



L'ORIGINE DELLA VITA

A cura di: Prof. Canio Loguercio

**PRIMA DI INIZIARE QUESTO
LUNGO VIAGGIO DOBBIAMO
PORCI UNA DOMADA
SEMPLICE MA
FONDAMENTALE...**



CHE COS'E'

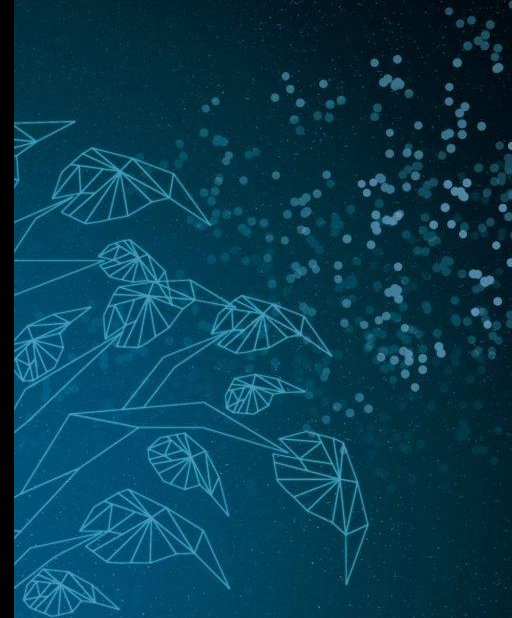
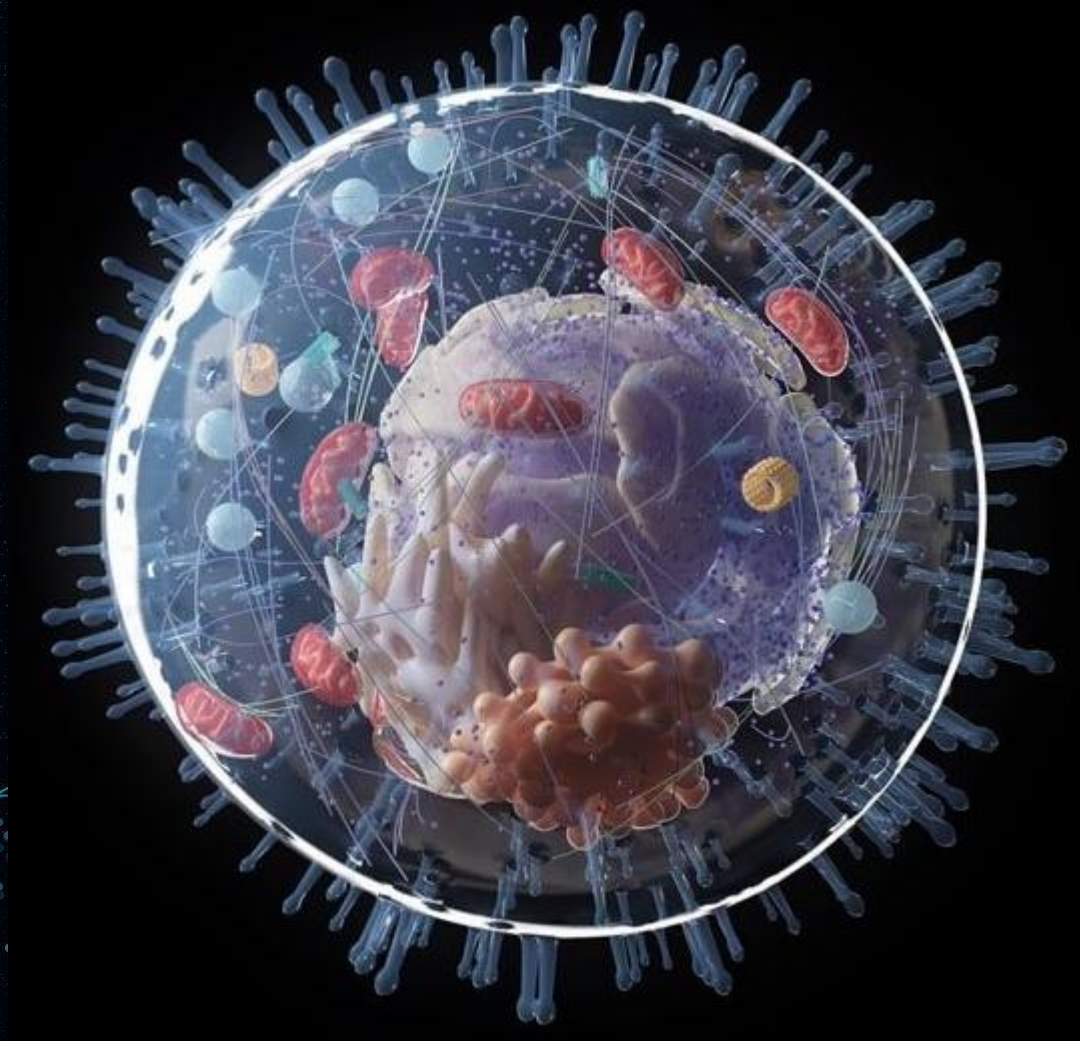
LA VITA?

