## FIGURES TO MATCH TABLE 2 – PROTOZOA AND MICROSPORIDIA (FUNGI)



Figure 1, H&E Entamoeba histolytica trophozoites Figure 2, PAS



Figure 3, H&E Giardia lamblia trophozoites 4, Loeffler's methylene blue



Figure 5. Balantidium coli, H&E



Figure 6. Cryptosporidium spp, H&E



Figure 7. Cyclospora cayetanensis, H&E (Courtesy of Dr. Duane Newton and Dr. Bobbi Pritt)



Figure 8. Cystoisospora belli oocyst H&E stain



Figure 9. Cystoisospora belli mature oocyst modified acid-fast stain



Figure 10. Microsporidial spores stained with Giemsa (note horizontal bar - polar tubule - arrow)



Figure 11. Microsporidial spores stained with Ryan's modified trichrome



Figure 12. Microsporidial spores stained with Gram stain (circle) (note confusion with bacteria).



Figure 13. Microsporidial spores stained with PAS (note PAS positive dot at the end of each spore).



Figure 14. Microsporidial spores stained with Gram chromotrope.



Figure 15. *Trypanosoma cruzi* in tissue stained with H&E (note kinetoplast – arrow).

## Figures to Match Table 2 – Helminths (Nematodes, Cestodes, Trematodes)



Figure 16. Enterobius vermicularis in appendix (note lateral alae in circles), H&E (Nematode)



Figure 17. Ascaris lumbricoides larvae in lung, H&E (Nematode)



Figure 18. Strongyloides stercoralis larvae in lung, H&E (Nematode)



Figure 19. Strongyloides stercoralis larvae in BAL, Giemsa (Nematode)



Figure 20. Hookworm attached to intestinal wall, H&E (Nematode)



Figure 21. *Trichuris trichiura* in intestine (note small end embedded and large end free in the lumen) H&E (Nematode)



Figure 22. *Trichinella* spp. larvae encysted in muscle, H&E, Note cyst wall is PAS positive in image on the right, multiple sections of a single coiled worm (Nematode)



Figure 23. *Taenia solium* cysticercus; note refractile hooks (arrows) and sucker (dart) H&E; note hooklet stained with carmine (right) (Cestode).



Figure 24. Scolex region of *Hymenolepis nana*, H&E. Note scolex in circle. Note adult worm scolex embedded in mucosa, H. Cestode



Figure 25. Developing intermediate stage (oval) Hymenolepis nana, H&E. Cestode



Figure 26. *Echinococcus granulosus* hydatid cyst: gross specimen showing internal daughter cysts; tissue section showing host tissue layer (black arrow), acellular laminated layer (green arrow), and nucleate germinal layer (red arrow); note the numerous protoscolices (H&E).



Figure 27. *Echinococcus granulosus* magnified view of protoscolex; note the row of hooklets (circle), H&E. Protoscolex stained with PAP.



Figure 28. *Echinococcus granulosus* hooklets stained with Ryan modified trichrome, individual hooklets also stained with Ryan modified trichrome; hooklet seen using polarized light; hooklet seen as acid-fast positive.



Figure 29. *Schistosoma haematobium* bladder biopsy; note the eggs with large terminal sping (circle). *Schistosoma mansoni* GI tract biopsy; note the eggs with large lateral spine (circle). H&E Trematods.



Figure 30. Adult Schistosoma sp. in lung tissue. H&E (Trematode)



Figure 31. Schistosoma mansoni lateral spine (partial in first image); acid-fast positive. (Trematode)



Figure 32. *Schistosoma haematobium* egg; note the larval form is acid-fast positive, rather than the egg shell as seen in Figure 31. (Trematode)



Figure 33. *Leishmania* sp. amastigotes in tissue (arrow); amastigotes in macrophage (nucleus red arrow, kinetoplast black arrow); enlarged image of a single amastigote (note bar/primitive kinetoplast – must be seen for ID – needs higher magnification). Giemsa stain



Figure 34. Comparison between Histoplasma (left) and Leishmania (right)



Figure 35. *Toxoplasma* bradyzoites in bone marrow (left); *Toxoplasma* tachyzoites in bone marrow (circle) (right)