

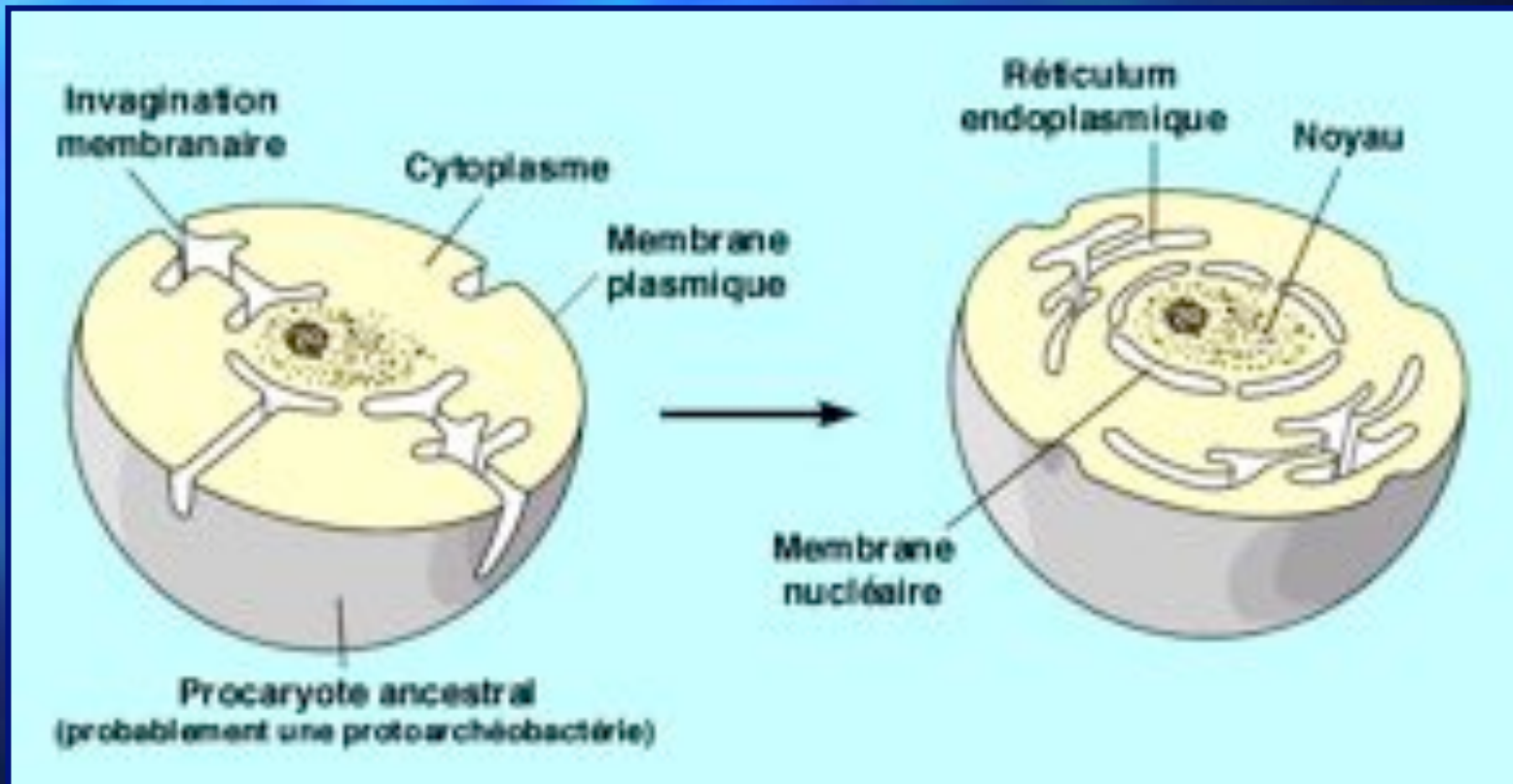


Introduction à la Microbiologie

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

