

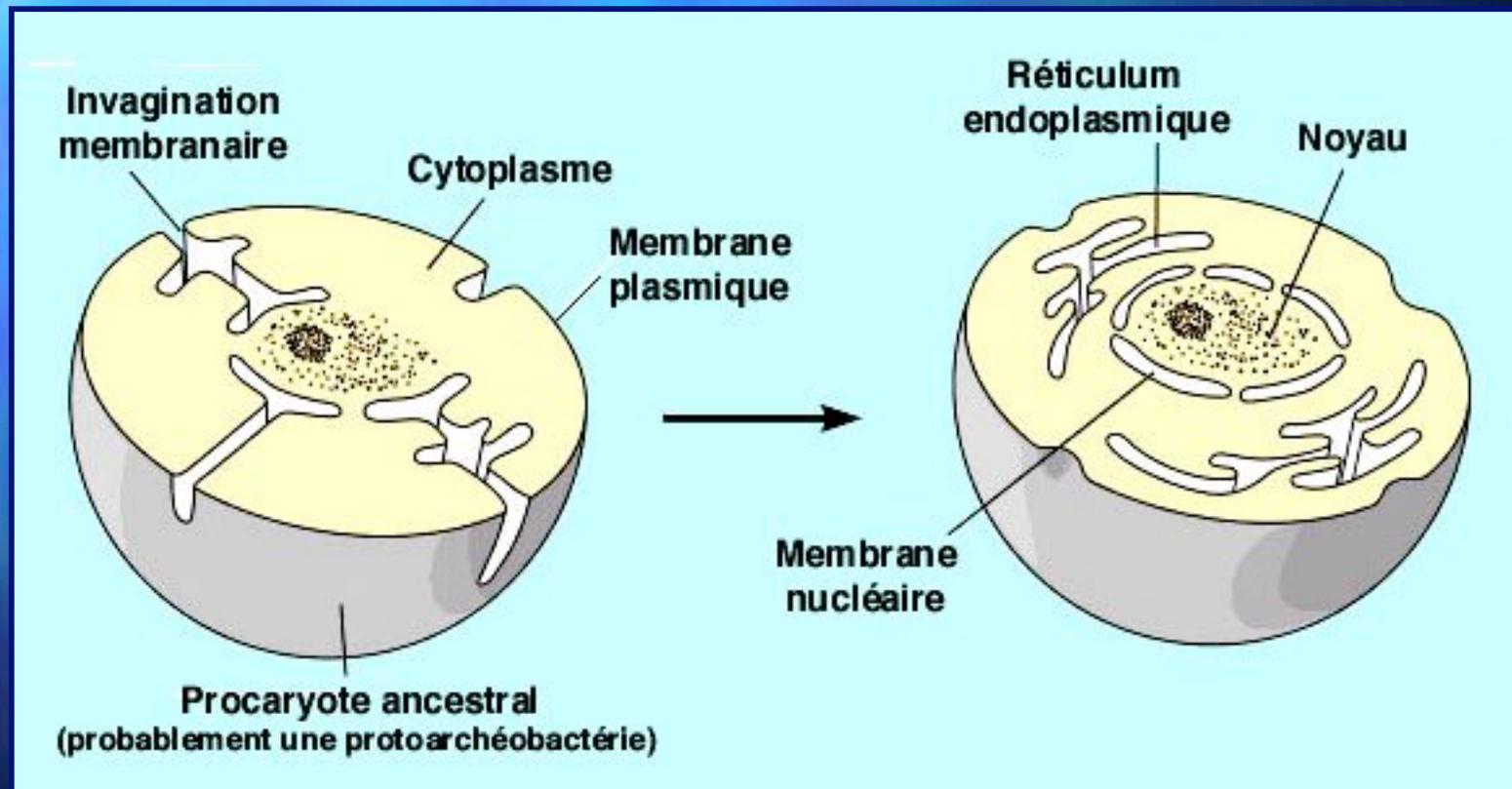


Introduction à la Microbiologie

Cours proposé par
Edmundo NAVA SAUCEDO
Aux étudiants de L3-S5

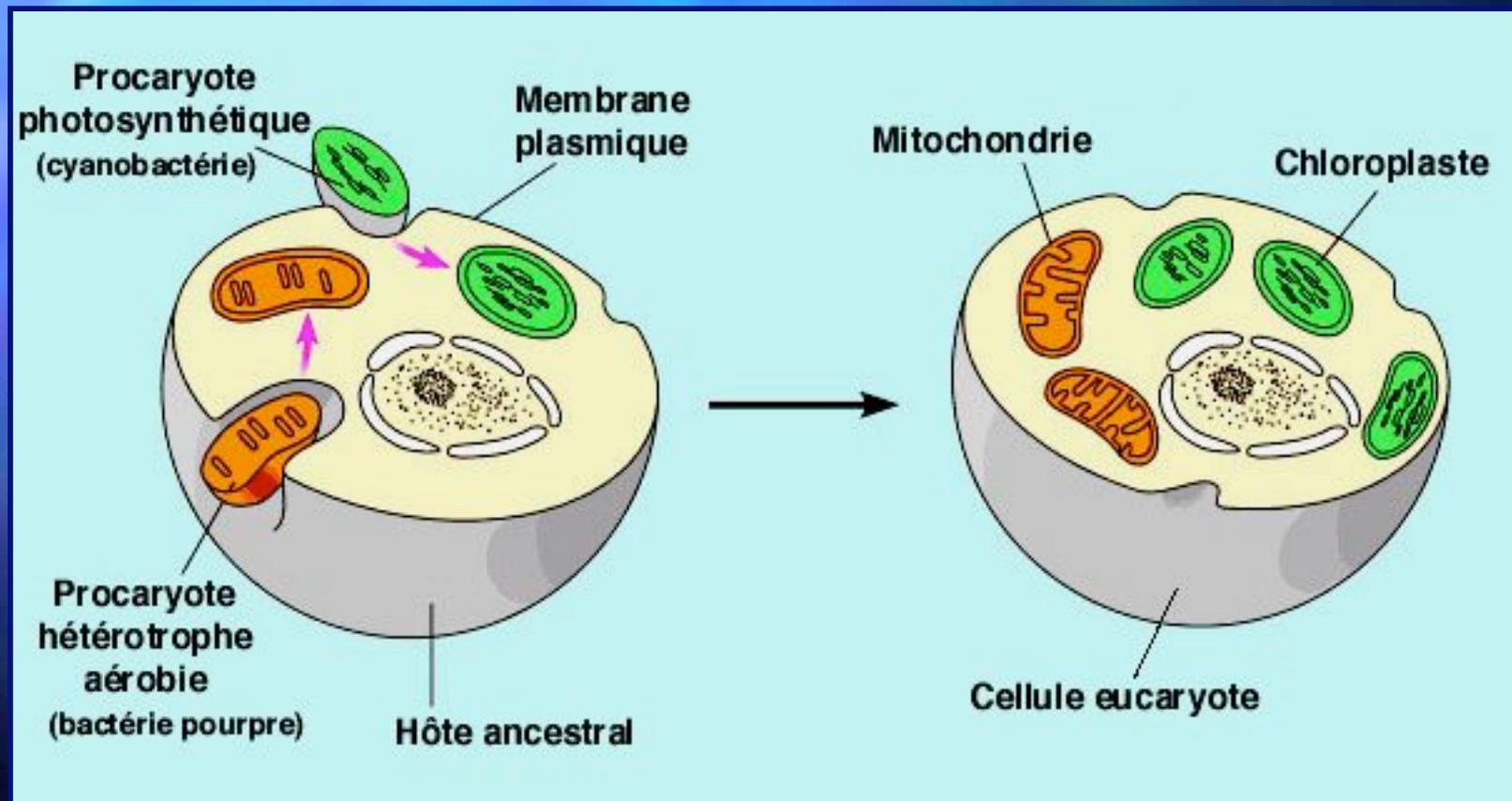
