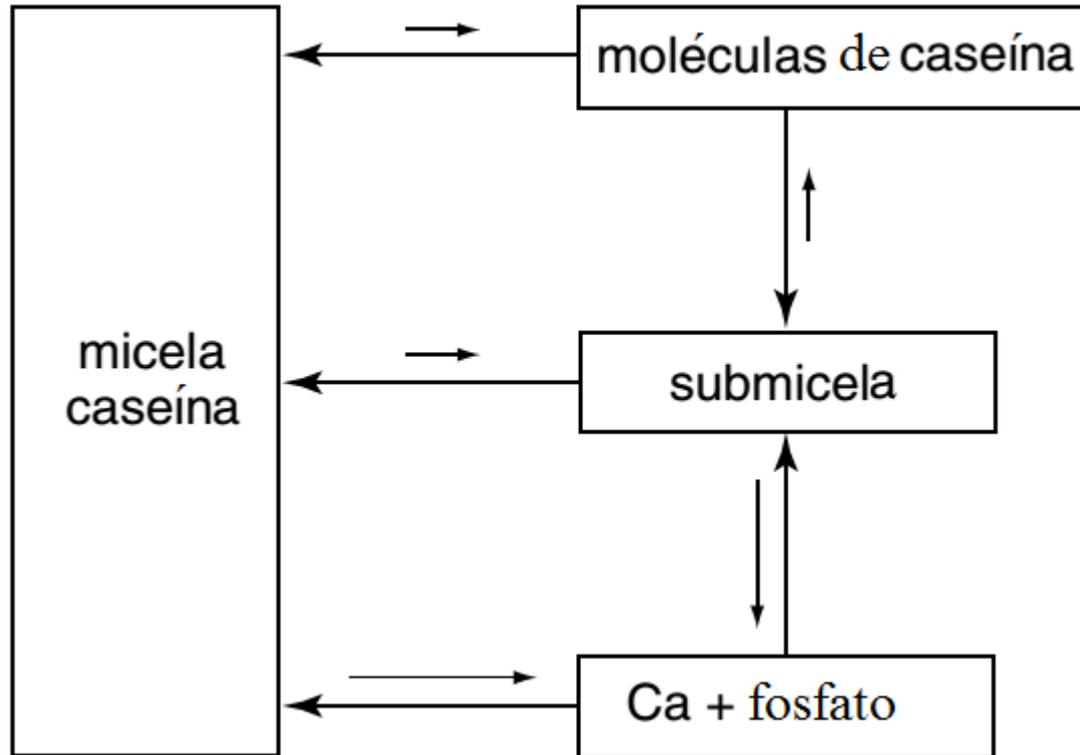
CASEÍNA



Proteínas lácteas



Equilibrios nativos de la caseína



Secuencias características

α_{s1} -Caseína : Pse-Glu-Pse

Pse-Ile-Pse-Pse-Pse-Glu

Pse-Val-Glu

Pse-Ala-Glu

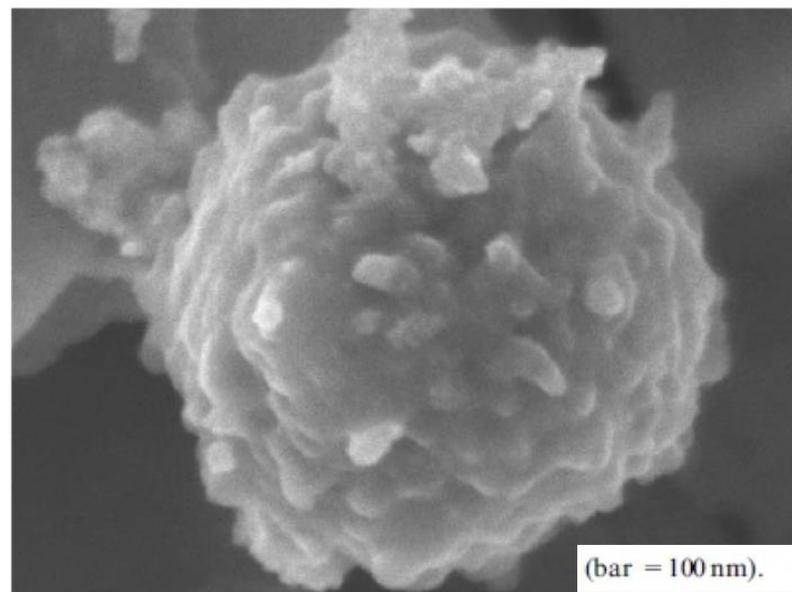
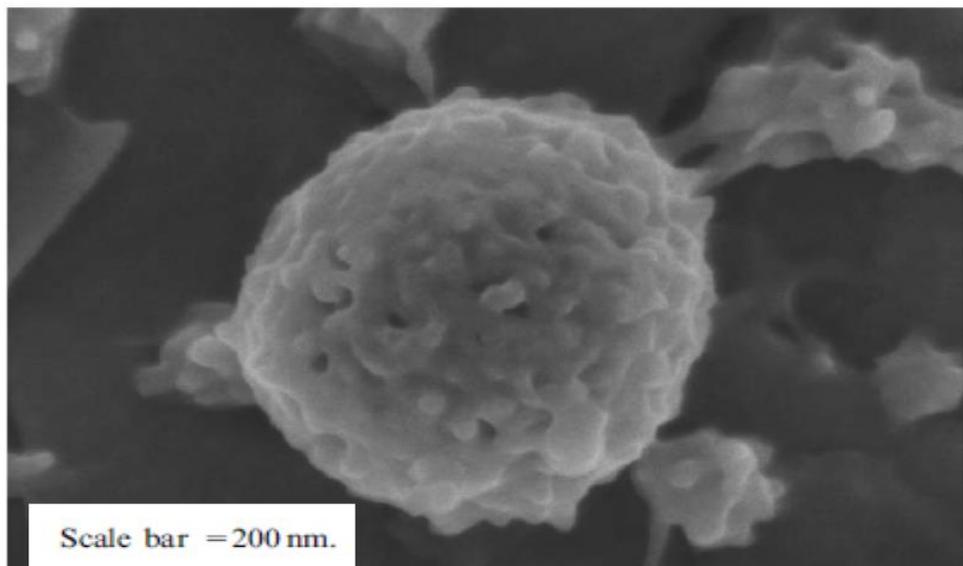
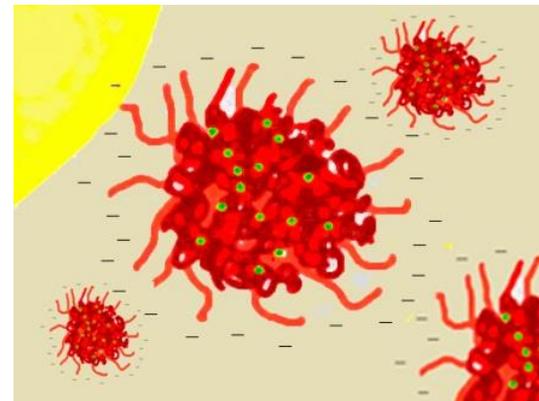
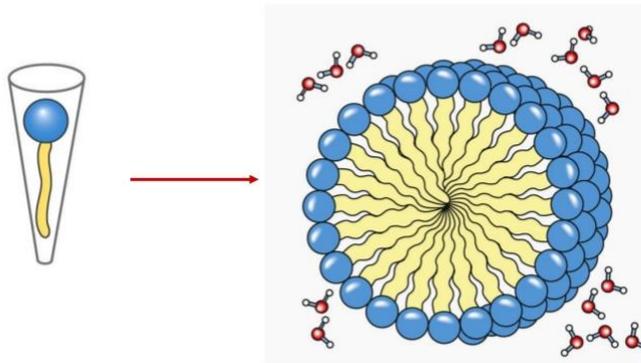
β -Caseína : Pse-Leu-Pse-Pse-Pse-Glu