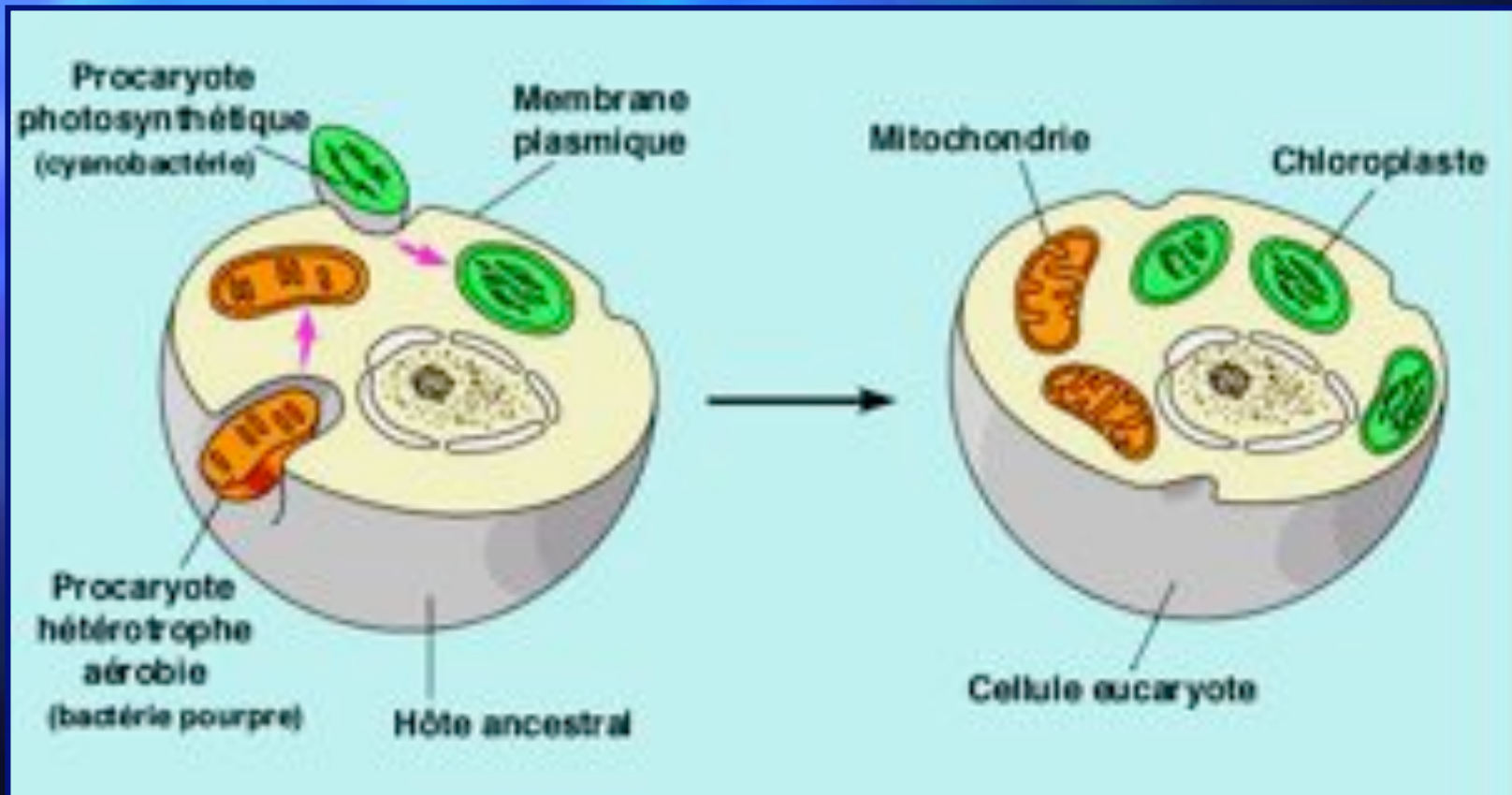
L'Endosymbiose en série

D'après Lynn Margulis



