

Bioinformatics: Life Sciences on Your Computer

Week 1 Assignment

Please use the quiz Week 1 Assignment to submit your answers. These are the questions in PDF format for your convenience.

1. In PubMed find a 2014 paper from *J Biol Chem* by H.H. Erdemir.
 - a. According to the abstract, IQGAP could be a target for therapy in patients with what condition?
 - b. Follow the protein link (RefSeq) on the right menu. From what organism(s) are these 10 records?
 - c. How many of the listed proteins have exactly 595 amino acids?
 - d. From your results, open the estrogen receptor isoform 1 record with accession number NM_000125.3. How many base pairs in the mRNA sequence?
 - e. Look at the revision history for NM_000125.3. How many new references are included in the May 25, 2014 update?
 - f. How many nucleotides were added when version 2 replaced version 1?
2. Go to the MeSH database and enter "Thiazolidinedione Receptor."
 - a. What is the title of the first record that comes up?
 - b. Open the record and click the checkbox by metabolism and then add to the search builder and search PubMed. How many results?
 - c. Find a 2014 paper by Jahrling et al. in those results. From the abstract what is listed as a quintessential feature of Alzheimer's disease and AD mouse models?
3. Search the NCBI protein database for all mouse protein sequences that have the word "kinase" in the title of the record. After getting the results, use the left menu to filter for sequences from the RefSeq database. How many records from RefSeq meet all search criteria?