Pse-Glu-Glu

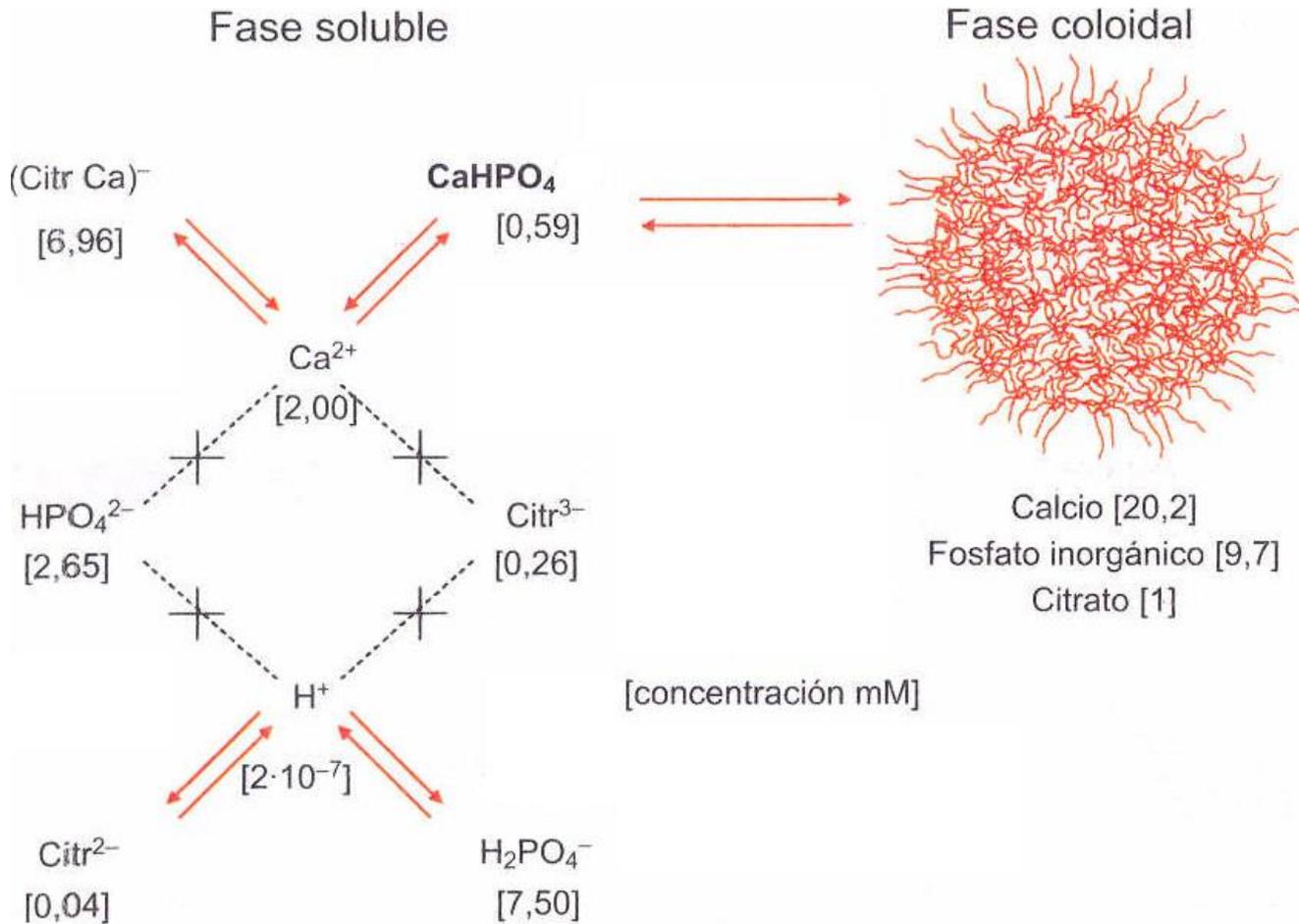
κ -Caseína : Pse-Pro-Glu

Micelas de caseína

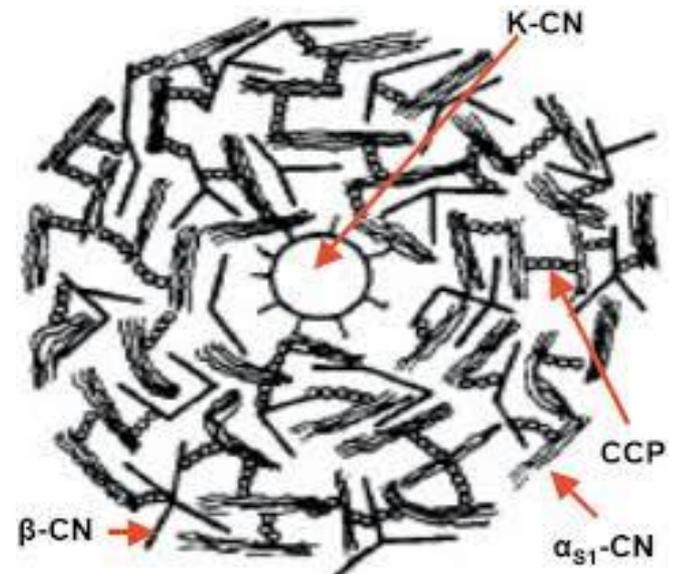
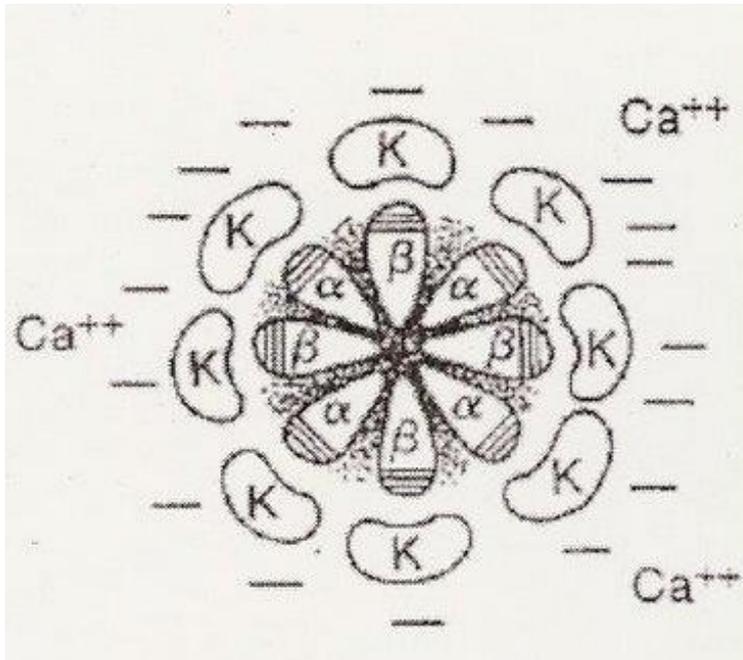
Formación de una micela



Principales equilibrios minerales en la leche

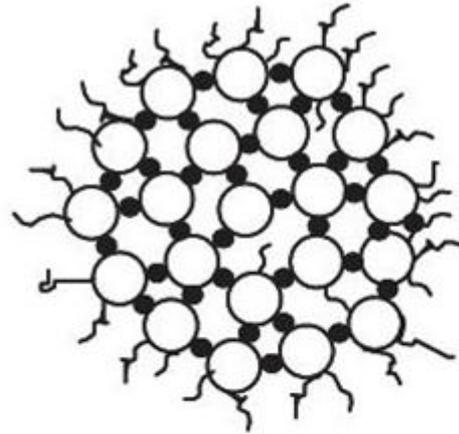


Caseína y sus modelos corteza-núcleo



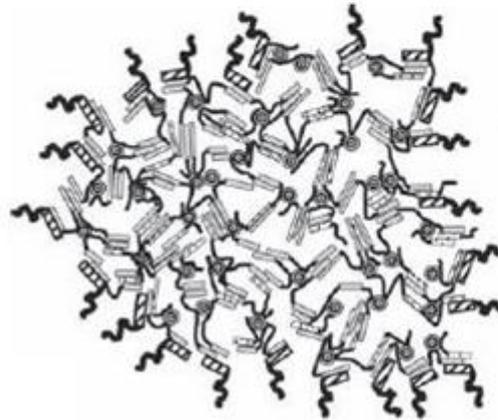
Modelos más aceptados de las micelas de caseína