L'Endosymbiose en série

D'après Lynn Margulis



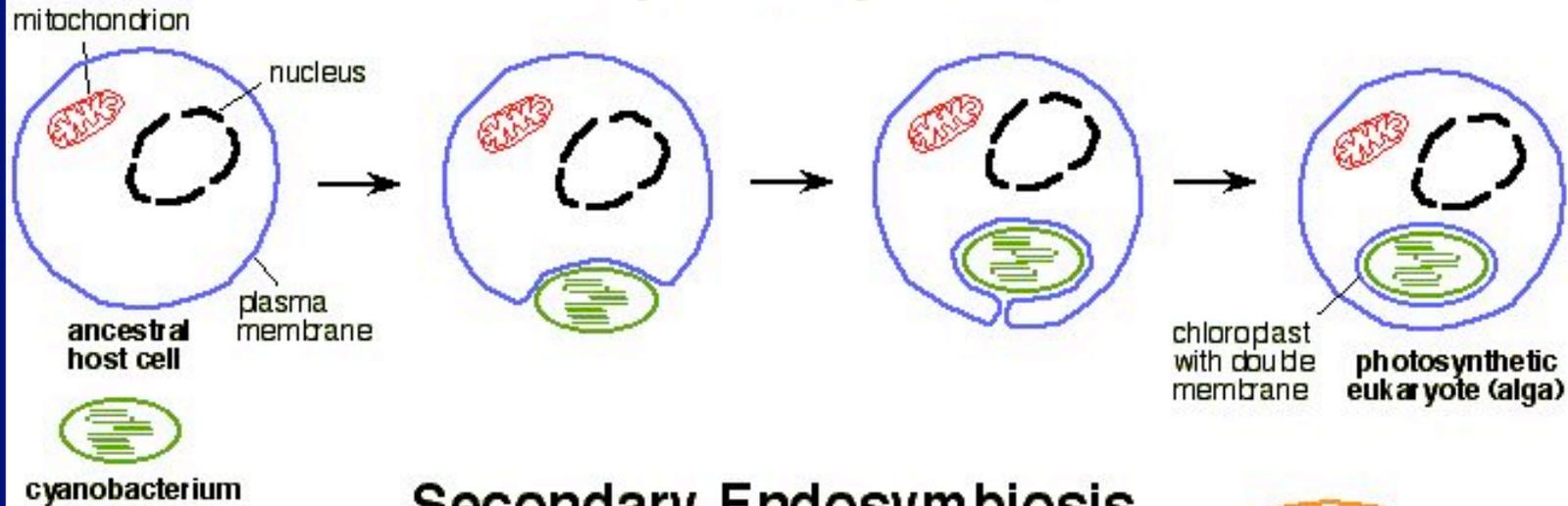
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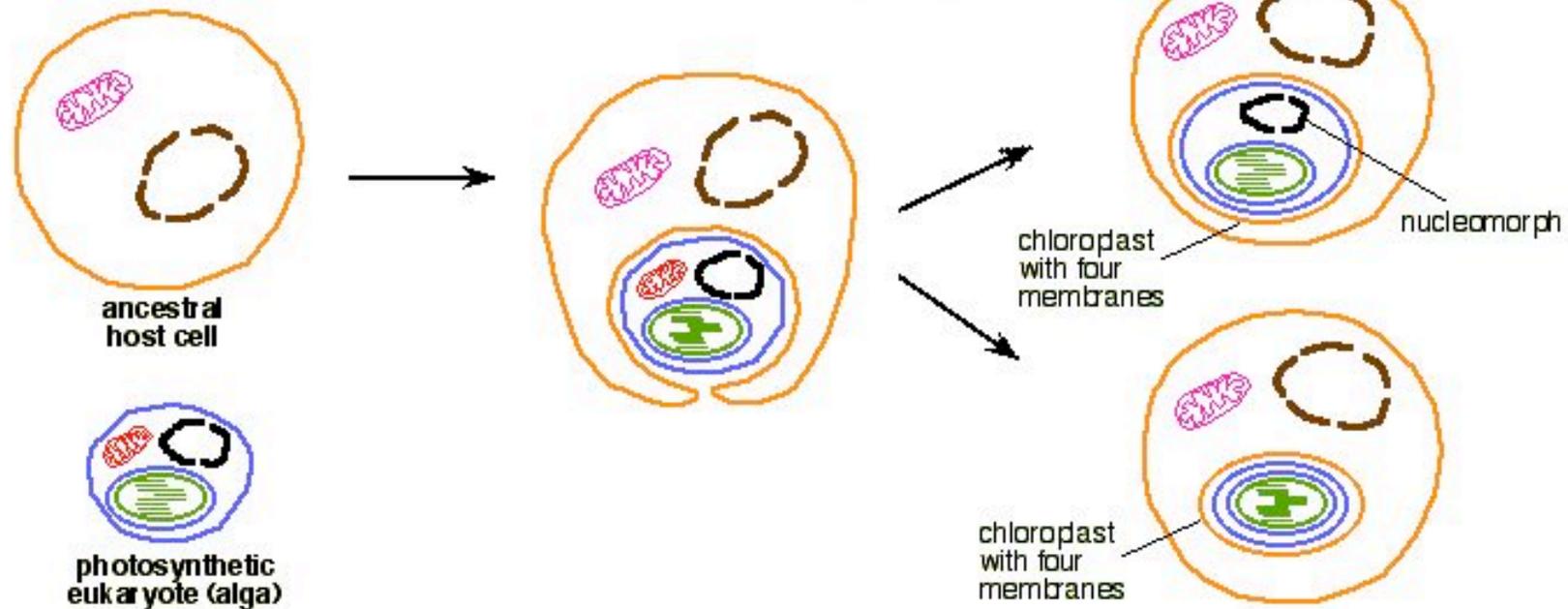


