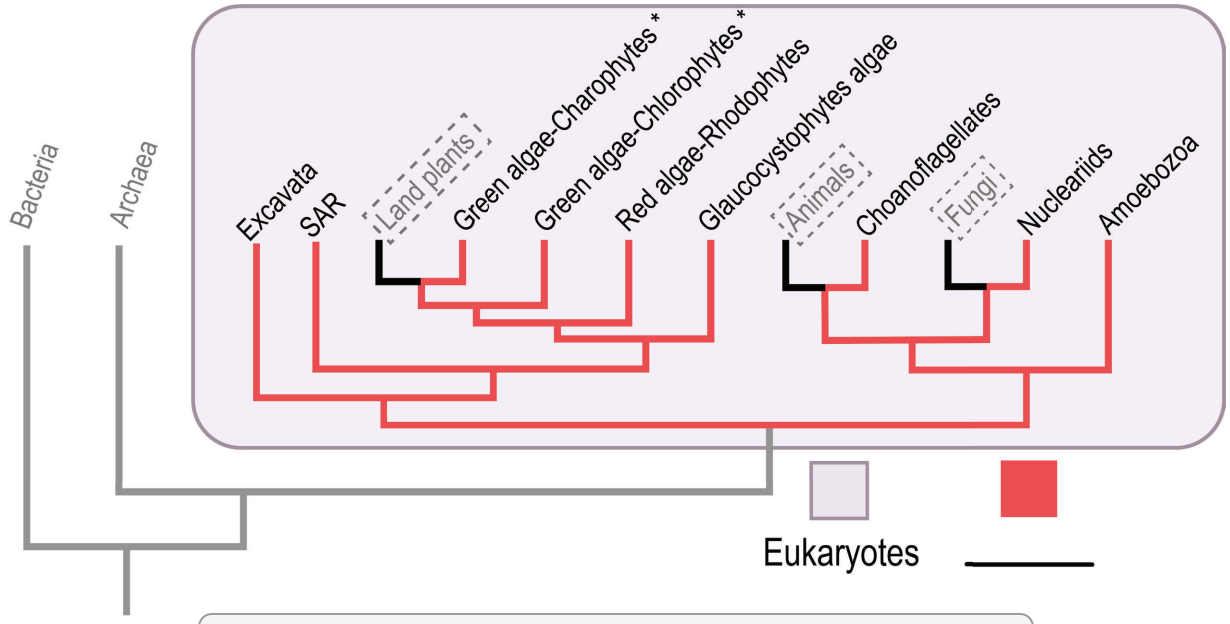
TOPIC: INTRODUCTION TO PROTISTS

What is a Protist?

◆ **Protists:** a diverse *para*phyletic group of _____karyotic organisms that are NOT plants, animals, or fungi.

- Some protists are more closely related to plants/animals/fungi than they are to each other.
- Most eukaryotes are protists - likely first eukaryotes.



NOTE: *Some authors classify these species as plants, not protists

EXAMPLE

Which of the following statements is true?

a) Protists are a distinct monophyletic group of eukaryotes.

b) All eukaryotes are protists, but not all protists are eukaryotes.

c) The term "protists" does not refer to an actual monophyletic group, but it is used for convenience.

d) Bacteria, archaea, & unicellular algae are all types of protists.

PRACTICE

Complete the sentence: All protists _____.

a) Have a membrane-bound nucleus.

b) Have a cell wall.

c) Are unicellular.

d) Are multicellular.

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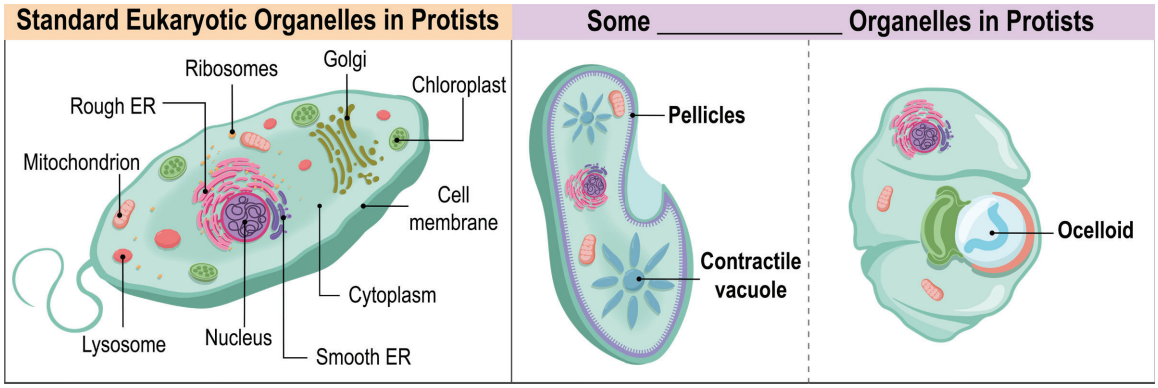
Diversity of Protist Structure & Function

◆ *Recall*: Protists are incredibly diverse; there is _____ characteristic unique only to all protists.

- Most have standard eukaryotic organelles, but may have some unique ones.



◆ Most protists are _____cellular and tend to live in _____, moist, soils and/or aquatic ecosystems.

◆ Protists can either be heterotrophic, photosynthetic, or _____ *trophic* (a combination of the two).

EXAMPLE

A unicellular mixotrophic protist loses its chloroplasts but is still able to survive. How is this possible?

a) It relies on free-floating photosystems in its cytoplasm.

b) It can engulf nutrients/other organisms via phagocytosis.

c) It can use an endospore to survive without nutrients for a long period of time.

d) All of the above.

PRACTICE

Which of the following is a common feature of all protists?

a) Contractile vacuole.

b) Ocelloid.

c) Flagellum.

d) Chloroplasts.

e) Pellicles.

f) None of the above.