de subunidades



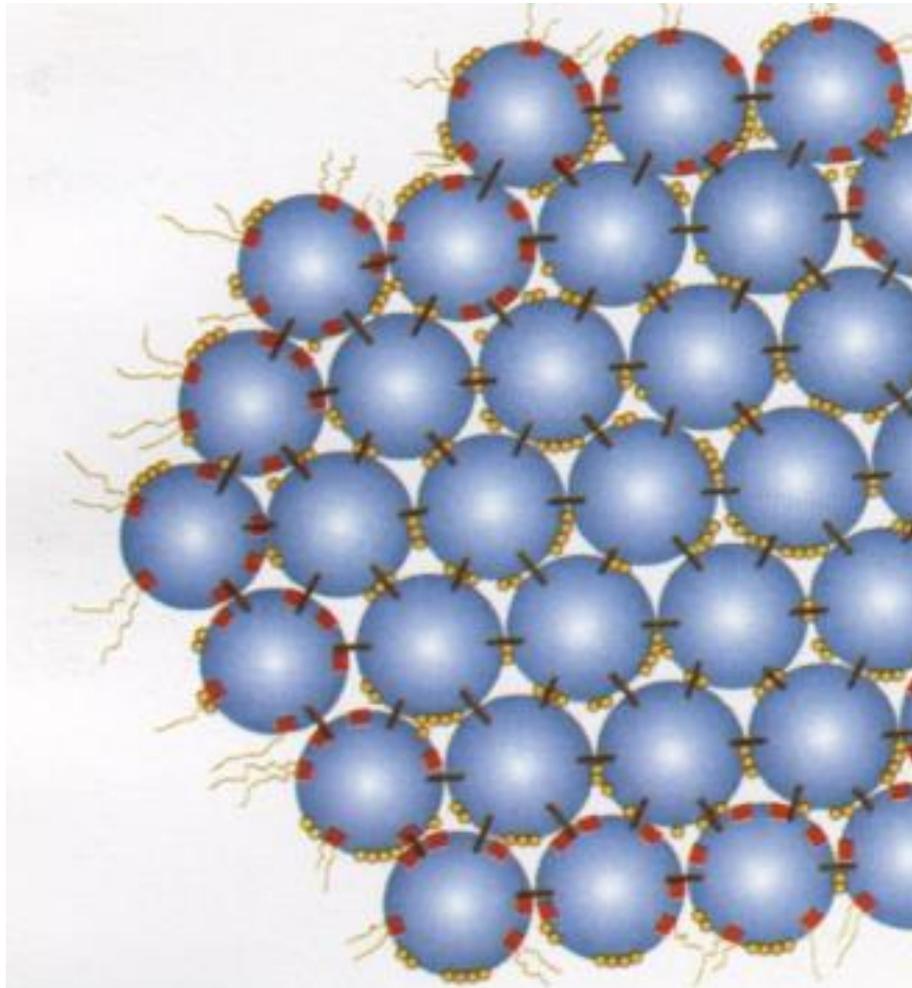
- submicela de caseína
- ~ parte hidrofílica de κ -caseína
- Fosfato de calcio coloidal

de estructura interna, Horne



- α_{S1} -caseína
- α_{S2} -caseína
- β -caseína
- κ -caseína
- Fosfato de calcio coloidal

Modelo de subunidades = submicelas

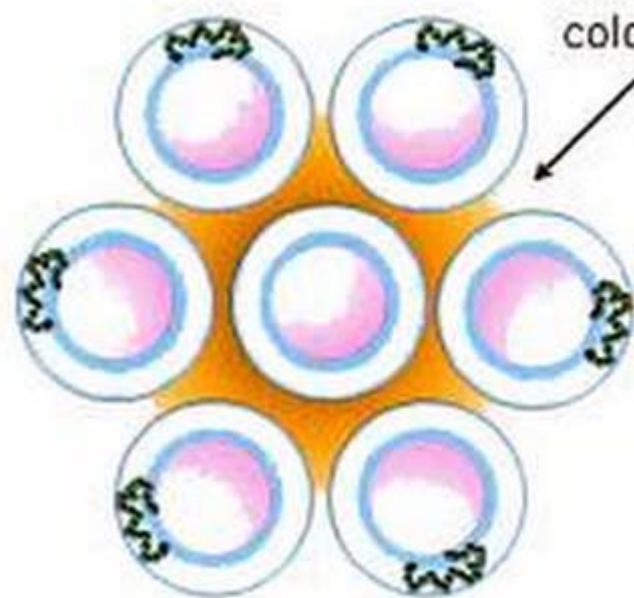


Caseína k
(parte polar)