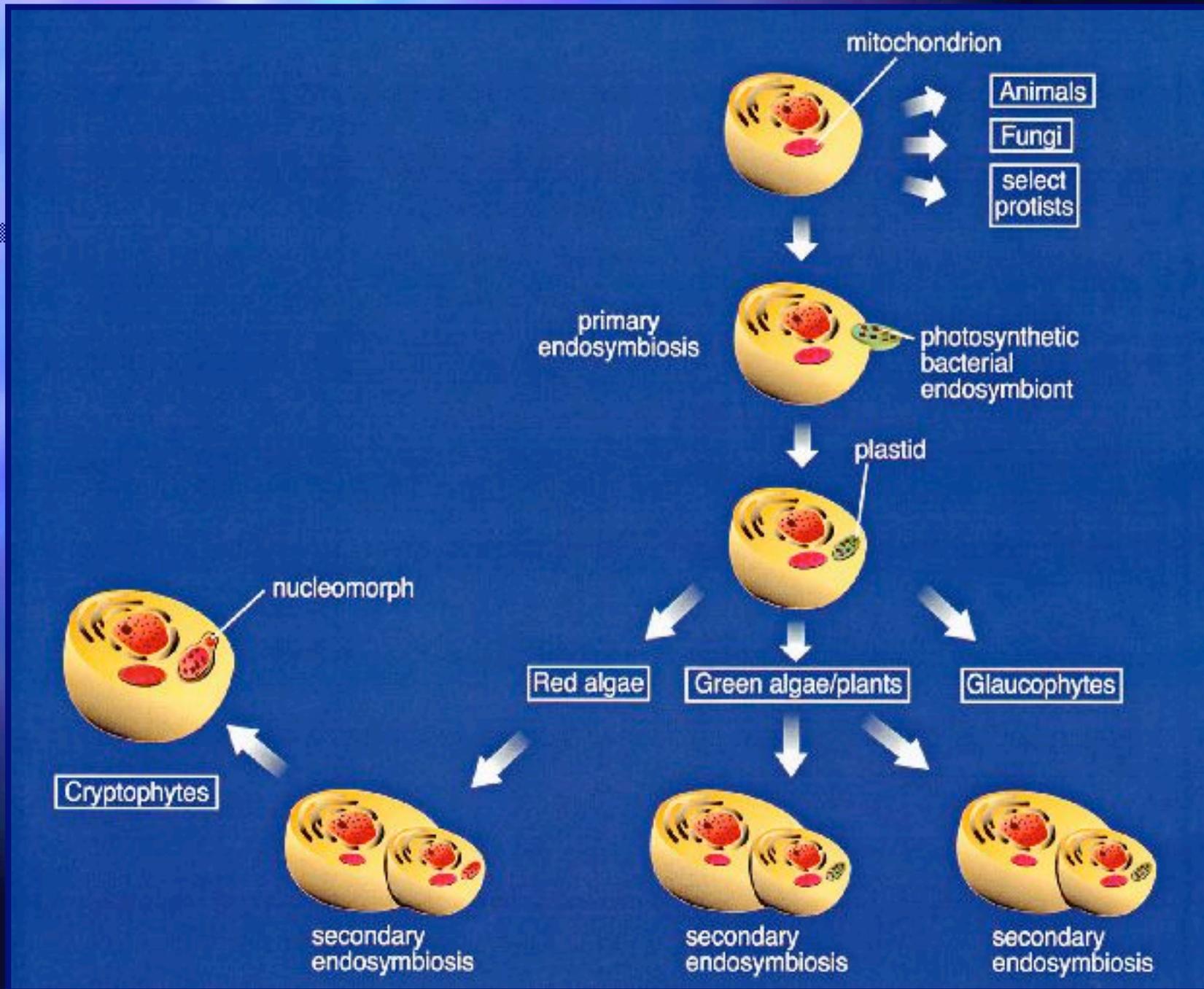
L'Endosymbiose en série

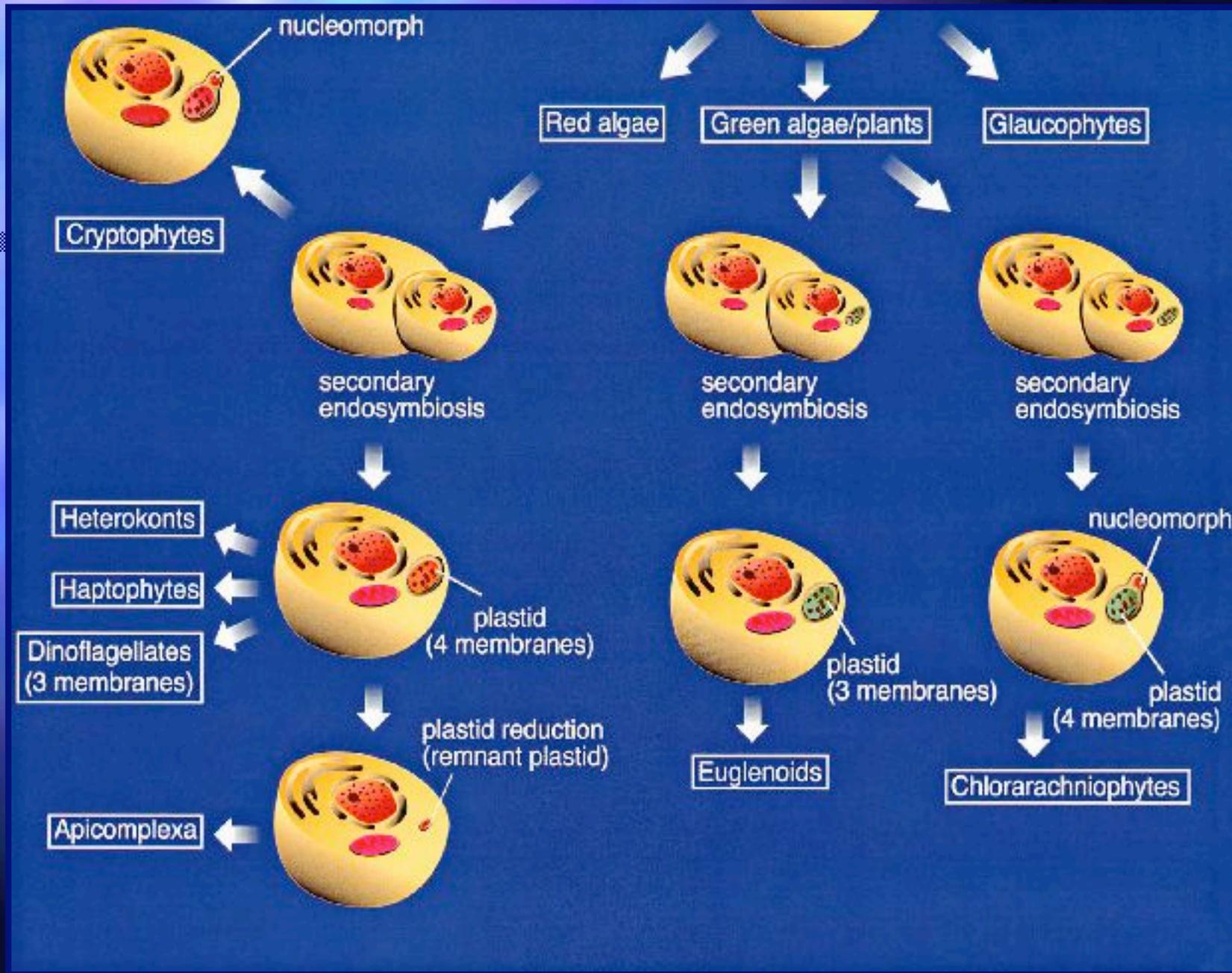
Primary Endosymbiosis



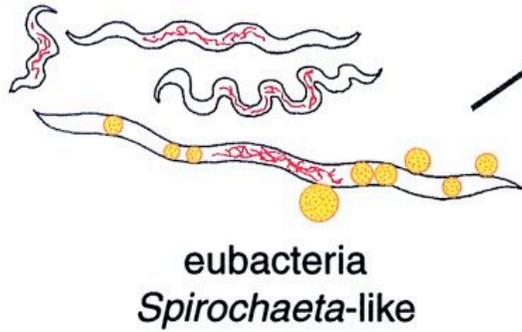
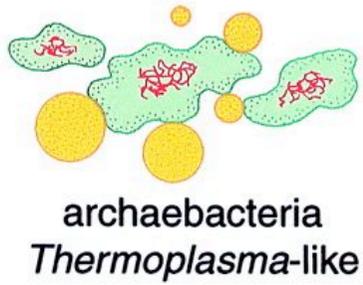
Secondary Endosymbiosis