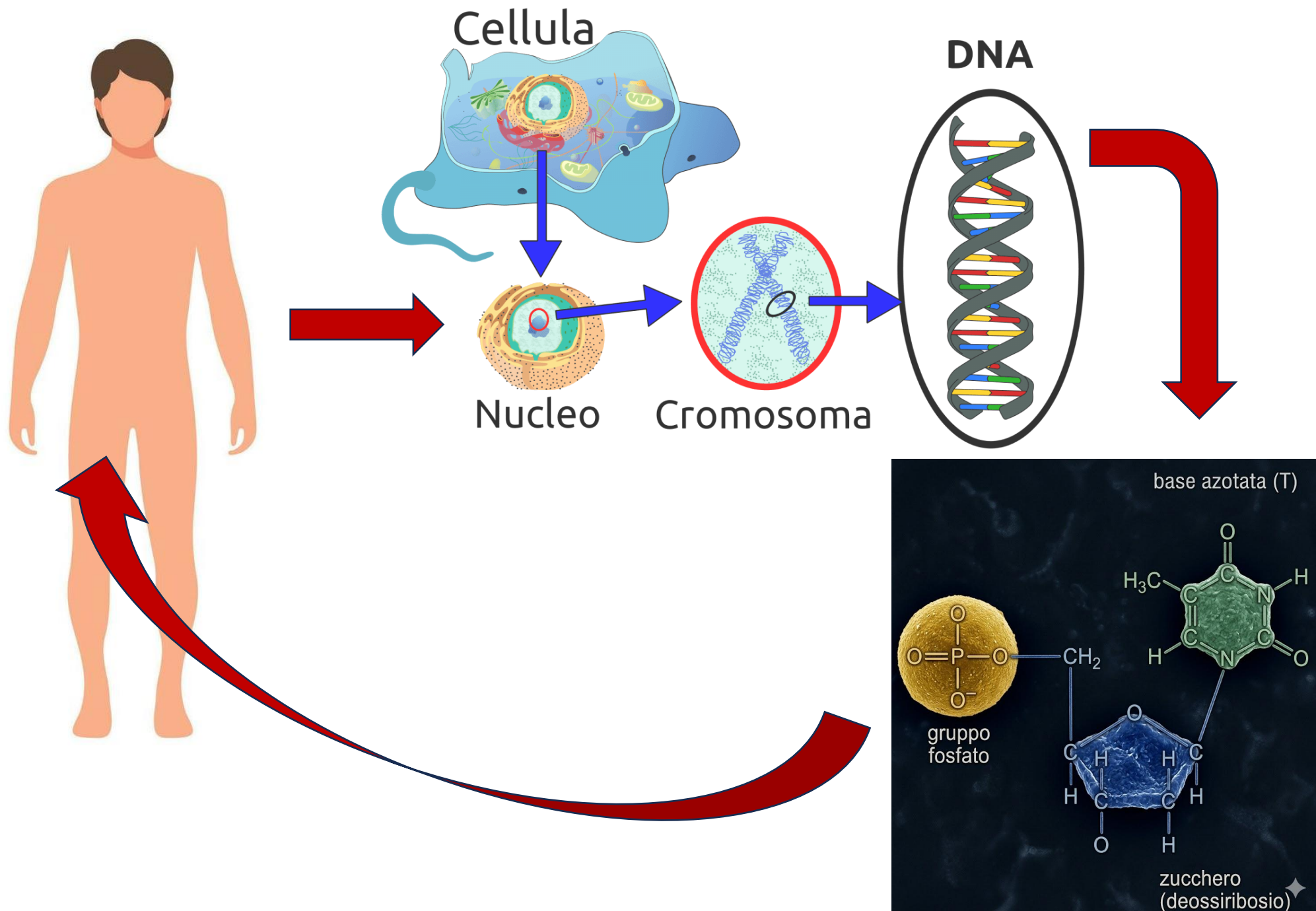


**“UN SISTEMA CHIMICO
AUTO-ALIMENTATO
CAPACE DI EVOLUZIONE
DARWINIANA”**

Divisione di Astrobiologia della NASA

LA CELLULA

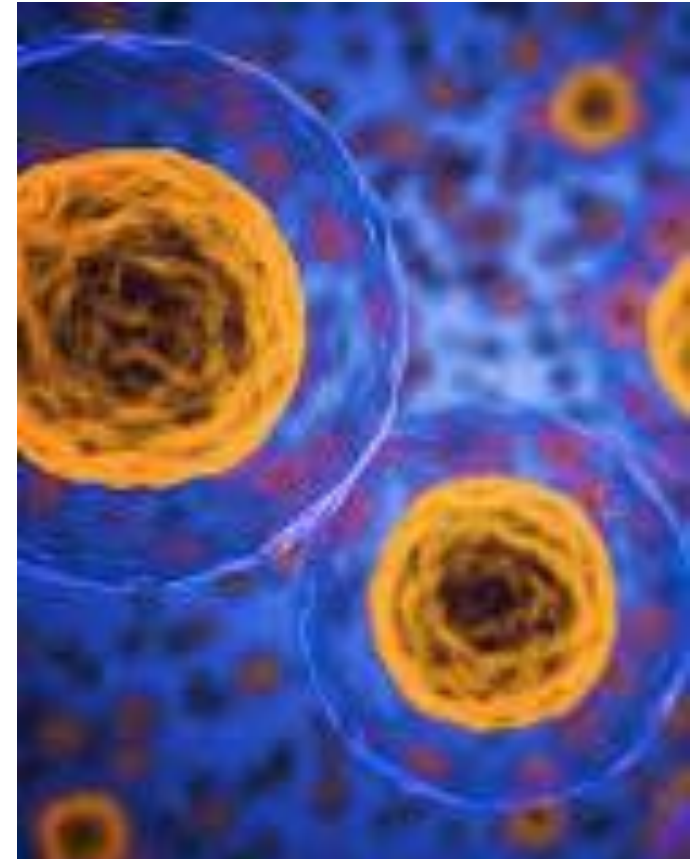




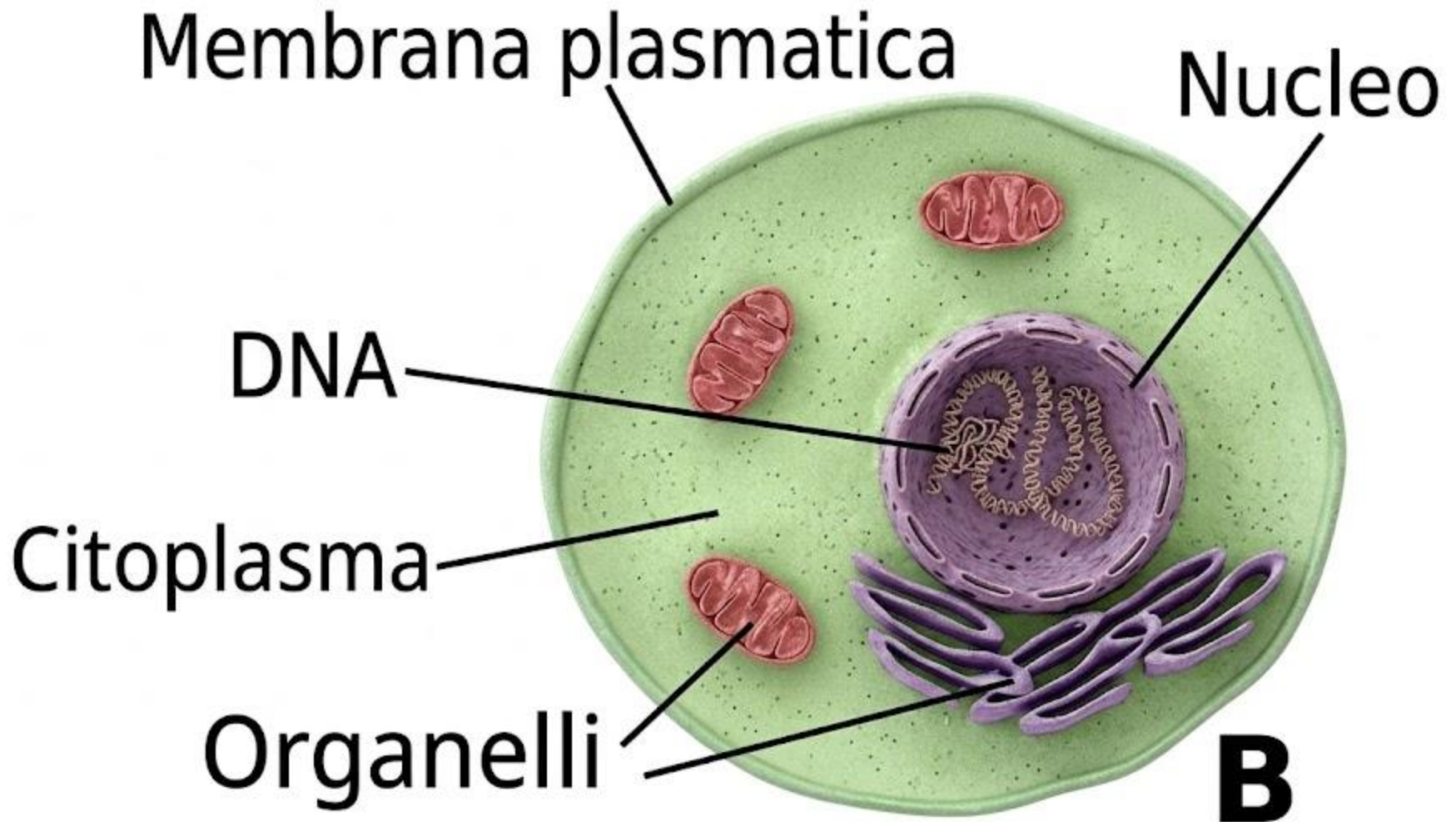
LA CELLULA

**LA CELLULA E'
L'UNITA' BASE DEGLI
ESSERI VIVENTI**

*Esattamente come
l'Atomo è l'unità base della
Materia,
la Cellula è l'unità base
della Vita*