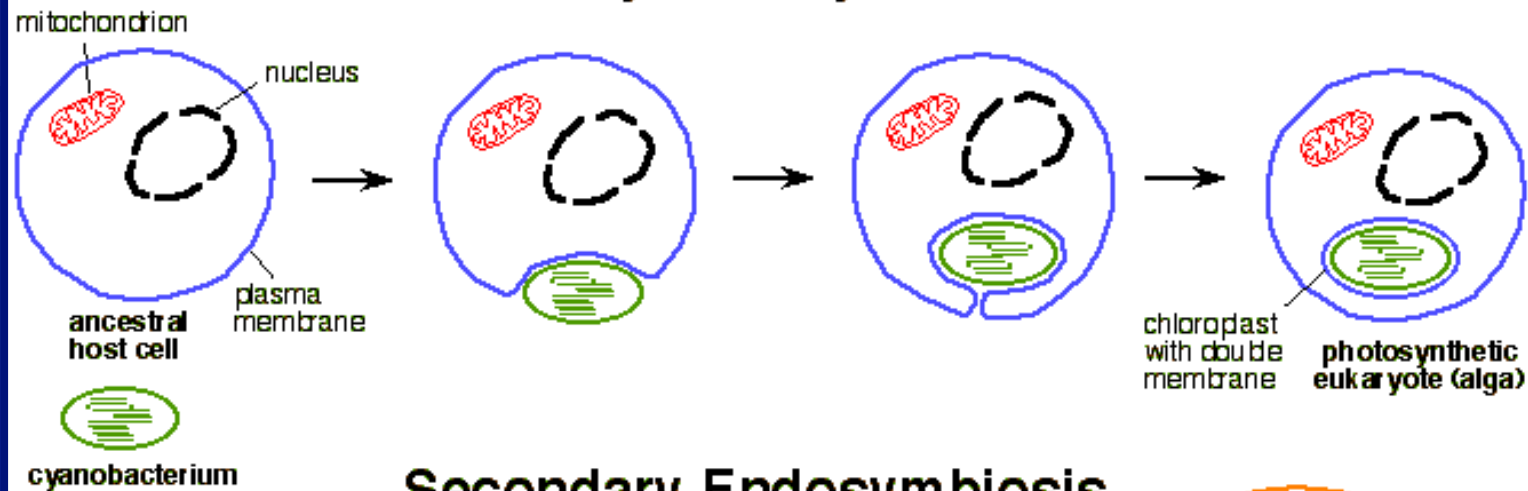
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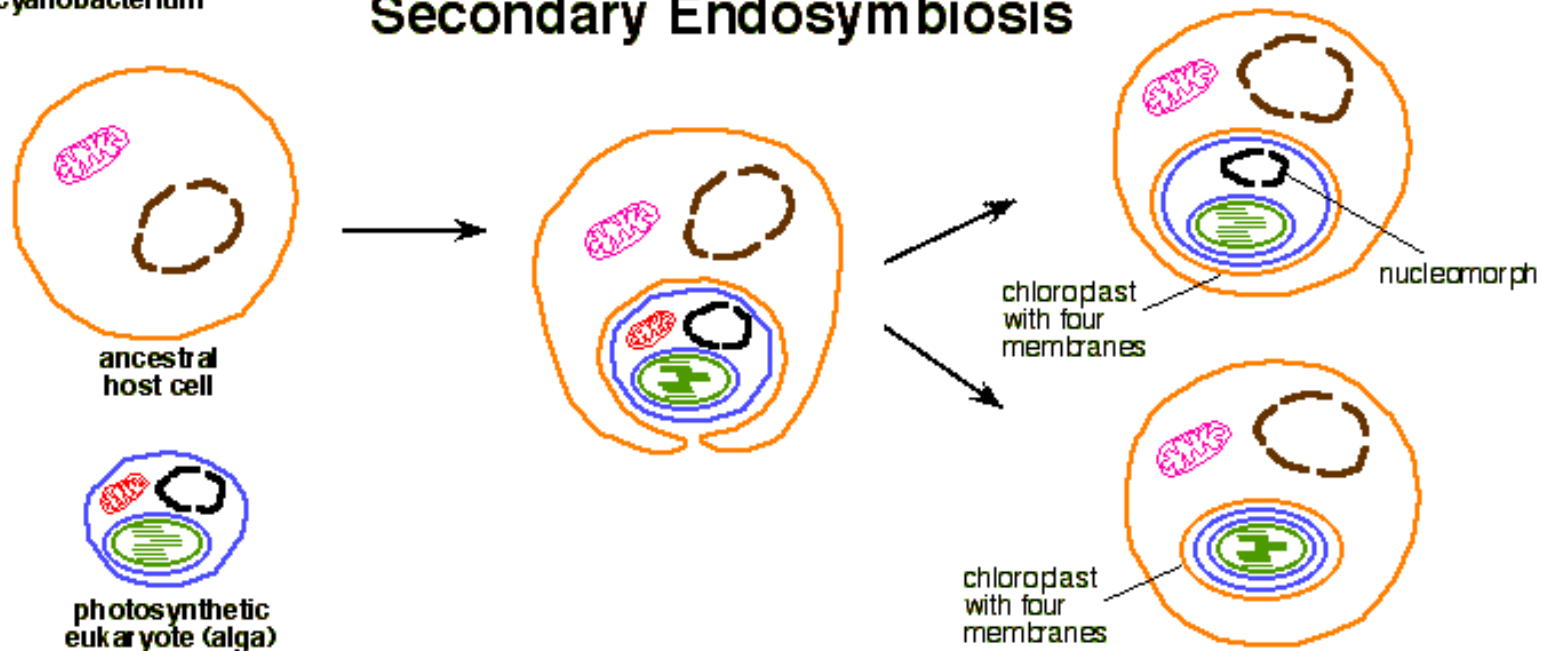