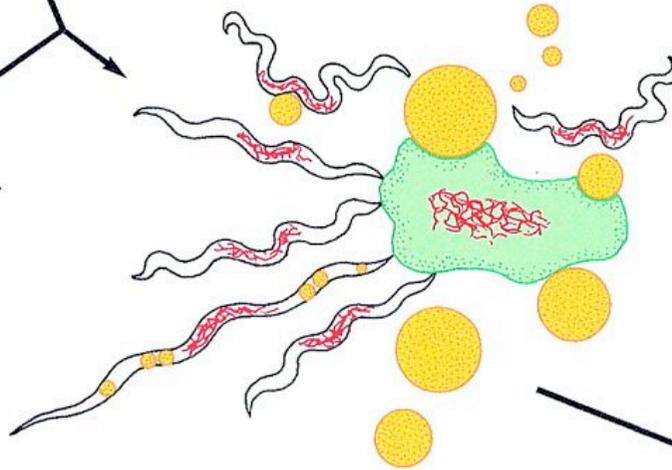


Prokaryotes



anoxic sulfuretum

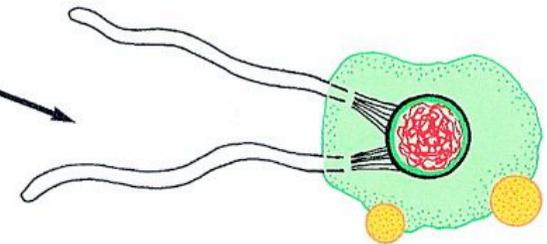
protoeukaryote
"Thiodendron" stage



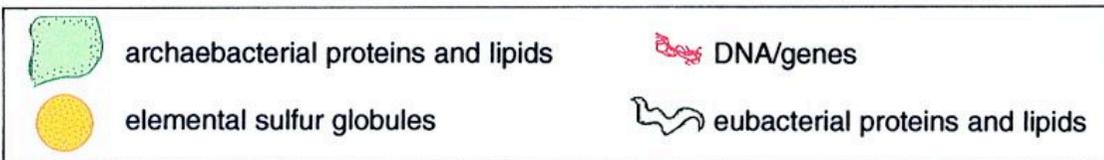
motility symbioses

Amitochondriate Eukaryotes

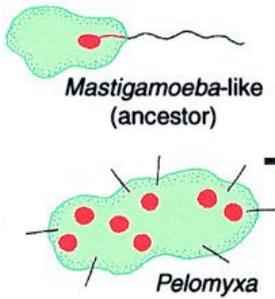
nucleated cell
with karyomastigont



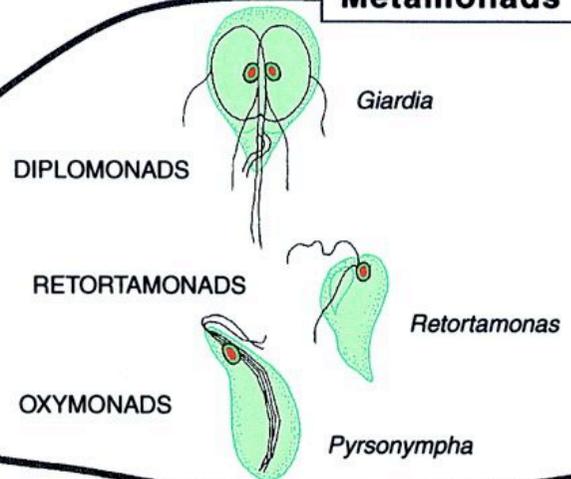
first archamoebas,
DNA, membrane
and protein fusion
in formation of
the nucleus