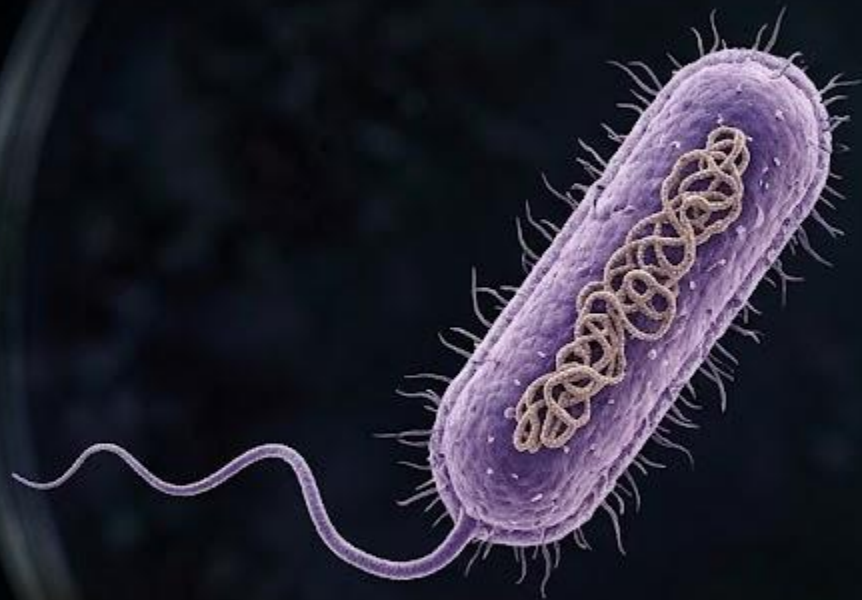


LA CELLULA

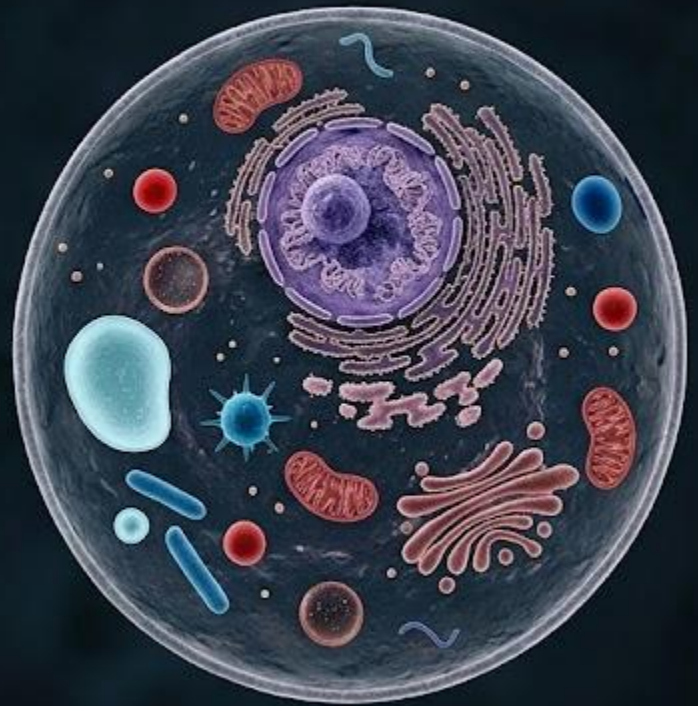


PROCARIOTI

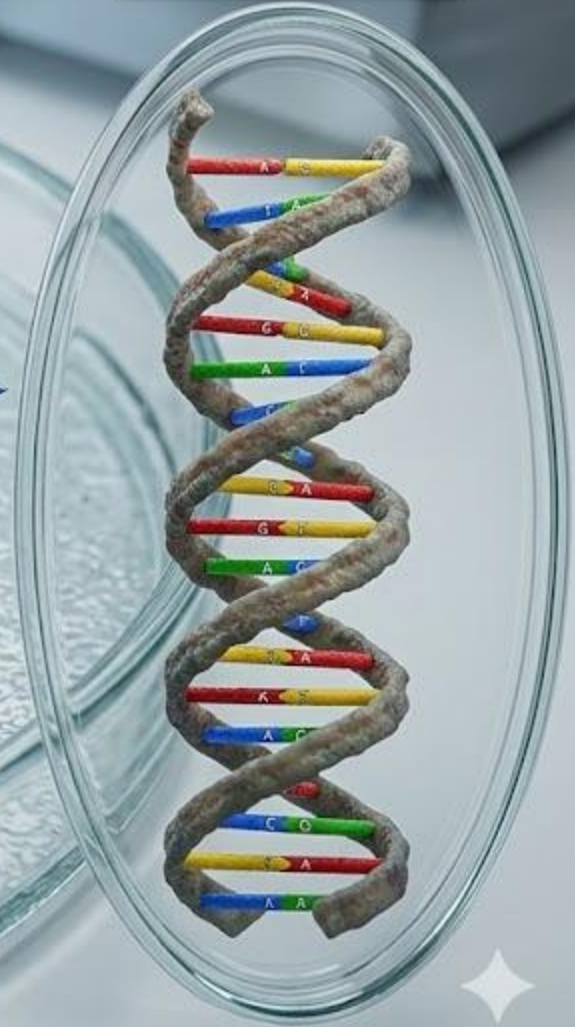
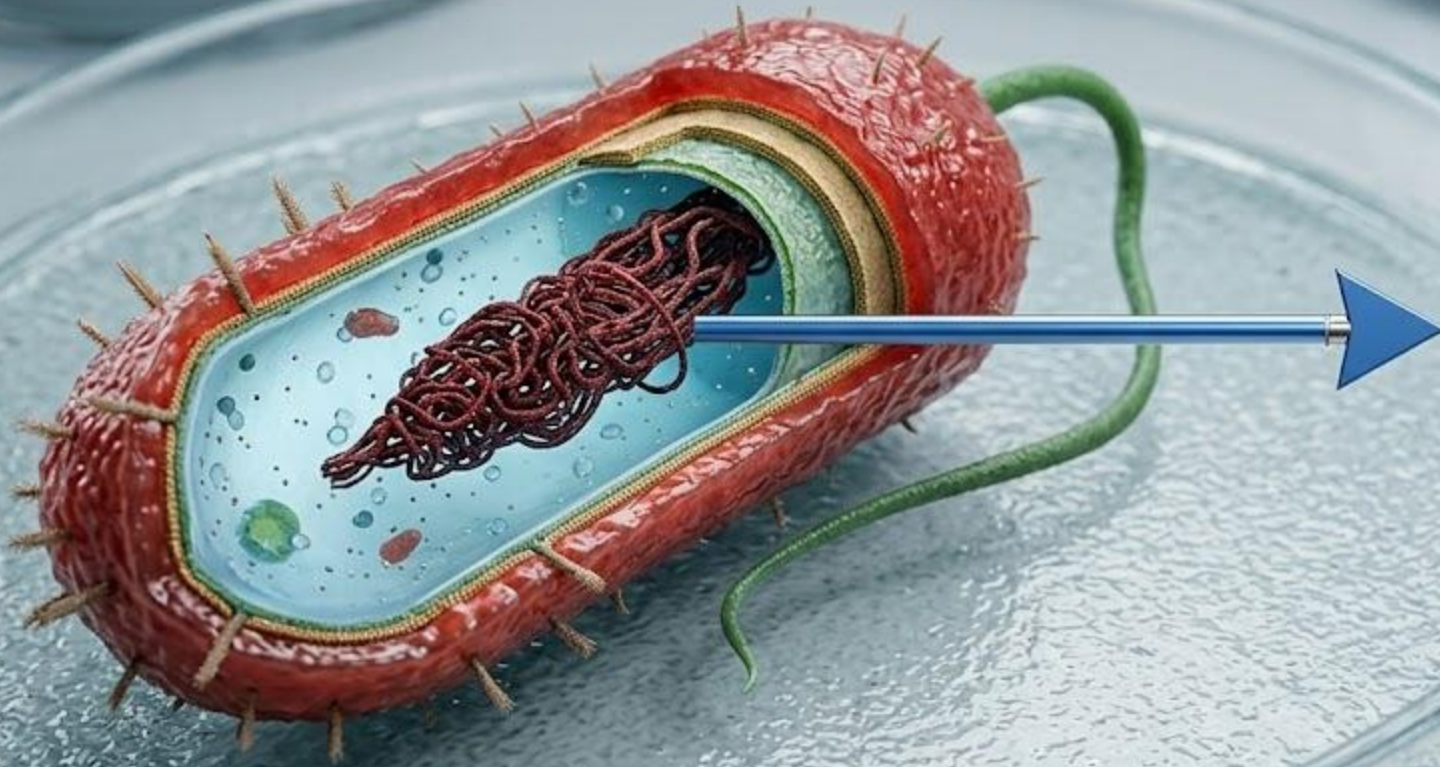
EUCARIOTI



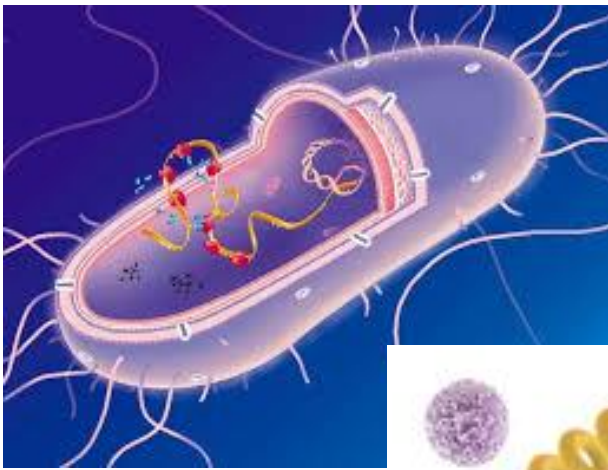
VS



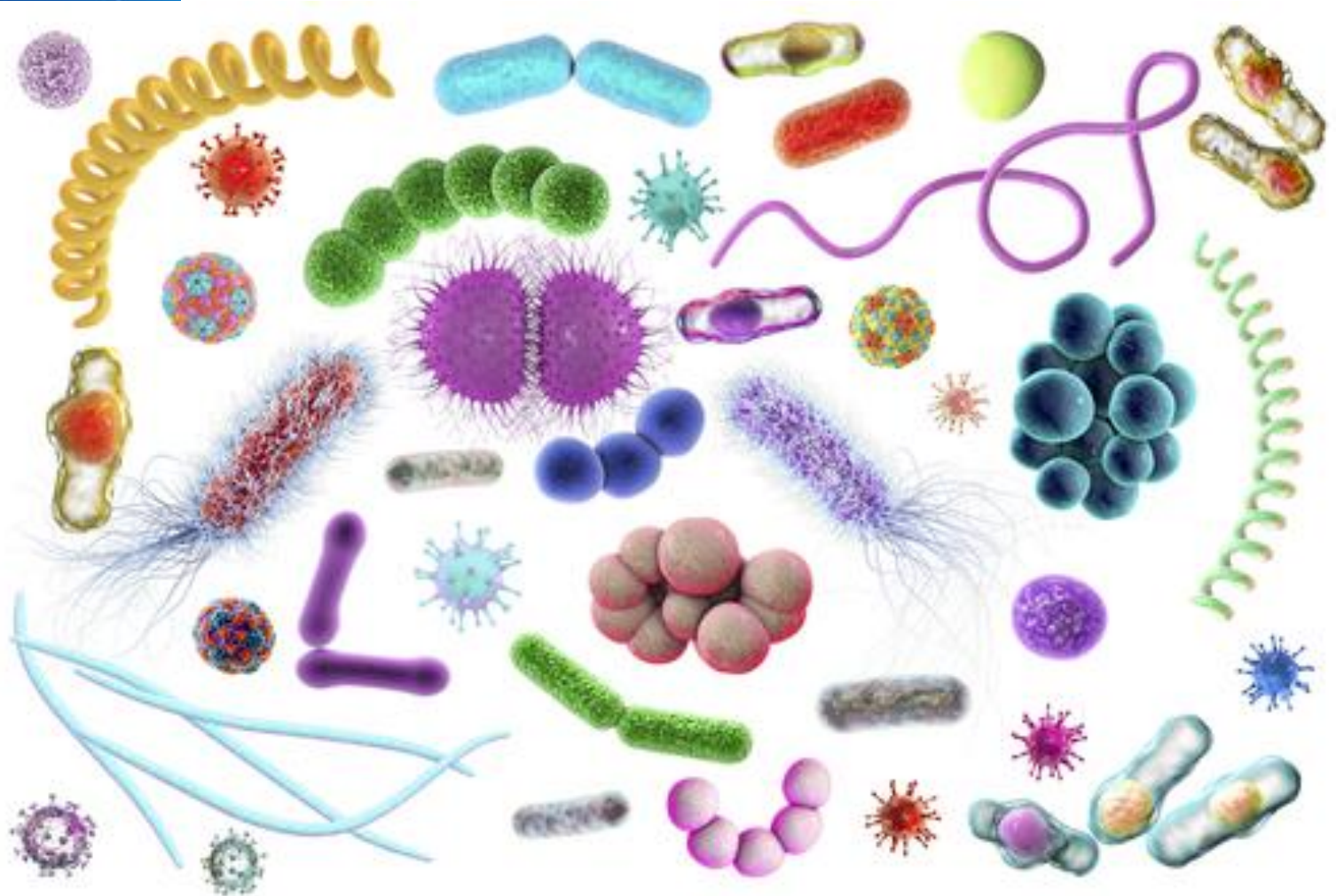
DNA



Cellula procariote



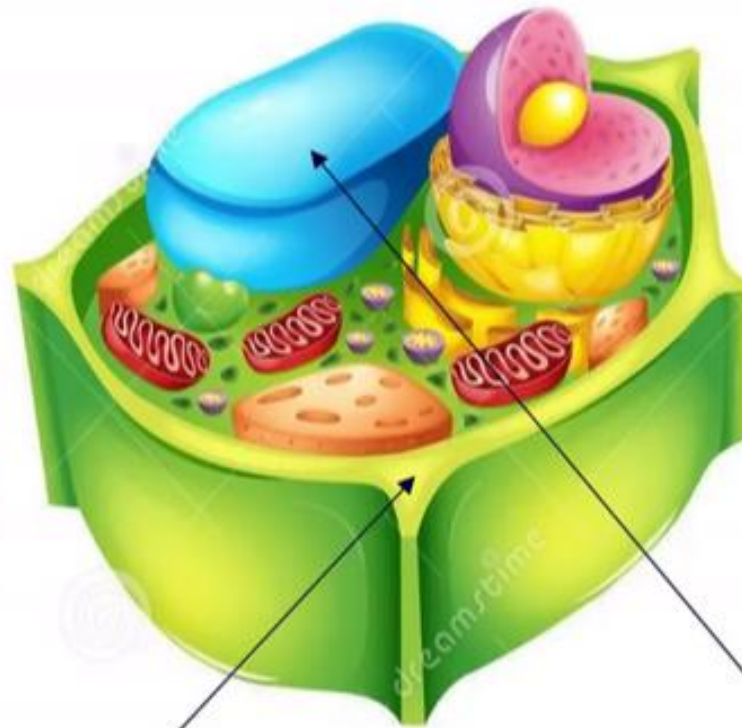
I PROCARIOTI



Cellula animale



Cellula vegetale

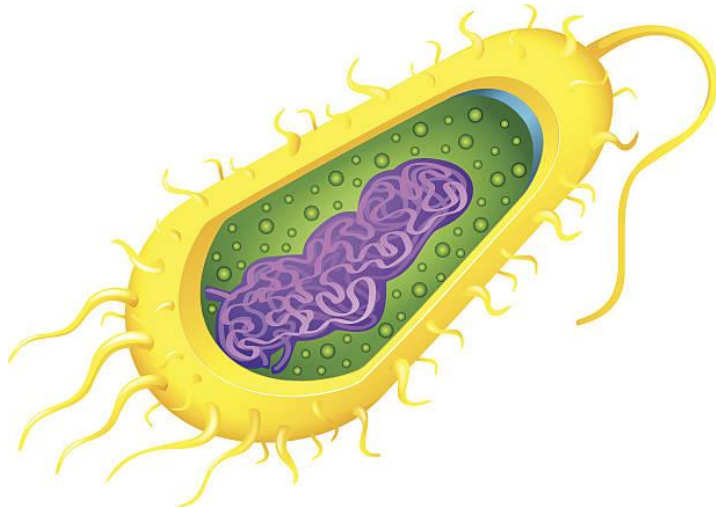


VACUOLO

PARETE CELLULARE RIGIDA

LA CELLULA

PROCARIOTE
(DNA DISPERSO NEL
CITOPLASMA)

