Archaea emerge by thermoreduction

Bacteria emerge by reductive evolution

Dawn of Domains

ongoing transition RNA → DNA and progressive individualization of cells

RNA-progenote

Evolution of phagocytosis and various metabolic types

Emergence of Eukarya

Protoeukaryotic RNA LUCA

Self-sustaining protometabolism

Pregenomic phase

Elaboration of a genetic code, of sn 1,2 lipids, and of a protonucleus with introns and exon shuffling

Convergent adaptation to various conditions (from extreme thermophily to psychrophily)

A promiscuous community of mesophilic and thermostolerant organisms that were metabolically and morphologically diverse, and genetically redundant

Catalytic closure of networks of polynucleotides and peptides interacting in amphiphile-enclosed vesicles evolving by heritable variation

Adapting Juan Miro's "Potato"

Emergence of Eukarya

DNA cells

DNA virus

sn 1,2 lipids

sn 2,3 lipids

DNA cells

Converging adaptation to various conditions