

## Biology Resource Guide

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This research guide provides selected print, online, and internet information resources on biology. Check the [Suffolk University Library Catalog](#) for specific book and periodical titles.

### **Indexes, Full-Text Databases, Search Engines**

#### [Academic Search Complete](#)

Our best general research database, this online resource covers a wide range of academic areas including chemistry, physics, biology, pharmaceutical and medical sciences. Full-text access for over 6,300 peer-reviewed titles is available with coverage for many titles dating back to 1990. Indexing and abstracting coverage begins generally from the mid-1980's. Searchable cited references are provided for more than 1,300 journals.

#### [Academic OneFile](#)

Like [Academic Search Complete](#), Academic OneFile is an excellent multi-disciplinary database containing 7,300 peer-reviewed journals and more than 5,000 in full-text. Coverage in most cases

from 1980.

### [BioOne](#)

The publisher states that BioOne "provides a unique aggregation of high-impact bioscience research journals." This database includes about 160 titles from about 120 publishers. Coverage is from 2000 or later until the present.

### [JSTOR](#)

Indexes and provides full-text access to over 300 scholarly journals in the areas of biological sciences, botany and plant sciences, aquatic sciences, ecology and evolutionary biology, and general science. Because coverage extends back to volume 1, issue 1 of each journal and includes previous and related titles, some of the journal archives extend back to the 19th century. Note that there is generally three to five years between the last issue available in JSTOR and the most recently published issue of a journal.

### [ScienceDirect](#)

This database is a collection of academic e-journals with full text, most back to 1995, published by Elsevier. Life sciences journals in this collection cover subjects in biochemistry, genetics and molecular biology, environmental science, immunology and microbiology, and neuroscience.

### [Wiley Interscience](#)

The publisher John Wiley & Sons, Inc. produces this database consisting of its own scientific, technical, and medical full-text journals and more than 850 scholarly journals from the Blackwell Synergy database which merged with Wiley Interscience on July 1, 2008. The life sciences journals in this database address subjects such as anatomy, bioinformatics, biology, genetics, genomics, molecular cell biology, and neuroscience.

### [SpringerLink](#)

Springer, a major publisher of scientific, technical, and medical books and journals, provides indexing and full-text for about 750 journals in this database. Includes approximately 200 biological sciences and medical journals..

### [HighWire](#)

<http://highwire.stanford.edu/>

Indexing and some full-text of over 350 physical, biological, social and medical sciences journals published by Stanford University's High Wire Press. Includes citation searching.

### [Medline with Full Text](#)

Premier medical database from the National Library of Medicine, with access to over 11 million

references and abstracts. Some linked full-text.

### [Access Science: McGraw-Hill Encyclopedia of Science & Technology Online](#)

Online encyclopedia produced by McGraw-Hill. Browse by topic or alphabetically or search by word or phrase. Includes data, tables, tools, study guides, bibliographies, a dictionary, biographies, and news articles.

### [Scirus](#)

<http://www.scirus.com/>

Elsevier Science publisher claims that its Scirus web site provides the "most comprehensive science specific search engine on the Internet. Scirus searches web pages (e.g. university and society web sites) as well as other sources such as patents and chemistry preprints. The Advanced Search function allows you to limit your search by subject area and content source.

## **Data Sources on the Web**

### [Worldwide Protein Data Bank](#)

<http://www.wwpdb.org/>

Founded as a global collaboration in 2003, "the mission of the wwPDB is to maintain a single Protein Data Bank Archive of macromolecular structural data that is freely and publicly available to the global community." wwPDB pools the work of three groups, MSD-EBI, PDBj, and the well-known [RCSB Protein Data Bank](#), based at Rutgers University. This "worldwide repository for the processing and distribution of 3-D biological macromolecular structure data" is worth visiting for its easy-to-use database of protein data.

### [BioTech](#)

<http://biotech.icmb.utexas.edu/>

"Located in Dr. Andrew Ellington lab at University of Texas at Austin, [BioTech](#) is a hybrid biology/chemistry educational resource and research tool on the World Wide Web." The site includes an illustrated interactive textbook supplement [Introduction to Glycolysis](#), lists of biomedical websites, resources for jobs, funding, grad schools, biotechnology regulations, and bioinformatics.

