

IStLS Bioinformatics Resources	http://www.istls.de/bioinfolinks.php
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Courses and lectures

Bioinformatics - Online Courses and Tutorials	http://www.bioinformatik.de/cgi-bin/browse/Catalog/Research_and_Education/Online_Courses_and_Tutorials/
EMBRACE Network of Excellence	http://www.embracegrid.info/page.php
EMBNNet Quick Guides	http://www.embnet.org/node/64
EMBNNet Courses	http://www.embnet.org/
Sequence Analysis with distributed Resources	http://bibiserv.techfak.uni-bielefeld.de/sadr/
Tutorial Protein Structures (EXPASY) SwissModel	http://swissmodel.expasy.org/course/course-index.htm
CMBI Courses for protein structure	http://swift.cmbi.ru.nl/teach/courses/index.html
2Can Support Portal - Bioinformatics educational resource	http://www.ebi.ac.uk/2can
Bioconductor Workshops	http://www.bioconductor.org/workshops/
CBS Bioinformatics Courses	http://www.cbs.dtu.dk/courses.php
The European School In Bioinformatics (Biosapiens)	http://www.biosapiens.info/page.php?page=esb

Institutes Centers Networks

Bioinformatics Institutes Germany

WSI Wilhelm-Schickard-Institut für Informatik - Universitaet Tuebingen	http://www.uni-tuebingen.de/en/faculties/faculty-of-science/departments/computer-science/department.html
WSI Huson - Algorithms in Bioinformatics	http://www.ab.informatik.uni-tuebingen.de/welcome.html
WSI Prof. Zell - Computer Architecture	http://www.ra.cs.uni-tuebingen.de/
WSI Kohlbacher - Div. for Simulation of Biological Systems	http://www.abi.informatik.uni-tuebingen.de/
WSI Nieselt - Integrated Transcriptomics	http://www.zbit.uni-tuebingen.de/pas/index.htm
ZBIT - Zentrum Bioinformatik Tuebingen	http://www.mnf.uni-tuebingen.de/fachbereiche/zentren/zentrum-fuer-bioinformatik-tuebingen/research.html
ZBIT Bioinformatics Teaching in Tuebingen	http://www.mnf.uni-tuebingen.de/fachbereiche/zentren/zentrum-fuer-bioinformatik-tuebingen/teaching.html
MPI Biological Cybernetics Tuebingen	http://www.kyb.mpg.de/
MPI Dev Biol Tuebingen - Protein Evolution (Lupas)	http://www.eb.tuebingen.mpg.de/abteilungen/1-proteinevolution
Bioinformatik und Information Mining (Berthold) Konstanz	http://cms.uni-konstanz.de/informatik/berthold/
Studiengang Bioinformatik Muenchen	http://www.bioinformatik-muenchen.de/
Bioinformatik Studiengang FU Berlin	http://www.inf.fu-berlin.de/stud/bioinf-stud/
institute for bioinformatics and systems biology / mips	http://www.helmholtz-muenchen.de/index.php?id=3940
Bioinformatics University Bielefeld	http://www.techfak.uni-bielefeld.de/web/Research/Researchgroups
Bielefeld Bioinformatics Medical Informatics Department	http://www.techfak.uni-bielefeld.de/ags/bi/index.shtml
Bielefeld Biomathematics and Theoretical Bioinformatics	http://www.techfak.uni-bielefeld.de/ags/bm/
Bielefeld Genome Informatics	http://gi.cebitec.uni-bielefeld.de/
IZIB Interdisziplinäeres Zentrum fuer Bioinformatik Leipzig	http://www.izbi.uni-leipzig.de/index.php
ZBI - Zentrum Bioinformatik - University Saarland	http://www.zbi.uni-saarland.de/zbi/
MPI Informatics Saarland	http://www.mpi-inf.mpg.de/
Jena Center for Bioinformatics - JCB	http://www.jcb-jena.de/
BCB - Berlin Centre for Genome Based Bioinformatics	http://bcbio.molgen.mpg.de/index.php
MPI for Molecular Genetics Berlin - Vingron Computational Molecular Biology	http://cmb.molgen.mpg.de/
Zuse Institute Berlin	http://www.zib.de/
ZBH Zentrum Bioinformatik University Hamburg	http://www.zbh.uni-hamburg.de/
DKFZ - iBioS Intelligent Bioinformatics Systems	http://ibios.dkfz.de/tbi/
HUSAR Bioinformatics Lab - Biocomputing Services at DKFZ	http://genome.dkfz-heidelberg.de/
TU Braunschweig - Department of Bioinformatics and Biochemistry	http://bibc.tu-bs.de/bioinf/
Plant Bioinformatics Portal Bioinformatics Center Gatersleben-Halle	http://pgrc-35.ipk-gatersleben.de/portal/page?_pageid=54,38463&_dad=portal&_schema=PORTAL

Networks Germany

NGFN - Nationales Genomforschungsnetz	http://www.ngfn.de/
GABI - Genomanalyse im biologischen System Pflanze	http://www.gabi.de/
HepatoSys - Network Systems Biology	http://www.hepatosys.de/

Networks and Centers Europe

EBI European Bioinformatics Institute	http://www.ebi.ac.uk/index.html
BioSapiens Network - European Virtual Institute for Genome Annotation	http://www.biosapiens.info/
The Sanger Centre UK	http://www.sanger.ac.uk/
CBS - Center for Biological Sequence Analysis Technical University Denmark	http://www.cbs.dtu.dk/
SIB - Swiss Institute of Bioinformatics	http://www.isb-sib.ch/
Pôle Bio-Informatique Lyonnais	http://pbil.univ-lyon1.fr/
SEQUOIA - Bioinformatics Lille	http://www2.lifl.fr/SEQUOIA/
Systems Biology Net Spain	http://www.sysbiol.net/
Institute Nacional de bioinformática Spain	http://www.inab.org/
prbb Barcelona Biomedical Research Park	http://www.prbb.org/eng/part01/p03.htm

Networks and Centers International

NCBI US National Center for Biotechnology Information	http://www.ncbi.nlm.nih.gov/
Kyoto University Bioinformatics Center Japan	http://www.bic.kyoto-u.ac.jp/
UBC Bioinformatics Centre UBC Canada	http://bioinformatics.ubc.ca/
Bioinformatics.Org - The Open-Access Institute	http://bioinformatics.org/
Weizmann Institute Bioinformatics and Biological Computing Israel	http://bip.weizmann.ac.il/index.html
Baylor College of Medicine HGSC	http://www.hgsc.bcm.tmc.edu/
San Diego Supercomputer Center Biological Projects CA USA	http://www.sdsc.edu/research/ResearchOverview.html
J. Craig Venter Institute (ex TIGR) MD USA	http://www.jcvi.org/
Whitehead Institute MIT MA USA	http://www.wi.mit.edu/
Broad Institute Center for Genome Research	http://www.broadinstitute.org/
Stanford Genomic Resources CA USA	http://lib.stanford.edu/stanford-genomic-resources
The Genomics and Bioinformatics Group National Cancer Institute USA	http://discover.nci.nih.gov/index.jsp

Systems Biology Germany

Systems Biology in Germany	http://www.systembiologie.de/
FORSYS - Research Units for Systems Biology	http://www.forsys.net/joomla/
SysMo Systems Biology of Microorganisms	http://www.sysmo.net/
HepatoSys - Network Systems Biology	http://www.hepatosys.de/
CSB - Center Systems Biology Stuttgart	http://www.centersysbio.uni-stuttgart.de/
ZBSA - Center for Systems Biology Freiburg	http://www.zbsa.uni-freiburg.de/
FRISYS Freiburg Initiative for Systems Biology	http://www.frisys.biologie.uni-freiburg.de/
FDM - Freiburg Center for Data Analysis and Modeling	http://www.fdm.uni-freiburg.de/
System Biology and Bioinformatics Wolkenhauer Univ. Rostock	http://www.sbi.uni-rostock.de/
BIOMS - Center for Modelling and Simulation in the Biosciences Heidelberg	http://www.bioms.de/
Systems Biology at the IST and ISYS at University of Stuttgart	http://www.sysbio.de/
MPI Dynamik komplexer Systeme - Magdeburg System Biology	http://www.mpi-magdeburg.mpg.de/research/groups/sb/
Magdeburg Centre for Systems Biology	http://www.mpi-magdeburg.mpg.de/MaCS
BioQuant Heidelberg	http://www.bioquant.uni-heidelberg.de/
ViroQuant Heidelberg	http://www.viroquant.uni-hd.de/
EML Research gGmbH Heidelberg	http://www.eml-r.org/english/research/index.php
Theoretical Biophysics Humboldt University Berlin	http://www2.hu-berlin.de/biologie/theorybp/
Bork Group at EMBL - Comparative Systems Analysis	http://www.bork.embl.de/

Systems Biology Europe

European Research Area for Systems Biology ERASysBio	http://www.erasysbio.net/Summary
SystemsX - The Swiss Initiative in Systems Biology	http://www.systemsx.ch/
YSBN The Yeast Systems Biology Network	http://www.gmm.gu.se/Ysbn/
SYSBIO Systems Biology and Bioinformatics Finland	http://www.aka.fi/sysbio
SCMBB Bruxelles	http://www.ucmbb.ulb.ac.be/
Centre for Integrative Systems Biology London	http://www3.imperial.ac.uk/cisbic
Manchester Centre for Integrative Systems Biology	http://www.mcisb.org/
Warwick Systems Biology Centre (CSB)	http://www2.warwick.ac.uk/fac/sci/systemsbiology/
Systems Biology Ireland	http://www.ucd.ie/sbi/
Netherlands Institute for Systems Biology (niSB)	http://www.sysbio.nl/
Systems Biology Net Spain	http://www.sysbiol.net/

Systems Biology International

The International Society for Systems Biology	http://issb.org/
Systems Biology Portal www.systems-biology.org	http://www.systems-biology.org/
US National Centers of System Biology	http://www.nigms.nih.gov/Initiatives/SysBio/Centers/
Systems Biology at UC San Diego	http://systemsbiology.ucsd.edu/
Department of Systems Biology Harvard Medical School Boston USA	http://sysbio.med.harvard.edu/
Institute for Systems Biology Seattle - USA	http://www.systemsbio.org/
Center for the Study of Biological Complexity Richmond USA	http://www.vcu.edu/csbc/
Ottawa Institute of Systems Biology	http://intermed.med.uottawa.ca/Associations/OISB/index.htm
The Systems Biology Institute - Tokyo	http://sbi.jp/
Institute for Advanced Biosciences Keio University	http://www.iab.keio.ac.jp/en/