Zona
hidrófoba

Grupos
fosfato

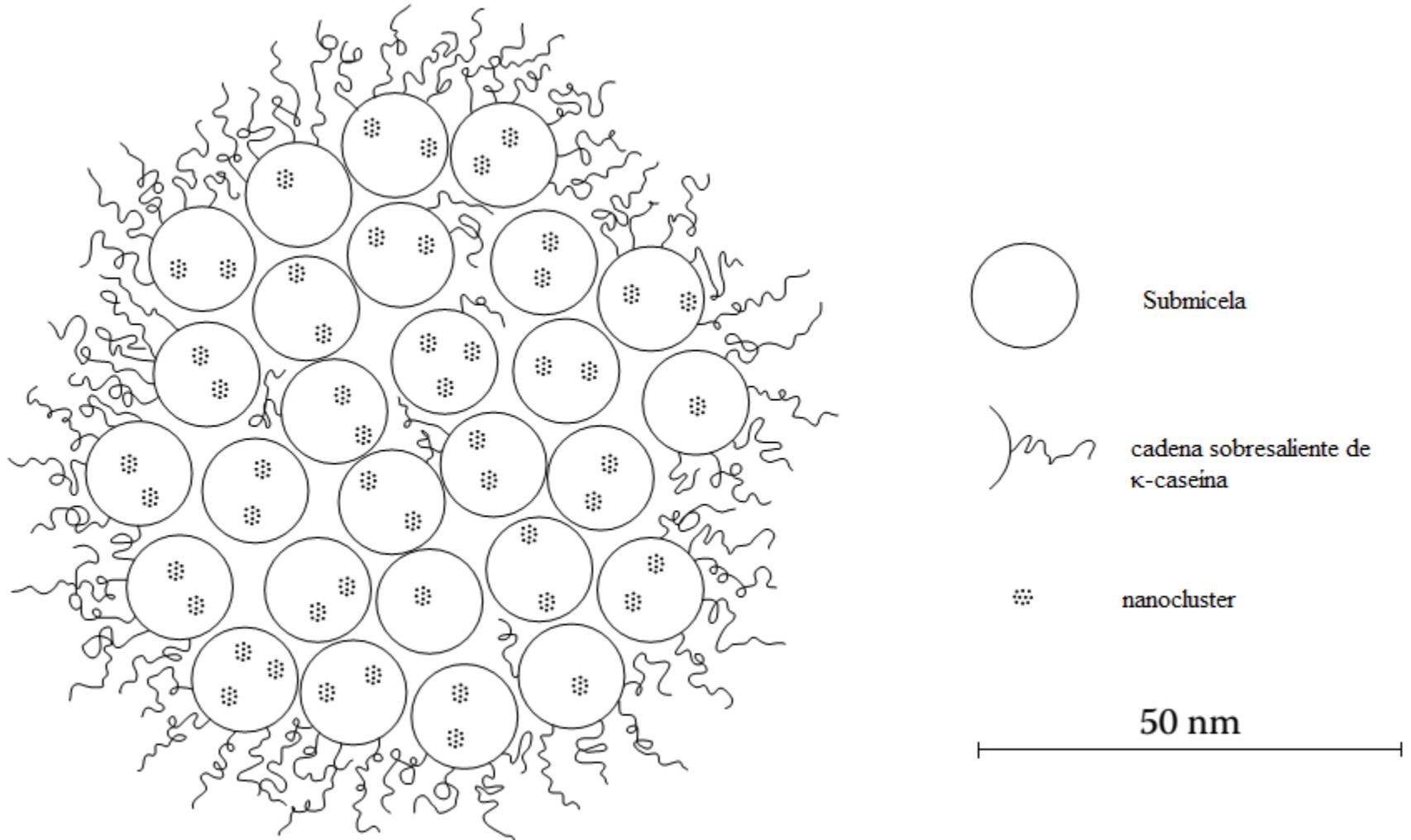
SUBMICELA



Fosfato
cálcico
coloidal

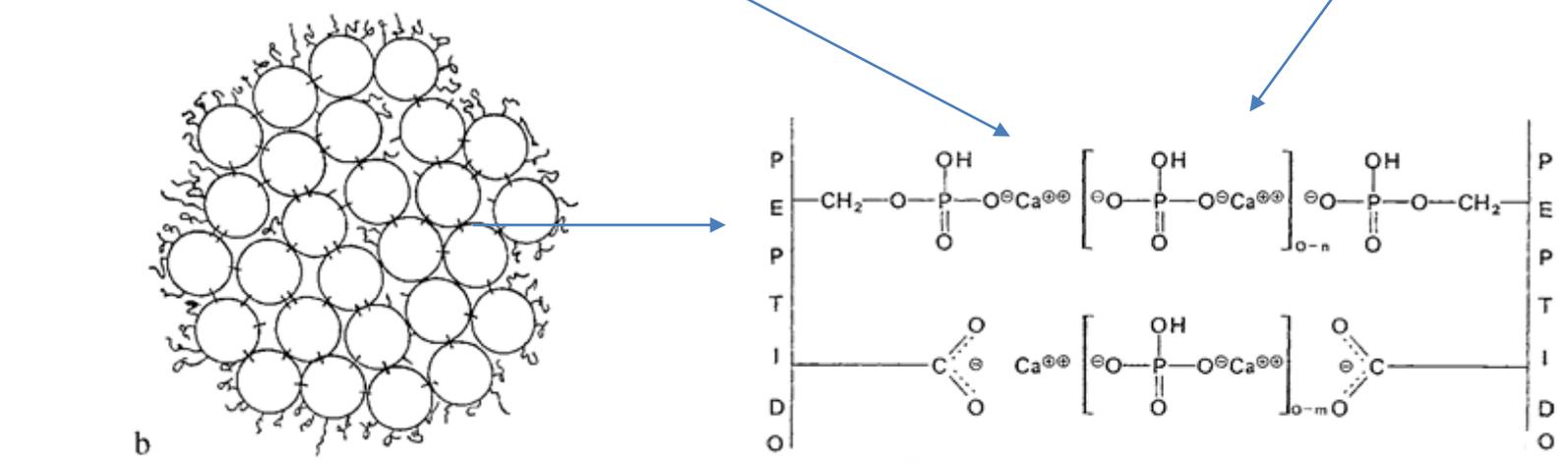
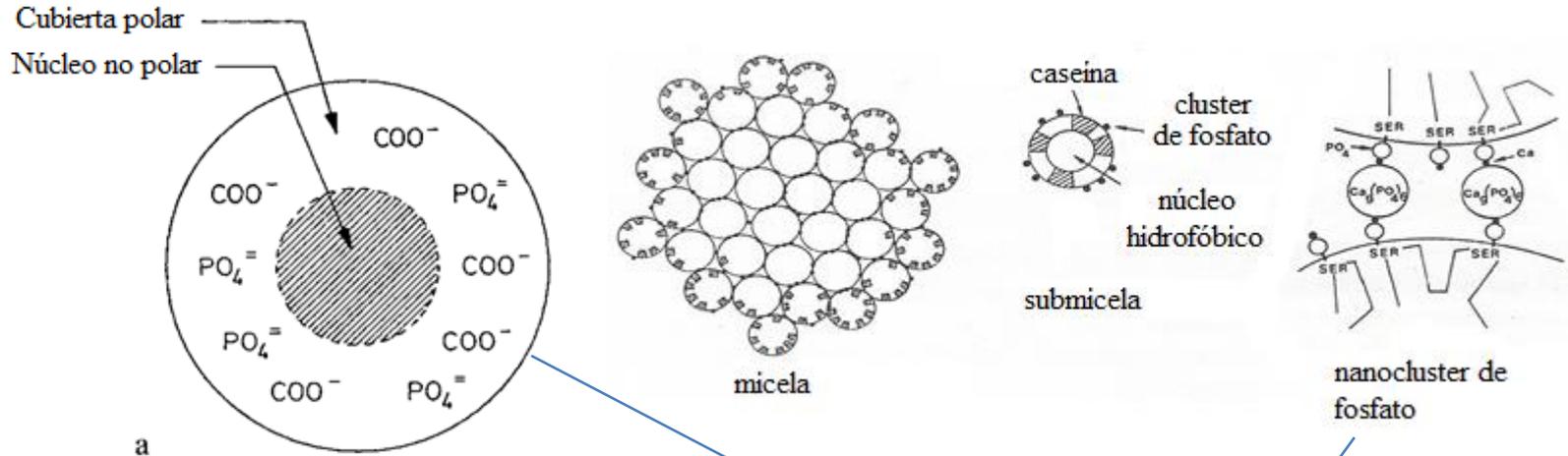
MICELA

