

Balantidium coli

Modesto del Castillo

Balantidium coli

Domin: Eukaryota

Phylum: Cilophora

Order; Vestibuliferida

Family: Balantididae

Genus: Balantidium

Species: *B. coli*

Epidemiology:

Balantidium is the only ciliated protozoan known to infect humans. Balantidiasis is a zoonotic disease and is transmitted by fecal-oral route from the normal host, the pig. Contaminated water is the most common mechanism of transmission. This is a parasite primarily of cows, pigs and horses

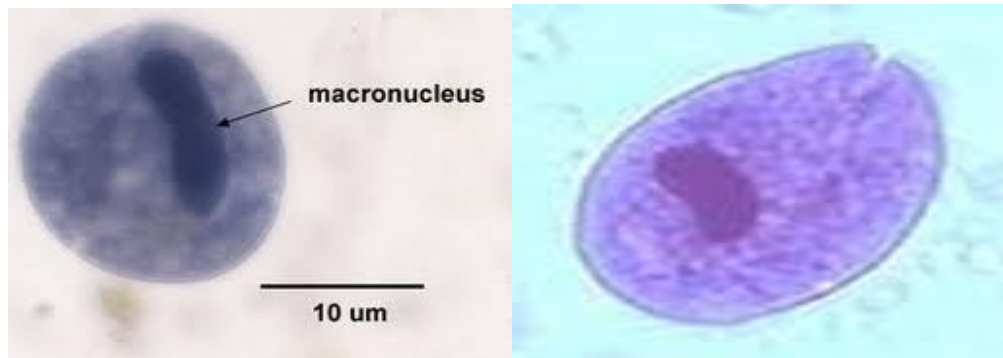
Morphology

Balantidium coli has two developmental stages,

1-a trophozoite stage and a cyst stage. In **trophozoites**, the two nuclei are visible. The

macronucleus is long and sausage-shaped, and the spherical micronucleus is nested next to it, often hidden by the **micronucleus**. The opening, known as the peristome, at the pointed anterior end leads to the cytosome, or the mouth.

- **2- Cysts** are smaller than trophozoites and are round and have a tough, heavy cyst wall made of one or two layers. Usually only the **macronucleus** and sometimes cilia and contractile vacuoles are visible in the cyst



1-Cysts are the parasite stage responsible for transmission of balantidiasis.

The host most often acquires the cyst through ingestion of contaminated food or water. Following ingestion, excystation occurs in the small intestine, and the trophozoites colonize the large intestine

2. The trophozoites reside in the lumen of the large intestine of humans and animals, where they replicate by binary fission,
3. Trophozoites undergo encystation to produce infective cysts
4. Some trophozoites invade the wall of the colon and multiply
5. Mature cysts are passed with feces

Transmission and symptoms:

is an intestinal protozoan parasite that can infect humans. These parasites can be transmitted through the fecal-oral route by contaminated food and water.

-*Balantidium coli* infection is mostly asymptomatic, but people with other serious illnesses can experience persistent diarrhea, abdominal pain, and sometimes a perforated colon.

-When traveling to endemic tropical countries, *Balantidium coli* infection can be prevented by following good hygiene practices. Wash all fruits and vegetables with clean water when preparing or eating them, even if they have a removable skin.

Metronidazole are effective as a treatment

Life cycle of *Balantidium coli*