Organizations Conferences

Bioinformatik.de	http://www.bioinformatik.de
Bioinformatics.Org - The Open-Access Institute	http://bioinformatics.org/
EMBNET Bioinformatics Network	http://www.embnet.org/
Gesellschaft fuer Informatik - Fachgruppe Bioinformatik	http://www.cebitec.uni-bielefeld.de/groups/fg402/
GBM Gesellschaft fuer Biochemie und Molekularbiologie	http://www.gbm-online.de/
ISCB - International Society for Computational Biology	http://www.iscb.org/
GCB 2011 German Conference on Bioinformatics - Weihenstephan	http://www.gcb2011.de/
GCB 2010 German Conference on Bioinformatics - Braunschweig	http://www.gcb2010.de/
Bioinformatics Open Source Conference BOSC 2011 Vienna	http://www.open-bio.org/wiki/BOSC_2011
Bioinformatics Open Source Conference BOSC 2010 Boston	http://www.open-bio.org/wiki/BOSC_2010
ISMB ECCB 2011 Vienna	http://www.iscb.org/ismbeccb2011
7th International Workshop on Data Integration in the Life Sciences 2010	http://www.chalmers.se/cse/dils2010-en
12th International Conference on Systems Biology ICSB 2011, Heidelberg, Germany	http://www.icsb-2011.net/icsb-2011/
11th International Conference on Systems Biology ICSB 2010, Edinburgh, UK	http://www.icsb2010.org.uk
HUO 2011 10th World Congress Geneva	http://www.hupo2011.com/
HUPO 2010 9th World Congress Sydney	http://www.hupo2010.com/
18. Arbeitstagung Mikromethoden der Proteinchemie München 2011	http://www.arbeitstagung.de/
Synthetic Biology 5.0 Conference Stanford, CA, USA	http://sb5.biobricks.org/

Journals

Bioinformatics	http://bioinformatics.oxfordjournals.org/
BioMed Central Bioinformatics	http://www.biomedcentral.com/bmcbioinformatics
AMB Algorithms for Molecular Biology	http://www.almob.org/
BioData Mining	http://www.biodatamining.org/home/
Briefings in Bioinformatics	http://bib.oxfordjournals.org/
Human Genomics	http://www.henrystewart.com/human_genomics/
In Silico Biology	http://www.bioinfo.de/isb/
Journal of Computational Biology	http://www.liebertpub.com/publication.aspx?pub_id=31
Journal of Medical Internet Research	http://www.jmir.org/
Nucleic Acids Research	http://www.oxfordjournals.org/nar/about.html
Omics: A Journal of Integrative Biology	http://www.liebertpub.com/publication.aspx?pub_id=43
PLoS Computational Biology	http://compbiol.plosjournals.org/perlserv/?request=index-html&issn=1553-7358
Nature Omics Gateway	http://www.nature.com/omics/index.html
Proteomics	http://www.wiley-vch.de/publish/en/journals/alphabeticIndex/2120/
Molecular and Cellular Proteomics	http://www.mcponline.org/
Journal of Proteome Research	http://pubs.acs.org/journals/jprobs/
Clinical Proteomics	http://www.springerlink.com/content/120552/
Proteomics - Clinical Applications	http://onlinelibrary.wiley.com/journal/10.1002/%28ISSN%291862-8354
Current Proteomics	http://www.bentham.org/cp/
Journal of Proteomics and Bioinformatics	http://omicsonline.com/JPBhome.htm
Briefings in Functional Genomics and Proteomics	http://bfgp.oxfordjournals.org/
Proteome Science	http://www.proteomesci.com/home/
Electrophoresis	http://www.wiley-vch.de/publish/en/journals/alphabeticIndex/2027/
BioMed Central - Systems Biology Gateway	http://www.biomedcentral.com/gateways/systemsbiology
BMC Systems Biology	http://www.biomedcentral.com/bmcsystbiol/
Molecular Systems Biology	http://www.nature.com/msb/index.html
BioSystems	http://www.sciencedirect.com/science/journal/03032647
IET Systems Biology	http://scitation.aip.org/IET-SYB
IET Synthetic Biology	http://scitation.aip.org/IET-STB

Bioinformatics server

EBI European Bioinformatics Institute	http://www.ebi.ac.uk/index.html
NCBI US National Center for Biotechnology Information	http://www.ncbi.nlm.nih.gov/
GenomeNet WWW server Japan	http://www.genome.jp/
Expasy Proteomics Server	http://www.expasy.org/
EMBNet - A Quick Guide to Expasy	http://www.embnnet.org/node/64
Pôle Bio-Informatique Lyonnais	http://pbil.univ-lyon1.fr/
Weizmann Institute Bioinformatics and Biological Computing	http://bip.weizmann.ac.il/index.html
Baylor College of Medicine HGSC	http://www.hgsc.bcm.tmc.edu/
Bioinformatics Software Server Lille	http://bioinfo.lifl.fr/index.php
San Diego Supercomputer Center Biological Projects	http://www.sdsc.edu/research/ResearchOverview.html
Bielefeld University Bioinformatics Server	http://bibiserv.techfak.uni-bielefeld.de/
HUSAR Bioinformatics Lab - Biocomputing Services at DKFZ	http://genome.dkfz-heidelberg.de/
The Genomics and Bioinformatics Group NCI	http://discover.nci.nih.gov/index.jsp

Databases

Sequences

Entrez Browser NCBI	http://www.ncbi.nlm.nih.gov/Entrez/
SRSWWW EMBL-EBI	http://srs.ebi.ac.uk/
DBGET/LinkDB Integrated Database Retrieval System	http://www.genome.ad.jp/dbget/dbget2.html
BCM Search Launcher	http://searchlauncher.bcm.tmc.edu/
GeneCards Weizmann	http://www.genecards.org/index.shtml
Genome Matrix databases information integration	http://genomematrix.molgen.mpg.de/gm/index.html
RefSeq Reference Sequence NCBI	http://www.ncbi.nlm.nih.gov/RefSeq/
Unigene NCBI	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=unigene
Uniprot Universal Protein Resource Swiss-Prot/TREMBL/PIR	http://www.uniprot.org/
EMBNet QuickGuide Swissprot Trembl Databases	http://www.embnnet.org/node/64
PIR - Protein Information Resource	http://pir.georgetown.edu/
IPI - International Protein Index EBI	http://www.ebi.ac.uk/IPI/IPIhelp.html
Human Gene and Protein Database (HGPD)	http://riodb.ibase.aist.go.jp/hgpd/cgi-bin/index.cgi
Protein Identifier Cross-Reference Service	http://www.ebi.ac.uk/Tools/picr/
NCBI UniVec and VecScreen Vector contamination search	http://www.ncbi.nlm.nih.gov/VecScreen/UniVec.html
Public SRS installations Biowisdom	http://downloads.biowisdomsrs.com/publicsrs.html

Genomes

Ensembl Genome Browser	http://www.ensembl.org/
Entrez-Genome NCBI	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Genome
Integr8 Proteome Analysis at EBI	http://www.ebi.ac.uk/integr8/
GOLD: Genomes On Line Database v 3.0	http://www.genomesonline.org/
CBS Genome atlas database	http://www.cbs.dtu.dk/services/GenomeAtlas/
MIPS: Munich Information Centre for Protein Sequences	http://www.helmholtz-muenchen.de/en/ibis
J. Craig Venter Institute (ex TIGR) MD USA	http://www.jcvi.org/
The Sanger Centre	http://www.sanger.ac.uk/
Whitehead Institute	http://www.wi.mit.edu/
Broad Institute Center for Genome Research	http://www.broadinstitute.org/
GeneCards Weizmann	http://bioinformatics.weizmann.ac.il/cards/
HGP - Human genome project information	http://www.ornl.gov/sci/techresources/Human_Genome/home.shtml
Human Genome Resources NCBI	http://www.ncbi.nlm.nih.gov/genome/guide/human/
Mouse Genome Resources NCBI	http://www.ncbi.nlm.nih.gov/genome/guide/mouse/
Rat Genome resources NCBI	http://www.ncbi.nlm.nih.gov/genome/guide/rat/
Fugu Fish Genome Project	http://www.fugu-sg.org/project/info.html
ZFIN - Zebrafish information network	http://zfin.org/
Wormbase C. elegans	http://www.wormbase.org/
C.elegans Blast server (Sanger Centre)	http://www.sanger.ac.uk/cgi-bin/blast/submitblast/c_elegans
FlyBase Drosophila	http://flybase.net/
Yeast Genome Database MIPS	http://mips.helmholtz-muenchen.de/genre/proj/yeast/index.jsp
Schizosaccharomyces pombe genome (Sanger Centre)	http://www.sanger.ac.uk/Projects/S_pombe/

Neurospora crassa Database (Broad)	http://www.broadinstitute.org/annotation/genome/neurospora/MultiHome.html
Neurospora crassa Database (MIPS)	http://mips.helmholtz-muenchen.de/genre/proj/ncrassa/
Fungal Genetics Stock Center	http://www.fgsc.net/
tair - The Arabidopsis Information Resource	http://www.arabidopsis.org/
GABI Primary Database (GabiPD) - Genomanalyse Pflanze	http://gabi.rzpd.de/
Plant genomes (MIPS)	http://www.helmholtz-muenchen.de/index.php?id=3946
Maize Genetics and Genomic Database	http://www.maizegdb.org/
International Rice Genome Sequencing Project	http://rgp.dna.affrc.go.jp/E/IRGSP/
Potato Genome Sequencing Consortium	http://www.potatogenome.net/

Protein structures

RCSB Protein Data Bank	http://www.rcsb.org/pdb/
Entrez-Structure	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Structure
Conserved Domains Database NCBI	http://www.ncbi.nlm.nih.gov/sites/entrez?db=cdd
Protein Databank in Europe (PDBe)	http://www.ebi.ac.uk/pdbe/
Structures by electron microscopy at MSD	http://www.ebi.ac.uk/msd-srv/emsearch/index.html
SWISS-MODEL	http://swissmodel.expasy.org/SWISS-MODEL.html
EMBLnet - A Quick Guide to Swiss-Model	http://www.emblnet.org/node/64
SCOP: Structural Classification of Proteins	http://scop.mrc-lmb.cam.ac.uk/scop/
Superfamily HMM models SCOP	http://supfam.mrc-lmb.cam.ac.uk/SUPERFAMILY/
CATH database of structural domains	http://www.cathdb.info/index.html
Gene3D Structural and Functional Annotation	http://gene3d.biochem.ucl.ac.uk/Gene3D/
The DALI database	http://ekhidna.biocenter.helsinki.fi/dali/start
NCBI VAST structural alignments	http://www.ncbi.nlm.nih.gov/Structure/VAST/vast.shtml
ModBase - Comparative protein structure models	http://modbase.compbio.ucsf.edu/modbase-cgi/index.cgi
BALL and BALLView Visualization and Modelling Tools	http://www.ball-project.org/

