Practical 2
19 February 2024

1. How many "Homo sapiens" sequences deposited in DDBJ? Compare with Genbank and EMBL
   http://www.ddbj.nig.ac.jp/
   http://www.ncbi.nlm.nih.gov/genbank/
   http://www.ebi.ac.uk/embl/

2. What is the GC-content of the AY330867?

3. Compare the contents in DDBJ, Genbank and EMBL

4. Get the papers about "discrimination of beta barrel membrane proteins".
   https://pubmed.ncbi.nlm.nih.gov/

5. Find the papers published by any author (E.g.) Kihara D.

6. How many related articles are listed in PUBMED for the paper, Cell 2008 Dec 26;135(7):1158-9?

7. List the papers published in the journal "Nature" for the year 2024. Check the list in SCOPUS and PUBMED

8. Find the h-index and number of citations for "Burkhard Rost".

9. Find the class of the enzyme EC 1.7.2.3 and its function
   http://www.brenda-enzymes.org/

10. Find the catalytic site residues in Asparagine synthetase
    Hint: Find the EC number and search in Catalytic site atlas
    https://www.ebi.ac.uk/thornton-srv/m-csa/

11. Find the scientific name, the taxonomy ID and the number of chromosomes for the following organisms. http://www.ncbi.nlm.nih.gov/Taxonomy/Browser/wwwtax.cgi?mode=Root
    Organisms: Human, Cat, Dog, domestic guinea pig, and Thale cress

12. What are NCBI E-utilities? Give the syntax for fetching a record in FASTA format using E-utilities. http://www.ncbi.nlm.nih.gov/books/NBK25500/

13. List two databases under each of the following category.
    a. Protein properties, b. Small molecules (Structure related), c. Cancer gene databases

    Hint: Use Nucleic Acids Research (NAR) – 'database category list'
    https://www.oxfordjournals.org/our_journals/nar/database/c/

Deadline: 25 Feb 2024