Modelo submicelar-capaa pilosa- Walstra

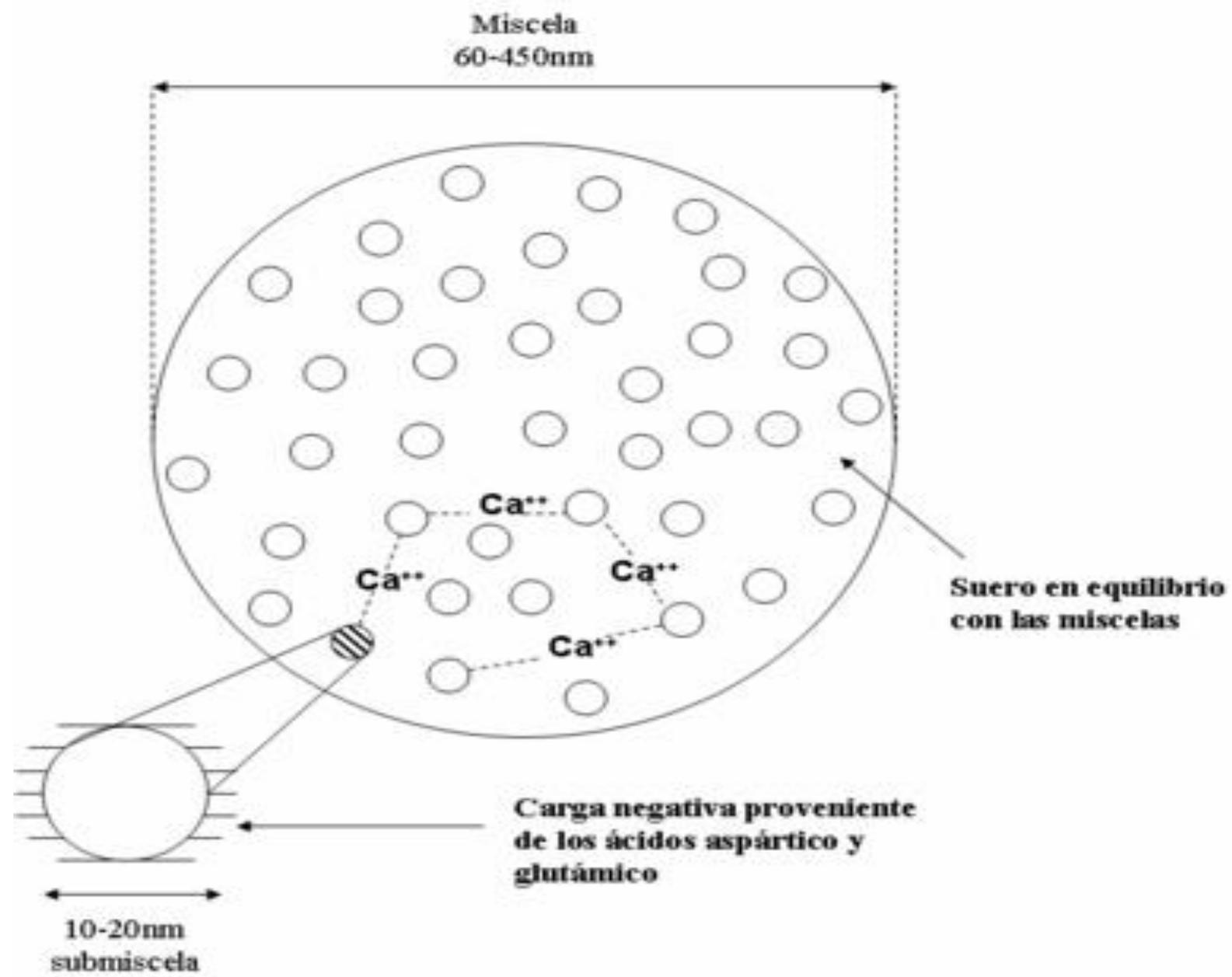


Modelo de Walstra

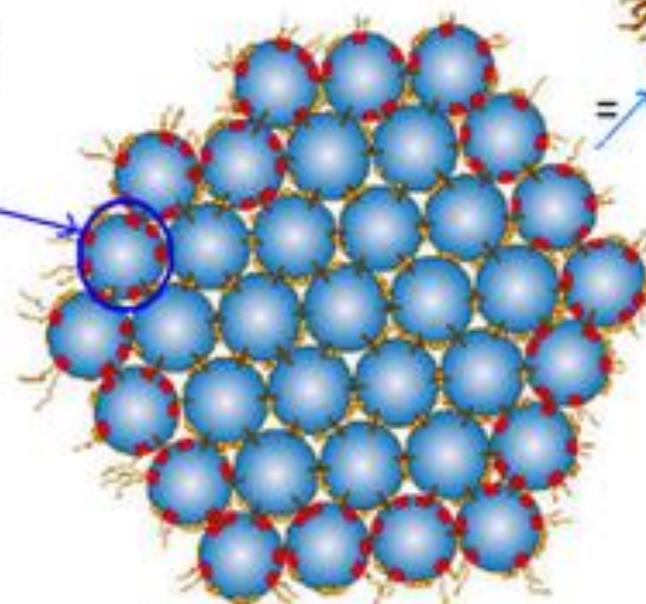
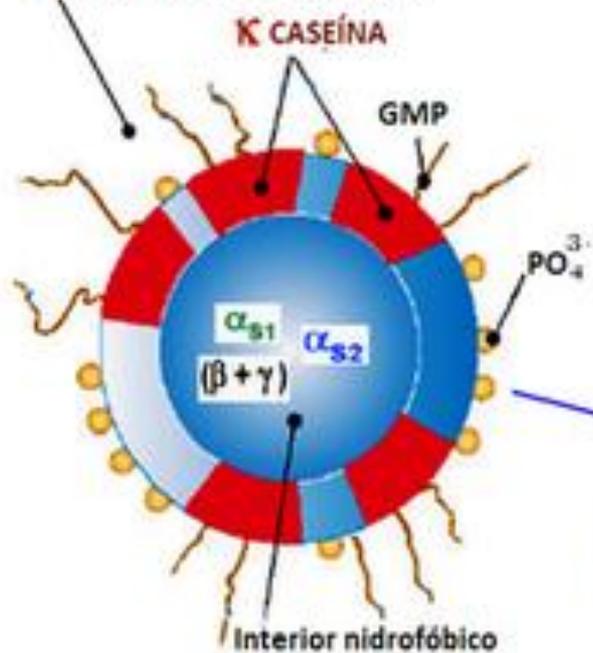
Estructura micelar y submicelar



- Submicela
- ⌋ cadena sobresaliente de κ -caseína
- Fosfato de calcio



SUBMICELA DE CASEÍNA



- Submicela
- GMP
- Fosfato de cálcio
- κ -caseína
- Interações hidrofóbicas - Grupo fosfato

● $\text{Ca}_9(\text{PO}_4)_6$ Coloidal

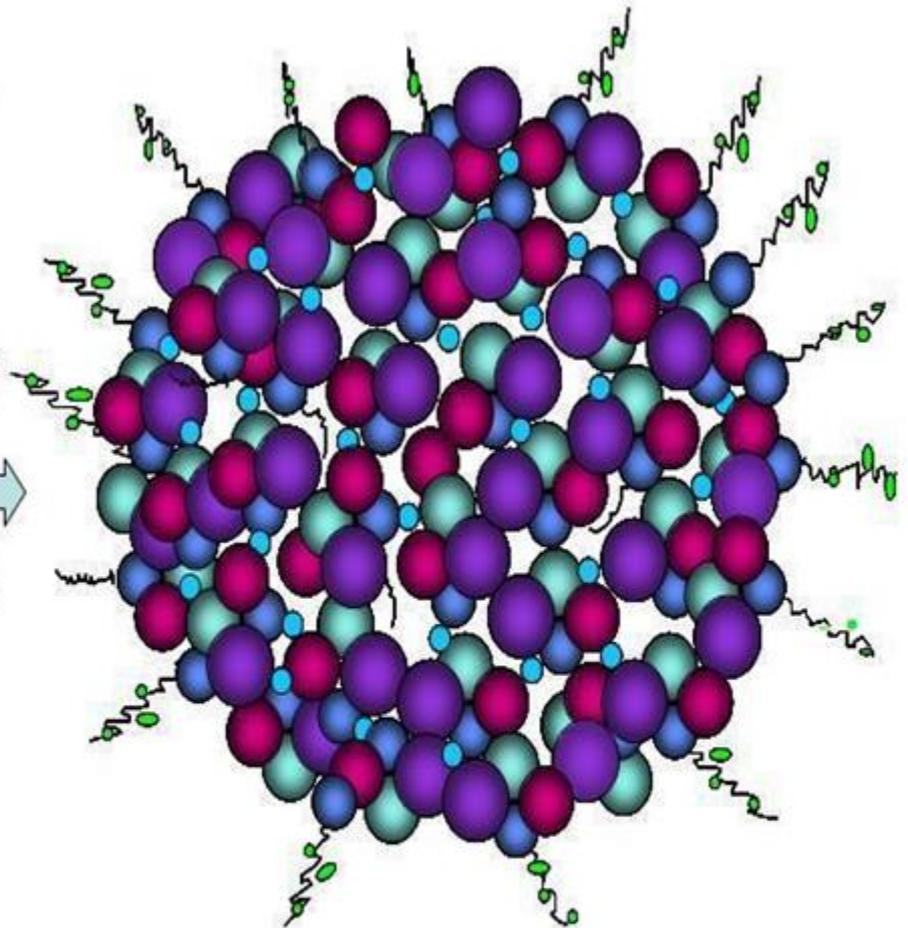
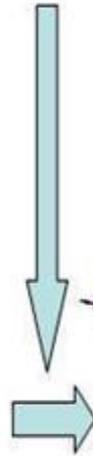
● α_{s1} -Cn

