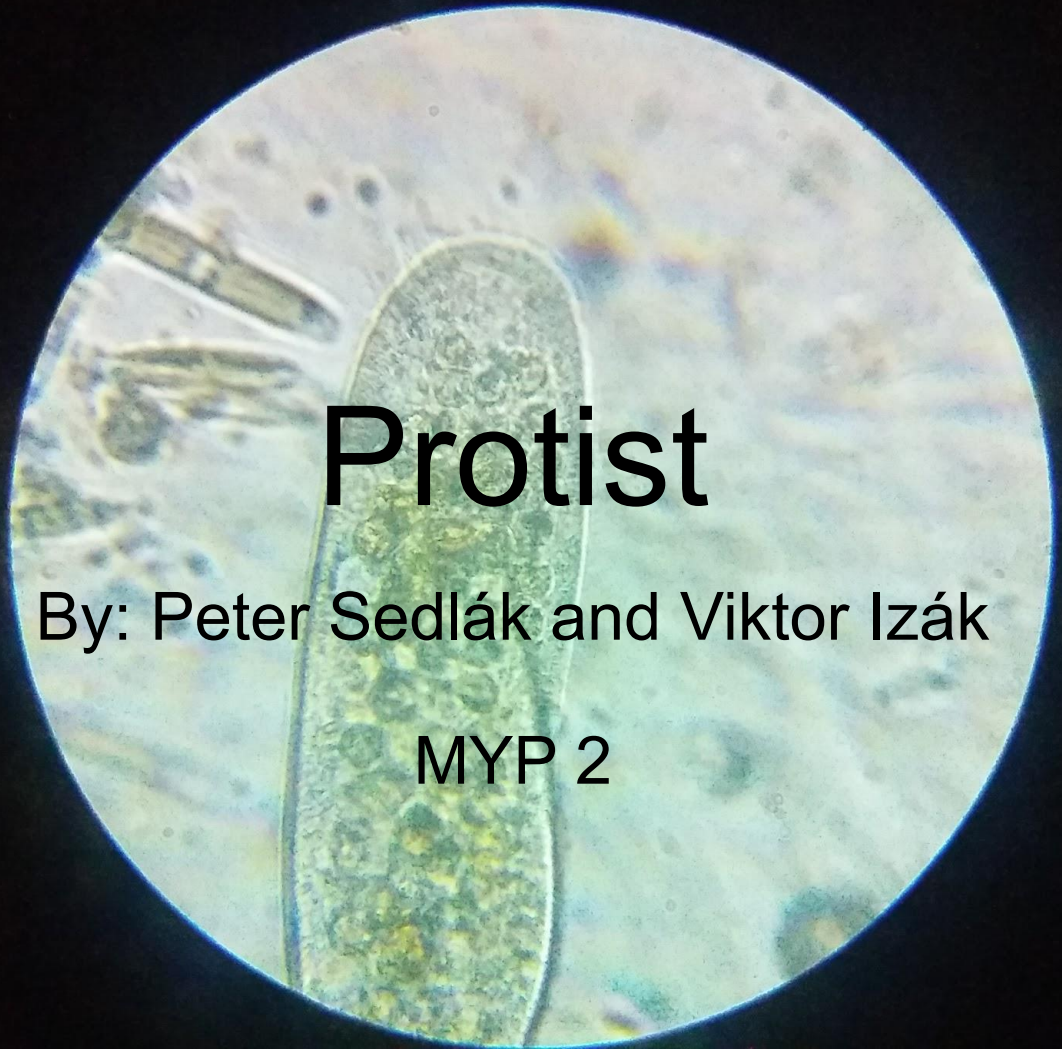

Protist

By: Peter Sedlák and Viktor Izák

MYP 2

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What is a protist?

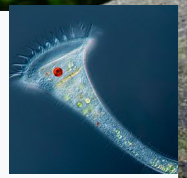
Protists are unicellular eukaryotes (organisms with a nucleus). In 1866, Ernst Haeckel used the word Protista for the first time. Protists are not a natural group or clade because they have no common origin. Like algae or invertebrates, they are often grouped together for convenience.

Classification of Protists

Protists have traditionally been subdivided into several groups: "animal-like" protozoa, "plant-like" algae, and "fungi-like" slime and water molds. However, many of these protists have little in common with each other other than the presence or absence of chloroplasts and flagella.

Subdivisions

Protozoa



As we discussed, in between different protists there's not much in common. So they they are very likely to be divided between these three groups.

Protozoa are those protists, that are very animal like protists. And sometimes are even classified as animals.

Some good examples can be: Flagellata, Ciliophora and amoeba.

