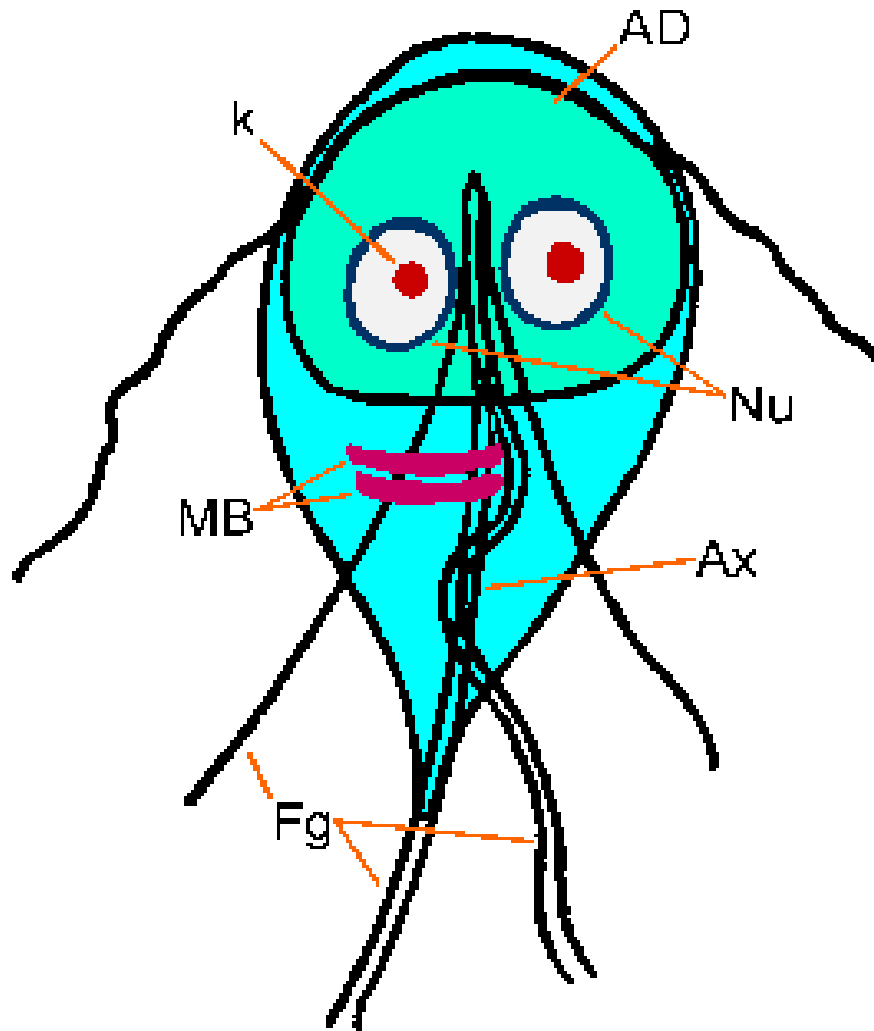


- ***Giardia lamblia***
- ***Dientamoeba fragilis***

- ***Chilomastix mesnili***
- ***Trichomonas hominis***

} Non
pathogenic

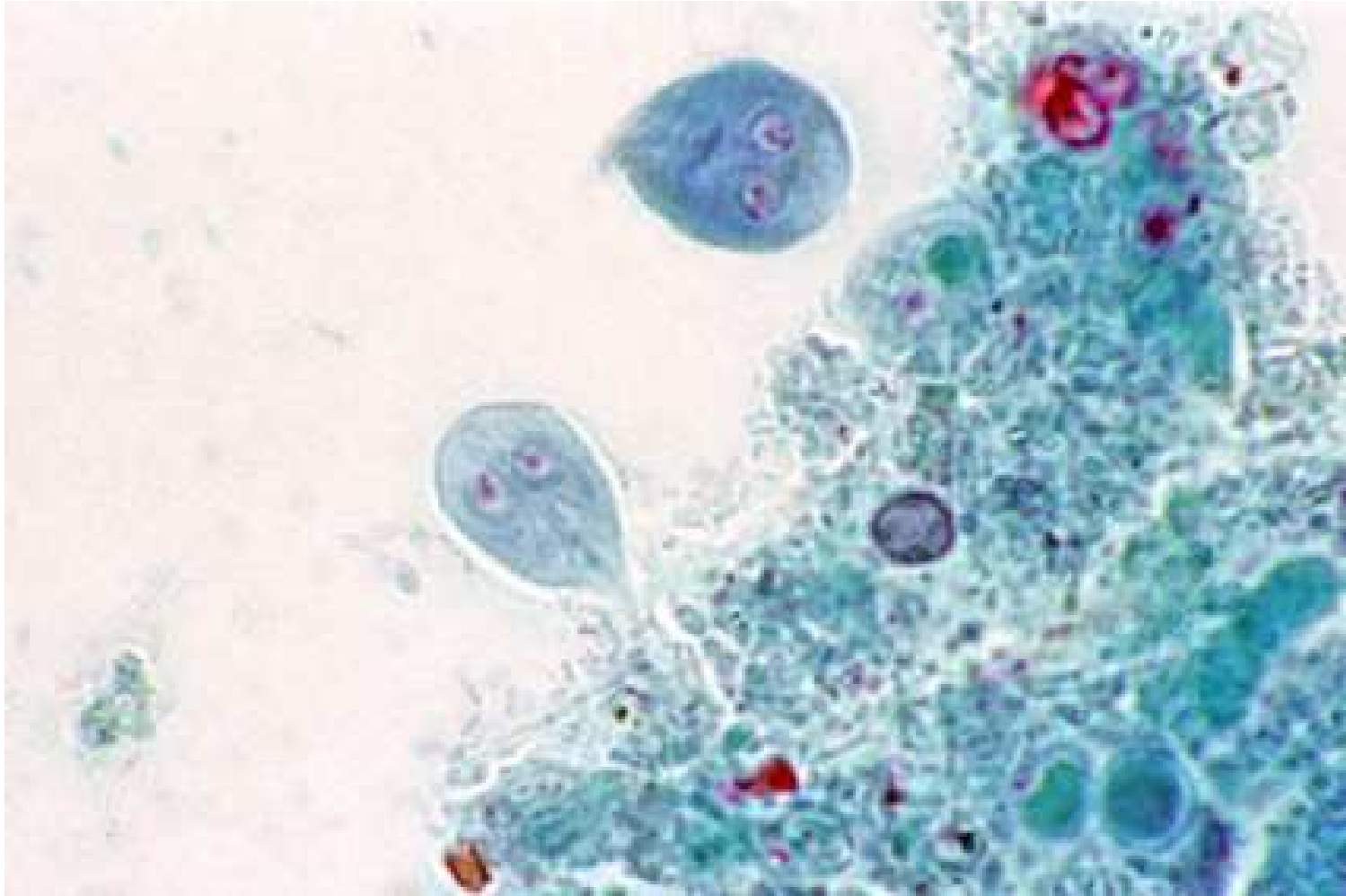
Giardia intestinalis



- AD adhesive disk
- K karyosomes
- Nu nuclei
- MB median bodies
- Ax axonemes
- Fl flagella

