Parasitology Rotation Assignment (Due end of the rotation, Email to CLS Instructor [QJI@DHS.LACOUNTY.GOV](mailto:QJI@DHS.LACOUNTY.GOV)).

Purpose

The purpose of this project is to provide student with dry lab activities and prepare students prior to on bench experience.

Identify the organism below from a picture of the free living cysts, egg or other diagnostic stage.

* Describe the proper specimen to collect for each Parasite
* Describe the symptoms associated with each parasite
* Describe the treatment used for each parasite

Complete the table below.

**Amoeba, Ciliates and Flagellates:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Organism | Specimen Source and preferred stain | Size (um) | Symptom | Treatment | Free Living Cyst (Picture) | Egg (Picture) | Other Diagnostic Stage (Picture) | Memory tricks |
| Amoebae | | | | | | | | |
| *Dientamoeba fragilis* |  |  |  |  |  |  |  |  |
| *Entamoeba coli* |  |  |  |  |  |  |  |  |
| *Entamoeba histolytica* |  |  |  |  |  |  |  |  |
| *Entamoeba hartmanni* |  |  |  |  |  |  |  |  |
| *Endolimax nana* |  |  |  |  |  |  |  |  |
| *Iodamoeba buetschlii* |  |  |  |  |  |  |  |  |
| *Naegleria sp* |  |  |  |  |  |  |  |  |
| *Acanthamoeba spp* |  |  |  |  |  |  |  |  |
| Ciliates | | | | | | | | |
| *Balantidium coli* |  |  |  |  |  |  |  |  |
| Flagellates | | | | | | | | |
| *Giardia lamblia, Giardia duodenalis*  *Giardia intestinalis* |  |  |  |  |  |  |  |  |
| *Trichomonas vaginalis* |  |  |  |  |  |  |  |  |
| Coccidia | | | | | | | | |
| *Crytosporidum* |  |  |  |  |  |  |  |  |
| *Isospora belli* |  |  |  |  |  |  |  |  |
| Microsporidium | | | | | | | | |
| *Microsporidium* |  |  |  |  |  |  |  |  |

**Apicomplexa Parasites:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Organism | Vector | Size (um) | Symptom &Treatment | Ring (Picture) | Trophozoite (Picture) | Schizont (Picture) | Gametocyte | Memory tricks |
| *Plasmodium falciparum* |  |  |  |  |  |  |  |  |
| *Plasmodium malariae* |  |  |  |  |  |  |  |  |
| *Plasmodium ovale* |  |  |  |  |  |  |  |  |
| *Plasmodium vivax* |  |  |  |  |  |  |  |  |
| Organism | Vector | Size (um) | Symptom &Treatment | Sporozoite (Picture) | Trophozoite (Picture) | Merozoite (Picture) | Gametocyte (Picture) | Memory tricks |
| Babesia |  |  |  |  |  |  |  |  |
| Organism | Vector | Size (um) | Symptom &Treatment | Oocyst (Picture) | Tissue Cyst in intermediate host (Picture) | Bradyzoite (Picture) | Tissue cyst in human (Picture) | Memory tricks |
| *Toxoplasma gondii* |  |  |  |  |  |  |  |  |

**Microfilaria**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Organism | Vector | Size (um) | Symptom | Treatment | Blood Smear or egg picture | Larvae Picture | Distinctive feature | Memory tricks |
| *Brugia malayi* |  |  |  |  |  |  |  |  |
| *Dirofilaria immitis* |  |  |  |  |  |  |  |  |
| *Loa loa* |  |  |  |  |  |  |  |  |
| *Mansonella sp* |  |  |  |  |  |  |  |  |
| *Onchocerca volvulus* |  |  |  |  |  |  |  |  |
| *Wuchereria bancrofti* |  |  |  |  |  |  |  |  |

**Nematodes**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Organism | Specimen Source, stain and vector | Size (um) | Symptom | Treatment | Egg (Picture) | Larvae (Picture) | Distinctive features (Picture) | Memory tricks |
| *Ancylostoma duodenale* |  |  |  |  |  |  |  |  |
| *Ancylostoma braziliense* |  |  |  |  |  |  |  |  |
| *Ascaris sp* |  |  |  |  |  |  |  |  |
| *Enterobius vermicularis* |  |  |  |  |  |  |  |  |
| *Hookworm* |  |  |  |  |  |  |  |  |
| *Necator americanus* |  |  |  |  |  |  |  |  |
| *Strongyloides stercoralis* |  |  |  |  |  |  |  |  |
| *Toxocara canis* |  |  |  |  |  |  |  |  |
| *Trichinella spiralis* |  |  |  |  |  |  |  |  |
| *Trichuris trichiura* |  |  |  |  |  |  |  |  |

**Trypanosoma and Leishmania spp**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Organism | Specimen Source stain and vector | Size (um) | Symptom | Treatment | Trypomastigote /promastigote | Amastigote (Picture) | Other Diagnostic Stage (Picture) | Memory tricks |
| *Trypanosoma cruzi* |  |  |  |  |  |  |  |  |
| *Trypanosoma brucei complex* |  |  |  |  |  |  |  |  |
| *Leishmania spp* |  |  |  |  |  |  |  |  |

**Trematode**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Organism | Specimen Source and preferred stain | Size (um) | Symptom | Treatment | Larvae/Adult (Picture) | Egg (Picture) | Other Diagnostic Stage (Picture) | Memory tricks |
| *Clonorchis sinesis* |  |  |  |  |  |  |  |  |
| *Fasciola hepatica* |  |  |  |  |  |  |  |  |
| *Fasciolopsis buski* |  |  |  |  |  |  |  |  |
| *Paragonimus westermani* |  |  |  |  |  |  |  |  |
| *Schistosoma haematobium* |  |  |  |  |  |  |  |  |
| *Schistosoma mansoni* |  |  |  |  |  |  |  |  |

**Cestodes**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Organism | Specimen Source and preferred stain | Size (um) | Symptom | Treatment | Egg (Picture) | Hydatid Cyst (Picture) | Adult (Picture) | Memory tricks |
| *Dibothriocephalus latum* |  |  |  |  |  |  |  |  |
| *Echinococcus granulosus* |  |  |  |  |  |  |  |  |
| *Taenia saginata* |  |  |  |  |  |  |  |  |
| *Taenia solium* |  |  |  |  |  |  |  |  |
| *Hymenolepis diminuta* |  |  |  |  |  |  |  |  |
| *Hymenolepis nana* |  |  |  |  |  |  |  |  |