

Corso di Bioinformatica

http://compgen.bio.unipd.it/~stefania/Didattica/AA2009-2010/Bioinformatica_BTS/Bioinfo_BTS.php

Per ogni punto dell'esercitazione copiare ed incollare le informazioni richieste in un file sotto forma di breve testo con figure, in modo da assemblare un traccia di relazione con brevi commenti.
Alla fine inviare via mail la relazione prodotta nel corso dell'esercitazione (stefania.bortoluzzi@unipd.it).
Salvare il file della relazione ogni 5'!

I ESERCITAZIONE

Ricerca in ENTREZ

ENTREZ (<http://www.ncbi.nlm.nih.gov/Entrez/index.html>) e' un'importante sistema per la ricerca di informazioni biologiche che fornisce un'interfaccia unificata per accedere a molti database differenti per contenuto ed organizzazione.

NCBI Entrez, The Life Sciences Search Engine

SEARCH SITE MAP PubMed Entrez Human Genome GenBank Map Viewer BLAST

Search across databases GO CLEAR Help

Welcome to the new Entrez cross-database search page

PubMed: biomedical literature citations and abstracts	Books: online books
PubMed Central: free, full text journal articles	OMIM: online Mendelian Inheritance in Man
Nucleotide: sequence database (GenBank)	Site Search: NCBI web and FTP sites
Protein: sequence database	UniGene: gene-oriented clusters of transcript sequences
Genome: whole genome sequences	CDD: conserved protein domain database
Structure: three-dimensional macromolecular structures	3D Domains: domains from Entrez Structure
Taxonomy: organisms in GenBank	UniSTS: markers and mapping data
SNP: single nucleotide polymorphism	PopSet: population study data sets
Gene: gene-centered information	GEO Profiles: expression and molecular abundance profiles
HomoloGene: eukaryotic homology groups	GEO DataSets: experimental sets of GEO data
PubChem Compound: small molecule chemical structures	Cancer Chromosomes: cytogenetic databases
PubChem Substance: chemical substances screened for bioactivity	PubChem BioAssay: bioactivity screens of chemical substances
Genome Project: genome project information	GENSAT: gene expression atlas of mouse central nervous system
Journals: detailed information about the journals indexed in PubMed and other Entrez databases	MeSH: detailed information about NLM's controlled vocabulary
NLM Catalog: catalog of books, journals, and audiovisuals in the NLM collections	

Per ogni punto dell'esercitazione copiare ed incollare le informazioni richieste in un file Word.

1 Ricerca bibliografica in ENTREZ Books:

- Dare un'occhiata a "Book List".
- Cercare Apoptosis.
- Cercare Cadherins in Cancer medicine.

2 Ricerca bibliografica in ENTREZ PubMed:

- Trovare l'articolo piu' recente sul rhabdomyosarcoma embrionale (embryonal rhabdomyosarcoma[Title]).

- Trovare un articolo su Science riguardante la produzione in vitro di un genoma di *Mycoplasma genitalium*.

3 Retrieval di sequenze con ENTREZ Nucleotide:

- Cercare sequenze del citocromo b (gene mitocondriale) di qualsivoglia specie di storione (acipenser, cytb).

4 Retrieval di sequenze con ENTREZ Protein:

- Cercare la sequenza della PROTEINA umana nebulin annotarsi la lunghezza e copiare la sequenza in formato FASTA nel file Word.

5 Entrez Genome:

The screenshot displays the NCBI Entrez Genome database interface. At the top, there is a search bar and navigation tabs for 'Limits', 'Preview/Index', 'History', 'Clipboard', and 'Details'. The main content area features a bar chart titled 'Total species (6079)' and 'Total records (11420)'. The chart shows the distribution of genomes across various organism groups: Viruses (2327 species, 3549 records), Eukaryota (2227 species, 1189 chromosomes, 2225 organelles, 42 plasmids), Bacteria (1360 species, 2144 chromosomes, 2030 plasmids), and Archaea (97 species, 88 chromosomes, 67 plasmids). Below the chart, there are three text boxes providing information about genome sequencing milestones, microbial genome resources, and SNP identification in *Salmonella enterica* serovar Enteritidis.

Genome Sequencing Milestone Reached! There are now 1000 complete Prokaryotic Genomes available in Entrez Genome. See the full list of [complete bacterial and archaeal genomes](#). [Microbial Resources](#) are available for search, retrieval, and analysis of all genomes.

Microbial Genomes Resources presents public data from prokaryotic genome sequencing projects. The sequence collection contains data from finished genomes as well as draft assemblies. The analytical tools include specialized [BLAST](#) with microbial genomes, newly developed [Concise Protein BLAST](#), annotation tools and many more.

Identification of SNPs in two *Salmonella enterica* serovar Enteritidis PT13a pathotypes that point to epidemiological trends. There has been an increasing number of infections leading to salmonellosis by *Salmonella enterica* serovar Enteritidis in the United States. [Using preliminary genomic](#)

Consultare le seguenti pagine, a da ciascuna provare a raggiungere le informazioni relative ad un diverso genoma completo:

1. Entrez genome project (<http://www.ncbi.nlm.nih.gov/sites/entrez?db=genomeprj>) → *Propionibacterium acnes*
2. Map Viewer (<http://www.ncbi.nlm.nih.gov/projects/mapview/>) → invertebrates → insects → *D. melanogaster* seguire i diversi link
3. Genomes (<http://www.ncbi.nlm.nih.gov/Genomes/>) → Human Genome Resources (<http://www.ncbi.nlm.nih.gov/projects/genome/guide/human/>)