Motifs Profiles Domains

Interpro Domain and Profile Database	http://www.ebi.ac.uk/interpro/
ExPASy - PROSITE	http://www.expasy.org/prosite/
ExPASy - ScanProsite tool	http://www.expasy.org/tools/scanprosite/
SIB myHits motif scan	http://hits.isb-sib.ch/cgi-bin/motif_scan
PRINTS protein fingerprints	http://www.bioinf.man.ac.uk/dbbrowser/PRINTS/
SMART - Simple Modular Architecture Research Tool	http://smart.embl-heidelberg.de/
Blocks WWW Server	http://blocks.fhcr.org/blocks/
Block Search	http://blocks.fhcr.org/blocks/block_search.html
The Sanger Centre Pfam Server	http://pfam.sanger.ac.uk/
The Sanger Centre HMM Pfam Searcher	http://pfam.sanger.ac.uk/search?tab=searchSequenceBlock
TIGRFAMs protein families HMM	http://www.jcvi.org/cms/research/projects/tigrfams/overview/
ProDom conserved protein domains	http://prodom.prabi.fr/prodom/current/html/home.php
CDD Conserved domains database NCBI	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=cdd
DomCut prediction of linker regions between functional domains	http://www.bork.embl-heidelberg.de/~suyama/domcut/
PANTHER (Protein ANalysis THrough Evolutionary Relationships) Classification System	http://www.pantherdb.org/
PIR iProClass Protein Classification	http://pir.georgetown.edu/pirwww/dbinfo/iproclass.shtml
Superfamily HMM models SCOP	http://supfam.mrc-lmb.cam.ac.uk/SUPERFAMILY/
Gene3D Structural and Functional Annotation	http://gene3d.biochem.ucl.ac.uk/Gene3D/
ModBase - Comparative protein structure models	http://modbase.compbio.ucsf.edu/modbase-cgi/index.cgi
Interproscan	http://www.ebi.ac.uk/Tools/webservices/services/interproscan
WebLogo	http://weblogo.berkeley.edu/
WebLogo Server	http://weblogo.berkeley.edu/logo.cgi
Human Protein Reference Database	http://www.hprd.org/
PhosphoMotif Finder	http://www.hprd.org/PhosphoMotif_finder
ELM Eukaryotic Linear Motif Functional Site Prediction	http://elm.eu.org/
Phospho.ELM Database of phosphorylation sites	http://phospho.elm.eu.org/
NetworkKIN kinase substrate relationship prediction	http://networkkin.info/search.php
DIALIGN - multiple sequence alignments to find conserved regulatory elements	http://bibiserv.techfak.uni-bielefeld.de/dalign/
The Gibbs Motif Sampler	http://bayesweb.wadsworth.org/gibbs/gibbs.html
MEME MAST motif discovery and search	http://meme.sdsc.edu/meme/intro.html

Pathways

KEGG: Kyoto Encyclopedia of Genes and Genomes	http://www.genome.ad.jp/kegg/
ExPASy - Biochemical Pathways	http://192.33.215.47/tools/pathways/
NCI BioCarta - Pathways	http://cgap.nci.nih.gov/Pathways/BioCarta_Pathways
PANTHER (Protein ANalysis THrough Evolutionary Relationships) Classification System	http://www.pantherdb.org/
Signaling Gateway - Cell Signaling Resource Nature	http://www.signaling-gateway.org/
Reactome Project	http://www.reactome.org/
BioCyc Database Collection	http://www.biocyc.org/
MetaCyc Encyclopedia of Metabolic Pathways	http://metacyc.org/
NCI Nature Pathway Interaction Database	http://pid.nci.nih.gov/
IUPHAR receptor database	http://www.iuphar-db.org/
LGICD Ligand-gated ion-channel database	http://www.ebi.ac.uk/compneur-srv/LGICdb/LGICdb.php
AraCyc - Pathway Database of Arabidopsis thaliana	http://www.arabidopsis.org/biocyc/
Invitrogen Pathways	http://www.invitrogen.com/site/us/en/home/LINNEA-Online-Guides/LINNEA-Pathways.html
NetPath human signal transduction pathways	http://www.netpath.org/
BBID-Biological Biochemical Image Database	http://bbid.grc.nia.nih.gov/
Signal Transduction - Biochemweb.org virtual library	http://www.biochemweb.org/signaling.shtml
BioPAX - data exchange for biological pathway data	http://www.biopax.org/
visANT - Visual Analysis Tool for Biological Networks and Pathways	http://visant.bu.edu/
MapMan - integrative view of microarray data and metabolic maps	http://gabi.rzpd.de/projects/MapMan/
GenMAPP Gene Map Annotator and Pathway Profiler	http://www.genmapp.org/
Biological Networks	http://biologicalnetworks.net/index.php
Comparative Pathway Analyzer	https://www.cebitec.uni-bielefeld.de/groups/brf/software/cpa/index.html
PaLS Pathway and Literature Strainer (gene set annotation tool)	http://pals.bioinfo.cnio.es/
ProdoNet Prokaryotic gene list pathway annotator	http://www.prodonet.tu-bs.de/
GraphWeb: analysis of biological networks	http://biit.cs.ut.ee/graphweb/
Network Analysis Tools (NeAT)	http://rsat.ulb.ac.be/rsat/index_neat.html

Enzymes

Enzyme Database - BRENDA	http://www.brenda-enzymes.info/
IntEnz EBI Enzyme Database	http://www.ebi.ac.uk/intenz/
Catalytic Site Atlas - CSA (EBI)	http://www.ebi.ac.uk/thornton-srv/databases/CSA/
REBASE The Restriction Enzyme Database	http://rebase.neb.com/rebase/rebase.html
Protein Kinase Resource	http://www.nih.gov/mirror/Kinases/
Kinase.com Global kinome analysis	http://www.kinase.com/
NetworKIN kinase substrate relationship prediction	http://networkin.info/search.php

Software

EBI: The BioCatalogue	http://www.biocatalogue.org/
Open Source Initiative OSI	http://www.opensource.org/
Open Bioinformatics Foundation	http://www.open-bio.org/wiki/Main_Page
SourceForge.net Open Source Resource	http://sourceforge.net/
Bioinformatics.Org - The Open-Access Institute	http://bioinformatics.org/
BioPerl	http://bio.perl.org/
BioPython	http://biopython.org/wiki/Main_Page
BioJava	http://biojava.org/wiki/Main_Page
BioRuby	http://bioruby.org/
BioBike (LISP)	http://nostoc.stanford.edu/Docs/

Literature

Pub Med Central	http://www.pubmedcentral.nih.gov/
Advanced PubMed Search	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=PubMed
PubMed/Medline NLM Mesh Browser	http://www.nlm.nih.gov/mesh/MBrowser.html
PubMed Single Citation Matcher	http://www.ncbi.nlm.nih.gov/pubmed/citmatch
NCBI Journal database	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=journals&term=
List of Journals Indexed for Medline	http://www.nlm.nih.gov/tsd/serials/ji.html
Scopus	http://www.scopus.com/scopus/home.url
Web of Science	http://scientific.thomson.com/products/wos/
Google Scholar	http://scholar.google.com/
CiteSeer (Computer and Information Sciences)	http://citeseer.ist.psu.edu/
Scirus	http://www.scirus.com/srsapp/
Espacenet - Europe's network of patent databases	http://worldwide.espacenet.com/
REDI Databases of Baden-Wuerttemberg	http://www-fr.redi-bw.de/
BIOSIS Previews	http://scientific.thomson.com/products/bp/
Medline	http://www.proquest.com/en-US/catalogs/databases/detail/medline_ft.shtml
OVID - Journals	http://www.ovid.com/site/catalog/journals_landing.jsp
DOAJ - Directory of open access journals	http://www.doaj.org/
PLoS Public Library of Science	http://www.plos.org/
HighWire Press - Stanford University free full papers	http://highwire.stanford.edu/
WorldSciNet Search Engine - World Scientific	http://www.worldscinet.com/
JSTOR - The Scholarly Journal Archive	http://www.jstor.org/
Electronic Journals Library	http://rzbx1.uni-regensburg.de/ezeit/
Subito - German libraries combined paper delivery service	http://www.subito-doc.com/
Crossref Search - commercial publishers worldwide common paper service	http://www.crossref.org/
Wiley Interscience	http://www3.interscience.wiley.com/
Springer Link	http://www.springerlink.com/
IngentaConnect	http://www.ingentaconnect.com/

Literature and Data Mining**Compendia**

Arrowsmith text mining tool compendium	http://arrowsmith.psych.uic.edu/arrowsmith_uic/tools.html
Literature mining for the biologist - Review	http://www.nature.com/nrg/journal/v7/n2/abs/nrg1768.html
Linking publication, gene and protein data - Review	http://www.ncbi.nlm.nih.gov/pubmed/17060904
Biomedical language processing - What is beyond PubMed - Review	http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1702322/?tool=pubmed
Text-mining and information-retrieval services for molecular biology - Review	http://genomebiology.com/2005/6/7/224/abstract
Text mining in Biology - Martin Krallinger	http://www.pdg.cnb.uam.es/martink/
PDG Course Text mining in Biomedical Literature March 2006	http://www.pdg.cnb.uam.es/martink/LINKS/tm_master_barcode2006.html
BioCreative Text mining challenge	http://www.biocreative.org/
TREC Genomics Track data mining competition	http://ir.ohsu.edu/genomics/
BioNLP information portal	http://www.bionlp.org/
BLIMP Biomedical Literature Mining Publications	http://blimp.cs.queensu.ca/other_links.html

Information retrieval and clustering

EBIMed Medline information retrieval and extraction	http://www.ebi.ac.uk/Rebholz-srv/ebimed/index.jsp
GoPubMed - Ontology based literature search	http://www.gopubmed.org/
PubMed pubmed rewired	http://www.hubmed.org/
MyNCBI PubMed updating and alerting	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?DB=pubmed
PubCrawler PubMed GenBank Update Service	http://pubcrawler.gen.tcd.ie/
eTBlast - related articles to any text	http://etest.vbi.vt.edu/etblast3/
CoPub Mapper Gene Co-Publication Text Mining	http://copub.gatcplatform.nl/
PubMatrix	http://pubmatrix.grc.nia.nih.gov/
NCBI Esearch Entrez Utility	http://www.ncbi.nlm.nih.gov/entrez/query/static/earch_help.html

