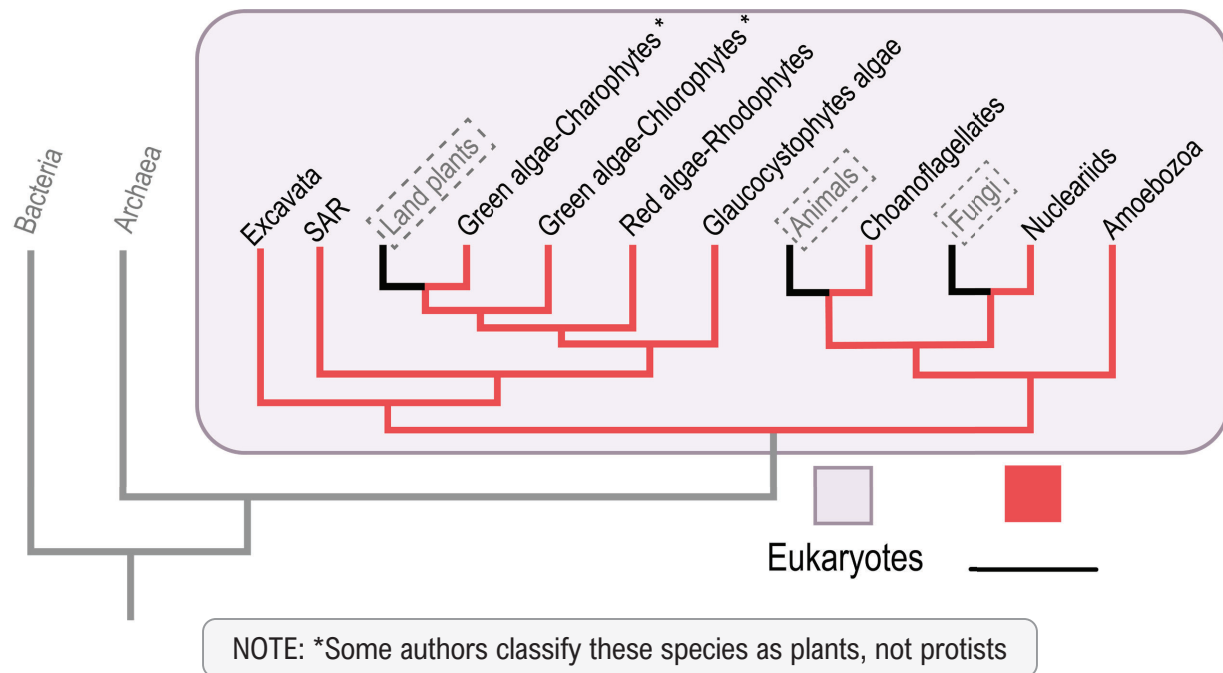


## TOPIC: INTRODUCTION TO PROTISTS

### What is a Protist?

- ◆ **Protists:** a diverse *paraphyletic* 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.



### 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

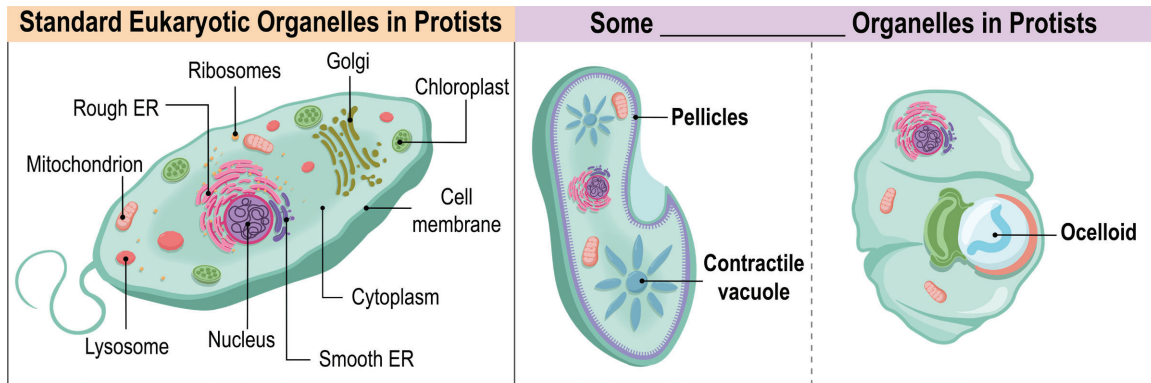
Complete the sentence: All protists \_\_\_\_\_.

- a) Have a membrane-bound nucleus.
- b) Have a cell wall.
- c) Are unicellular.
- d) Are multicellular.

## TOPIC: INTRODUCTION TO PROTISTS

### 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. | c) Flagellum.    | e) Pellicles.         |
| b) Ocelloid.            | d) Chloroplasts. | f) None of the above. |