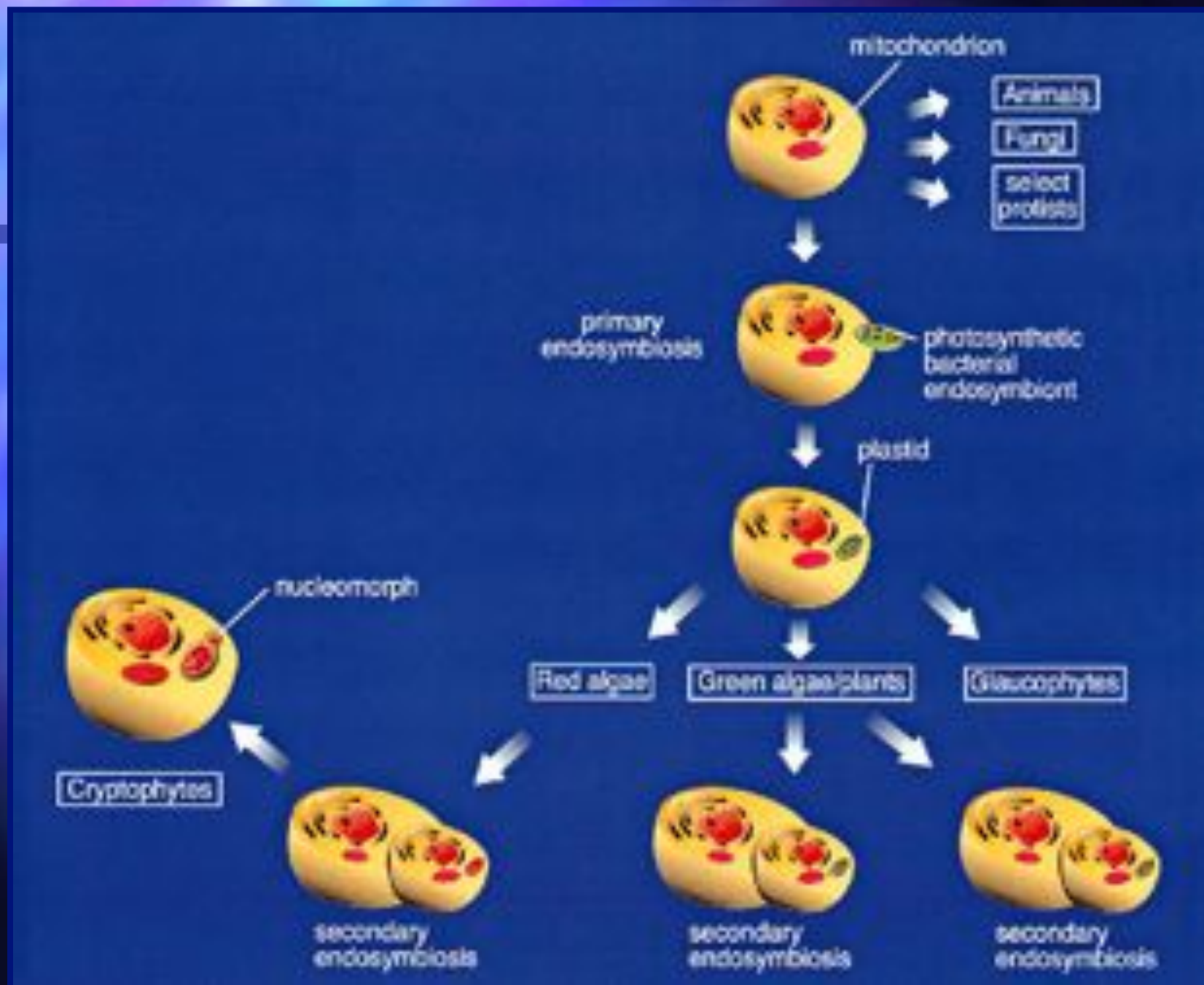
L'Endosymbiose en série

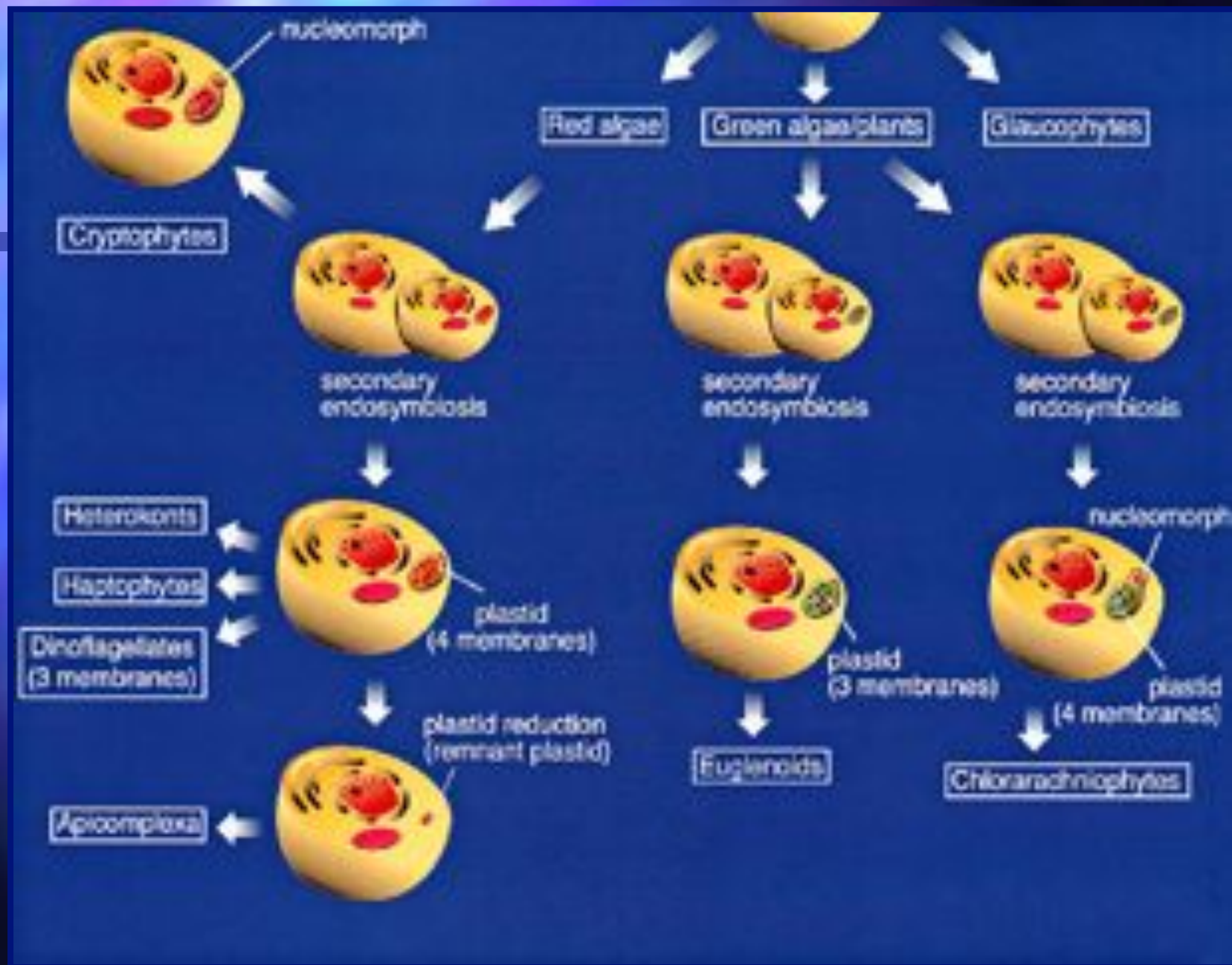
Primary Endosymbiosis



Secondary Endosymbiosis







Prokaryotes

archaebacteria
Thermoplasma-like