Information Extraction and Mining

The Arrowsmith Project	http://arrowsmith.psych.uic.edu/arrowsmith_uic/index.html
BioIE - Extracting informative sentences	http://www.bioinf.manchester.ac.uk/dbbrowser/bioie/
Chilibot - Mining PubMed for relationships	http://www.chilibot.net/
Textpresso	http://www.textpresso.org/
PubGene	http://www.pubgene.org/
XplorMed: eXploring Medline abstracts	http://www.ogic.ca/projects/xplormed/
iProLink integrated Protein Literature INformation and Knowledge	http://pir.georgetown.edu/pirwww/iprolink/iprolink.shtml
RLIMS-P Rule-based Literature Mining System for Protein Phosphorylation	http://pir.georgetown.edu/iprolink/rlimsp/
iHOP - Information Hyperlinked over Proteins	http://www.ihop-net.org/UniPub/iHOP/
String: functional protein association networks	http://string.embl.de/
BITOLA - Biomedical Discovery Support System	http://www.mf.uni-lj.si/bitola/
ONDEX - Data integration and visualisation	http://www.ondex.org/

Text entity recognition tools

AliasServer Protein synonym search	http://cbi.labri.fr/outils/alias/index.php
ARGH Biomedical Acronym Database	http://etblast.vbi.vt.edu/argh/index.shtml
Text2Knowledge - Acronym, Gene Name, Synonym, Interaction Database	http://bioinformatics.org/textknowledge/
ABNER: A Biomedical Named Entity Recognizer	http://www.cs.wisc.edu/~bsettles/abner/

Literature mining software

RefViz	http://www.refviz.com/
QUOSA Information Manager	http://www.quosa.com/
TRANSINSIGHT	http://www.transinsight.com/
InforSense	http://www.inforsense.com/
BioLT Literature Mining Tool (Biomax Informatics AG)	http://www.biomax.com/products/biolit.php
FTI Technology e-discovery	http://www.ftitechnology.com/
KNIME - Konstanz Information Miner	http://www.knime.org/
Ariadne Genomics MEDSCAN	http://www.ariadnegenomics.com/
BITOLA - Biomedical Discovery Support System	http://www.mf.uni-lj.si/bitola/
ONDEX - Data integration and visualisation	http://www.ondex.org/
HyBrow hypothesis testing software	http://www.hybrown.org/
R Text Mining Package	http://cran.r-project.org/web/packages/tm/index.html

Alignment and database searches

WWW BLAST Database Searches at NCBI	http://www.ncbi.nlm.nih.gov/BLAST/
EMBNET QuickGuide BLAST	http://www.embnet.org/node/64
Fasta3 Database Searches at the EBI	http://www.ebi.ac.uk/fasta33/
Sequence similarity searches at the EBI	http://www.ebi.ac.uk/Tools/sss/
MPsrch at EBI	http://www.ebi.ac.uk/MPsrch/
BCM Search Launcher: Multiple Sequence Alignments	http://searchlauncher.bcm.tmc.edu/multi-align/multi-align.html
PeCoP Psi-Blast to find persistently conserved positions	http://bioinformatics.org/pecop/
PVS: Protein Variability Server - conserved epitope discovery	http://imed.med.ucm.es/PVS/
Dotter dot-matrix sequence comparison program	http://sonnhammer.sbc.su.se/Dotter.html
ClustalX	http://bips.u-strasbg.fr/fr/Documentation/ClustalX/
Tcoffee DNA, RNA, Protein alignment tools	http://www.ebi.ac.uk/Tools/t-coffee/index.html
mreps DNA tandem repeat identifier	http://bioinfo.lifl.fr/mreps/index.php
YASS genomic DNA local alignment similarity search tool	http://bioinfo.lifl.fr/yass/index.php
Standalone BLAST	ftp://ftp.ncbi.nlm.nih.gov/blast/executables/LATEST/
BLAST standalone setup for Windows PC	http://www.ncbi.nlm.nih.gov/staff/tao/URLAPI/pc_setup.html
STRAP Interactive Structure based Alignment Program	http://3d-alignment.eu/
GeneDoc Homepage	http://www.nrbcs.org/downloads/
Jalview - Java alignment editor	http://www.jalview.org/
BioEdit Sequence Alignment Editor for Windows 95/98/NT/XP	http://www.mbio.ncsu.edu/BioEdit/BioEdit.html

Sequence tools

Galaxy bioinformatics framework	http://main.g2.bx.psu.edu/
Unipro UGENE: Integrated Bioinformatics Tools	http://ugene.unipro.ru/
BCM Sequence Utilities	http://searchlauncher.bcm.tmc.edu/seq-util/seq-util.html
SeWeR - Sequence Analysis using Web Resources	http://bioinformatics.org/sewer/
Sequence Manipulation Suite 2	http://bioinformatics.org/sms2/
Sequence Extractor cloning toolbox	http://bioinformatics.org/seqext/
ReadSeq	http://searchlauncher.bcm.tmc.edu/seq-util/Options/readseq.html
Webcutter 2.0	http://www.firstmarket.com/cutter/cut2.html
Reverse Complement of Sequence	http://searchlauncher.bcm.tmc.edu/seq-util/Options/revcomp.html
Primer 3	http://frodo.wi.mit.edu/primer3/
PrimerX - mutagenic primer design	http://bioinformatics.org/primerx/
pDraw32 Acaclone Plasmid drawing	http://www.acaclone.com/
Savvy Plasmid Maps	http://bioinformatics.org/savvy/
European Molecular Biology Open Software Suite EMBOSS	http://emboss.sourceforge.net/
Genome assembly by phred and phrap	http://www.phrap.org/
EMBNET Quick Guides to phred and phrap	http://www.embnet.org/node/64
Oligo Heat Map hybridization analysis	http://bioinfo.unice.fr/software/ohm/
Integrated DNA Technologies Oligo SciTools	http://www.idtdna.com/SciTools/

Protein tools

NPS: Network Protein Sequence Analysis	http://npsa-pbil.ibcp.fr/cgi-bin/npsa_automat.pl?page=NPSA/npsa_server.html
pI/Mw tool - Expasy	http://www.expasy.org/tools/pi_tool.html
PeptideMass - Expasy	http://www.expasy.org/tools/peptide-mass.html
ProtParam tool - Expasy	http://www.expasy.org/tools/protparam.html
ProtScale - Expasy	http://web.expasy.org/protscale/
ISREC SAPS server	http://iubio.bio.indiana.edu/soft/iubionew/molbio/protein/analysis/Saps/SAPS_form.html

Phylogenetics

PHYLIP	http://evolution.genetics.washington.edu/phylip.html
Inst. Pasteur Pylip Online Server	http://bioweb.pasteur.fr/seqanal/phylogeny/phylip-uk.html
Phylip Online Help	http://evolution.genetics.washington.edu/phylip/phylip.html
Phylip Tutorial (Jarno Tuimala)	http://koti.mbnet.fi/tuimala/oppaat/phylip2.pdf
EMBNNet A Quick Guide to PHYLIP	http://www.embnet.org/node/64
Phylogeny.fr - robust phylogenetic analysis for the non-specialist	http://www.phylogeny.fr/
MEGA phylogeny software	http://www.megasoftware.net/
MacClade Home Page	http://macclade.org/macclade.html
PAUP	http://paup.csit.fsu.edu/index.html
FORESTER phylogenomics software libraries	http://www.phylosoft.org/forester/
TreeView	http://taxonomy.zoology.gla.ac.uk/rod/treeview.html
Rod Page Software	http://taxonomy.zoology.gla.ac.uk/rod/rod.html
Hypertree large tree displaying tool	http://kinase.com/tools/HyperTree.html
PANDIT Protein and Associated Nucleotide Domains with Inferred Trees	http://www.ebi.ac.uk/goldman-srv/pandit/
PeCoP Psi-Blast to find persistently conserved positions	http://bioinformatics.org/pecop/
Ribosomal Database Project	http://rdp.cme.msu.edu/
Phylogeny Web Servers List	http://evolution.genetics.washington.edu/phylip/software.serv.html
PHYLIP Phylogeny Programs	http://evolution.genetics.washington.edu/phylip/software.html
The Tree of Life Home Page	http://tolweb.org/tree/phylogeny.html
Tree of Life Links	http://tolweb.org/tree/home.pages/links.html
NCBI Taxonomy Browser	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=Taxonomy

Annotation

Gene Function Resources

Gene Ontology (GO) Consortium	http://www.geneontology.org/
QuickGO - GO Browser at EBI	http://www.ebi.ac.uk/ego/GSearch?q=Quick+GO
AmiGO - GO Browser	http://amigo.geneontology.org/cgi-bin/amigo/go.cgi
Ontology Lookup Service (OLS)	http://www.ebi.ac.uk/ontology-lookup/
GOA - Gene Ontology Annotation Project at EBI	http://www.ebi.ac.uk/GOA/index.html
GOSTat - find statistically overrepresented GO terms	http://gostat.wehi.edu.au/
Gene Ontology Tools for Gene Expression Analysis	http://www.geneontology.org/GO.tools.microarray.shtml#serbgo
Sequence Ontology Project	http://www.sequenceontology.org/
Online Mendelian Inheritance in Man	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=OMIM
GeneCards Weizmann	http://www.genecards.org/index.shtml
Genetic Association Database	http://geneticassociationdb.nih.gov/

Integrated annotation services

NIH - DAVID Annotation tools	http://david.abcc.ncifcrf.gov/home.jsp
eFamily Project - Grid integrating of protein database annotations	http://www.efamily.org.uk/
DAS - Distributed Annotation System	http://biodas.org/
DAS registry server at Sanger - available DAS servers	http://das.sanger.ac.uk/das/sources
SPICE - DAS Client	http://www.efamily.org.uk/software/dasclients/spice/
EnsEMBL Genome Browser DAS client	http://www.ensembl.org/
Dasty - DAS client	http://www.ebi.ac.uk/dasty/