Giardia intestinalis

Trichrome stain. Two trophozoites with different shapes

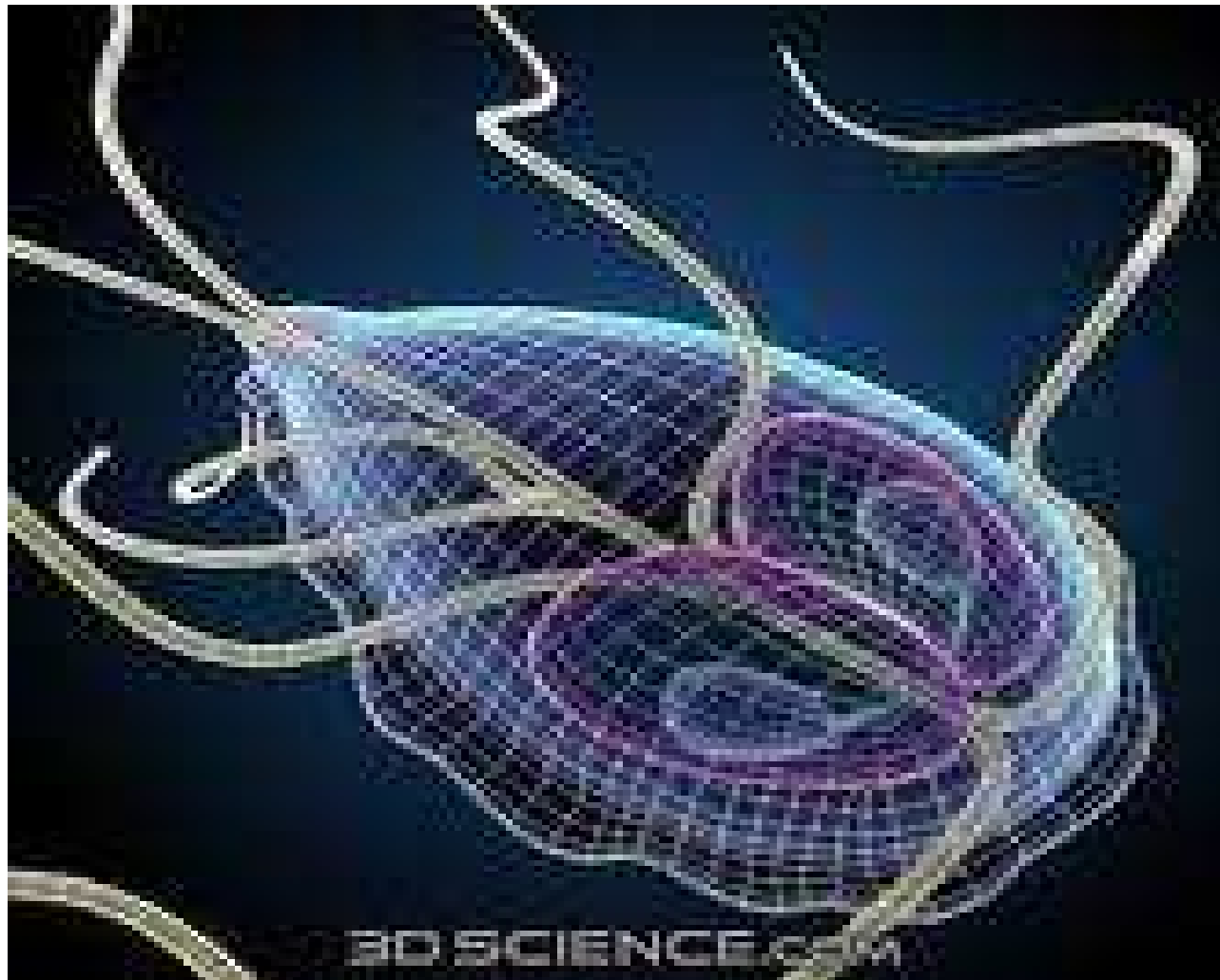


Giardia intestinalis

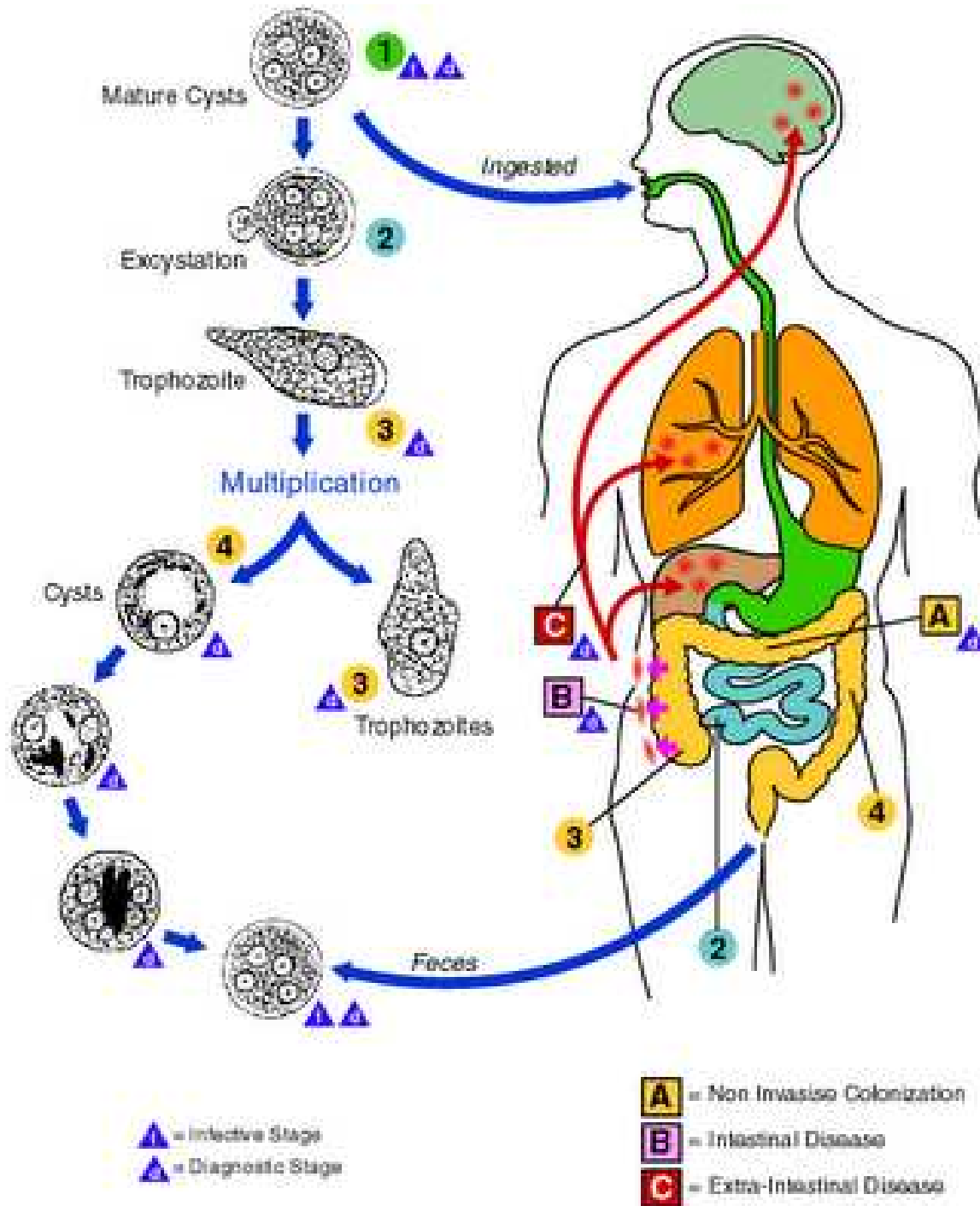