● α_{s2} -Cn

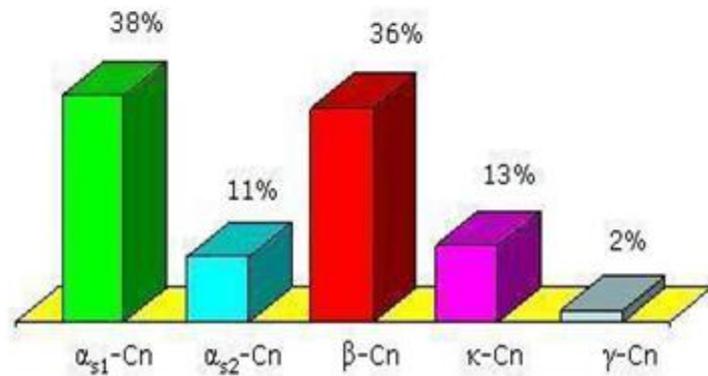
● β -Cn

● K-Cn

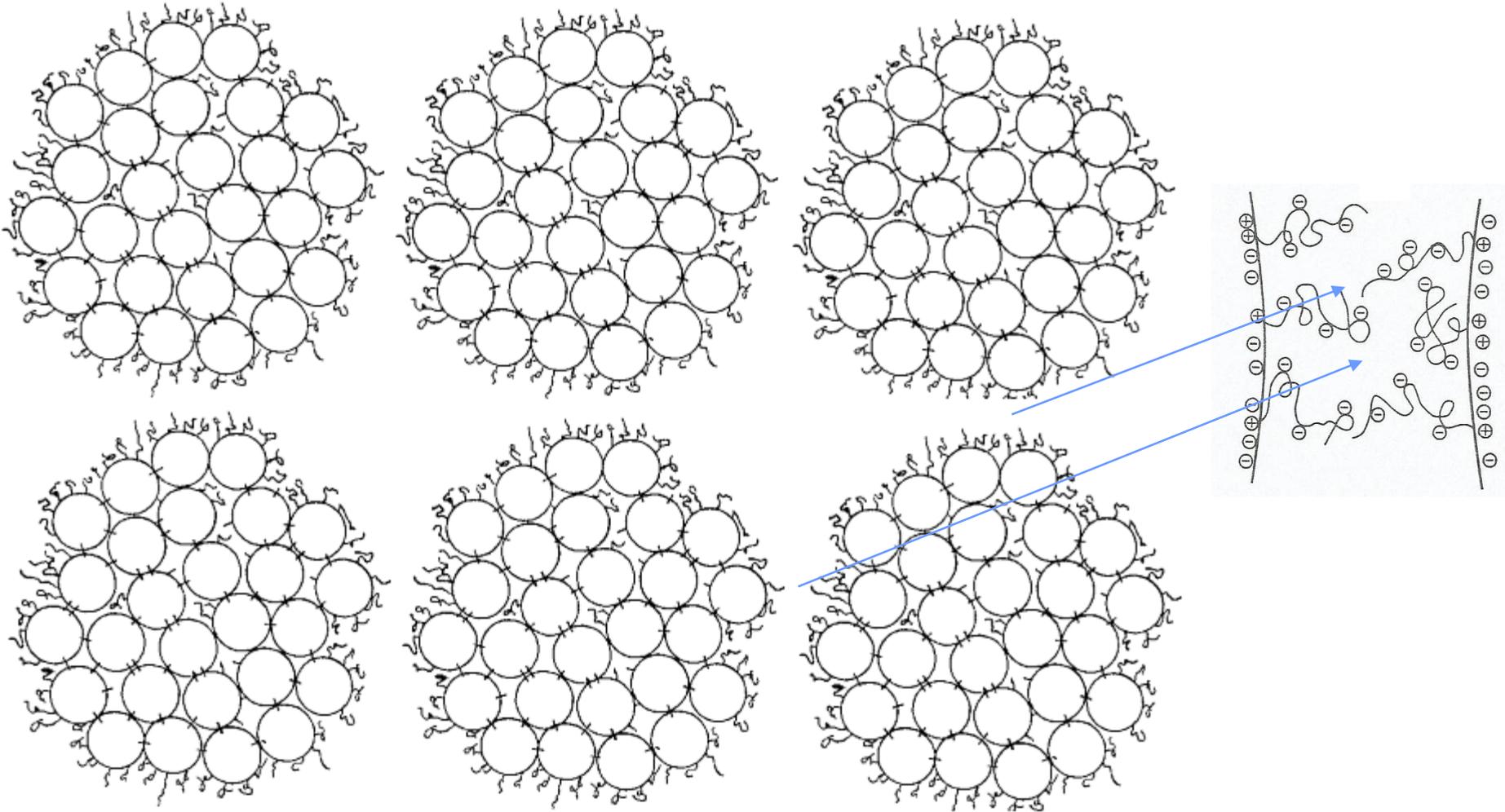
Submicelas (10 nm)



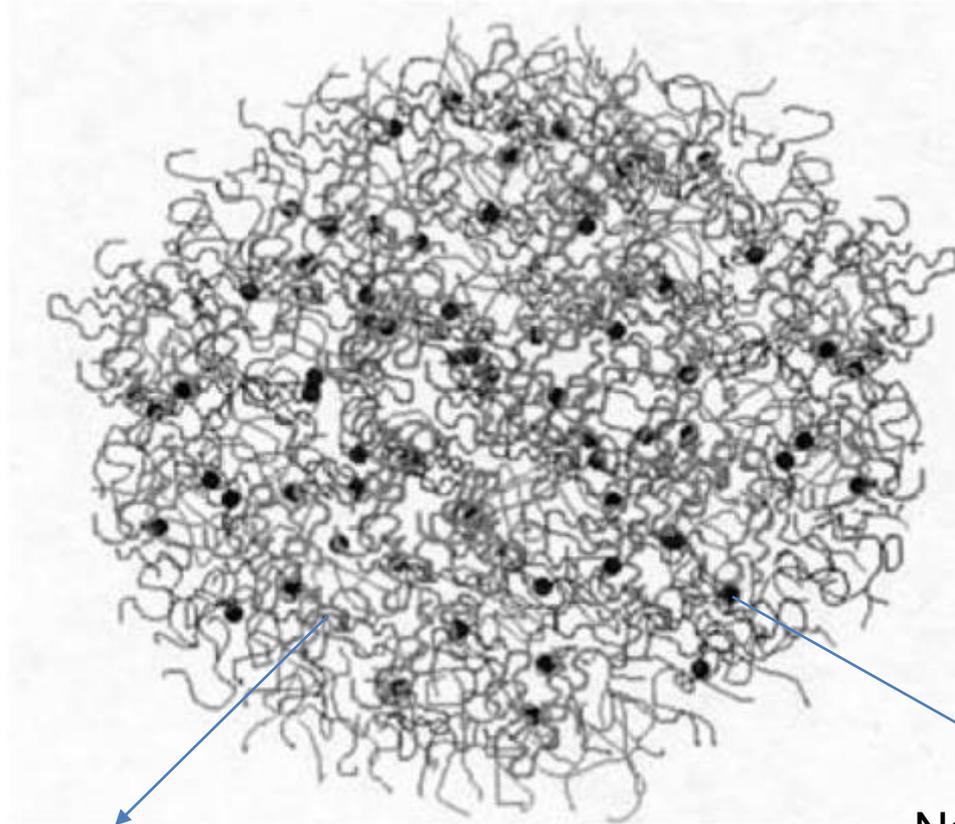
micelas (20-300 nm)