## **Journals on the Web**

### [Journal of Biological Chemistry](#)

<http://www.jbc.org>

Searchable database of full-text JBC articles from 1905 to present.

### [Journal of Cell Biology](http://www.jcb.org/)

<http://www.jcb.org/>

Most online versions of scientific journals are not freely available but since JCB is published by a non-profit, they actually provide free content and an archive that goes all the way back to 1955. Click on the search button to look for your topic related to cell biology. For a list of other high-quality scientific journals available free on the web--although often with an "embargo" for the latest year--take a look at this list of journals offering [Free Online Full-text Articles](#). This list is maintained by Stanford University's [HighWire](#), which is the best free index to scientific journal literature. Use the search engine on the opening page to locate journal articles on your topic. HighWire results are clearly marked, so you will quickly know whether an article is available for free or not.

### [Public Library of Science](http://www.plos.org/index.html)

<http://www.plos.org/index.html>

A noble project, "The Public Library of Science (PLoS) is a non-profit organization of scientists and physicians committed to making the world's scientific and medical literature a freely available public resource." PLoS publishes its own peer-reviewed journals, beginning with *PLoS Biology* on October 13, 2003 and *PLoS Medicine* on October 19, 2004. PLoS is launching three new community journals in 2005 — *PLoS Genetics*, *PLoS Computational Biology*, and *PLoS Pathogens*.

### [All that JAS Journal Abbreviation Sources](http://www.abbreviations.com/jas.asp)

<http://www.abbreviations.com/jas.asp>

Registry of web resources that list or provide access to the full titles associated with journal abbreviations.

### [FreeMedicalJournals.com](http://www.freemedicaljournals.com)

<http://www.freemedicaljournals.com>

Links to biomedical journals that can be accessed free online.

## **Clearing Houses on the Web**

### [NBII:National Biological Information Infrastructure](http://www.nbio.gov/)

<http://www.nbio.gov/>

The NBII is a collaboration among government agencies, academic institutions, and private industry that "links diverse, high-quality biological databases, information products, and

analytical tools maintained by NBII partners."

### [National Center for Biotechnology Information \(NCBI\)](#)

<http://www.ncbi.nlm.nih.gov/>

The NCBI was "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." Their databases include [GenBank](#), "an annotated collection of all publicly available DNA sequences, maintained by NIH. It also connects visitors to [PubMed Central](#), the digital archive of life sciences journal literature developed by NCBI at the National Library of Medicine. Many other useful links to resources for molecular biology information can be found here.

### [Science.gov: Biology & Nature](#)

[http://www.science.gov/browse/w\\_115.htm](http://www.science.gov/browse/w_115.htm)

As evidenced by NCBI above, the federal government produces many useful web resources related to the sciences. This page provides an annotated list of links for governmental websites related to biology and nature. Browse the links, or use the Science.gov search engine to find specific materials in their 47 million webpages.

### [The WWW Virtual Library: Bio Sciences](#)

<http://vlib.org/Biosciences.html>

Here's a metasite that lists and links to many websites in the biosciences. Disciplines covered include: biodiversity and ecology; biotechnology; botany; cell biology; developmental biology; the environment; genetics; microbiology and virology; model organisms; mycology; neurobiology; parasitology; physiology and biophysics; vision science; and zoology.

And if you'd like to use a specialized search engine to sort through "Scholarly Internet Resource Collections," you might want to use [Infomine: Biological, Agricultural & Medical Sciences](#).

### [Association for Biology Laboratory Education](#)

<http://www.ableweb.org/>

Lists workshops, conferences, and a list of "hot" biology web sites.

### [BiologyBrowser](#)

<http://www.biologybrowser.org/>

Created by the publisher Thomson Reuters, BiologyBrowser is a free guide to internet sources in the life sciences. Browsible and keyword-searchable categories include organisms (e.g. bacteria, fungi, plantae) and life sciences categories (e.g. biochemistry, biodiversity, astrobiology). A few of the information resources, such as the Nomenclature Glossary for Zoology, Guide to Animal

Names, and the Index to Organism Names are produced by Thomson Reuters. In most cases, however, BiologyBrowser provides links to "current science news stories" and "relevant web sites" created by others.

