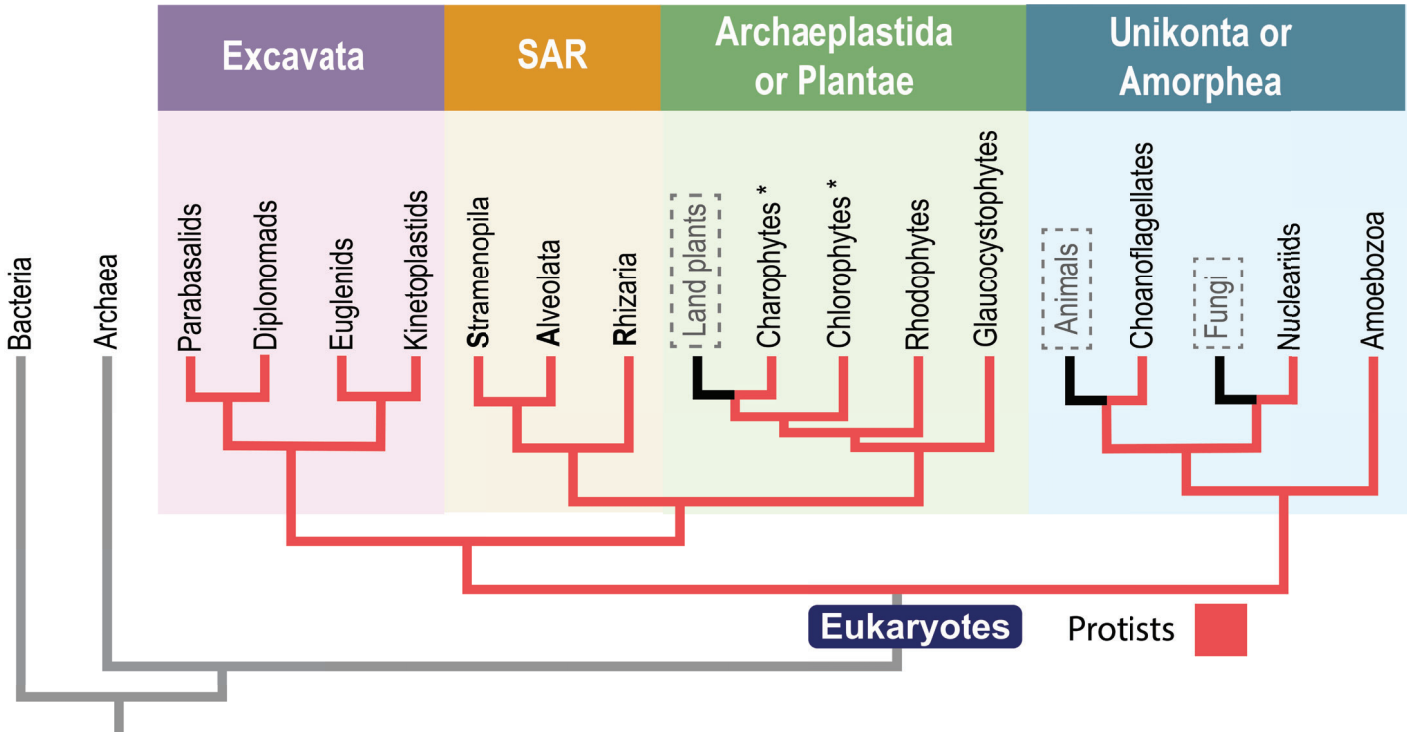
TOPIC: EUKARYOTIC SUPERGROUPS: EXPLORING PROTIST DIVERSITY

Overview of the Four Supergroups of Eukaryotes

- Since protists are super diverse, their phylogeny is also super diverse.
  - One current hypothesis states that there are _____ supergroups of eukaryotes:

1. Excavata **2. SAR** **3. Archaeplastida** **4. Unikonta**

- The 4 supergroups are grouped based on both _____ & morphological studies.



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

PRACTICE

Which of the following answer options lists the 4 supergroups of eukaroytes?

a) Excavata, SAR, Amoebozoa, Archaeplastida.

b) Unikonta, Plantae, Excavata, Rhizaria.

c) Excavata, SAR, Archaeplastida, Opisthokonta.

d) Stramenopila, Alveolata, Rhizaria, Unikonta.

e) Excavata, SAR, Archaeplastida, Unikonta.

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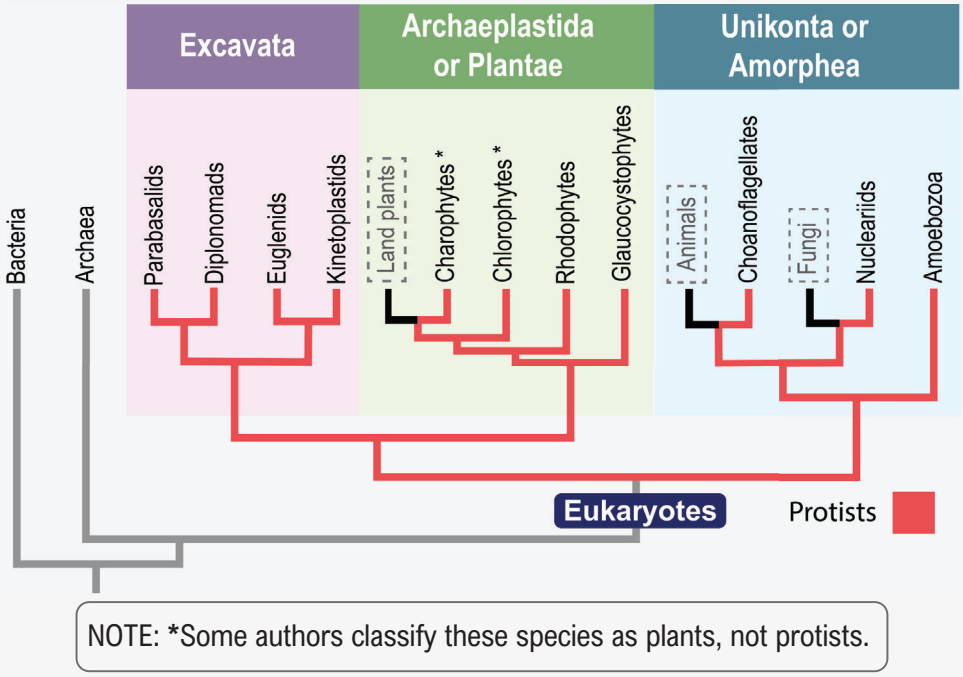
Using the phylogenetic tree below, which of the following groups is most closely related to animals?

a) Archaea. b) Nucleariids. c) Parabasalids. d) Charophytes.



PRACTICE

How does the eukaryotic supergroup classification system differ from the traditional taxonomic hierarchy (Domain, Kingdom, Phylum, etc.)?

a) Supergroups emphasize evolutionary relationships based on genetic evidence, while the traditional hierarchy often relies on observable traits.

b) Supergroups are not rank-based and do not conform to the rigid levels of the traditional hierarchy.

c) The supergroup classification system is designed to accommodate updates as new phylogenetic discoveries are made.

d) All of the above.

PRACTICE

What is the biggest benefit to the eukaryotic supergroup framework?

a) It clearly reflects the genetic & evolutionary relationships between different protists.

b) It clearly reflects the genetic & evolutionary relationships between different animals.

c) It clearly reflects the genetic & evolutionary relationships between different plants.

d) It clearly reflects the genetic & evolutionary relationships between different fungi.