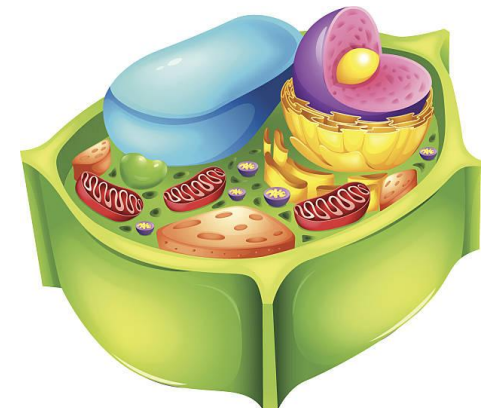


EUCARIOTE
(DNA RACCHIUSO NEL
NUCLEO)



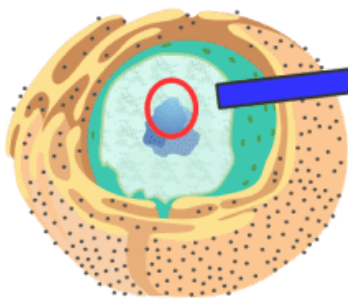
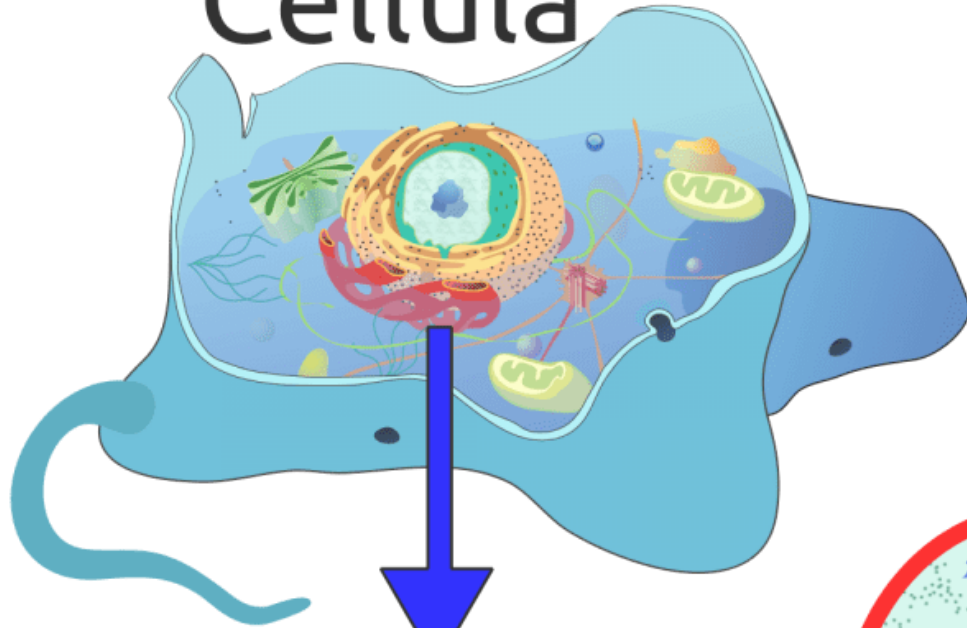
ANIMALI