## **Selected Reference Resources**

### [Gale Virtual Reference Library](#)

The GVRL database includes several good online life sciences encyclopedias. [Grzimek's Animal Life Encyclopedia](#) provides extensive coverage of the animal world. Entries often include maps, photographs, and beautiful color illustrations. Also available in [print](#) (REF QL7 .G7813 2004). The [Biology](#) online encyclopedia aims to provide "as broad an introduction as possible to the many facets of biology" as well as offering in-depth treatment of topics such as molecular genetics and human physiology. [Genetics](#) covers all aspects of genetics including ethical, legal, and social issues. Extra features include color photos and line drawings, a glossary of scientific terms, and a discussion of careers in genetics. [Animal Sciences](#) addresses topics such as how animals develop, animal ecology and behavior, and interactions between animals and humans. [Plant Sciences](#) is a 4 volume encyclopedia covering all aspects of plant sciences. The [Encyclopedia of Bioethics](#) contains original articles, including bibliographies, on bioethics topics.

### [Credo Reference](#)

[Collins Dictionary of Biology](#) and the [Dictionary of Developmental Biology and Embryology](#) are two online dictionaries available from the Credo Reference database.

### [Encyclopedia of Life Sciences](#)

REF QH302.5 .E54 2002

The twenty volumes that constitute the Encyclopedia cover ten core areas of the biological sciences including biochemistry. Volume 20 includes: an alphabetical listing of the articles; a subject index; a glossary; a study guide of core introductory articles; and an appendix containing additional reference information.

### [Encyclopedia of the Human Brain](#)

This reference sources contains brief but comprehensive summaries of all aspects of the human brain and nervous system. Also available in [print](#) (REF QP376 .E586 2002).

### [Synopsis and Classification of Living Organisms](#)

REF QH83 .S89

Two volume reference work that presents the higher level taxonomy of living organisms. Synoptic articles of all taxa down to the family level.

### [Walker's Mammals of the World](#)

REF QL703 .W222 1999

A major reference work in 2 volumes that includes information and photographs of each genus.

### [Scientific and Common Names of 7,000 Vascular Plants in the United States](#)

REF QK96 .B68 1995

Relates scientific names of vascular plants with their common or vernacular names: scientific names by genus; common names followed by scientific name; synonyms of the scientific name cross-referenced to the scientific name; and genera of vascular plants arranged by family.

### [An Atlas of Plant Structure](#)

REF QK641 .B7

Provides photomicrographs and line drawings useful in interpreting lab specimens.

### [CRC Handbook of Microbiology](#)

REF QR6 .C2 1977

The Sawyer Library has Volumes 1-4 of this handbook covering data on properties of bacteria (vol.1); fungi, algae, protozoa, and viruses (vol.2); and microbial composition (vols.3-4).

### [CRC Handbook of Medicinal Herbs](#)

REF RS164 .D83 2001

Covers hundreds of species of folk medicinal herbs. Provides description of use, toxicity, and common and scientific names.

### [Merck Index](#), 14th Edition

REF DESK RS51 .M4 2006

Published by Merck Research Laboratories. Entries cover chemicals, laboratory reagents, drugs and pharmaceuticals, and naturally occurring substances and plants. Includes ring structures and Chemical Abstracts Service registry numbers.

### [Gray's Anatomy of the Human Body](#), 30th edition

REF QM23.2 .G73 1985

The most famous of all anatomy texts.

### [Wolf-Heidegger's Atlas of Human Anatomy](#)

REF QM25 .W633 2001

This 2 volume atlas contains colored plates, black-and-white photographs, radiographs, CT and MRI images.

### [Atlas of Human Anatomy](#)

REF QM25 .N46 2003

Dr. Frank Netter's clearly labelled and beautiful illustrations make this an excellent atlas for the student of anatomy.

### [The Dog & Cat](#)

REF SF767.D6 D66 1996 v.3

This is volume 3 of *The Color Atlas of Veterinary Anatomy*. "The book presents the important features of regional and topographical anatomy in a series of full-colour photographs of detailed dissections."

### [Dictionary of Genetics](#)

REF QH427 .K55 2002

Includes about 7,000 definitions and hundreds of illustrative tables and drawings. Appendices cover genome sizes and gene numbers of about 30 organisms, internet addresses for genetic databanks, and a chronology of developments in genetics and evolutionary science.

### [Dictionary of Biological Psychology](#)

REF QP360 .D52 2001

Definitions and explanations of terms found in the neuroscience and biological psychology literature.