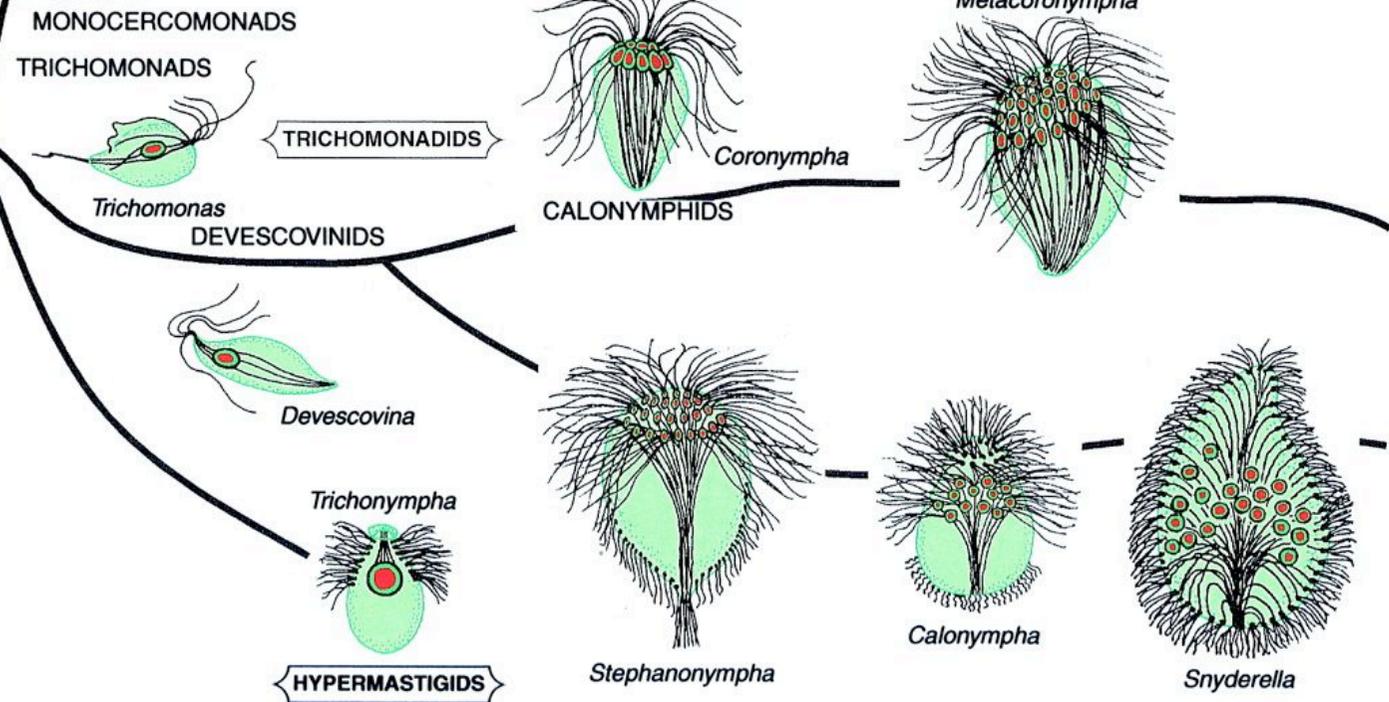
Archamoebae



Metamonads



Parabasalids



- nucleus
- archaebacterial lipids, proteins
- karyomastigont
- akaryomastigont

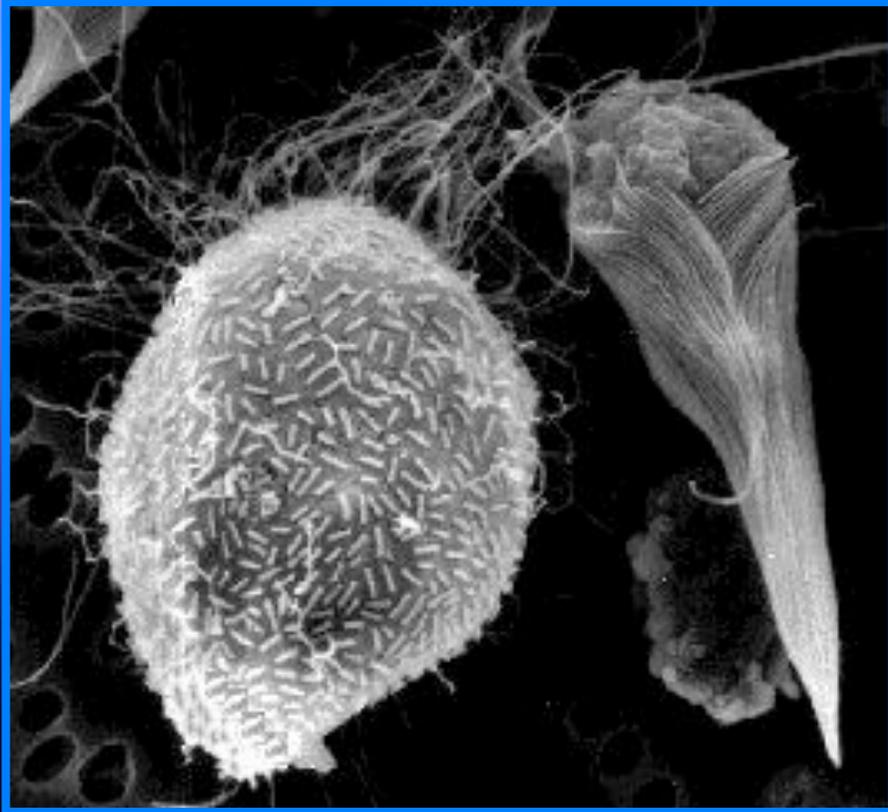
FAMILIES

ORDERS

CLASS-

L'Endosymbiose en série