Median bodies in cysts



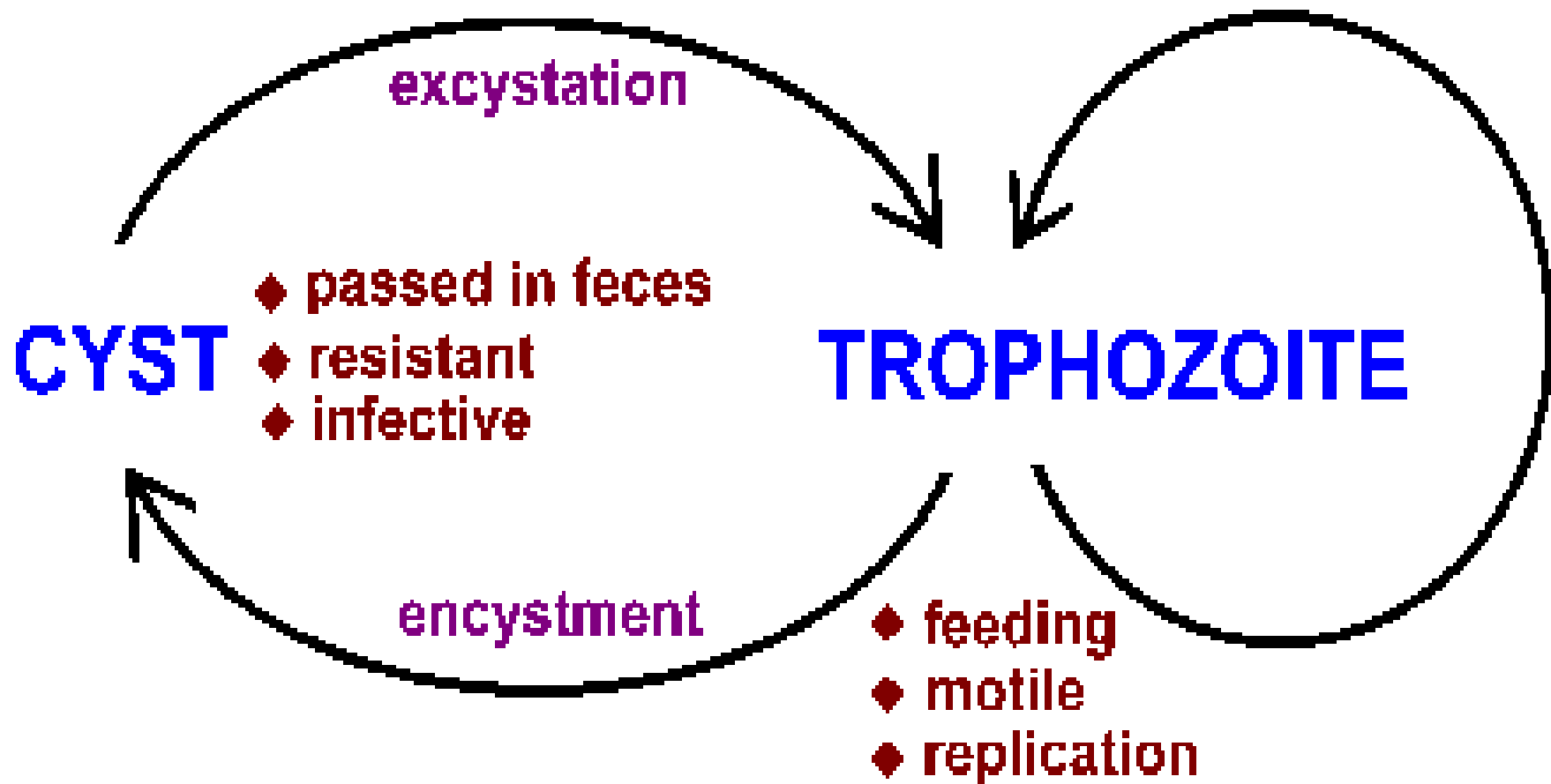
Giardia intestinalis



G. intestinalis Cycle



Typical Fecal-Oral Life Cycle



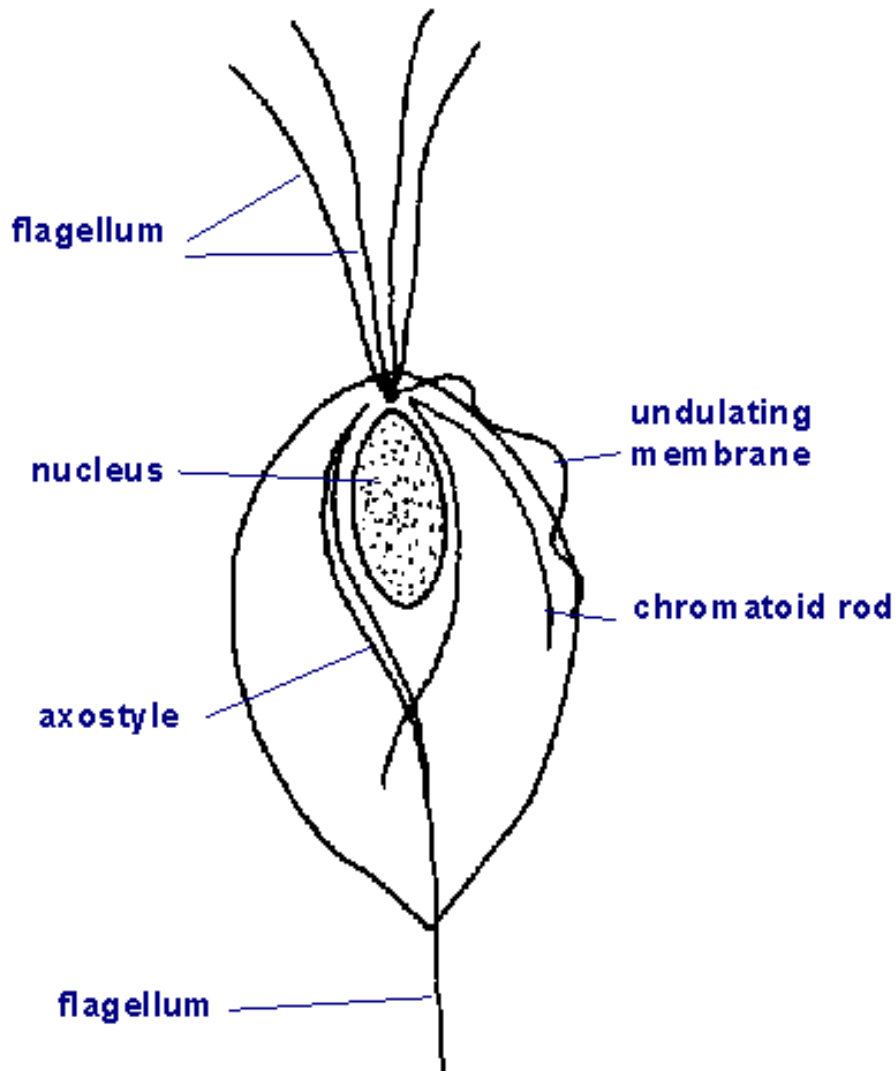
