

## Editorial on Protozoa and its Diseases

Luis Jun\*

*Department of Microbiology and Immunology, Muhimbili University of Health Sciences, Dar es Salaam, Tanzania*

Infections with protozoa are a form of parasitic infection. Parasitic diseases caused by species that used to be known as Kingdom Protozoa. Insect vectors or touch with a contaminated material or surface are the most common ways to contract them, and they include species that are now known as supergroups. The subgroups are Excavata, Amoebozoa, SAR, and Archaeplastida. Protozoa can be found in almost any setting. They can survive in the environment as free-living species, mostly in soil, water, or moss. They may also be resting cysts, allowing them to survive dry periods. Protists are a set of over 64,000 single-celled life forms that have been artificially grouped together. Because of their drastic variations and individuality, protists are difficult to describe. Protists can be found in a wide range of damp environments, and the bulk of them are self-contained species. Plankton and terrestrial forms can also be found in these damp habitats. Protists are chemoorganotrophic. Chemoorganotrophic organisms that use the chemical bonds in organic compounds as a source of energy. And these Protists are in charge of nitrogen and phosphorus recycling. In humans and domesticated animals, parasites are also responsible for disease. Protozoa are chemoorganotrophic protists that can obtain nutrients in three different ways. Saprotrophic feeding is the first way of obtaining nutrients. Nutrients are derived from dead organic matter by enzymatic degradation in saprotrophic feeding. Osmotrophic feeding is the second way of obtaining nutrients in which nutrients are obtained

by the absorption of soluble materials in osmotrophic successfully invaded and developed themselves in hosts from nearly every animal phylum. The parasitic organisms with the most research, those with medical and agricultural implications. Trypanosomes, for example, are responsible for a variety of serious human diseases. Trypanosomes reside in human blood plasma and the central nervous system, and they've developed a clever way of fooling the host's immune system. Other infectious disease is sleeping sickness which is also known as African trypanosomiasis. In this, infection with the flagellate protozoan *Trypanosoma brucei gambiense* or any closely related subspecies *T. brucei rhodesiense*, which transmitted by the tsetse fly, causes sleeping sickness. The illness of sleeping sickness is divided into two phases. In the first phase, infected people usually have a fever, headache, muscle and joint pain, and lymph node inflammation. In the second stage, which can occur in a matter of weeks or up to two years, is characterized by brain and spinal cord involvement, as well as personality changes, sleep disturbances, and extreme lethargy, and can lead to death if left untreated. Malaria, giardia, and Toxoplasmosis are some of the most common infectious diseases caused by protozoans. These infections can be found in a variety of locations in the body. Treatment choices are determined by the protozoa that have infected you. Some people are significantly more effective than others. In disinfecting infections, protozoa samples which are unlike other pathogens, cannot be characterized simply by culture. Under a microscope, they can often be seen inside red blood cell. Rapid blood tests for antibodies or antigens, as well as PCR tests to detect their genetic material, are also available.

**Correspondence to:** Luis Jun, Department of Microbiology and Immunology, Muhimbili University of Health Sciences, Dar es Salaam, Tanzania, E-mail: [lujun@usal.tz](mailto:lujun@usal.tz)

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