Gene prediction services

Glimmer Microbial Gene-Finding System	http://cbscb.umd.edu/software/glimmer/
NCBI Glimmer3	http://www.ncbi.nlm.nih.gov/genomes/MICROBES/glimmer_3.cgi
Grailexp Grail Experimental Gene Discovery Suite	http://compbio.ornl.gov/grailexp
BCM Gene Feature Searches	http://searchlauncher.bcm.tmc.edu/seq-search/gene-search.html
CBS HMMgene server	http://www.cbs.dtu.dk/services/HMMgene/
CBS NetGene2 server	http://www.cbs.dtu.dk/services/NetGene2/
CBS NetPlantGene server	http://www.cbs.dtu.dk/services/NetPGene/
CBS Genome Atlas	http://www.cbs.dtu.dk/ws/ws.php?entry=GenomeAtlas
GeneMark	http://opal.biology.gatech.edu/GeneMark/
WebGeneMark	http://opal.biology.gatech.edu/GeneMark/genemark24.cgi
Eukaryotic WebGeneMark	http://opal.biology.gatech.edu/GeneMark/eukhmm.cgi
GENSCAN (C. Burge)	http://mobyli.pasteur.fr/cgi-bin/portal.py?#forms::genscan
SplicePredictor	http://deepc2.psi.iastate.edu/cgi-bin/sp.cgi
ESTScan: a program for detecting, evaluating, and reconstructing potential coding regions in ESTs	http://www.ch.embnet.org/software/ESTScan2.html
EBI Wise2 matches protein to genomic DNA	http://www.ebi.ac.uk/Wise2/
Lowelab tRNAscan-SE Search Server	http://lowelab.ucsc.edu/tRNAscan-SE/

Promotor prediction services

CBS NetStart 1.0 server Translation Start	http://www.cbs.dtu.dk/services/NetStart/
CBS Promoter 2.0 server	http://www.cbs.dtu.dk/services/promoter/
WWW Promotor Scan Pol II	http://www.bimas.cit.nih.gov/molbio/proscan/index.html
EPD Eukaryotic promotor database	http://www.epd.isb-sib.ch/
TFM Explorer	http://bioinfo.lifl.fr/TFM/TFME/
TFM-Scan	http://bioinfo.lifl.fr/TFM/TFMscan/
TFSEARCH - Transcription Factor Search	http://www.cbrc.jp/research/db/TFSEARCH.html
TRANSFAC database at Biobase Biological Databases	http://www.biobase.de/index.php?id=transfacdatabases
ORegAnno: Open Regulatory Annotation	http://www.oreganno.org/oreganno/Help.jsp
JASPAR Transcription factor database	http://jaspar.genereg.net/
JASPAR Transcription factor database paper	http://nar.oxfordjournals.org/cgi/reprint/36/suppl_1/D102
MotifMogul - Multiple Transcription Factor Binding Sites Algorithms	http://xerad.systemsbio.net/MotifMogulServer/
Regulatory Sequence Analysis Tools (RSAT)	http://rsat.ulb.ac.be/rsat/
DIALIGN - multiple sequence alignments to find conserved regulatory elements	http://bibiserv.techfak.uni-bielefeld.de/dialign/
The Gibbs Motif Sampler	http://bayesweb.wadsworth.org/gibbs/gibbs.html
MEME MAST motif discovery and search	http://meme.sdsc.edu/meme/intro.html
DiRE identification of Distant Regulatory Elements of co-regulated genes	http://dire.dcode.org/

ConTra - identification of conserved transcription factor binding sites	http://bioit.dmbr.ugent.be/ConTra/index.php
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Structures

Transmembrane features

TMHMM Server 2.0	http://www.cbs.dtu.dk/services/TMHMM-2.0/
Phobius - combined TM and signal peptide prediction	http://phobius.sbc.su.se/
ISREC TMPred Server	http://www.ch.embnet.org/software/TMPRED_form.html
SOSUI Structure prediction of membrane proteins	http://bp.nuap.nagoya-u.ac.jp/sosui/
HMMTOP Prediction of transmembrane helices and topology	http://www.enzim.hu/hmmtop/
TMAP multiple sequence alignment protein prediction	http://mobylye.pasteur.fr/cgi-bin/MobylyePortal/portal.py?form=tmap
TopPred - Topology prediction of membrane helices	http://mobylye.pasteur.fr/cgi-bin/MobylyePortal/portal.py?form=toppred
PRED-TMBB transmembrane beta barrel prediction	http://biophysics.biol.uoa.gr/PRED-TMBB/input.jsp

3D structures

RCSB PDB Protein Data Bank - PDB	http://www.rcsb.org/pdb/
NCBI Structure	http://www.ncbi.nlm.nih.gov/Structure/
Protein Databank in Europe (PDBe)	http://www.ebi.ac.uk/pdbe/
Conserved Domain Database NCBI	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=cdd
Structures by electron microscopy at MSD	http://www.ebi.ac.uk/msd-srv/emsearch/index.html
NCBI VAST structural alignments	http://www.ncbi.nlm.nih.gov/Structure/VAST/vast.shtml
SWISS-MODEL	http://swissmodel.expasy.org/SWISS-MODEL.html
EMBLNet - A Quick Guide to Swiss-Model	http://www.embnet.org/node/64
EMBL Dali protein structure comparison server	http://ekhidna.biocenter.helsinki.fi/dali_server/
The DALI database Dali Fold Classification	http://ekhidna.biocenter.helsinki.fi/dali/start
CPHmodels - Homology modeling	http://www.cbs.dtu.dk/services/CPHmodels/index.html
ModBase - Comparative protein structure models	http://modbase.compbio.ucsf.edu/modbase-cgi/index.cgi
SCOP: Structural Classification of Proteins	http://scop.mrc-lmb.cam.ac.uk/scop/
Superfamily HMM models SCOP	http://supfam.mrc-lmb.cam.ac.uk/SUPERFAMILY/
CATH Protein Structure Classification Database	http://www.cathdb.info/index.html
Gene3D Structural and Functional Annotation	http://gene3d.biochem.ucl.ac.uk/Gene3D/
Ressource Parisienne en Bioinformatique Structurale (RPBS)	http://bioserv.rpbs.jussieu.fr/RPBS/html/fr/TO_Home.html
Tutorial Protein Structures (EXPASY) SwissModel	http://swissmodel.expasy.org/course/course-index.htm

3D software

Rosetta	http://www.rosettacommons.org/
foldit - The Protein folding game	http://fold.it/portal/
PyMOL molecular visualization system	http://www.pymol.org/
BALL and BALLView Visualization and Modelling Tools	http://www.ball-project.org/
UCSF Chimera	http://plato.cgl.ucsf.edu/chimera/
TarFisDock identifying drug targets by docking	http://www.dddc.ac.cn/tarfishdock/
CAVER protein analysis and visualaization - pockets and tunnels	http://www.caver.cz/
DeepView Swiss-PdbViewer	http://spdbv.vital-it.ch/
GENO3D : Automatic Modeling of Protein Structure	http://geno3d-pbil.ibcp.fr/cgi-bin/geno3d_automat.pl?page=/GENO3D/geno3d_home.html
PredictProtein	http://www.predictprotein.org/
Cn3D Home Page	http://www.ncbi.nlm.nih.gov/Structure/CN3D/cn3d.shtml
Jmol	http://jmol.sourceforge.net/
Open Rasmol	http://www.openrasmol.org/
RasTop - Rasmol Graphical Interface	http://www.geneinfinity.org/rastop/
Chime	http://www.umass.edu/microbio/chime/getchime.htm
Polyview 3D web server for animated images	http://polyview.cchmc.org/polyview3d.html
Biodesigner Molecular Modeling and Visualization	http://www.pirx.com/biodesigner/overview.html
VMD - Visual Molecular Dynamics	http://www.ks.uiuc.edu/Research/vmd/
Accelrys Discovery Studio Visualizer (free version)	http://www.accelrys.com/products/downloads/ds_visualizer/index.html

Model building

Coot	http://www.biop.ox.ac.uk/coot/
O (Alwyn Jones)	http://xray.bmc.uu.se/~alwyn/index.html
Accelrys Discovery Studio	http://accelrys.com/products/discovery-studio/
ARP/wARP	http://www.embl-hamburg.de/ARP/
HKL X-ray crystallography package	http://www.hkl-xray.com/
XDS diffraction data processing	http://www.mpimf-heidelberg.mpg.de/~kabsch/xds/
Mosflm diffraction data processing	http://www.mrc-lmb.cam.ac.uk/harry/imosflm/
Phaser crystallographic software	http://www.phaser.cimr.cam.ac.uk/index.php/Phaser_Crystallographic_Software
SHARP/autoSHARP	http://www.globalphasing.com/sharp/
SHELX	http://shelx.uni-ac.gwdg.de/SHELX/
Phenix	http://www.phenix-online.org/
RefMac	http://www.ysbl.york.ac.uk/~garib/refmac/
Solve/Resolve	https://solve.lanl.gov/
USF Uppsala software factory	http://xray.bmc.uu.se/usf/
CCMS XtalView	http://www.sdsc.edu/CCMS/Packages/XTALVIEW/xtalview.html
CCP4 Molecular Graphics	http://www.ccp4.ac.uk/MG/
CCP4 Software for Molecular X-ray crystallography	http://www.ccp4.ac.uk/
CCP4 Scala - scale together multiple observations of reflections	http://smb.slac.stanford.edu/facilities/software/ccp4/html/scala.html
CCP4 Molrep - automated program for molecular replacement	http://www.ccp4.ac.uk/html/molrep.html
CCP4 SOLOMON - density modification (phase improvement) by solvent flipping	http://www.ccp4.ac.uk/html/solomon.html
CNSsolve Crystallography and NMR system	http://cns-online.org/
EMAN 3D single particle image reconstruction	http://blake.bcm.tmc.edu/eman/
SPIDER and WEB EM 3D single particle image reconstruction	http://www.wadsworth.org/spider_doc/spider/docs/

Signal peptides and localization

SignalP server	http://www.cbs.dtu.dk/services/SignalP/
Phobius - combined TM and signal peptide prediction	http://phobius.sbc.su.se/
PSORT WWW Server	http://psort.hgc.jp/
iPSORT N-terminal protein sorting signals	http://ipsort.hgc.jp/

Glycosylation and lipid modifications

NetNGlyc Server	http://www.cbs.dtu.dk/services/NetNGlyc/
NetOGlyc server	http://www.cbs.dtu.dk/services/NetOGlyc/
ExPASy - ScanProsite tool	http://www.expasy.org/tools/scanprosite/
LipoP 1.0 server gram negative lipoprotein prediction	http://www.cbs.dtu.dk/services/LipoP/