NON-PATHOGENIC FLAGELLATES

- *Trichomonas hominis*
- *Chilomastix mesnili*
- *Dientamoeba fragilis*

Trichomonas hominis

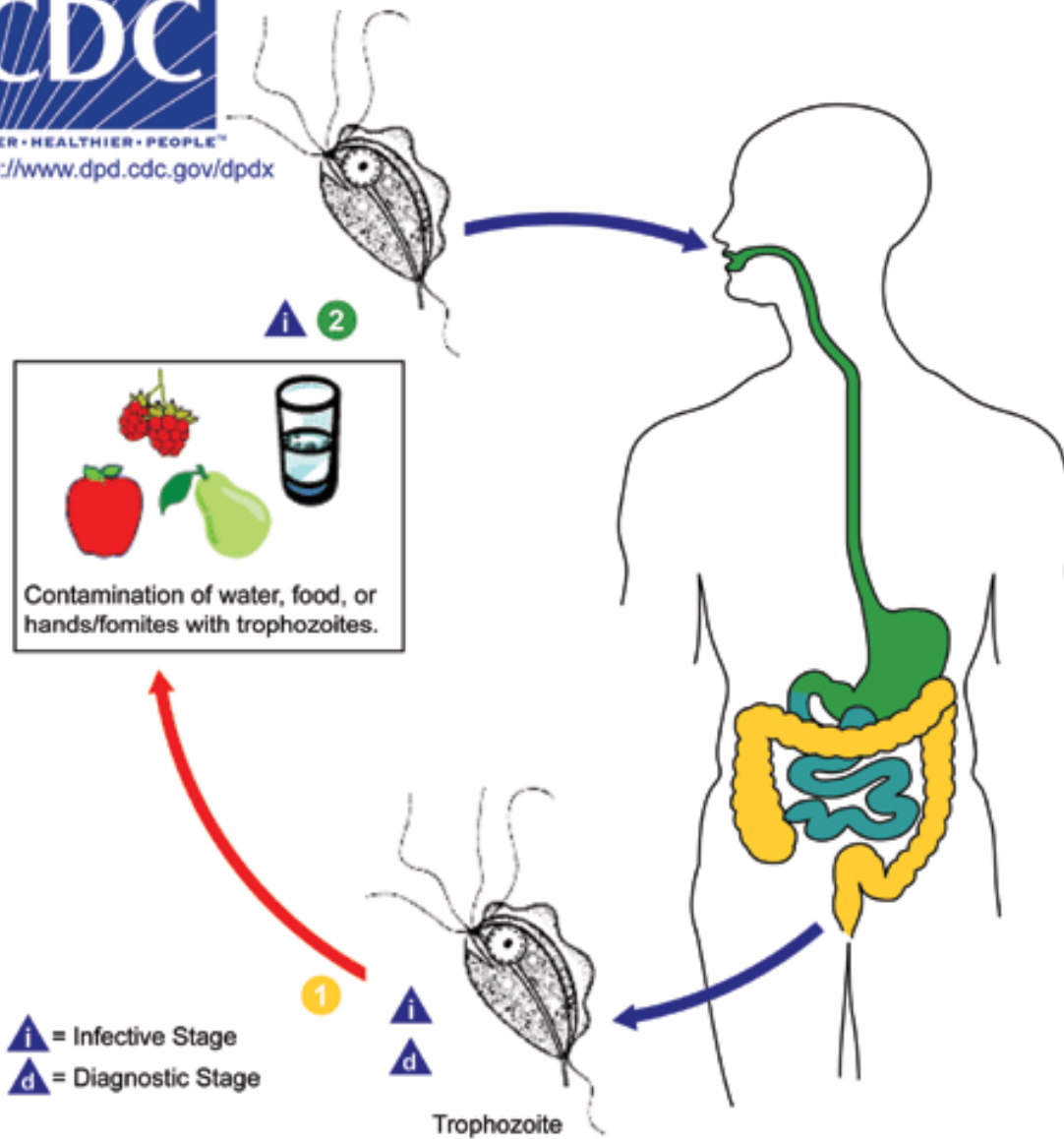
- **Common, non pathogenic commensal**
- **Only trophozoite form recognized**
- **Lives in large intestine**
- **5-14 μm length**
- **Single nucleus**
- **Basal bodies**
- **3-4 flagella**