Joenia et Devescovina



L'Endosymbiose en série

Euglène



L'Endosymbiose en série

Euglène



L'Endosymbiose en série

Euglène



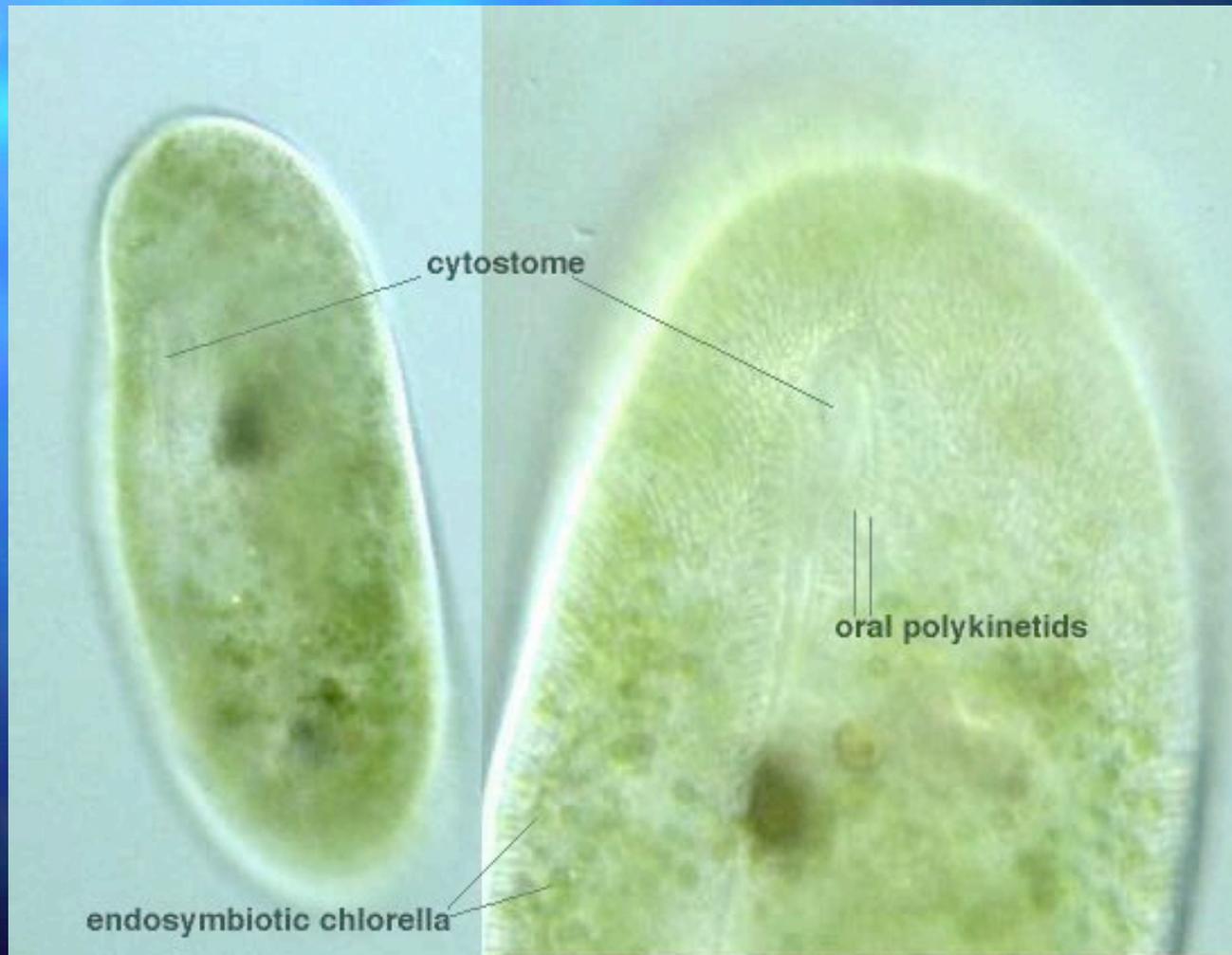
L'Endosymbiose en série

Paramecium bursaria + Chlorella



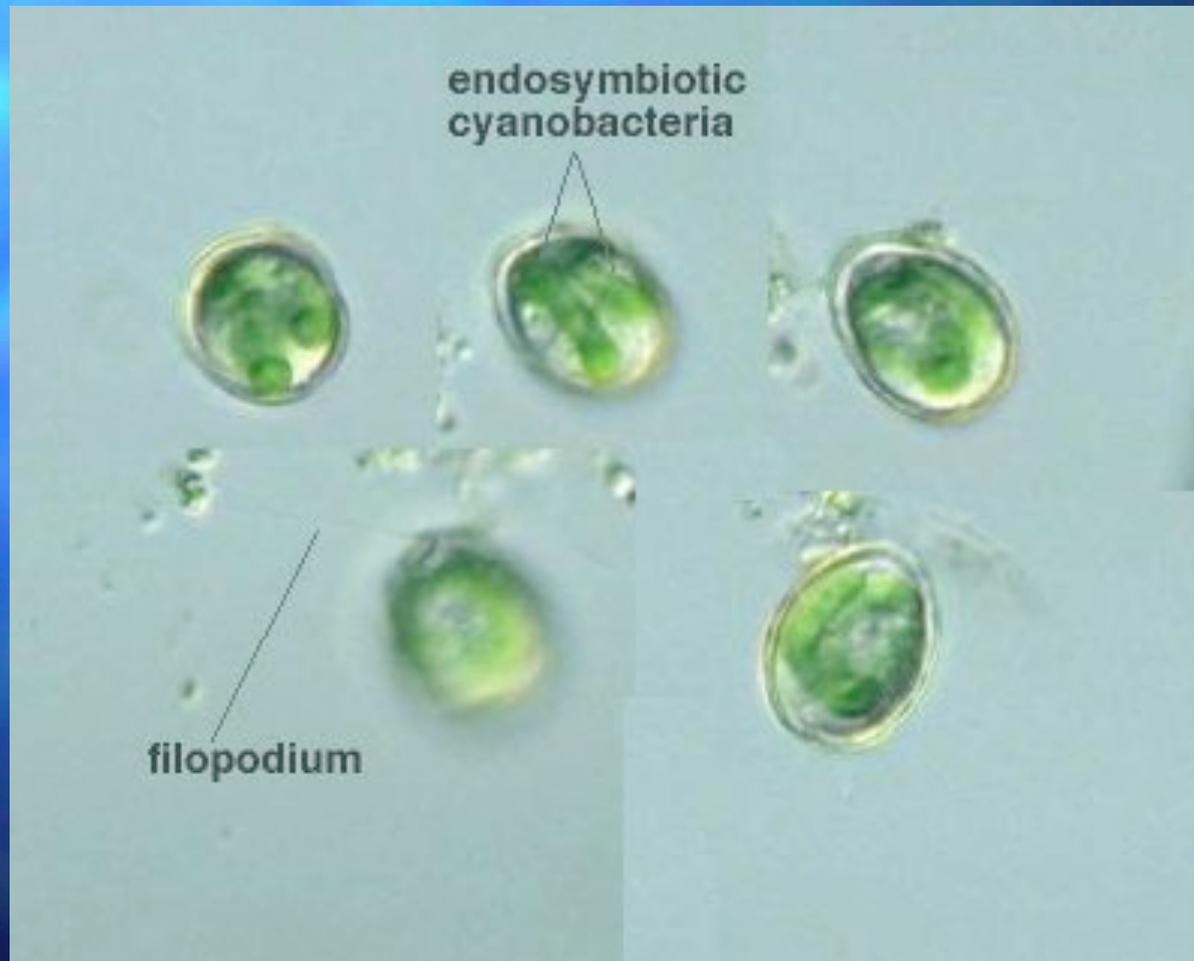