VEGETALI

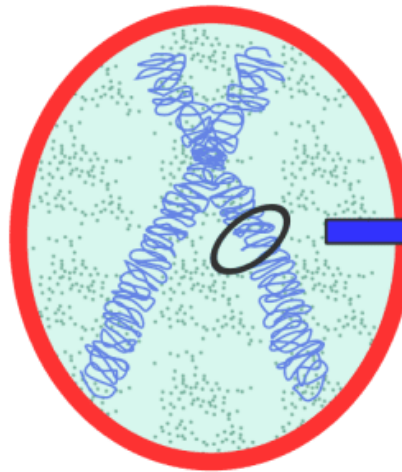


Cellula

DNA

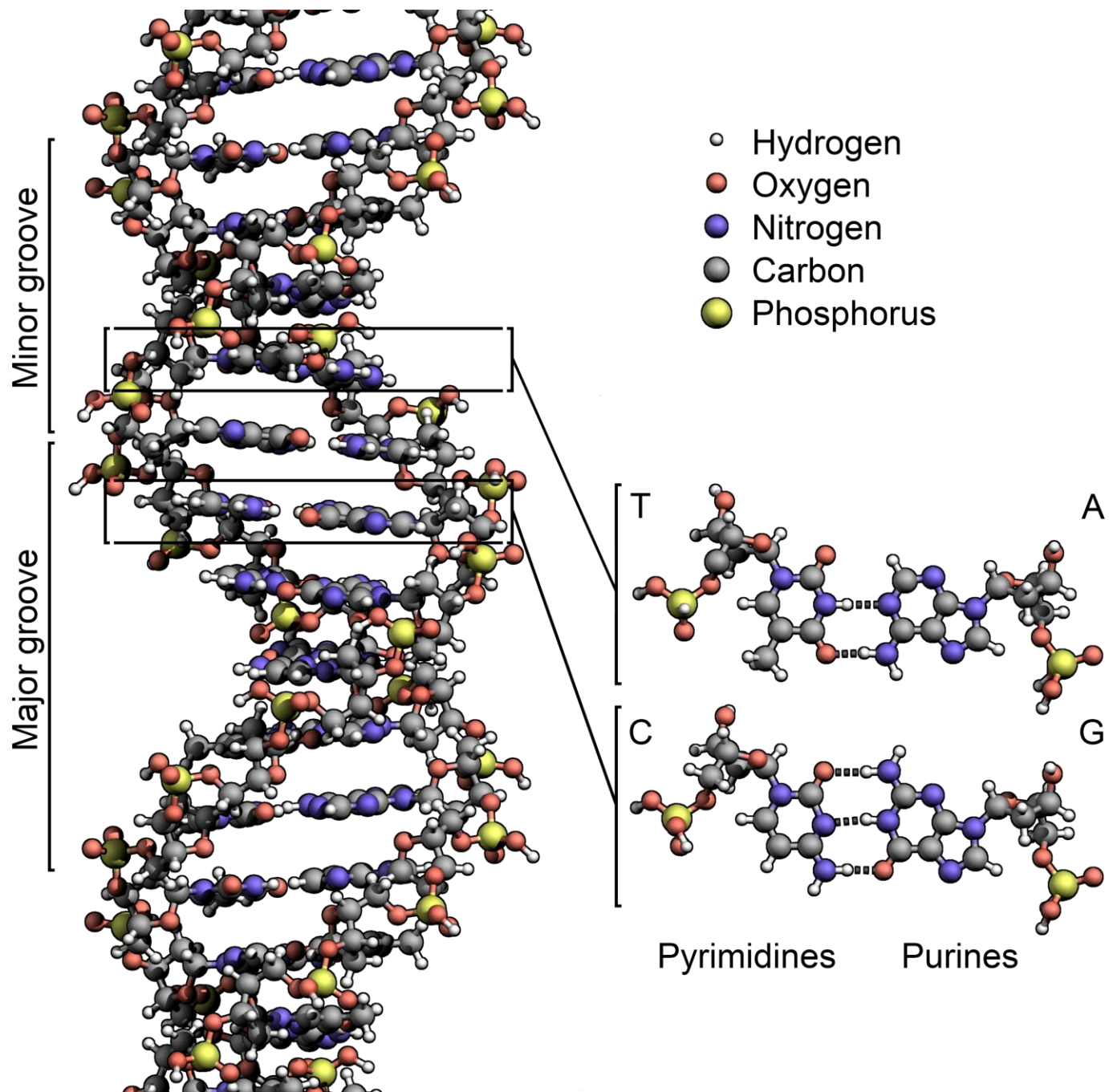


Nucleo

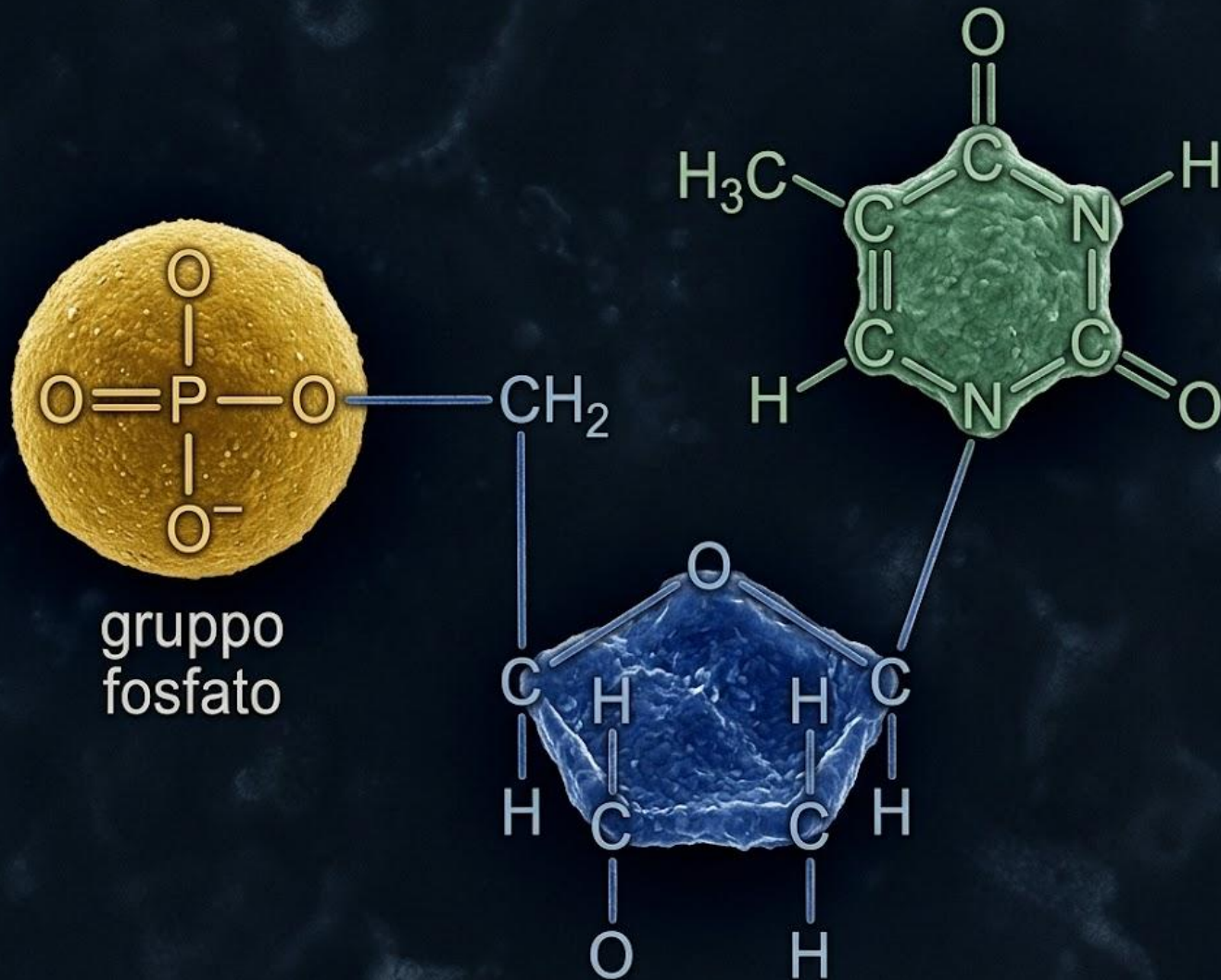


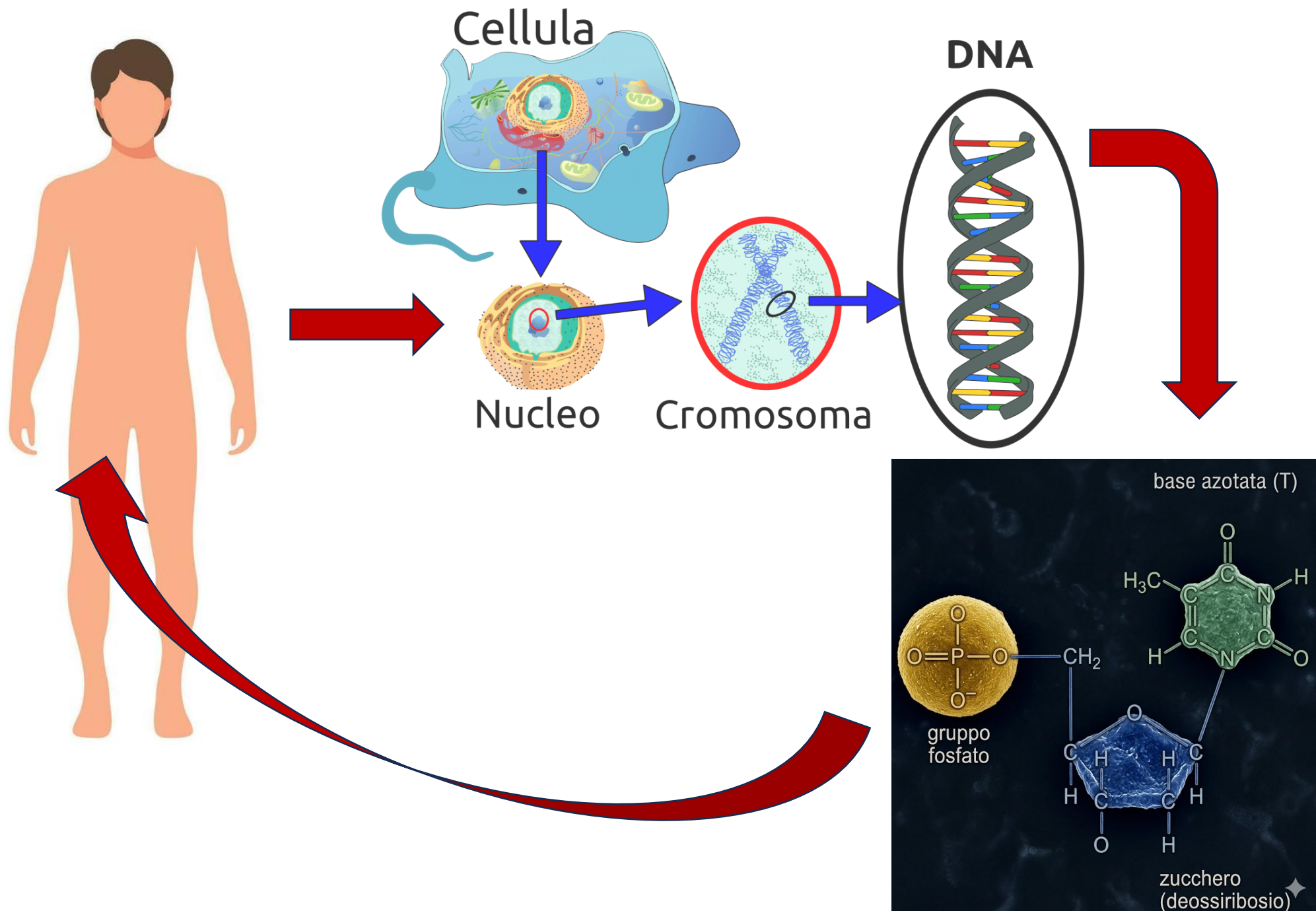
Cromosoma





base azotata (T)