Secondary structures

BCM Structure Prediction Tools	http://searchlauncher.bcm.tmc.edu/seq-search/struc-predict.html
PredictProtein	http://www.predictprotein.org/
JPRED Secondary structure prediction	http://www.compbio.dundee.ac.uk/~www-jpred/
JUFO neuronal network prediction server	http://www.meilerlab.org/index.php/servers
PSIPRED Protein Structure Prediction Server	http://bioinf.cs.ucl.ac.uk/psipred/
PROF - Secondary Structure Prediction System	http://www.aber.ac.uk/~phiwww/prof/
ISREC COILS Server	http://www.ch.embnnet.org/software/COILS_form.html
NPS: Consensus secondary structure prediction	http://npsa-pbil.ibcp.fr/cgi-bin/npsa_automat.pl?page=/NPSA/npsa_seccons.html
NPS : coiled-coils prediction	http://npsa-pbil.ibcp.fr/cgi-bin/npsa_automat.pl?page=/NPSA/npsa_lupas.html
NPS: MLRC	http://npsa-pbil.ibcp.fr/cgi-bin/npsa_automat.pl?page=/NPSA/npsa_mlrc.html
NPS: HNN	http://npsa-pbil.ibcp.fr/cgi-bin/npsa_automat.pl?page=/NPSA/npsa_hnn.html
NPS: SOPMA	http://npsa-pbil.ibcp.fr/cgi-bin/npsa_automat.pl?page=/NPSA/npsa_sopma.html
NPS: GOR4	http://npsa-pbil.ibcp.fr/cgi-bin/npsa_automat.pl?page=/NPSA/npsa_gor4.html
DSSP Kabsch Sander PDB secondary structure assignment	http://swift.cmbi.kun.nl/gv/dssp/
BotDB DSSP analysis	http://botdb.abcc.ncifcrf.gov/proteinAnal/dsspUpload.jsp
DSSPCont Rostlab	https://rostlab.org/owiki/index.php/DSSPcont
DomCut prediction of linker regions between functional domains	http://www.bork.embl-heidelberg.de/~suyama/domcut/

RNA

Unafold RNA folding services	http://mfold.rna.albany.edu/
Integrated DNA Technologies Unafold server	http://eu.idtdna.com/Scitools/Applications/unafold/
Vienna RNA secondary structure servers	http://rna.tbi.univie.ac.at/
ncRNA tools for sequence/structure analyses of non-coding RNAs	http://software.ncrna.org/
SARSA Structural Alignment of RNA Using a Structural Alphabet	http://genome.cs.nthu.edu.tw/SARSA/
MAGNOLIA advanced RNA sequence and structural alignment	http://bioinfo.lifl.fr/magnolia/

Small molecules

Human Metabolome Database	http://www.hmdb.ca
KEGG Drug Database	http://www.genome.jp/kegg/drug/
KEGG Ligand Database	http://www.genome.ad.jp/kegg/ligand.html
ChEBI - Chemical Entities of Biological Interest	http://www.genome.jp/kegg/liqand.html
MSD Ligand Chemistry in PDB	http://www.ebi.ac.uk/msd-srv/msdchem/cgi-bin/cgi.pl
NCBI PubChem Compound	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pccompound
NCBI PubChem Substance	http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?db=pcsubstance
NLM SIS Chemical Information	http://sis.nlm.nih.gov/chemical.html
NCI-3D Search	http://chem.sis.nlm.nih.gov/hci3d/
ChemIDplus	http://chem.sis.nlm.nih.gov/chemidplus/
CHEMINFO: Chemical Information Sources from Indiana University	http://www.indiana.edu/~cheminfo/
FAF-Drugs: Free ADME/tox Filtering	http://bioserv.rpbs.jussieu.fr/Help/FAFDrugs.html
OpenBabel format conversion tool for drugs	http://mobyle.rpbs.univ-paris-diderot.fr/cgi-bin/portal.py?form=OpenBabel
Java Molecular Editor at RPBS	http://mobyle.rpbs.univ-paris-diderot.fr/cgi-bin/portal.py?form=JME
JME Molecular Editor by Peter Ertl	http://www.molinspiration.com/jme/
SuperPred Drug Target Prediction Server	http://bioinformatics.charite.de/superpred/

Functional genomics

Transcriptomics databases

Microarray Bioinformatics at EBI	http://www.ebi.ac.uk/microarray/index.html
Arrayexpress at the EBI	http://www.ebi.ac.uk/arrayexpress/
Expression Profiler at EBI	http://www.ebi.ac.uk/expressionprofiler/
Documentation for Expression Profiler	http://www.bioinf.ebc.ee/EP/EP/
Gene Expression Atlas - Large Scale Meta-Analysis of Public Microarray Data	http://www.ebi.ac.uk/gxa/
GEO Gene Expression Omnibus at NCBI	http://www.ncbi.nlm.nih.gov/geo/
NCBI Sequence Read Archive	http://www.ncbi.nlm.nih.gov/sra
MaRe Microarray Retriever	http://grenada.lumc.nl/HumaneGenetica/MaRe/
Stanford Microarray Database	http://genome-www5.stanford.edu/
Yale Microarray Database	http://info.med.yale.edu/microarray/
JCV Institute Genomics	http://www.jcvi.org/cms/research/groups/
NIH ENCODE Project: ENcyclopedia Of DNA Elements	http://www.genome.gov/10005107
NGFN German National Functional Genomics Network	http://www.ngfn.de/
Genevestigator	https://www.genevestigator.ethz.ch/
GeneCAT - Gene Co-expression Analysis Toolbox	http://genecat.mpg.de/
CATMA - A complete Arabidopsis Transcriptome MicroArray	http://www.catma.org/
The Arabidopsis Information Resource - TAIR	http://www.arabidopsis.org/
AFGN Arabidopsis Functional Genomics Network	http://www.uni-tuebingen.de/plantphys/AFGN/
Microarray Gene Expression Data Society	http://www.mged.org/
Stanford Functional Genomics Facility	http://microarray.org/sfgf/

Transcriptomics tools

NIH - Guide to Microarray Data analysis	http://discover.nci.nih.gov/microarrayAnalysis/Microarray_Home.jsp
Microarray Tools at NCI	http://discover.nci.nih.gov/tools.jsp
HSLs: Microarray, SAGE and other gene expression data analysis tools	http://www.hsls.pitt.edu/obrc/index.php?page=gene_expression
J-Express microarray analysis free version	http://www.ii.uib.no/%7Ebjarted/jexpress/main.html
MicroArray Explorer tool for Data Mining Gene Expression Patterns	http://maexplorer.sourceforge.net/
Tools from the Eisen Lab	http://www.eisenlab.org/eisen/
BioConductor Project - Open Source Software for Bioinformatics	http://www.bioconductor.org/
R and Bioconductor Manual (Thomas Girke)	http://manuals.bioinformatics.ucr.edu/home/R_BioCondManual
Babelomics - Systems biology microarray data mining	http://babelomics.bioinfo.cipf.es/index.html
TIGR Microarray Software	http://www.jcvi.org/cms/research/software/
RNA-Seq software ERANGE	http://woldlab.caltech.edu/maseq/
Broad Institute Genecluster 2.0	http://www.broad.mit.edu/cancer/software/genecluster2/gc_license.html
dChip Software: Gene Expression Microarray and SNP Microarray Analysis	http://biosun1.harvard.edu/complab/dchip/
NASC Affymetrix Service: Analysis hints	http://affy.arabidopsis.info/analysisindex.html
Analysis of Affymetrix data using Excel	http://affy.arabidopsis.info/AffyAnalysisWithExcel.html
Affymetrix - NetAffx™ Analysis Center	http://www.affymetrix.com/analysis/index.affx
MapMan - integrative view of microarray data and metabolic maps	http://gabi.rzpd.de/projects/MapMan/
GenMAPP Gene Map Annotator and Pathway Profiler	http://www.genmapp.org/

Proteomics databases and search engines

ExpASy Swiss 2Dpage	http://world-2dpage.expasy.org/swiss-2dpage/
WORLD-2DPAGE Index to 2D-PAGE databases and services	http://world-2dpage.expasy.org/list/
ExpASy Peptide Mass Tool	http://web.expasy.org/peptide_mass/
ExpASy Mass Search	http://www.cbrg.ethz.ch/services/MassSearch_new
ExpASy MultiIdent Peptide Mass Fingerprinting Tool	http://web.expasy.org/multiident/
MASCOT Peptide Mass Fingerprint	http://www.matrixscience.com/search_form_select.html
SEQUEST MS proteomics search engine	http://fields.scripps.edu/researchtools.php
Phenyx MS protein search engine (GeneBio/SIB)	http://www.genebio.com/products/phenyx/
X! Tandem MS search engine	http://www.thegpm.org/TANDEM/index.html
OMSSA ms/ms search engine	http://pubchem.ncbi.nlm.nih.gov/omssa/
UCSF Mass Spectrometry Facility Protein Prospector	http://prospector.ucsf.edu/prospector/mshome.htm
PROWL protein and MS tools	http://prowl.rockefeller.edu/
PRIDE - Proteomics Identifications Database	http://www.ebi.ac.uk/pride/
PeptideAtlas	http://www.peptideatlas.org/
GPMDb proteomics database	http://gpmdb.thegpm.org/

Human Protein Atlas	http://www.proteinatlas.org/
Tranche - Secure P2P for Scientific Data Dissemination	http://tranche.proteomecommons.org/
ISPIDER MS meta protein database search	http://www.ispider.manchester.ac.uk/cgi-bin/ispider.pl
Protein Identifier Cross-Reference Service	http://www.ebi.ac.uk/Tools/picr/
NIH Histone Sequence Database	http://genome.nih.gov/histones/
Phospho.ELM Database of phosphorylation sites	http://phospho.elm.eu.org/
PhosphoPep Phosphopeptide systems biology database	http://www.phosphopep.org/
Human Protein Reference Database	http://www.hprd.org/

Proteomics post translational modifications

ExPASy - FindMod tool	http://web.expasy.org/findmod/findmod_masses.html
ExPASy - QuickMod - MS/MS modified peptide search tool	http://web.expasy.org/quickmod/
RESID Database of protein modifications	http://www.ebi.ac.uk/RESID/
Delta Mass PTM database (ABFR)	http://www.abfr.org/index.cfm/dm_home
Unimod database - protein modifications for MS	http://www.unimod.org/unimod_help.html
Unimod - Modification naming guidelines	http://www.unimod.org/names.html
PRIDE Modification Search	http://www.ebi.ac.uk/pride/modSearch.do
PRIDE modification ontology lookup service (OLS)	http://www.ebi.ac.uk/ontology-lookup/browse.do?ontName=MOD
ExPASy - Sulfinator tool Tyr sulfination sites predictor	http://web.expasy.org/sulfinator/
NetPhos 2.0 Server STY phosphorylation site predictor	http://www.cbs.dtu.dk/services/NetPhos/
HUPO PSI Protein Modification Documentation	http://www.psidev.info/

