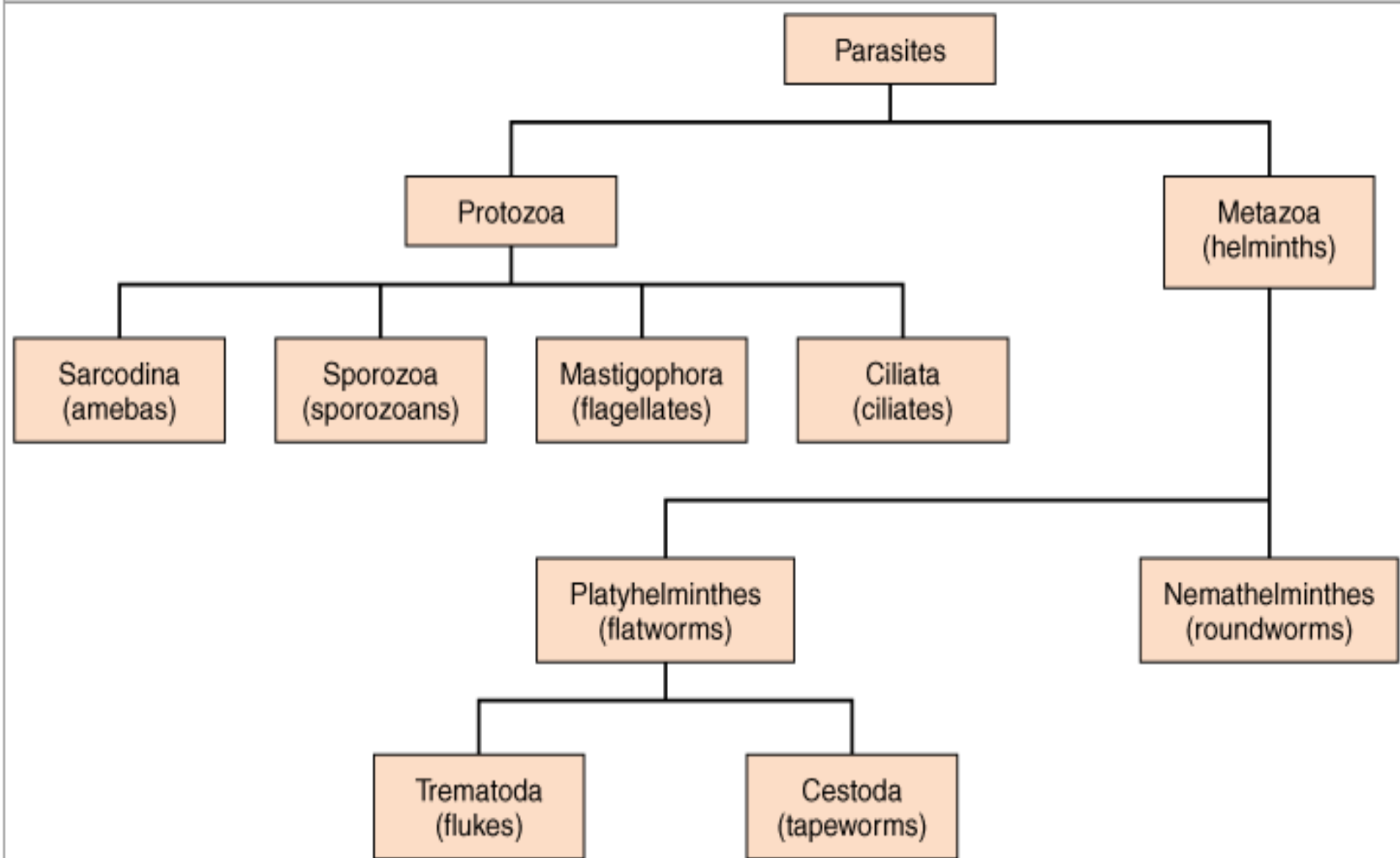


Parasitology

Parasite refers to organisms belonging to one or two major taxonomic groups: **protozoa** and **helminths**.

- ▶ **Protozoa** are microscopic, single-celled eukaryotes superficially resembling yeasts in both size and simplicity.
- ▶ **Helminths** are macroscopic, multicellular worms possessing differentiated tissues and complex organ systems; they vary in length from a meter to less than a millimeter.



Source: Levinson W: *Review of Medical Microbiology and Immunology, 11th Edition*:
<http://www.accessmedicine.com>

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Relationships of the medically important parasites.

Amebas

- ▶ Amebas move by extending cytoplasmic projections (pseudopodia) outward from the main cell body.
- ▶ Amebas feed by engulfing food particles with their pseudopodia.
- ▶ E.g.: *Entamoeba histolytica*

Flagellates

- ▶ Flagellates move by means of two or more flagella that rotate and propel the cells through their liquid environment.
- ▶ Flagellates ingest food particles through an oral groove called a cytostome.
- ▶ E.g.: *Giardia lamblia*, *Trichomonas vaginalis*
Leishmania species and *Trypanosoma species*

Ciliates

- ▶ Ciliates move by means of many hairl-ike projections (cilia)
- ▶ E.g.: *Balantidium coli*

Sporozoa

- ▶ Also called apicomplexa, are obligate, intracellular parasites, Sporozoans can have complex life cycles with more than one host:
 1. **Definitive host:** which harbors the sexually reproducing stage.
 2. **Intermediate host:** provides the environment in which asexual reproduction occurs.
- ▶ E.g.: *Plasmodium species* and *Toxoplasma gondii*