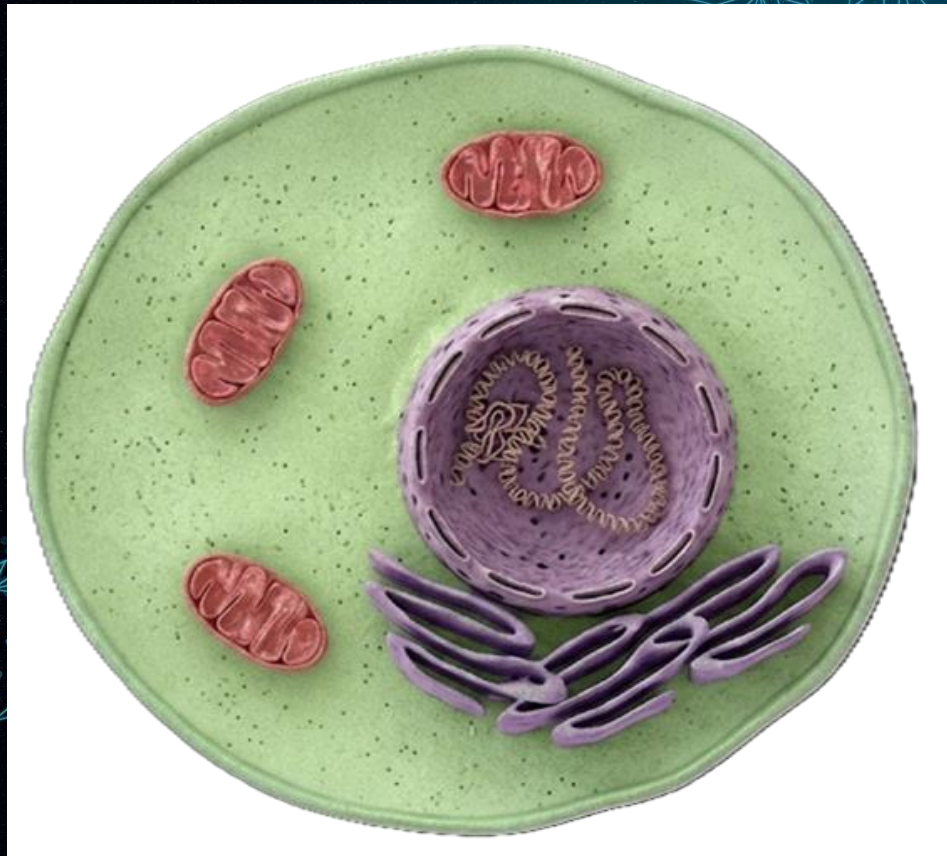




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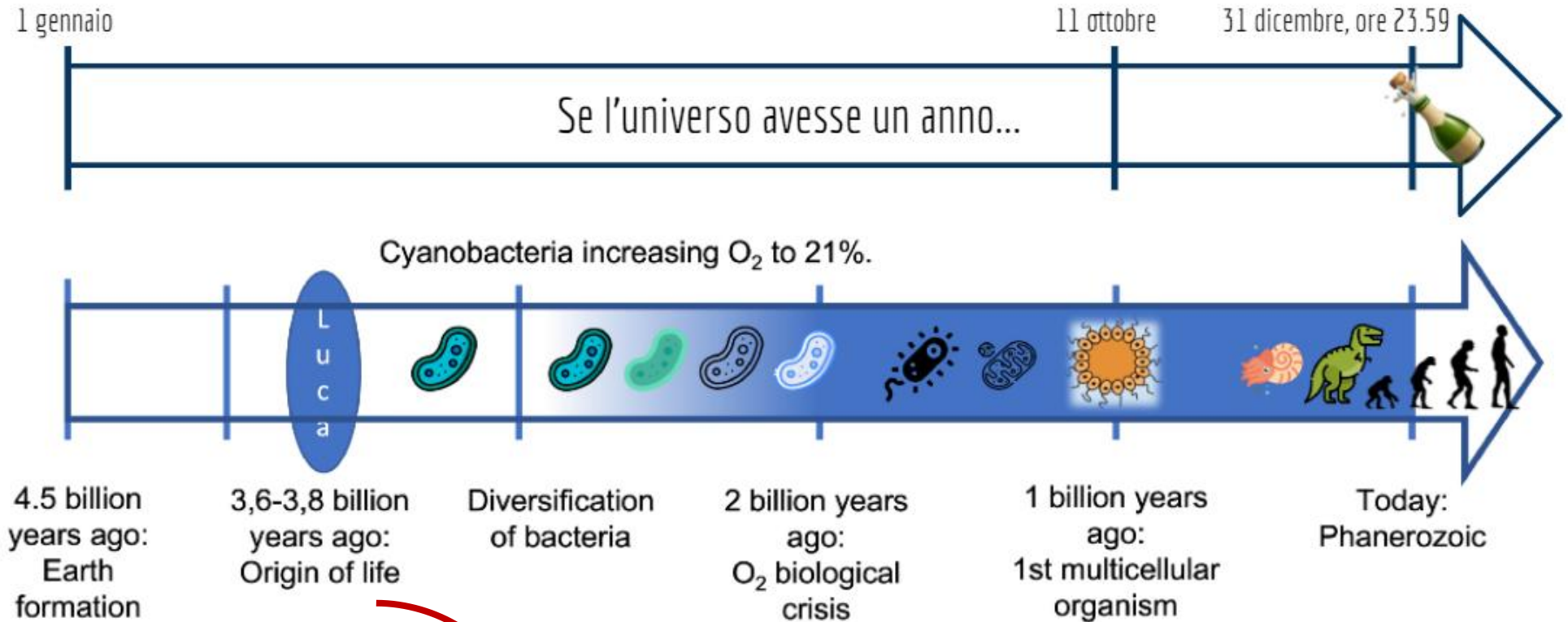
DA DOVE NASCE LA CELLULA???