Proteomics software

TPP Trans-Proteomic Pipeline	http://tools.proteomecenter.org/wiki/index.php?title=Software:TPP
SASHIMI MS proteomics pipeline	http://sourceforge.net/projects/sashimi
OpenMS / TOPP open source MS proteomics pipeline	http://open-ms.sourceforge.net/
MaxQuant	http://www.maxquant.org/
ICPLQuant	http://www.biochem.mpg.de/lottspeich/technologies/ICPLQuant/index.html
Scaffold protein identification framework (by Proteome Software)	http://www.proteomesoftware.com/Proteome_software_prod_Scaffold.html
mMass - Open Source Mass Spectrometry Tool	http://mmass.biographics.cz/
PeptideProphet MS proteomics prediction tool	http://peptideprophet.sourceforge.net/
ProteinProphet MS proteomics prediction tool	http://proteinprophet.sourceforge.net/
MassTRIX Metabolomics mass to pathway mapper	http://www.helmholtz-muenchen.de/en/mips/workgroups/metabolomics/metabolomics-projects/masstrix/index.html

Proteomics organisations and standards

HUPO - Human Proteome Organisation	http://www.hupo.org/
UniProt Chordata protein annotation program	http://www.uniprot.org/program/Chordata
HUPO Proteomics Standards Initiative	http://www.psidev.info/
MASC Arabidopsis Proteomics Standards Subcommittee	http://www.arabidopsis.org/portals/masc/Subcommittees.jsp
mzML Specification HUPO Proteomics Standards Initiative	http://www.psidev.info/index.php?q=node/257
Mass spectrometry data formats - Wikipedia	http://en.wikipedia.org/wiki/Mass_spectrometry_data_formats
gabi Arabidopsis Proteomics Data	http://gabi.rzpd.de/projects/Arabidopsis_Proteomics/
Proteomics from Angelika Görg	http://www.weihenstephan.de/blm/deg/
Boston University Biology Proteomics Resource	http://genomics10.bu.edu/jtullai/proteomics_resources/
Deutsche Gesellschaft für Proteomforschung	http://www.dgpf.org/
Swiss Proteomics Society	http://www.swissproteomicsociety.org/
SWISS Proteomics Society Proteomics Links	http://www.swissproteomicsociety.org/links.html
Proteome commons	http://www.proteomecommons.org/index.jsp
ISB NHLBI Seattle Proteome Center	http://www.proteomecenter.org/
IonSource Proteomics Resource Links	http://www.ionsource.com/links/proteolinks.htm

Protein-Protein Interactions

EBI IntAct Project	http://www.ebi.ac.uk/intact/
DIP - Database of Interacting Proteins	http://dip.doe-mbi.ucla.edu/
DIP DLRP Database of Interacting Proteins	http://dip.doe-mbi.ucla.edu/dip/DLRP.cgi
BOND - Biomolecular Object Network Database	http://bond.unleashedinformatics.com/
BioGRID - General Repository for Interaction Datasets	http://www.thebiogrid.org/
MINT - Molecular Interactions database	http://mint.bio.uniroma2.it/mint/
GNP Genome Network Platform	http://genomenetwork.nig.ac.jp/public/sys/gnppub/
MIPS MPact Protein Interaction and Complex DB	http://mips.helmholtz-muenchen.de/genre/proj/mpact/
MIPS Mammalian Protein-Protein Interaction Databank	http://mips.helmholtz-muenchen.de/proj/ppi/
The JCB Protein-Protein Interaction Website	http://www.imb-jena.de/jcb/ppi/
GeneInfinity's Protein Interaction Analysis page	http://www.geneinfinity.org/sp/sp_proteininteraction.html#ppidb
HPRD Human Protein Reference Database	http://www.hprd.org/
Human Protein Interaction Database	http://wilab.inha.ac.kr/hpid/
NCBI HIV Human protein interaction database	http://www.ncbi.nlm.nih.gov/RefSeq/HIVInteractions/
UniHI MDC Unified Human Interactome	http://theoderich.fb3.mdc-berlin.de:8080/unihi/home
MIPS Yeast Protein-Protein-Interaction and Complex Viewer	http://mips.helmholtz-muenchen.de/proj/yeast/CYGD/interaction/
Yeast Protein complex database	http://yeast-complexes.embl.de/
HomoMINT predicted human interaction network	http://mint.bio.uniroma2.it/HomoMINT/
PIPs Human Protein Interaction Prediction Database	http://www.compbio.dundee.ac.uk/www-pips/
Domino Domain peptide interaction database	http://mint.bio.uniroma2.it/domino/
VirusMINT	http://mint.bio.uniroma2.it/virusmint/
OPHID Interologous interaction database	http://ophid.utoronto.ca/
PathBlast - Comparison of interaction networks between organisms	http://www.pathblast.org/
iHOP - Information Hyperlinked over Proteins	http://www.ihop-net.org/UniPub/iHOP/
String: functional protein association networks	http://string.embl.de/
3DID - 3D interacting domains	http://3did.irbbarcelona.org/
DOMINE Database of Protein Domain Interactions	http://domine.utdallas.edu/cgi-bin/Domine
PSI-MI HUPPO Standard for interactions	http://www.psidev.info/index.php?q=node/60
BioPAX - data exchange for biological pathway data	http://www.biopax.org/
Graphviz - Open Source Graph Visualization Software	http://www.graphviz.org/
Cytoscape - open source software for interaction visualization and integration	http://www.cytoscape.org/
Osprey - protein interaction viewer	http://biodata.mshri.on.ca/osprey/
Osprey - protein interaction molecular modeling	http://www.cs.duke.edu/donaldlab/osprey.php
visANT - Visual Analysis Tool for Biological Networks and Pathways	http://visant.bu.edu/
aiSee - commercial Graph layout software	http://www.aisee.com/
NAViGaTOR - Network Analysis, Visualization, & Graphing TORonto	http://ophid.utoronto.ca/navigator/

miRNA

RNA Molecular Biology Tuschl Lab	http://www.rockefeller.edu/labheads/tuschl/
miRBASE microRNA database Sanger Institute	http://www.mirbase.org/
Rfam RNA families database of alignments and CMs Sanger Institute	http://www.sanger.ac.uk/resources/databases/rfam.html
The siRNA user guide - Tuschl Lab	http://www.rockefeller.edu/labheads/tuschl/sirna.html
microRNA.org: A resource for predicted microRNA targets and expression	http://www.microrna.org/
OligoWalk Web Server for siRNA design	http://rna.urmc.rochester.edu/cgi-bin/server_exe/oligowalk/oligowalk_form.cgi
AsiDesigner siRNA design pipeline	http://sysbio.kribb.re.kr:8080/AsiDesigner/menuDesigner.jsf

Systems Biology

System Biology Information Resources

BioModels.NET	http://www.biomodels.net/
The Reactome Project	http://www.reactome.org/
Panther Classification Systems - Panther Pathways	http://www.pantherdb.org/pathway/
Human Metabolome Database	http://www.hmdb.ca
KDBI - Kinetic Data of Biomolecular Interactions	http://xin.cz3.nus.edu.sg/group/kdbi/kdbi.asp
SBML Systems Biology Markup Language	http://sbml.org/index.psp
SBGN Systems Biology Graphical Notation Standardization	http://sbgn.org/
The International Society for Systems Biology	http://issb.org/
Systems Biology Portal www.systems-biology.org	http://www.systems-biology.org/
The Systems Biology Institute - Tokyo	http://sbi.jp/
US National Centers for System Biology	http://www.nigms.nih.gov/Initiatives/SysBio/
Systems Biology at UC San Diego	http://systemsbiology.ucsd.edu/
Systems Biology in Germany	http://www.systembiologie.de/
HepatoSys - Network Systems Biology	http://www.hepatosys.de/
SystemsX - The Swiss Initiative in Systems Biology	http://www.systemsx.ch/
YSBN The Yeast Systems Biology Network	http://www.gmm.gu.se/YSBN/
Nature web focus: Systems biology: a user's guide	http://www.nature.com/focus/systemsbiologyuserguide/index.html
Systems Biology Wikipedia	http://en.wikipedia.org/wiki/Systems_biology

Systems Biology Modeling Tools

Systems Biology WorkBench SBW package	http://sbw.kgi.edu/research/sbwIntro.htm
JDesigner: A Biochemical Network Layout Tool	http://sbw.kgi.edu/software/jdesigner.htm
Jarnac biochemical simulation package	http://sbw.kgi.edu/software/jarnac.htm
Pasadena Twain ODE solver of the SWB package	http://sbw.sourceforge.net/sbw/software/
CADLIVE - network construction system	http://www.cadlive.jp/
Dizzy stochastic simulations tool	http://magnet.systemsbiology.net/software/Dizzy/
CellDesigner - a modeling tool for biochemical networks	http://www.celldesigner.org/
SBMLsqueezer: A CellDesigner plug-in to generate kinetic rate equations for biochemical networks	http://www.biomedcentral.com/1752-0509/2/39
Cellware - Modeling and Simulation Tool	http://www.bii.a-star.edu.sg/achievements/applications/cellware/
E-Cell project	http://www.e-cell.org/
COPASI - Complex Pathway Simulator	http://www.copasi.org/
Gepasi - Biochemical Kinetics Simulator	http://www.gepasi.org/
Dynetica - a simulator of dynamic networks	http://www.duke.edu/~you/Dynetica_page.htm
JSim - a Java based simulation system	http://nsr.bioeng.washington.edu/jsim/
STOCKS - Stochastic kinetic simulations	http://www.sysbio.pl/stocks/index.html
Basis Gillespie Stochastic Simulator	http://www.basis.ncl.ac.uk/Software.html
CaliBayes - Bayesian calibration of biological simulators	http://www.calibayes.ncl.ac.uk/
JWS Online - Online Cellular Systems Modelling	http://jji.bio.vu.nl/index.html
PyBioS - web server for modeling and simulation of cellular systems	http://pybios.molgen.mpg.de/
Virtual Cell Internet simulation server at NRCAM	http://www.nrcam.uchc.edu/

Internet search

Search engines

Google	http://www.google.com
Bing	http://www.bing.com/
AltaVista	http://de.altavista.com/
Yahoo!	http://de.yahoo.com/
Wolfram alpha	http://www.wolframalpha.com/
WebCrawler	http://webcrawler.com/
MetaGer	http://meta.rzrn.uni-hannover.de/
CUSI - Suchmoeglichkeiten im Internet	http://www.tu-chemnitz.de/misc/cusi.html
W3 Search Engines FU Berlin	http://www.chemie.fu-berlin.de/outerspace/meta-index.html