eubacteria
Spirochaeta-like

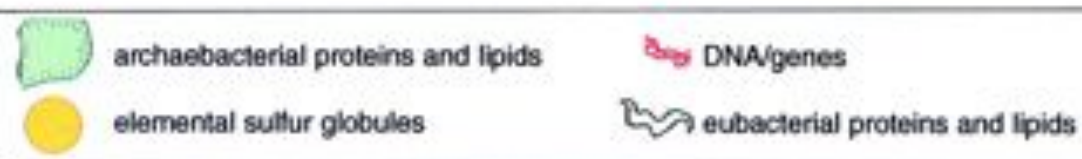
anoxic sulfuretum

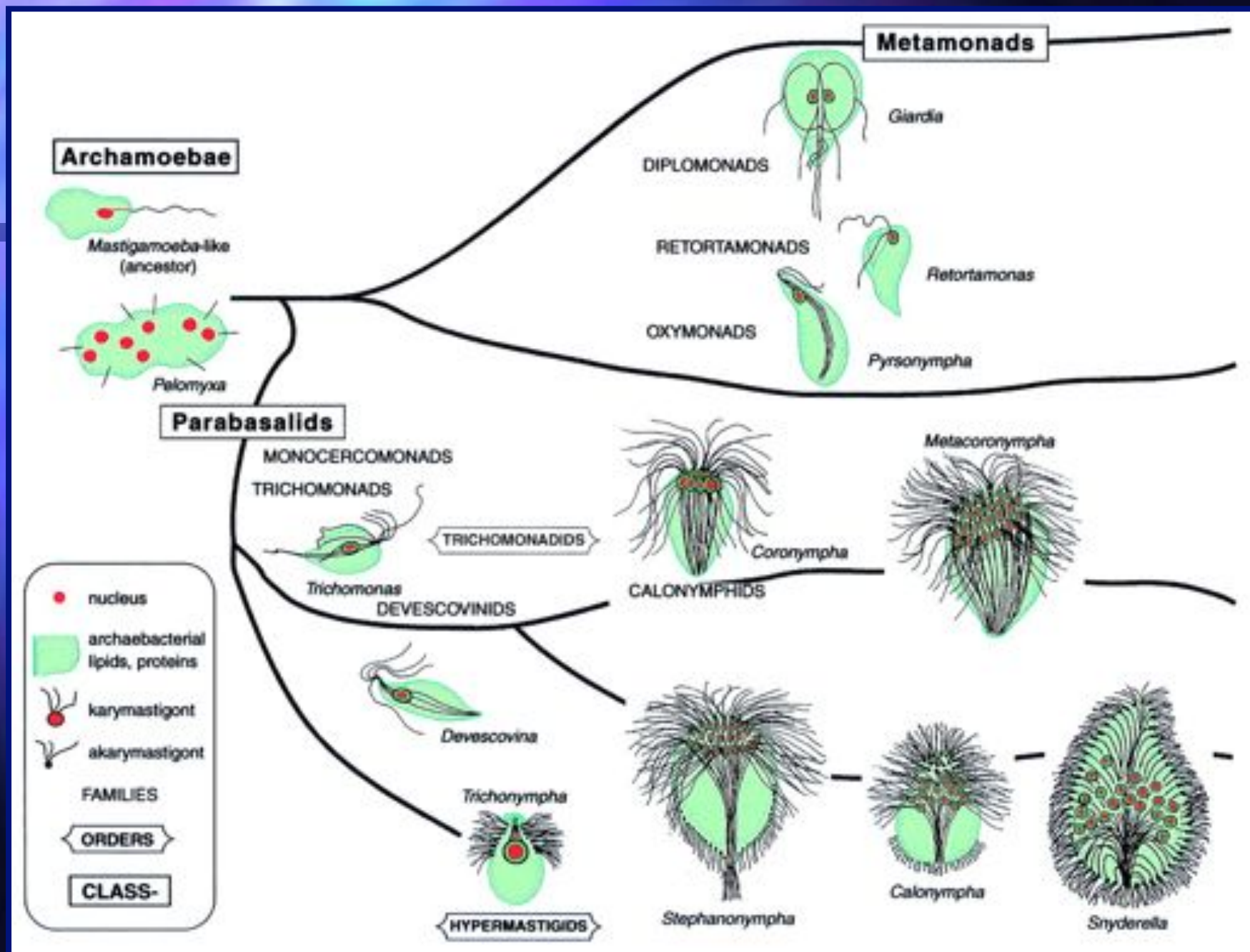
protoeukaryote
"Thiodendron" stage

Amitochondriate Eukaryotes