**NELLO
SPECIFICO...
DA DOVE NASCE
LA BASE DELLA
VITA...
IL DNA?**

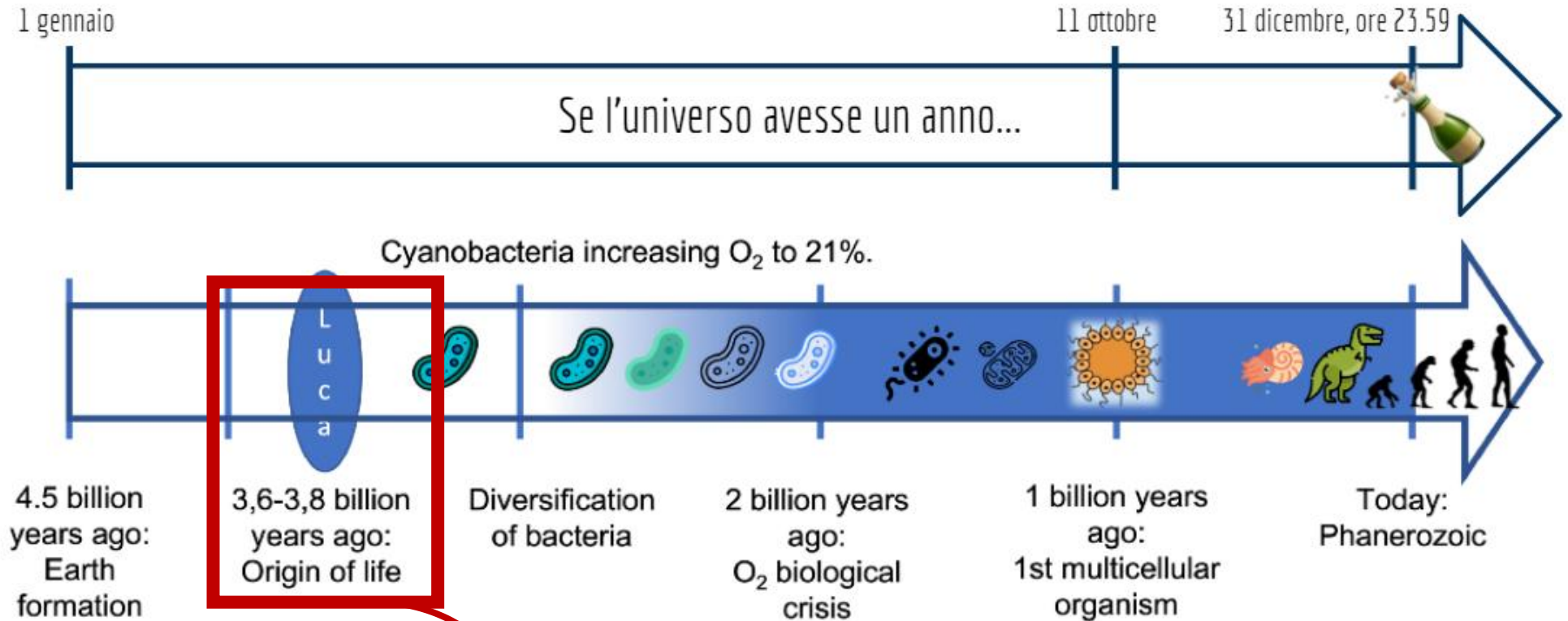


DNA
Acido Deossiribonucleico



LUCA

Last Universal Common Ancestor



LUCA

Last Universal Common Ancestor



LA TERRA 4,5 MILIARDI DI ANNI FA



LA TERRA 3,5 MILIARDI DI ANNI FA

Benjamin
Garnett

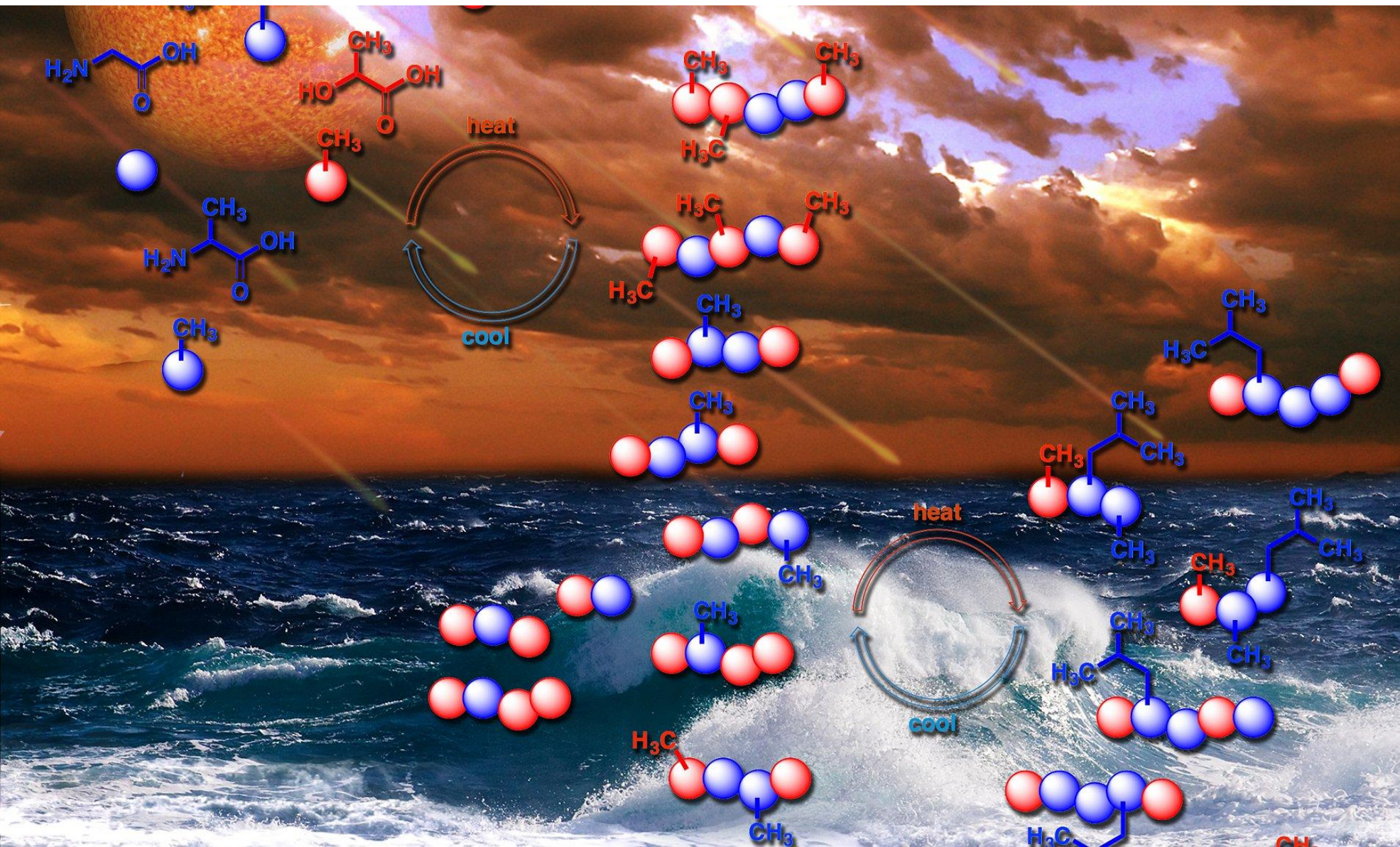


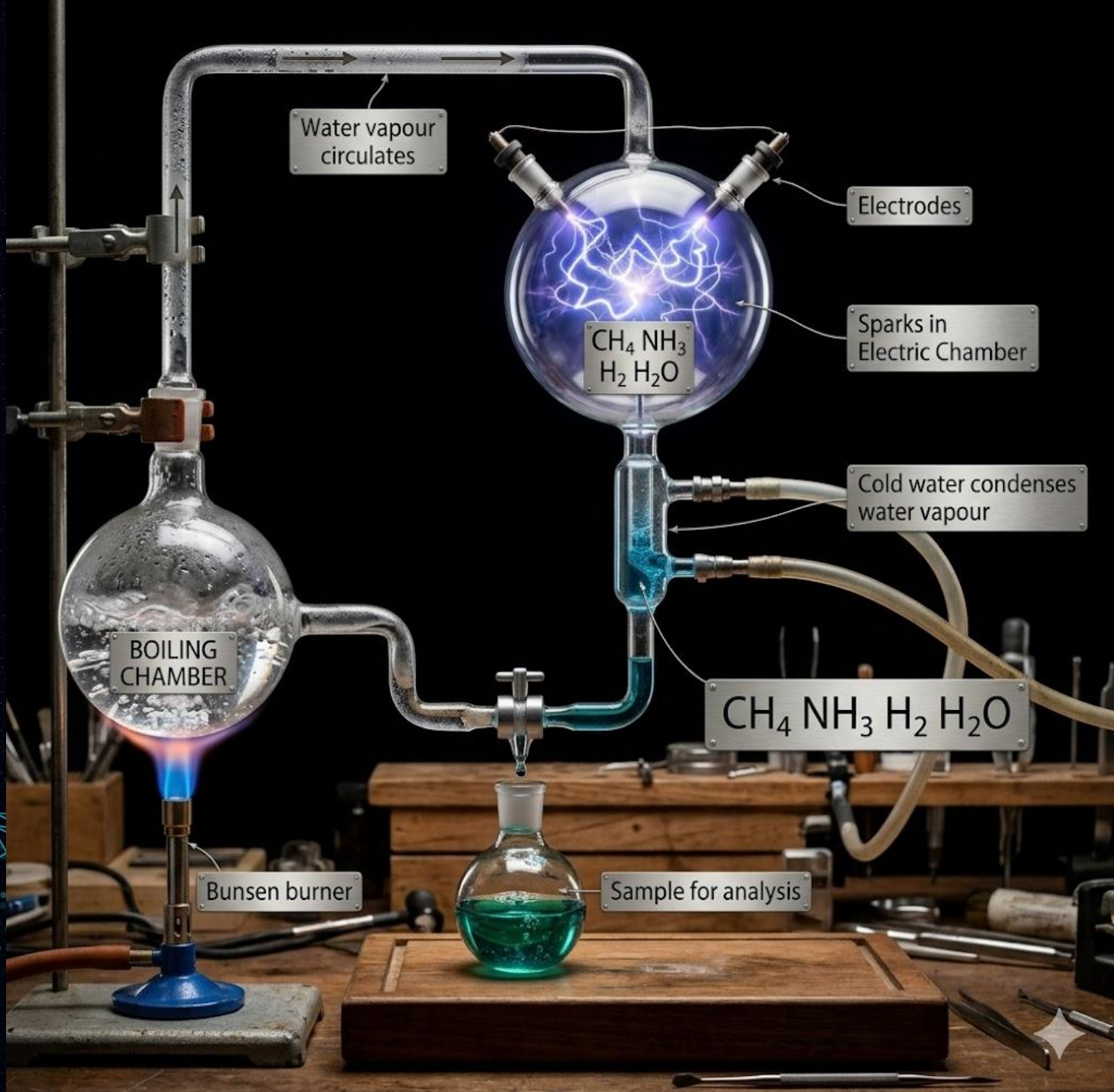
TEORIA ABIOGENESI

COME SI SIANO POTUTI ORIGINARE, SULLA TERRA,
SISTEMI VIVENTI A PARTIRE DALLA MATERIA
INORGANICA?











