

## Virtual Lab: Protist vs Fungus Reference Guide

### Animal-like Protists

- Known as protozoans
- One-celled
- Heterotrophs that meet their energy requirements by feeding on other organism or dead organic matter
- Grouped into phyla according to the way they move
- Some propel themselves with short hairlike extensions called cilia
- Some propel themselves with long whip-like extensions called flagella
- Some get around by sending out extensions called pseudopods and also use their pseudopods to engulf food
- Parasitic protozoans have no means of locomotion and are usually found in a part of the host that has constant and readily available food supply, such as an animal's bloodstream or intestine.

### Plantlike Protists

- Known as algae
- Some species move by means of flagella
- Some species of algae are one-celled and others are many-celled
- All make their own food, they are autotrophic
- Contain chlorophyll, as well as other photosynthetic pigments
- Pigments are responsible for the green, golden, brown, and red colors of the different types of algae
- The colors of algae are used in their classification
- Photosynthesis takes place in the chloroplasts
- The pigments absorb the sun's energy to produce carbohydrates from carbon dioxide and water
- The carbohydrates serve as food for the organism
- Photosynthetic protists are the major producers of the nutrients and releasers of oxygen in the world

### Funguslike Protists

- Include several small phyla of protists that have features of both protists and fungi
- Slime molds and water molds are funguslike protists
- Obtain energy by decomposing organic plant and animal materials
- Cells of slime molds move by means of pseudopods and behave like amoebas
- Slime molds reproduce with spores the way fungi do
- Most water molds resemble a fungus in that they grow as a mass of threads over plants or animal, digest it, and then absorb the organism's nutrients
- Water molds like protists, produce reproductive cells with flagella

### Fungi

- Most are many-celled
- Basic structural units of many-celled fungus are threadlike filaments called hyphae
- Hyphae develop from spores
- Do not make their own food
- Most feed on dead or decaying tissues, they are saprophytes
- Secrete enzymes to digest food outside of themselves, then absorb the digested food
- Some are parasites
- Decompose or break down organic materials and return them to the soil
- Fungi along with bacteria are nature's recyclers