nucleated cell
with karyomastigont

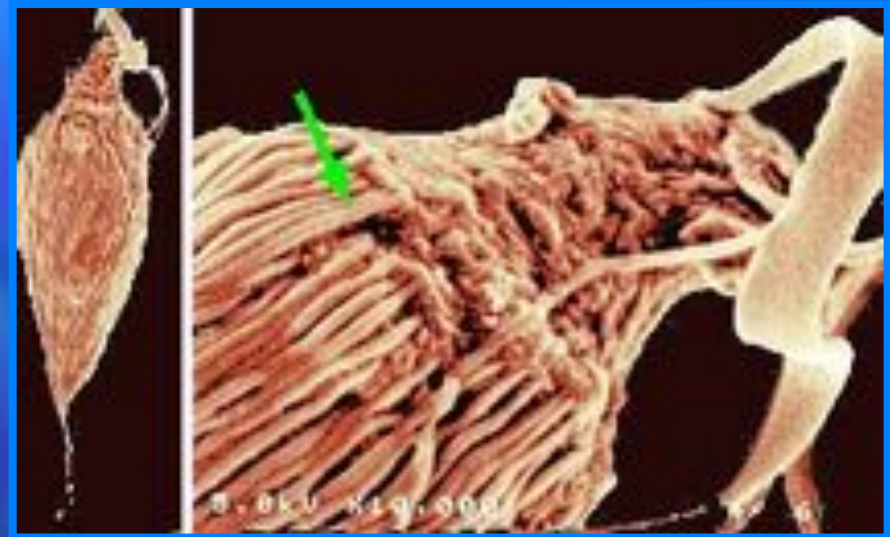
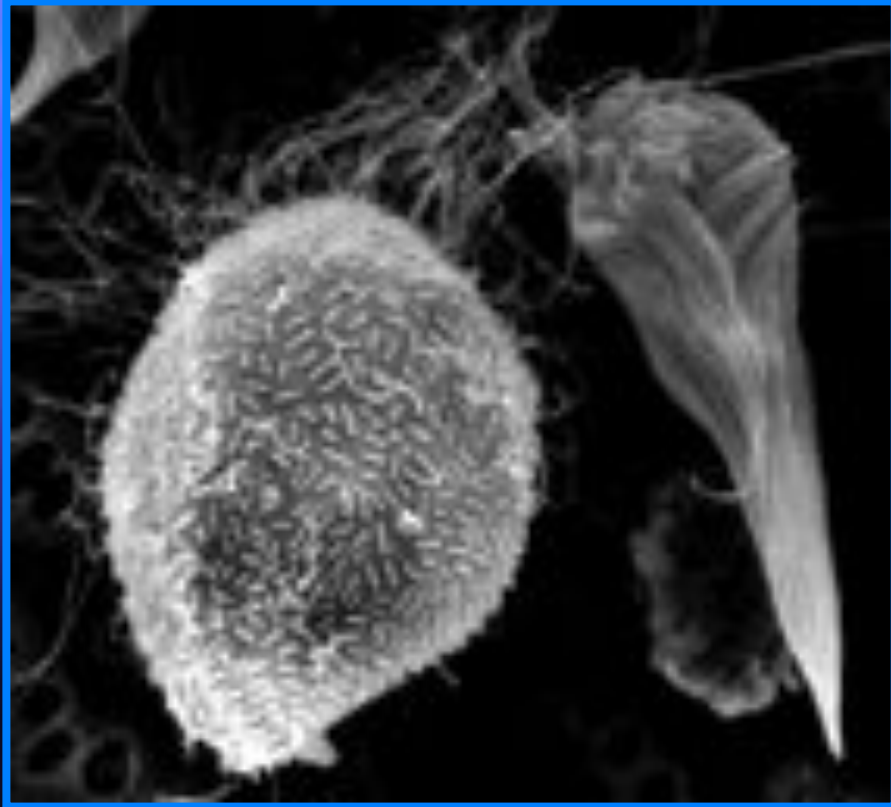
first archamoebas,
DNA, membrane
and protein fusion
in formation of
the nucleus