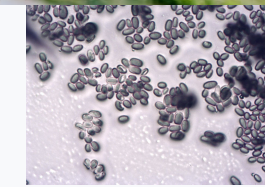
Protophyta

These are the maximum beneficial due to the fact they may be plant- like and convey oxygen through photosynthesis.

These organisms are composed primarily of unicellular algae.

Good examples of types of algae are: dinoflagellates, diatoms and flagellates these are also called photosynthetic protists because they produce oxygen thru photosynthesis.

Mold



Molds are generally refered to fungi; but slime molds and water molds are "fungus-like" (saprophytic) protists, although some are pathogens.

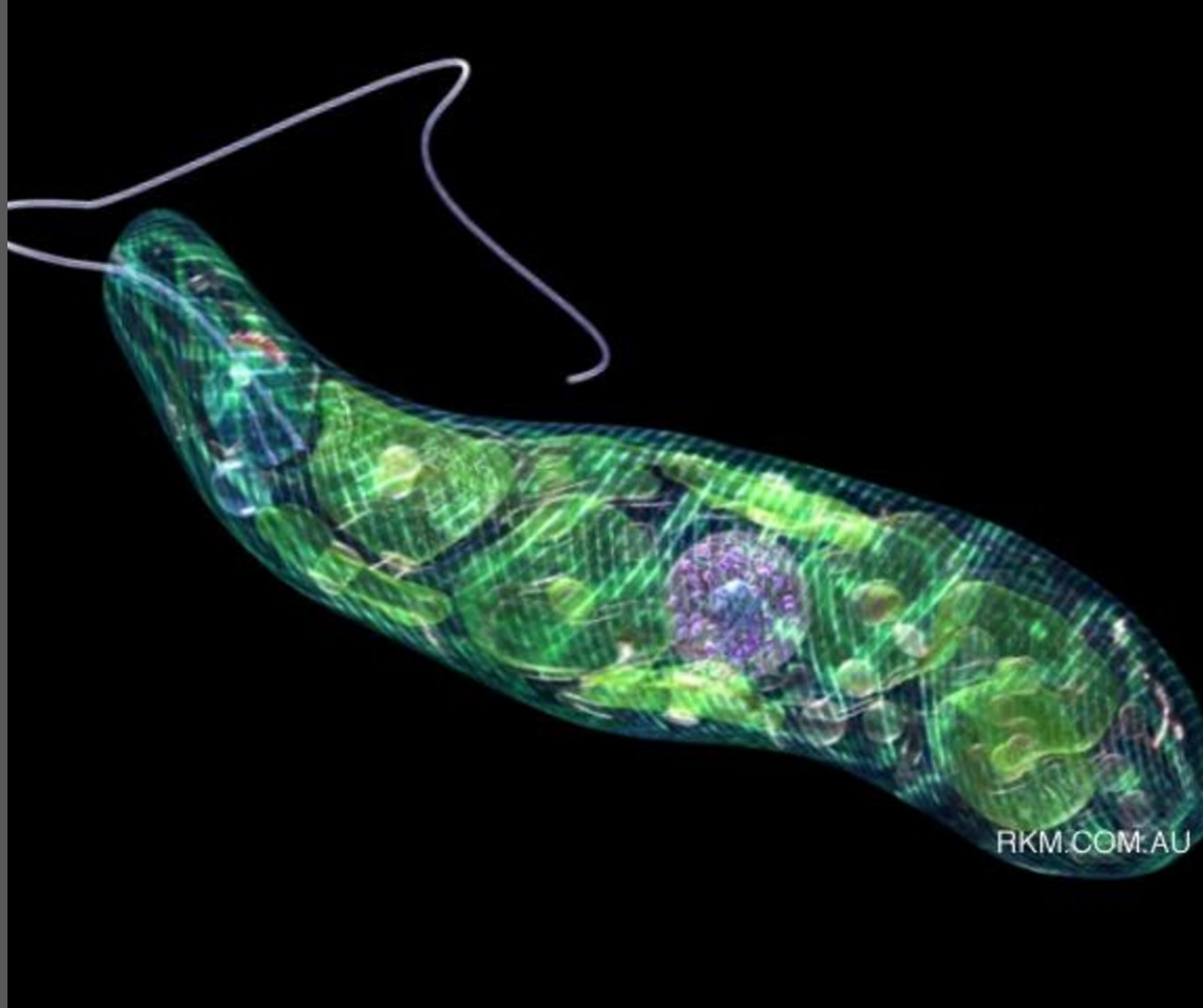
Slime molds are further divided to two separate types of slime molds exist, the cellular and acellular forms.