Link lists

Expasy	http://www.expasy.org/
Expasy Life Science Directory	http://www.expasy.org/links.html
Bioinformatics Links Directory UBiC	http://bioinformatics.ca/links_directory/
HSL: OBRC: Online Bioinformatics Resources Collection	http://www.hsl.pitt.edu/guides/genetics/obrc
Nucleic Acids Research Database Summary Paper List	http://www3.oup.co.uk/nar/database/a/
Nucleic Acids Research Database Issue 2011	http://nar.oxfordjournals.org/content/39/suppl_1
Nucleic Acids Research Database Issue 2010	http://nar.oxfordjournals.org/content/38/suppl_1
Nucleic Acids Research Webserver Issue 2011	http://nar.oxfordjournals.org/content/39/suppl_2
Nucleic Acids Research Webserver Issue 2010	http://nar.oxfordjournals.org/content/38/suppl_2
CMS Molecular Biology Resource	http://mbcf.dfci.harvard.edu/cmsmbr/
Harvard Dept of MCB - Biology Links	http://mcb.harvard.edu/BioLinks.html
CiteULike - online reference management sharing service	http://www.citeulike.org/
Connotea - online reference and link sharing	http://www.connotea.org/
del.icio.us social bookmarking	http://del.icio.us/
Biotech Europe Link Base	http://www.biotech-europe.de/rubric/linkbase/index.html

Internet

Connected: An Internet Encyclopedia	http://freesoft.org/CIE/index.htm
RSS Tutorial for Content Publishers and Webmasters	http://www.mnot.net/rss/tutorial/

Neural networks

SNNS Stuttgarter Neural Network Simulator	http://www-ra.informatik.uni-tuebingen.de/software/snns/welcome_e.html
SNNS Download	http://www.ra.cs.uni-tuebingen.de/SNNS/
Java-NNS University of Tuebingen	http://www-ra.informatik.uni-tuebingen.de/software/JavaNNS/welcome_e.html
Java-NNS Download	http://www-ra.informatik.uni-tuebingen.de/downloads/JavaNNS/

Books

Bioinformatics (Mount) CSHL Press	http://www.cshlpress.com/default.tpl?action=full&--eqskudatarq=466
Bioinformatics Baxevanis Ouellette Francis Wiley-VCH Ch. 5	http://www.wiley-vch.de/publish/en/books/bySubjectL.S00/bySubSubjectL.S70/0-471-47878-4/
Beginning Perl for Bioinformatics (Tisdall) O'Reilly	http://www.oreilly.com/catalog/begger/bio/
Mastering Perl for Bioinformatics (Tisdall) O'Reilly	http://www.oreilly.com/catalog/mperl/bio/
Angewandte Bioinformatik (Selzer Marhoefer Rohwer) - Springer	http://www.springer.com/west/home/generic/order?SGWID=4-40110-22-2317982-0
Bioinformatik Interaktiv (Merkel, Waack) Wiley-Blackwell	http://www.wiley-vch.de/publish/dt/books/bySubjectL.S00/bySubSubjectL.S69/3-527-32594-8/?sID=3mkeuksb2ansqu9u8ll3n1ssq4
Bioanalytik (Lottspeich Engels Joachim) Elsevier	http://www.bioanalytik.net/
Systems Biology: A Textbook (Wiley)	http://eu.wiley.com/WileyCDA/WileyTitle/productCd-3527318747.html
Bioinformatics and Computational Biology Solutions Using R and Bioconductor	http://www.springerlink.com/content/u014612g263032jk/
Bioconductor Case Studies (Springer)	http://www.springer.com/statistics/stats+life+sci/book/978-0-387-77239-4
R Programming for Bioinformatics (CRC Press)	http://crcpress.com/shopping_cart/products/product_detail.asp?sku=C6367
BLAST - (Korf, Yandell, Bedell) O'Reilly	http://www.oreilly.com/catalog/blast/
Sequence Analysis in a Nutshell (Markel Leon) O'Reilly	http://www.oreilly.com/catalog/seqanalyan/

The bioinformatics bench

Linux

Ubuntu Linux	http://www.ubuntu.com/
Debian Linux	http://www.debian.org/
Open SUSE Linux	http://en.opensuse.org/
Professional SUSE Linux	http://www.suse.com/
Fedora Project	http://fedoraproject.org/
RedHat Linux	http://www.redhat.com/
Linux Kernel Archives	http://www.kernel.org/
BioLinux - Wikipedia	http://en.wikipedia.org/wiki/BioLinux
Knoppix	http://www.knopper.net/knoppix/index-en.html
BioKnoppix	http://bioknoppix.hpcf.upr.edu/
EMBNET A QuickGuide to UNIX	http://www.embnnet.org/node/64
Linux Community (German)	http://www.linux-community.de/
linux.de	http://www.linux.de/

LAMP and WAMP

LAMP Wikipedia.de	http://de.wikipedia.org/wiki/LAMP
LAMP Wikipedia.en	http://en.wikipedia.org/wiki/LAMP_(software_bundle)
Comparison of WAMPs	http://en.wikipedia.org/wiki/Comparison_of_WAMPs
XAMPP	http://www.apachefriends.org/de/xampp.html

Apache + HTML

Apache	http://www.apache.org/
SELFHTML	http://selfhtml.org/

MySQL

MySQL	http://dev.mysql.com/
MySQL Community Server Download	http://dev.mysql.com/downloads/
MySQL Workbench Download	http://dev.mysql.com/downloads/workbench/
MySQL GUI Tools Download	http://dev.mysql.com/downloads/gui-tools/5.0.html
MySQL reference manual	http://dev.mysql.com/doc/refman/5.1/en/index.html

PHP

PHP	http://www.php.net/
SELFPHP	http://www.selfphp.info/
phpMyAdmin	http://sourceforge.net/projects/phpmyadmin/
php-homepage.de - Resource fuer PHP und MySQL	http://www.php-homepage.de/
PHP-Archiv - PHP Scripts	http://www.phparchiv.de/

Perl

Perl	http://www.perl.com/
The Perl directory at perl.org	http://www.perl.org/
Perl documentation	http://perldoc.perl.org/
Perl Download	http://www.perl.org/get.html
ActiveState - ActivePerl Downloads	http://www.activestate.com/Products/ActivePerl/
Strawberry Perl for Windows	http://strawberryperl.com/
CPAN PERL Script Archiv	http://www.cpan.org/
Bioperl	http://bio.perl.org/
Installing Bioperl on Windows - BioPerl	http://www.bioperl.org/wiki/Installing_Bioperl_on_Windows
EMBNET QuickGuides PERL and Regular Expressions	http://www.embnnet.org/node/64

R and BioConductor

The R project for statistical computing	http://www.r-project.org/
The Comprehensive R archive network	http://cran.r-project.org/
BioConductor Project - Open Source Software for Bioinformatics	http://www.bioconductor.org/
R and Bioconductor Manual (Thomas Girke)	http://manuals.bioinformatics.ucr.edu/home/R_BioCondManual
useR! 2011 R user conference Warwick, UK	http://www.warwick.ac.uk/statsdept/user-2011/
useR! 2010 R user conference Gaithersburg, Maryland	http://user2010.org/

Editors

The Vim Editor	http://www.vim.org/
Proton	http://www.computerbase.de/downloads/software/entwicklung/proton/
Komodo	http://www.activestate.com/Products/komodo_edit/

Laboratory tools

WETLAB: an open source electronic lab notebook	http://arrowsmith.psych.uic.edu/arrowsmith_uic/wetlab.html
PHP Labware Project	http://bioinformatics.org/phplabware/labwiki/index.php
OpenFreezer	http://openfreezer.org/

EMBOSS

EMBOSS	http://emboss.open-bio.org/
EMBOSS wiki	http://emboss.open-bio.org/wiki/
EMBOSS application wiki	http://emboss.open-bio.org/wiki/Appdocs
EMBOSS applications	http://emboss.sourceforge.net/apps/release/6.4/emboss/apps/index.html
EMBOSS applications program groups	http://emboss.sourceforge.net/apps/release/6.4/emboss/apps/groups.html
EMBOSS for Windows	ftp://emboss.open-bio.org/pub/EMBOSS/windows/
EMBOSS Users Guide	http://emboss.open-bio.org/html/use/index.html
EMBOSS Developers Guide	http://emboss.open-bio.org/html/dev/index.html
EMBOSS Administrators Guide	http://emboss.open-bio.org/html/adm/index.html
EMBOSS user documentation	http://emboss.sourceforge.net/docs/
EMBOSS FAQ	http://emboss.sourceforge.net/docs/faq.html
EMBOSS Main Tutorial	http://emboss.sourceforge.net/docs/emboss_tutorial/emboss_tutorial.html
EMBOSS mailing lists	http://emboss.sourceforge.net/support/#usermail
EmbNet EMBOSS and wEMBOSS Quick Guides	http://www.embnet.org/node/64
JEMBOSS	http://emboss.sourceforge.net/Jemboss/
wEMBOSS	http://wemboss.sourceforge.net/
Public SRS installations Biowisdom	http://downloads.biowisdomsrs.com/publicsrs.html

NCBI BLAST software

BLAST Wikipedia	http://en.wikipedia.org/wiki/BLAST
BLAST setup procedure for Windows	http://www.ncbi.nlm.nih.gov/staff/tao/URLAPI/pc_setup.html
NCBI BLAST download	ftp://ftp.ncbi.nih.gov/blast/executables/
BLAST FASTA databases download	ftp://ftp.ncbi.nih.gov/blast/db/FASTA/
BLAST standalone documentation	ftp://ftp.ncbi.nih.gov/blast/documents

Open Source Bioinformatics Platforms

Galaxy bioinformatics framework	http://galaxy.psu.edu/
myGRID - Open Source Middleware Environment for Bioinformatics Workflows	http://www.mygrid.org.uk/
TAVERNA Open Source Bioinformatics Workbench	http://taverna.sourceforge.net/
eFamily Project - Grid integrating of protein database annotations	http://www.efamily.org.uk/
Bioclipse - visual platform for structural chemo- and bioinformatics	http://www.bioclipse.net/
Systems Biology WorkBench SWB package	http://sbw.kgi.edu/research/sbwIntro.htm
Mobyle web environment for bioinformatics workflows	http://bioweb2.pasteur.fr/projects/mobyle/what_is_mobyle.html
Chinook P2P Bioinformatics Platform	http://www.bcgsc.bc.ca/chinook/
Gaggle data management framework	http://www.systemsbiology.org/Technology/Data_Management/Gaggle