Trophozoite of *Trichomonas vaginalis*



AWS

***Trichomonas
hominis
trophozoite***



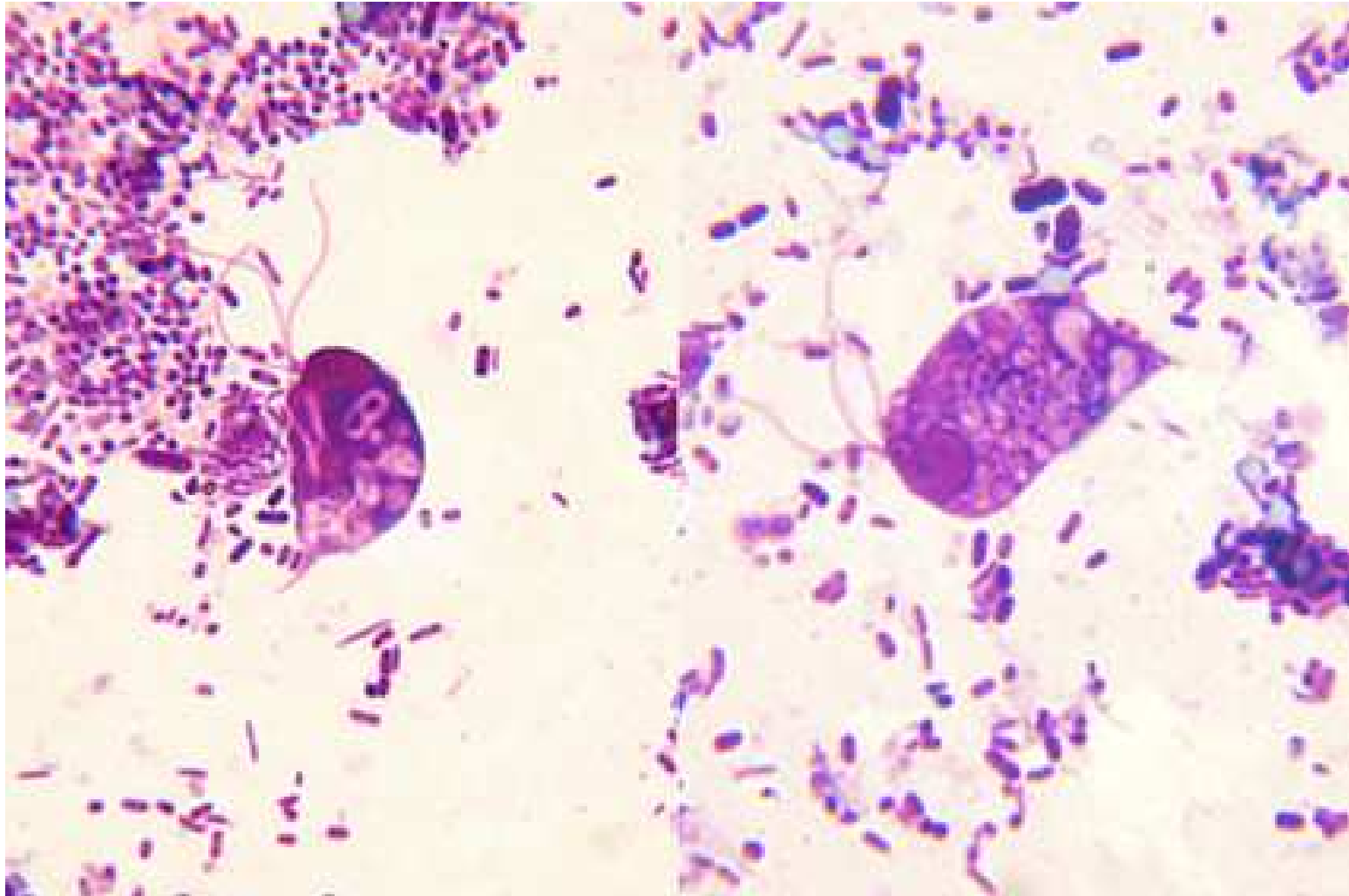
Life cycle of *Trichomonas* *hominis*

Chilomastix mesnili

- **Larger than *Trichomonas* (10-15 μm length)**
- **Cyst and trophozoite forms**
- **No cyto-squelettal elements**
- **Cyst is pear-shaped (18 μm long)**
- **1-2 nuclei in cyst**
- **Considered to be nonpathogenic but may cause intestinal disorders like diarrhea in heavy infected cases**