Example of illnesses and uses

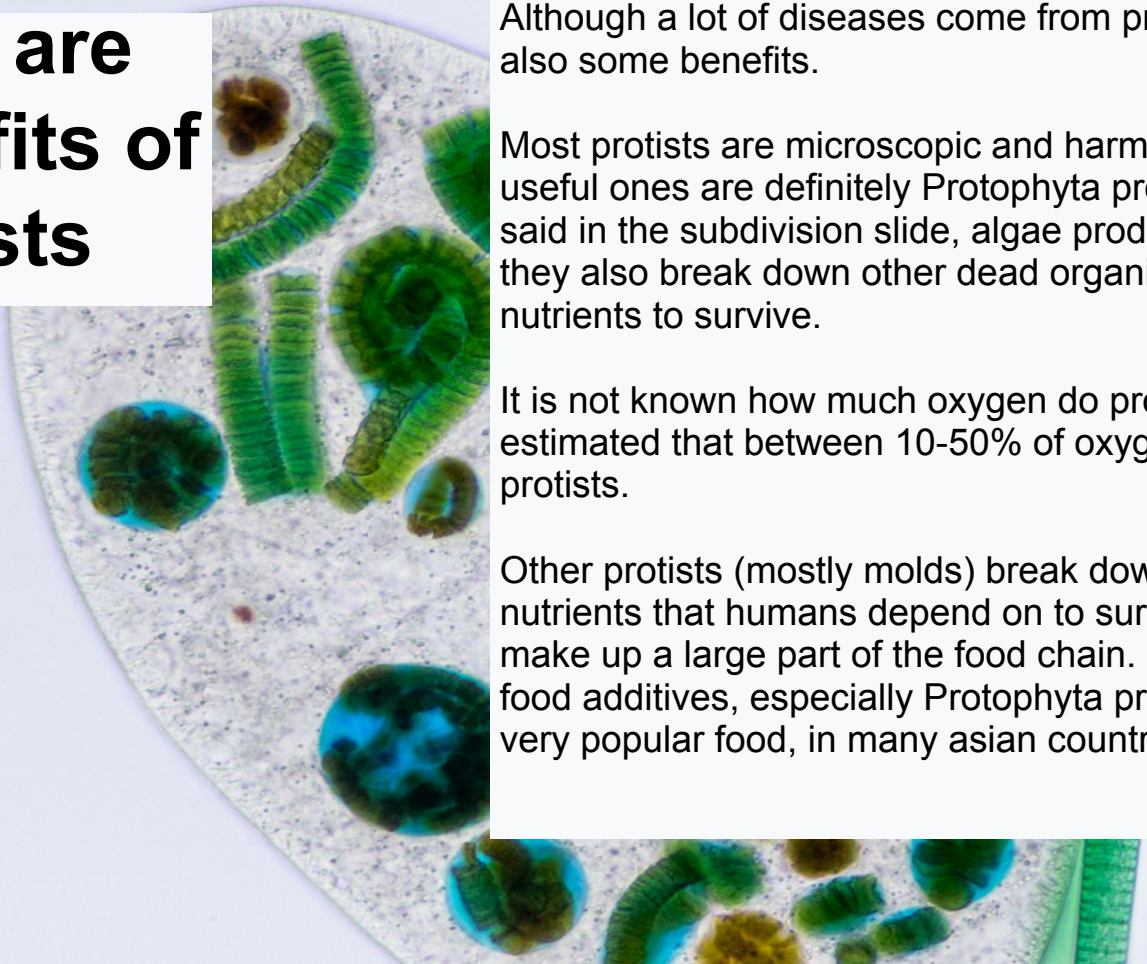
Most protist diseases in humans are caused by animal-like protists or protozoa. Trypanosome protozoa cause Chagas disease and sleeping sickness. Giardia protozoa cause giardiasis. Plasmodium parasites cause malaria.

How do protists infect the body?

Parasites enter the body through food or water contaminated with the feces of infected people or animals. Protozoa attach to the lining of the host's small intestine, preventing the host from fully absorbing nutrients. They can also cause diarrhea, abdominal pain, and fever.



What are benefits of Protists



Although a lot of diseases come from protists, they provide also some benefits.

Most protists are microscopic and harmless, but the most useful ones are definitely Protophyta protists, as I already said in the subdivision slide, algae produce oxygen, and they also break down other dead organisms and use their nutrients to survive.

It is not known how much oxygen do protists make but it is estimated that between 10-50% of oxygen is produced by protists.

Other protists (mostly molds) break down and recycle nutrients that humans depend on to survive. All protists make up a large part of the food chain. Protists are used in food additives, especially Protophyta protists, which are very popular food, in many asian countries.

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