L'Endosymbiose en série

Frontonia vernalis + Chlorella



L'Endosymbiose en série

Paulinella + cyanobactéries

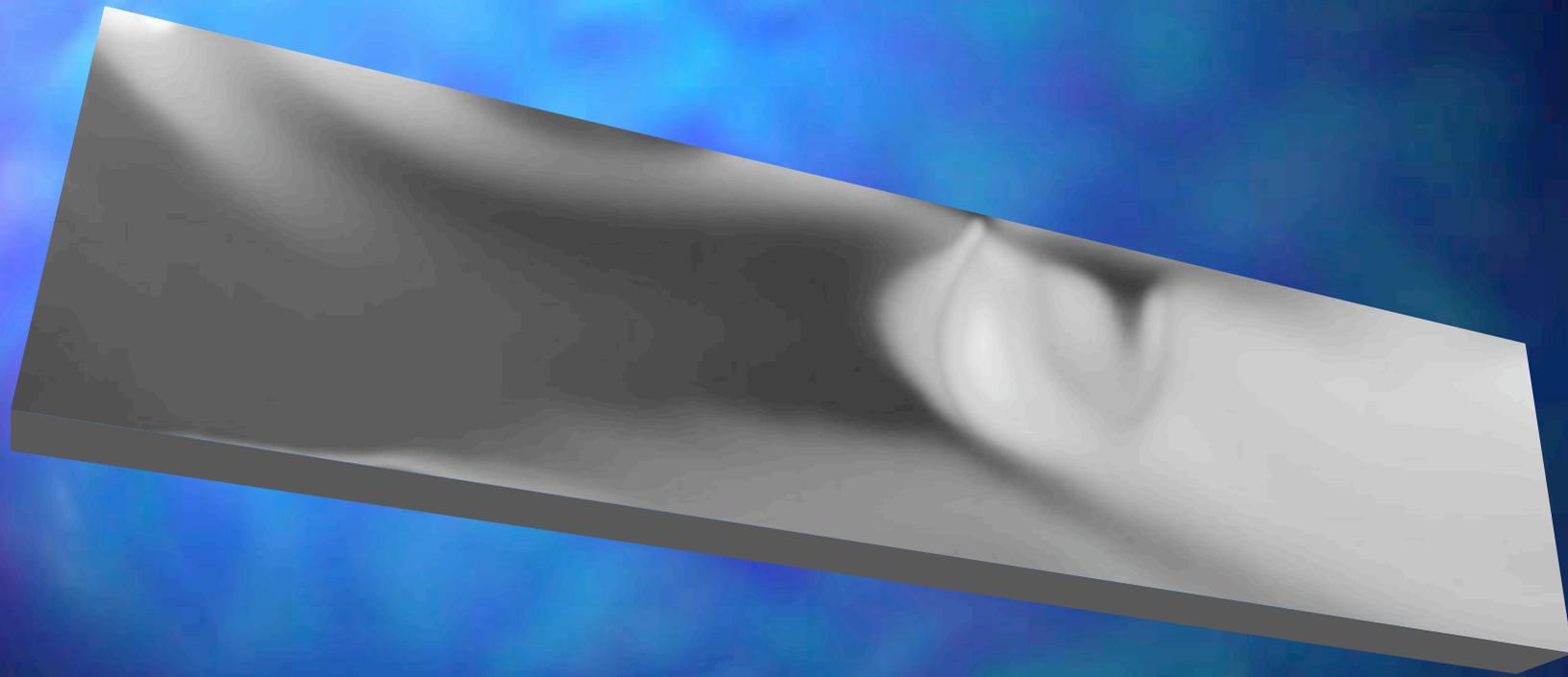


L'Endosymbiose en série

Anisolpidium + phycoparasites



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À Suivre ...