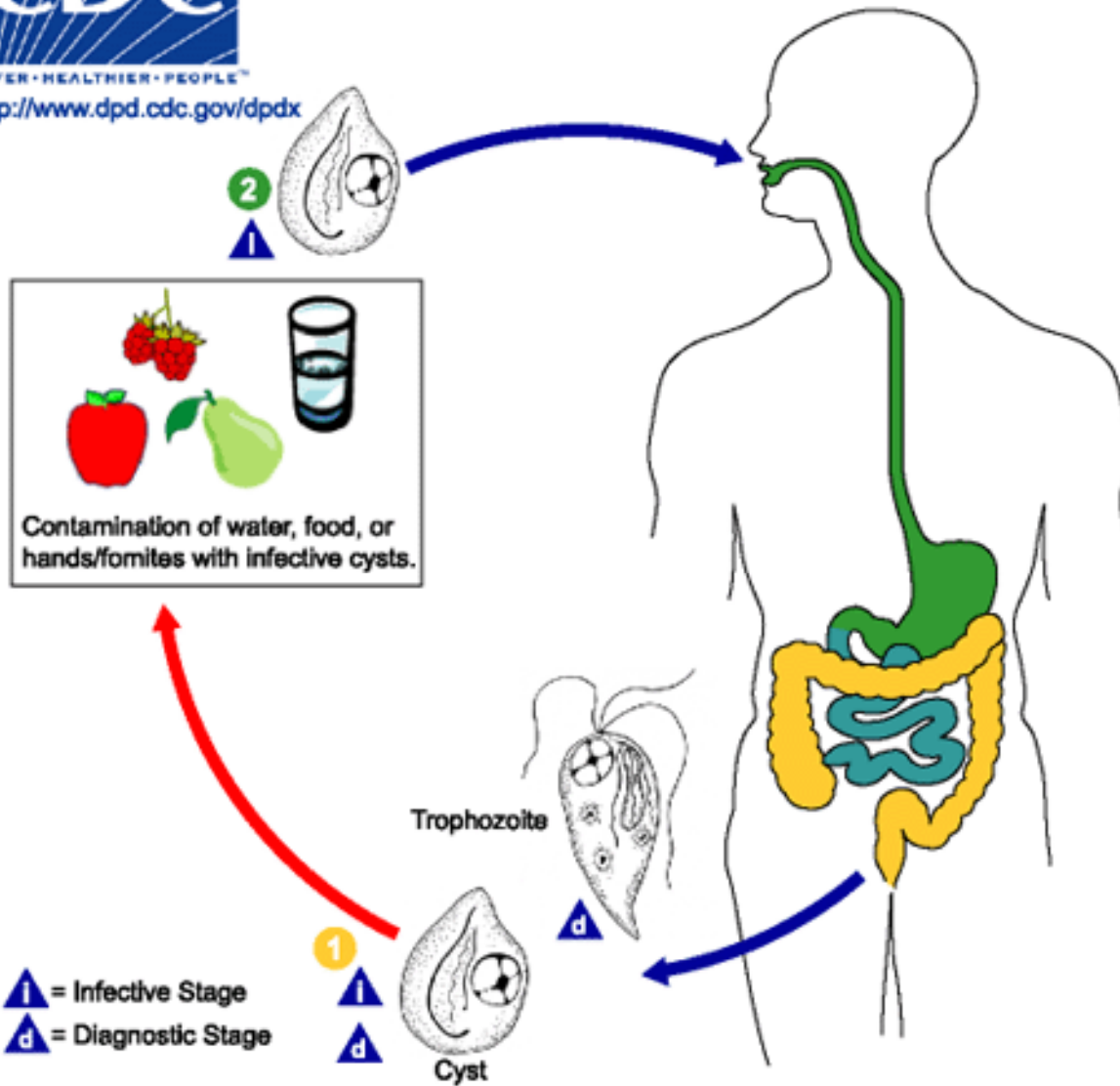
Chilomastrix mesnili

Giemsa stain. trophozoites



Chilomastrix mesnili
lemon-shaped cysts with anterior knob



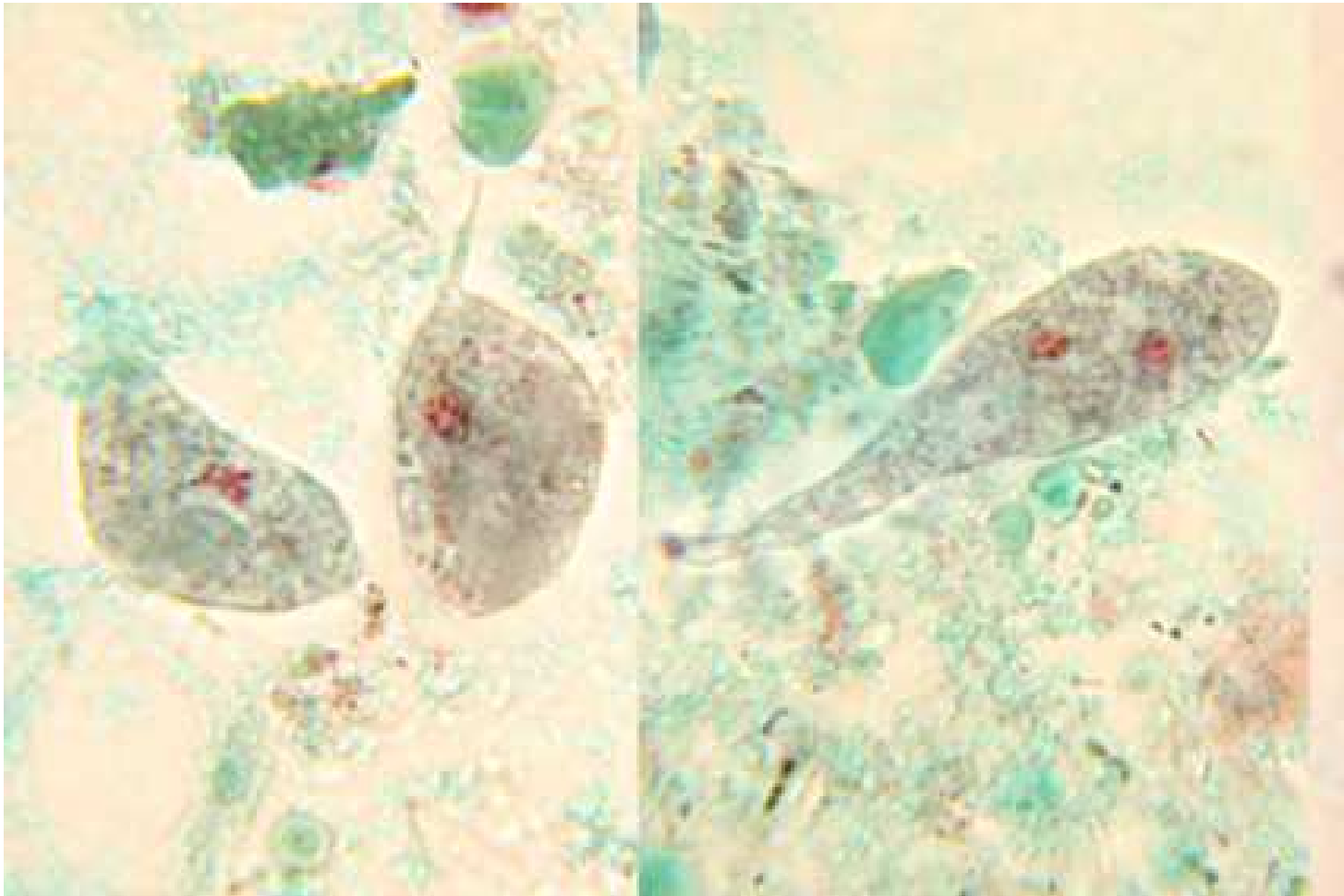


Life cycle of *Chilomastrix mesnili*

Dientamoeba fragilis

- Originally described as an amoeba because of lack of flagella but similar to *Trichomonas*
- Only trophozoite form recognized
- Non pathogenic but some symptoms might occur if large number of parasites (diarrhoea, abdominal pain, nausea, flatulence, fatigue)
- Pathogenesis unknown
- Treated usually with iodoquinol (metronidazole)
- Transmission ? Maybe via helminths eggs (*Enterobius* sp.)

Dientamoeba fragilis



Life cycle of *Dientamoeba fragilis*.



SAFER • HEALTHIER • PEOPLE™

<http://www.dpd.cdc.gov/dpdx>