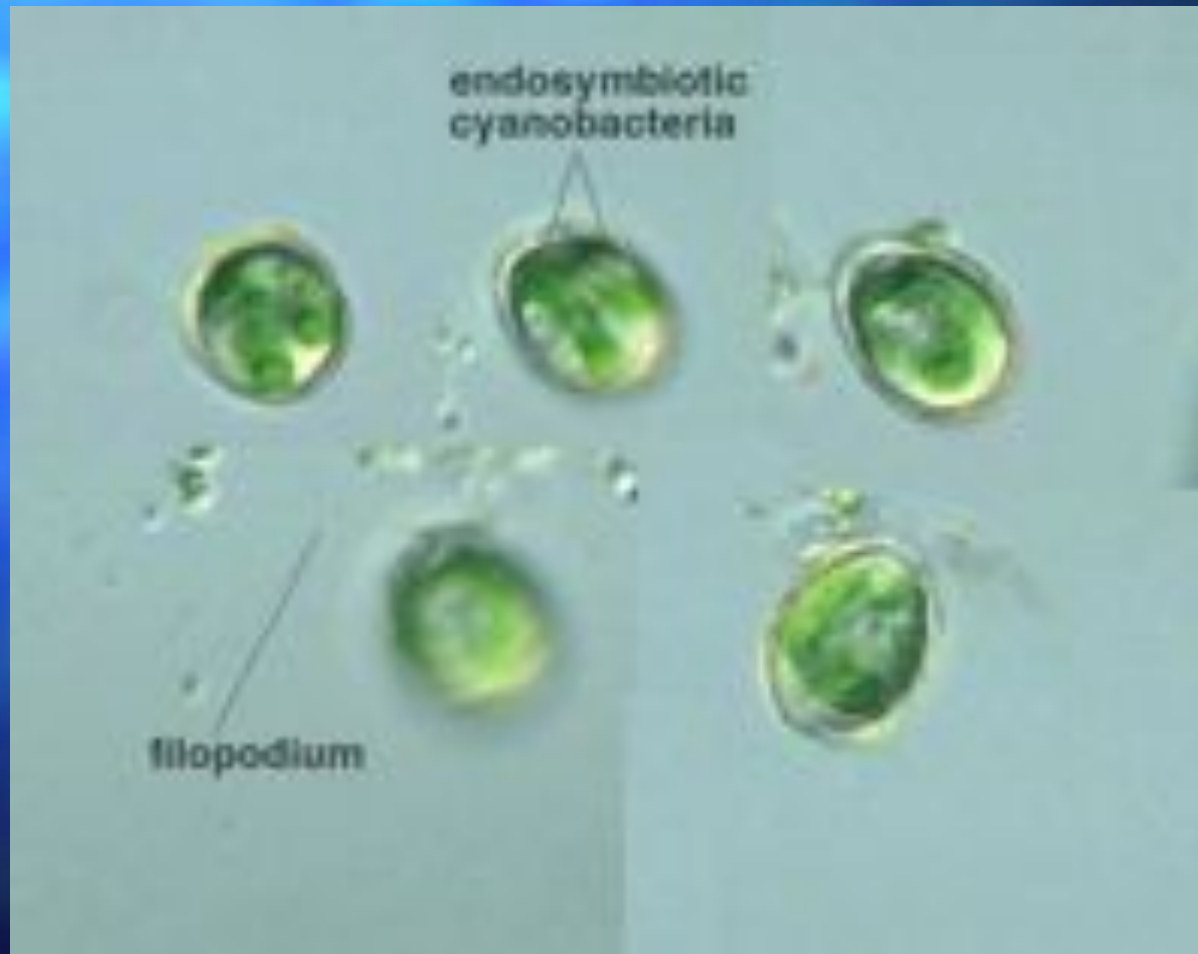
L'Endosymbiose en série

Joenia et Devescovina



L'Endosymbiose en série

Paulinella + cyanobactéries



L'Endosymbiose en série

Paramecium bursaria + Chlorella



L'Endosymbiose en série

Frontonia vernalis + Chlorella