Interacciones entre micelas



Modelo de estructura interna, Holt



Matriz proteínica homogénea

Nanoclusters
de fosfato de calcio

Modelo micelar de Horne

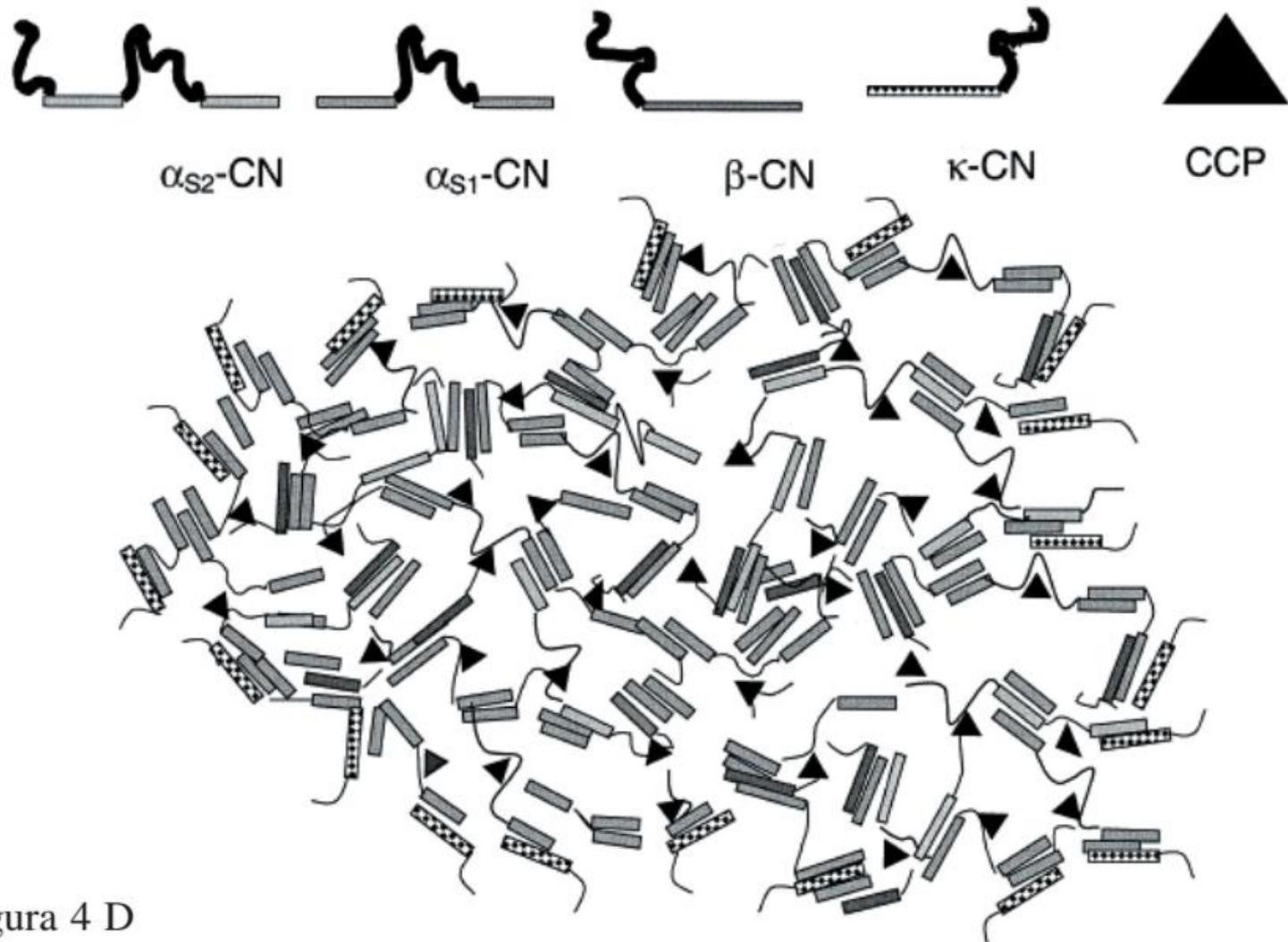
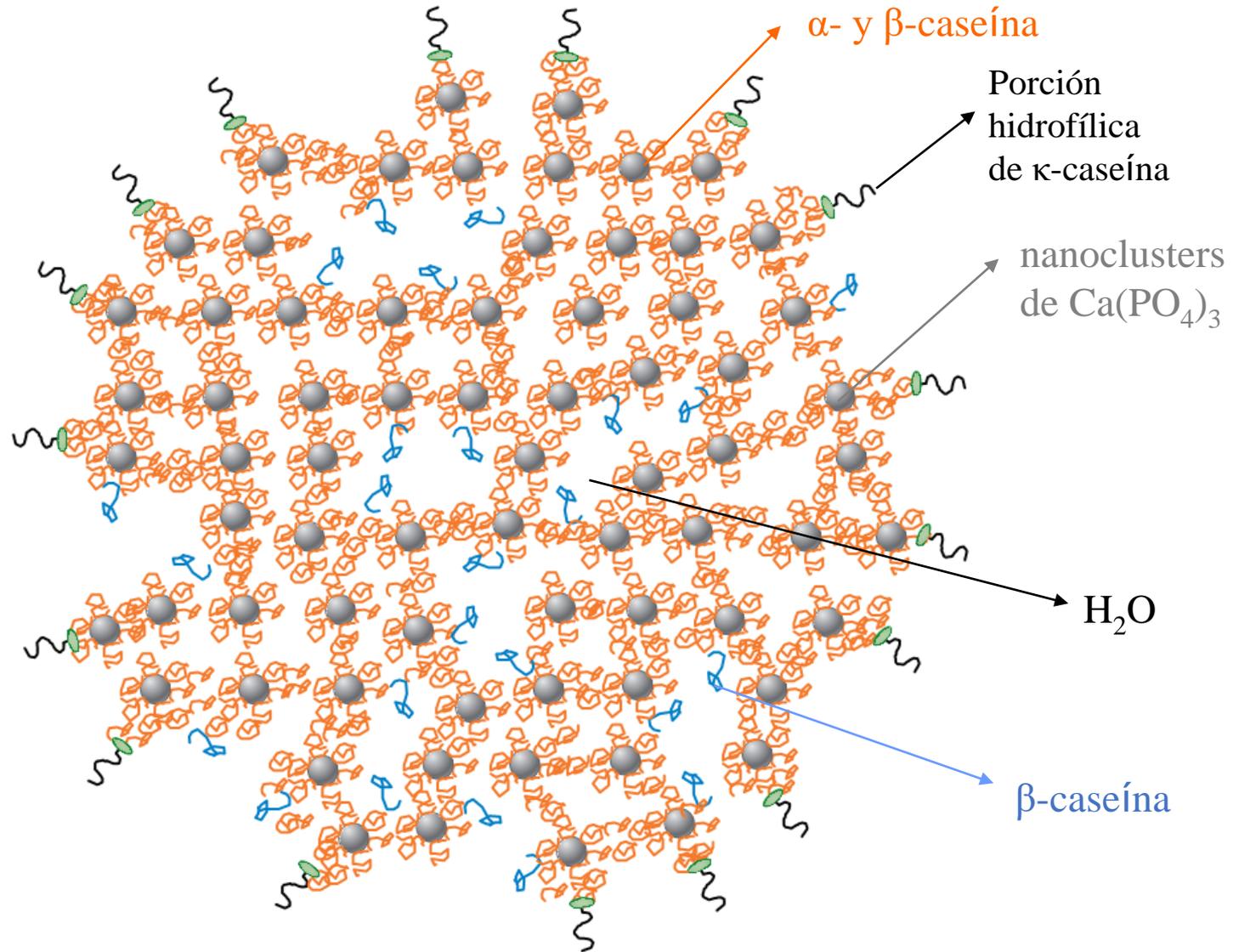
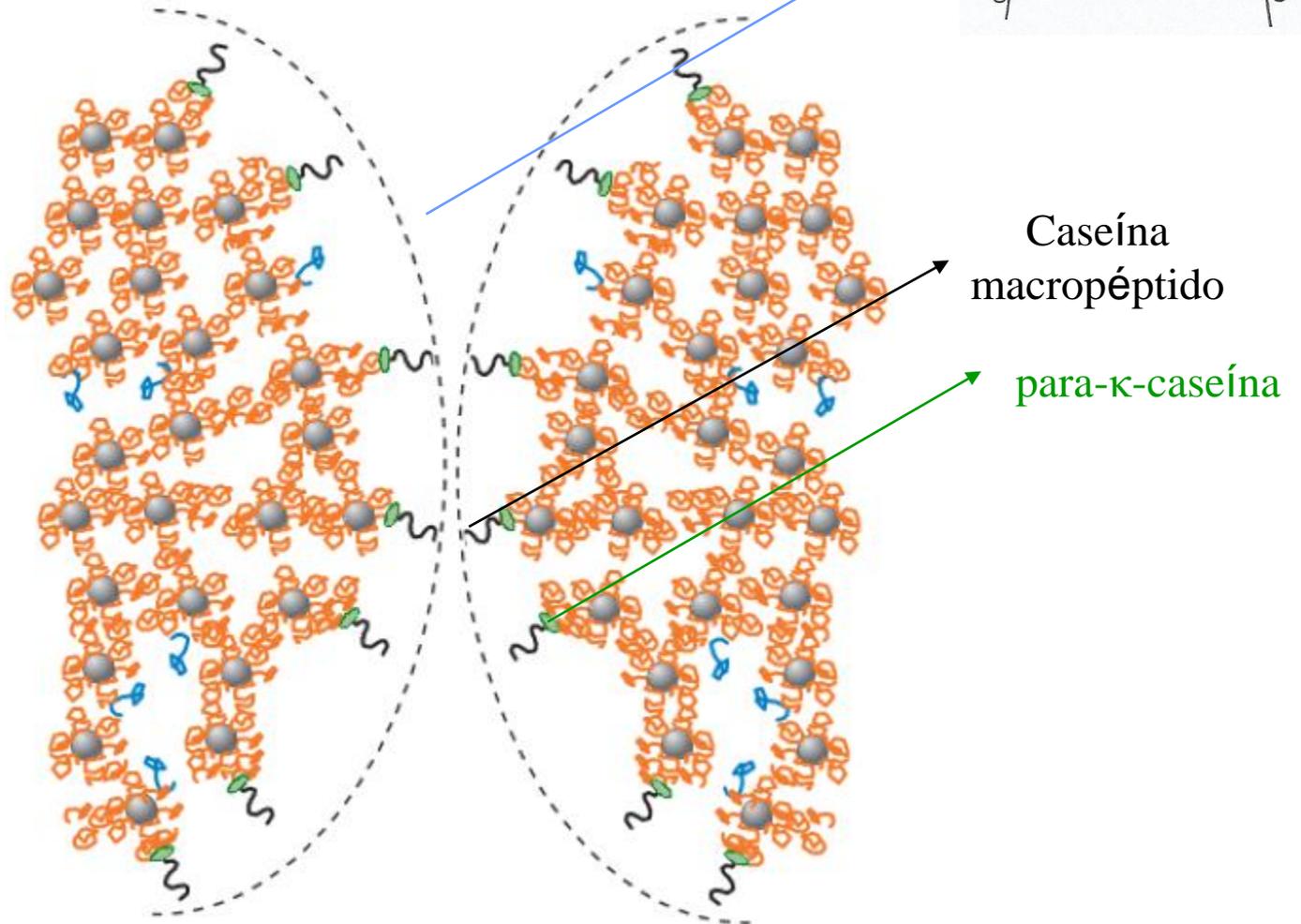
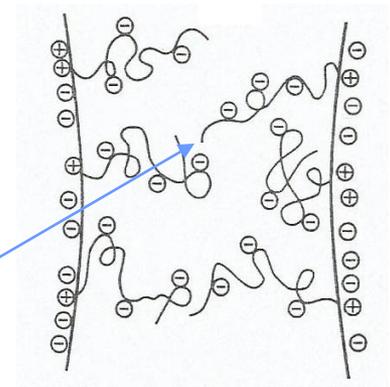


