

30 points

BIO 415

Spring 2019

Bioinformatics Project

1. Login at the EupathDB web
2. Click on "Education and Tutorials" (left side of screen)
3. Click on "EupathDB Workshops"
4. Select "2018-University of Georgia, Athens GA"
5. Click on "Schedule" (Top of screen)
6. Scroll down to "~~Tuesday~~ ^{Monday} June 18, 2018"
7. What do the following terms mean? **genome, genomic sequence, epitope, transmembrane domain, proteome, protein sequence, homolog, paralog, ortholog, syntenic, syntenic sequence, motif, ChIP-Seq, BLAST and UTR**
8. Click on "Finding genes, building search strategies and visiting gene pages". Complete the exercise as indicated in the instructions (Printed instructions will also be handed out in lab).
9. Click on "Genome Browser 1: Alignments and Comparative Genomics". Complete the exercise as indicated in the instructions (Printed instructions will also be handed out in lab).
10. Prepare a summary (2-3 pages) of the exercises. Include the following in your summary:
 - a) The ease or challenge of navigating the sites in both exercises.
 - b) Your understanding of how the exercise can be applied to perform sequence alignments, navigate chromosomes in order to locate genes and c) identify the chromosome for the *P. falciparum* ortholog of your assigned *P. yoelii* gene ID.
11. Post your summary on Blackboard at 11:59 pm 4/18/19.

Students will apply the methods from this exercise to the *Plasmodium falciparum* orthologues of the assigned *P. yoelii* gene at the conclusion of the exercises and after we have discussed the exercises in class.