L'Endosymbiose en série

Anisolpidium + phycoparasites



L'Endosymbiose en série

Euglène



L'Endosymbiose en série

Euglène

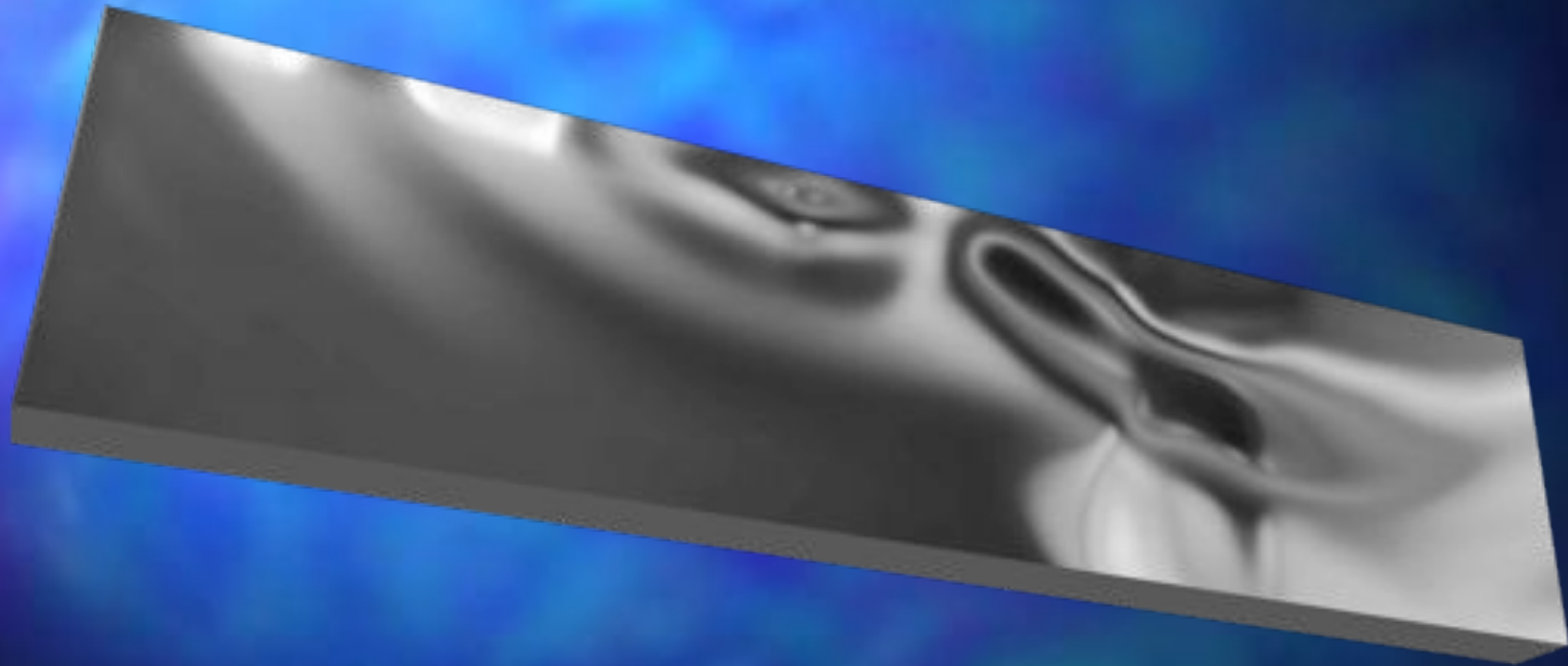


L'Endosymbiose en série

Euglène



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À Suivre ...