Figura 4 D

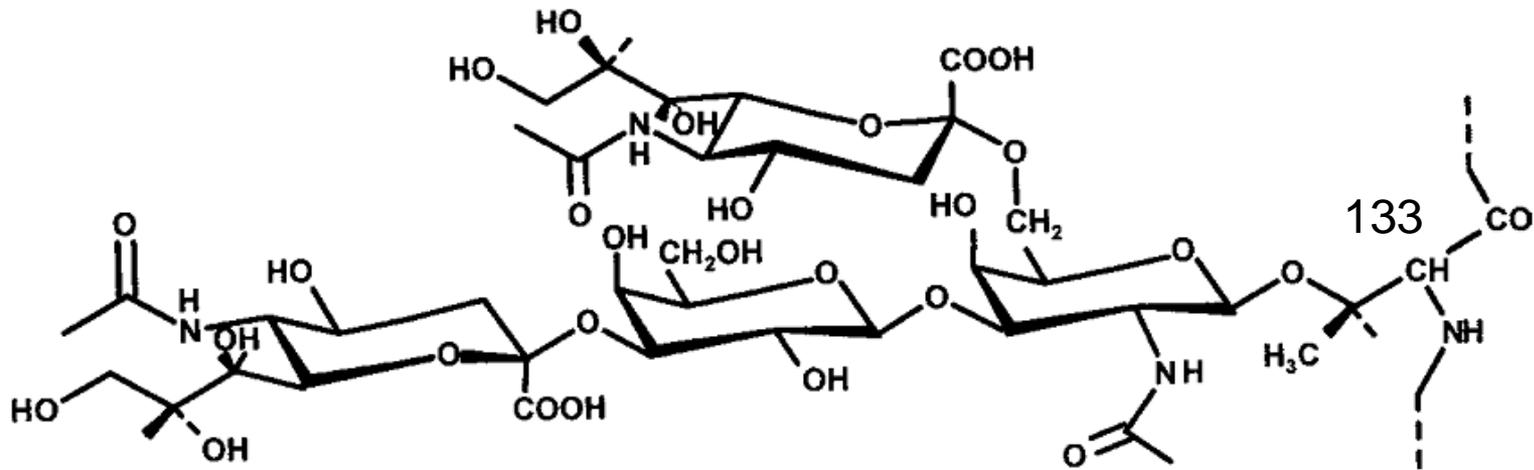
Dalgleish, Horne



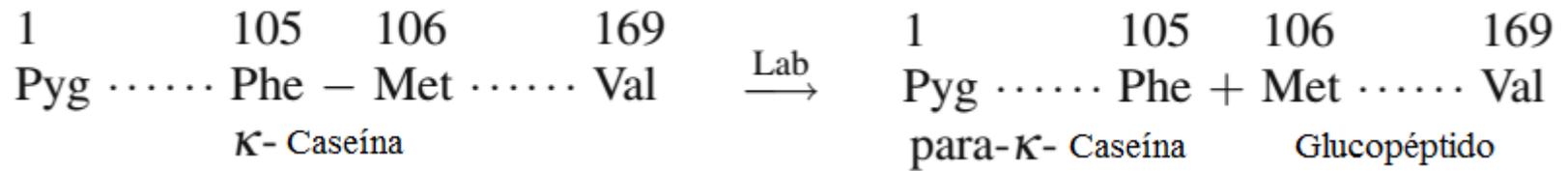
Interacción micelar



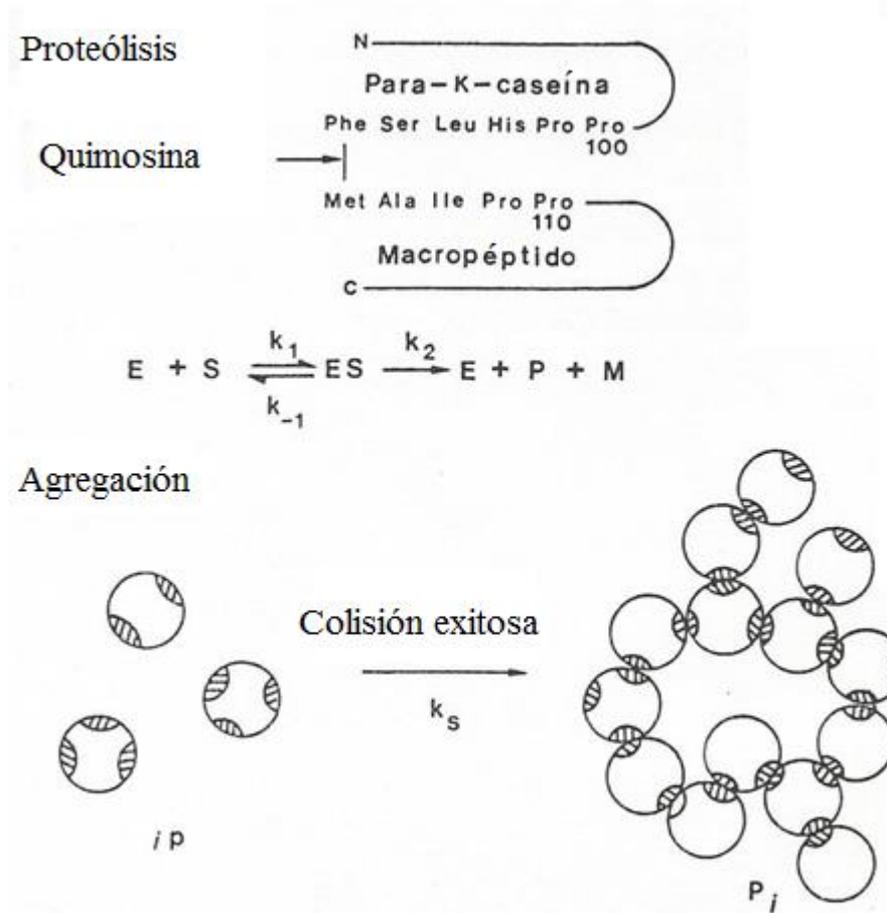
K-caseína, fosfoglucoproteína



Coagulación enzimática de la leche

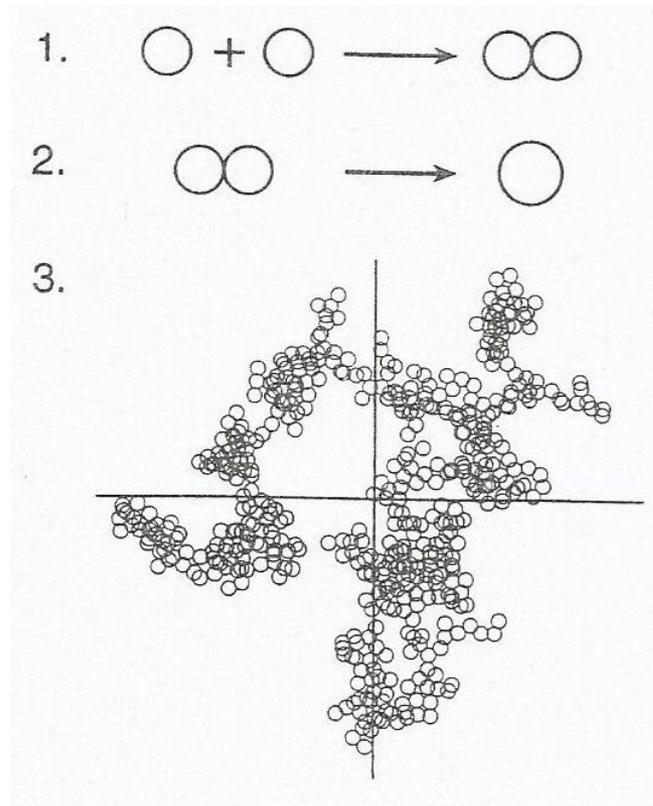


Coagulación enzimática de la leche



Agregación de las micelas: floculación posterior a la adición del agente coagulante

Se forman agregados que dan la apariencia de grumos



Elaboración de queso → Cuajada