Scariche
elettriche,
raggi Uv

Aminoacidi

PROTEINA

Sostanze
chimiche
organiche

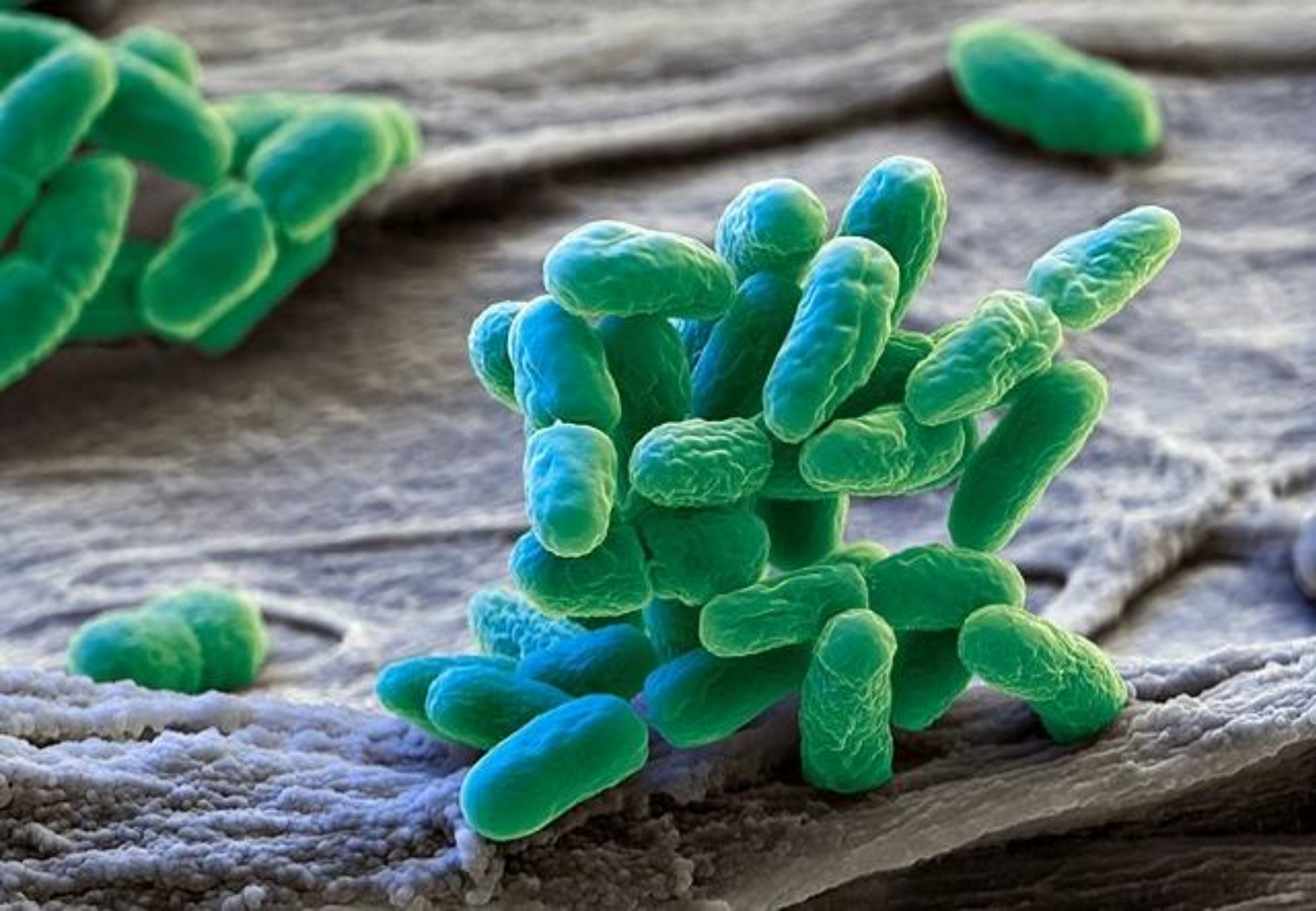
RNA

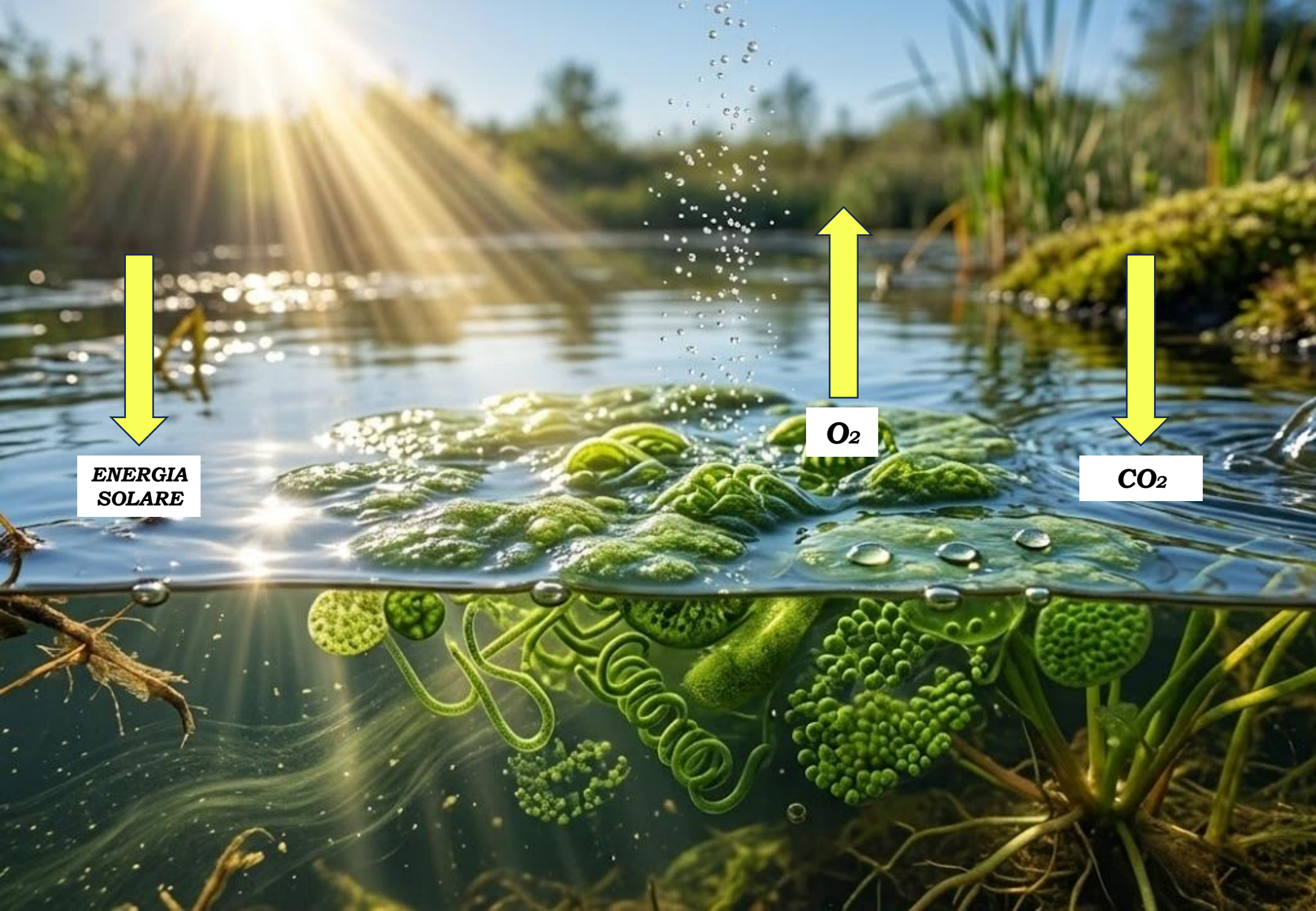


DNA Batterico

Plasmide





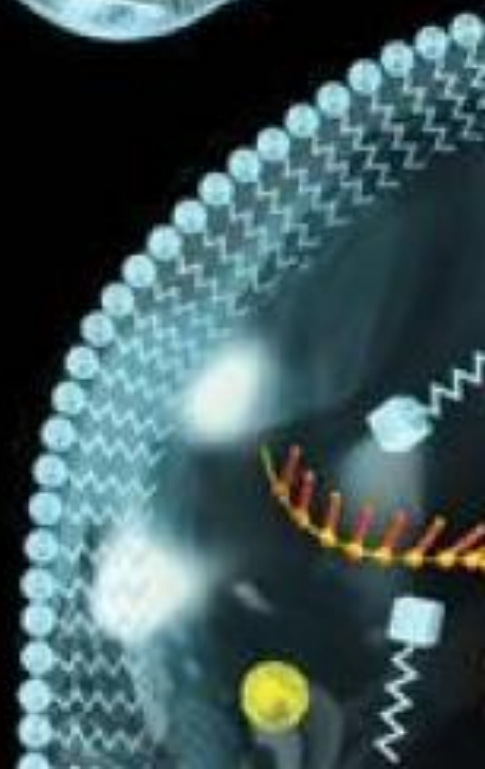
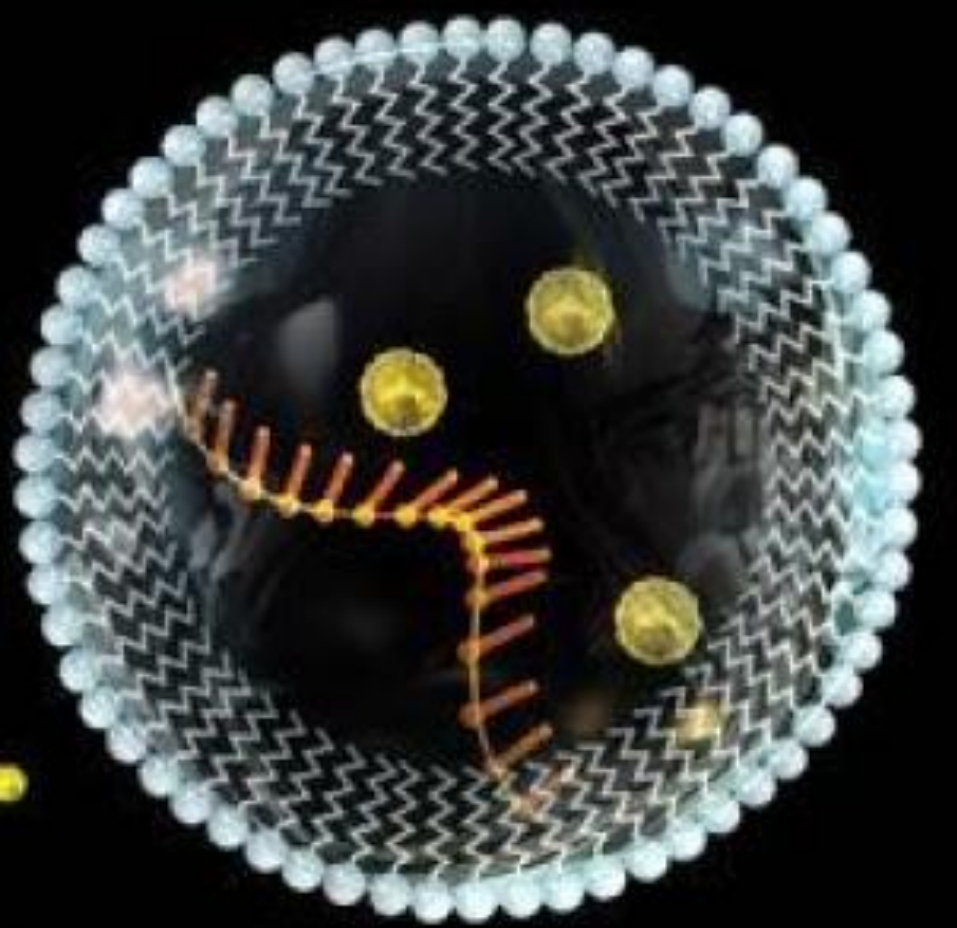


**ENERGIA
SOLARE**

O₂

CO₂





ARCHAEA & PROTEROZOIC

PALEOZOIC

CAMBRIAN

ORDOVICIAN

SILURIAN

DEVONIAN

CARBONIFEROUS

PERMIAN



BACTERIA

ARCHAEA

EUKARYA

animals

fungi

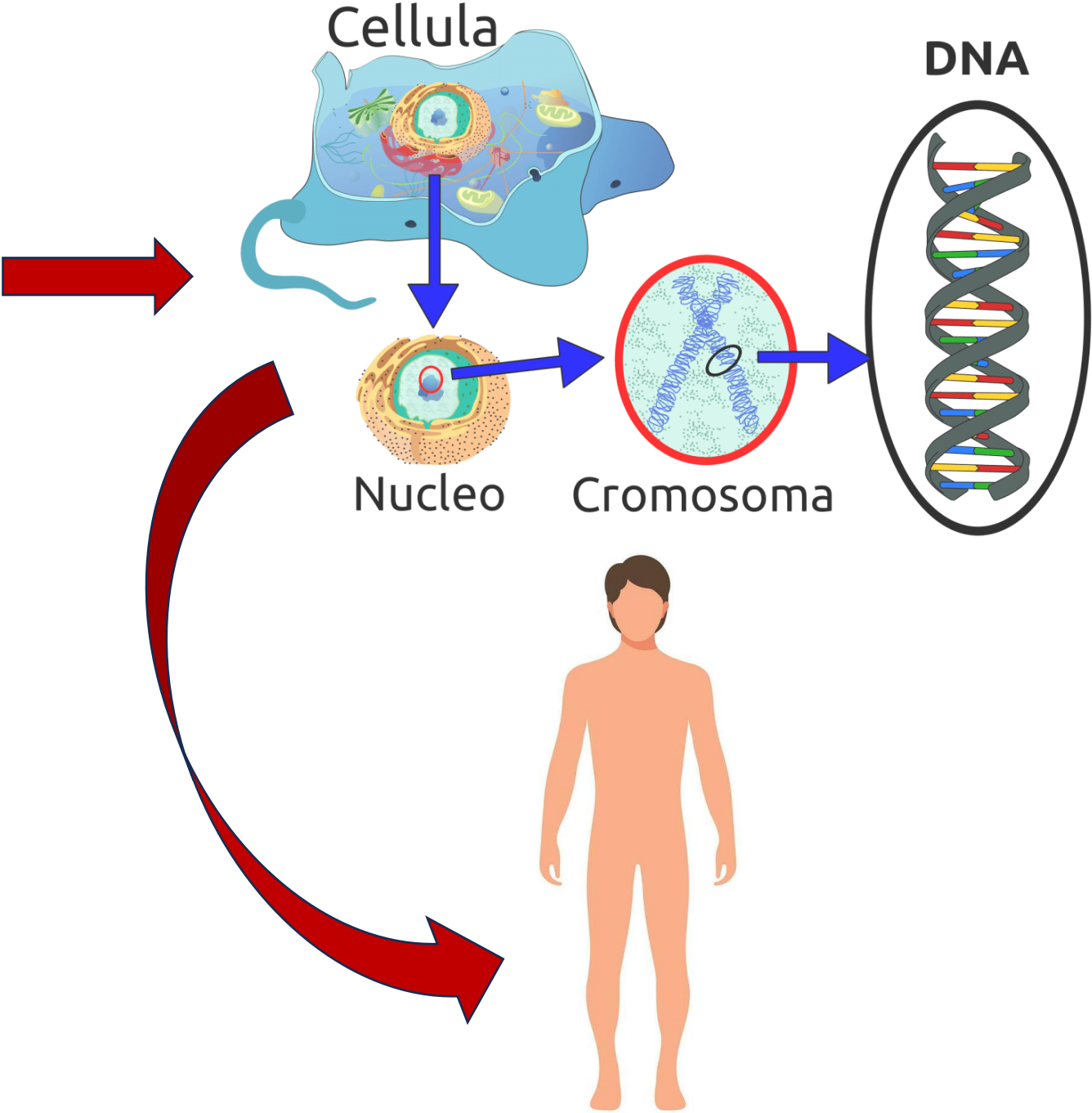
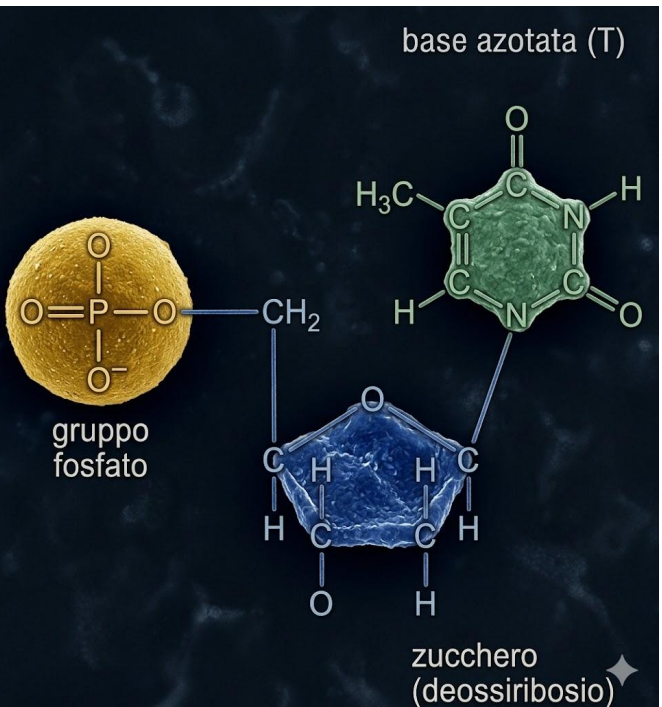
plants

protists

FIRST CELLS

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GRAZIE!

