

BIOINFORMATICS RESOURCES PURDUE UNIVERSITY LIBRARIES

Encyclopedias

Encyclopedia of Genetics, Genomics, Proteomics and Informatics

<http://www.springerlink.com/content/jh1201/>


Encyclopedia of Genetics, Genomics, Proteomics, and Bioinformatics
Life Sciences Library (Reference) 599.935 En19 2005

Books

To search for books in the Libraries catalog, use “bioinformatic?” as a keyword and sort the list by newest publication date.

To search for electronic books or other electronic resources, use **Assisted Search**. Search for “bioinformatic?” as a keyword anywhere and “electronic resource” as a phrase.

Databases and other resources

- **PubMed** (Medline) – index to the bibliographic literature with links (LinkOut) to structures, compounds, sequences, etc. identified in the journal article. The following URL will activate :
<http://www.ncbi.nlm.nih.gov/sites/entrez?otool=inpurduelib>
- **NCBI** (National Center for Biotechnology Information) - Established in 1988 as a national resource for molecular biology information, NCBI creates public databases, conducts research in computational biology, develops software tools for analyzing genome data, and disseminates biomedical information - all for the better understanding of molecular processes affecting human health and disease.
<http://www.ncbi.nlm.nih.gov/> Cross-database searching available at:
<http://www.ncbi.nlm.nih.gov/sites/gquery>
- **EBI** (European Bioinformatics Institute) – Established to provide freely available data and bioinformatics services to all facets of the scientific community in ways that promote scientific progress; to contribute to the advancement of biology through basic investigator-driven research in bioinformatics; to provide advanced bioinformatics training to scientists at all levels, from PhD students to independent investigators; and, to help disseminate cutting-edge technologies to industry. <http://www.ebi.ac.uk/>
- **PubChem** - PubChem is organized as three linked databases within the NCBI's [Entrez](#) information retrieval system. These are PubChem Substance, PubChem Compound, and

PubChem BioAssay. PubChem also provides a fast chemical structure similarity search tool. <http://pubchem.ncbi.nlm.nih.gov/>

- **BIOSIS Previews** - life sciences and biomedical research from journals, meetings, patents, and books. Start here for plant biology or plant genetics and other non-clinical biology and genetics articles. Use the term “computational biology” in the major concepts field to narrow retrieval. <http://purl.lib.purdue.edu/db/biosis>
- **Cold Spring Harbor Protocols** - an interactive source of several hundred reliable, new and classic research techniques in molecular and cellular biology. <http://purl.lib.purdue.edu/db/cshp>
- **Current Protocols Series** - contains the largest collection of authoritative, peer-reviewed, regularly-updated research methods and topical overviews available. <http://purl.lib.purdue.edu/db/currentprotocols>
- **Proteome Bioknowledge Library** – now called **Biobase Knowledge Library** - combination of computational and experimental data for drug discovery, biomarker discovery, gene regulation analysis and more. <http://purl.lib.purdue.edu/db/proteome>

Tutorials and Help

- **NCBI Entrez:** <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=helpentrez.chapter.EntrezHelp>
- **NCBI Entrez tutorial:** <http://www.ncbi.nlm.nih.gov/Entrez/tutor.html>
- **Other NCBI tutorials**, including materials from courses previously taught at NCBI: <http://www.ncbi.nlm.nih.gov/Education/>
- **Bioinformatics Tutorials Series (BITS)** - from MIT Engineering and Science Libraries and Harvard's Countway Library, a series of brief video tutorials on BLAST and UCSC Genome Browser <https://www.countway.harvard.edu/lenya/countway/live/menuNavigation/libraryServices/classes/videoTutorials.html>
- **Bioinformatics Tools: Tips, Tutorials, and Terminology for Using Selected Resources in Genome Database Guide** - http://www.ornl.gov/sci/techresources/Human_Genome/posters/chromosome/tools.shtml
- **EBI 2Can Support** – short and concise introductions to the basic concepts in molecular and cellular biology, bioinformatics, and the tools and databases available from EBI. <http://www.ebi.ac.uk/2can/home.html>

Portals and other institutional sites

- **Bioresearch Portal** – Stanford School of Medicine list of resources.
<http://lane.stanford.edu/portals/bioresearch.html>
- **The Comprehensive Microbial Resource (CMR)** -- a free website used to display information on all of the publicly available, complete prokaryotic genomes.
<http://cmr.jcvi.org/tigr-scripts/CMR/CmrHomePage.cgi>
- **Ensembl Genome Browser** -- a joint project between [EMBL - EBI](#) and the [Sanger Institute](#) to develop a software system which produces and maintains automatic annotation on selected eukaryotic genomes. <http://www.ensembl.org/index.html>
- **ExPASy Proteomics server** - (**Expert Protein Analysis System**) proteomics server of the [Swiss Institute of Bioinformatics](#) (SIB) is dedicated to the analysis of protein sequences and structures as well as 2-D PAGE. Includes the Life Science Directory of biomolecular servers. <http://ca.expasy.org/>
- **Internet Resources for Bioinformatics** – University of Delaware Library list of resources. <http://www2.lib.udel.edu/subj/bioinformatics/internet.htm>
- **OBRC** (Online Bioinformatics Resources Collection) – annotations and links for 2100+ databases and software tools developed at the University of Pittsburgh.
<http://www.hsls.pitt.edu/guides/genetics/obrc/>
- **RCSB Protein Data Bank** -- Research Collaboratory for Structural Biology's information portal to biological macromolecular structures.
<http://www.rcsb.org/pdb/home/home.do>
- **UCSC Genome Browser** - reference sequence and working draft assemblies for a large collection of genomes. <http://genome.ucsc.edu/>