



WEB INFORMATION RESOURCES ON BIOLOGICAL SCIENCES: A GLIMPSE

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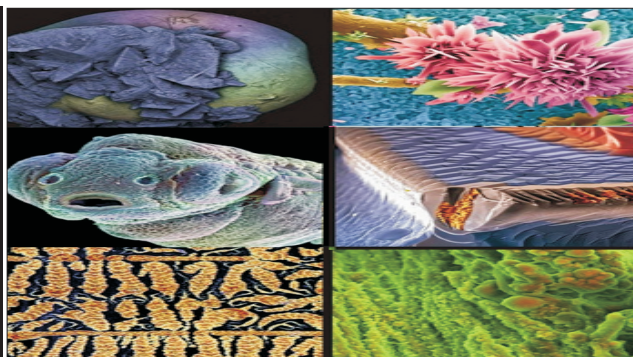
ABSTRACT

Web-based information system is an information system that uses Internet web technologies to deliver information and services, to users or other information systems/applications. It is a software system whose main purpose is to publish and maintain data by using hypertext-based principles. A web information system usually consists of one or more web applications, specific functionality-oriented components, together with information components and other non-web components. Web browser is typically used as front-end whereas database as back-end. Bases on mode of access, these databases can be categorized into following categories.

KEYWORDS: Web resource; biological science; e-resources; Database Access.

INTRODUCTION :

The library should be 'virtually' accessible and so the library website should be designed according to accessibility guidelines and



should provide information about contact details, library timings etc. E-resources/web resources are important for research and development. Realization of e-resources available in different forms and links like Statistical Databases, Journal Gateways, Search Engines/Databases/IR Harvesters, E-Books, Full Text E-Journals, Document Specific Databases, Information Gateways, E-Theses and Dissertations, Open Courseware, etc. scattered through various institutions geographically.

ELECTRONIC INFORMATION RESOURCES IN BIOLOGICAL SCIENCES

Print media was the prominent source for communicating advances in biological sciences till the year 1900. The use of components of

information technology (IT) has revolutionized the storage and dissemination of massive volumes of information in the media other than print. Almost the entire gamut of primary, secondary and tertiary information sources hitherto embodied in print media released at different intervals are now taking the form of electronic databases accessible via on-line host or offline. In essence, this is the effect of convergence of dual technological streams - biological sciences research and information technology. The databases in biological sciences are structured in such a way as how to offer various access points to retrieve desired information from specific collection accumulated for many years and also from multiple collections

accumulated through a couple of decades. There are versatile tools of immense value that enabled biological sciences community to strengthen exploration decision support by providing access to biological information resources available in various forms of electronic knowledge base. These electronically available knowledge or web information resources and information bits in biological sciences are grouped into the below mention categories.

- + Bibliographic
- + Full Text Databases
- + Factual Databases

The databases that provide full text retrieval of facts coupled with value added information derived or culled out by the experts from different sources and presented. These details are different from simple reproduction of published information. These databases in biological sciences consist of information like Biological companies, Top Biologists of Today, Professional organizations etc.

LIST OF A FEW ONLINE BIOLOGICAL WEB INFORMATION RESOURCES**Biological Databases**

- ✦ A Database for Coffee Genomics: ESTs, Microsatellites, Retro Transposons, Gene clustering – Coffee DNA is a public domain database for coffee genomics comprising comprehensive information on coffee germplasm, Coffea specific Microsatellites, Transposes, SNPs, Expressed Sequence Tag sequences and Geneprofiling <http://www.coffeedna.net>
- ✦ AARS DataBase - Aminoacyl- TRNA Synthetase Data Bank.
<http://rose.man.poznan.pl/aars/index.html>
- ✦ ADME DB- ADME DB is a database containing information on Human Cytochrome P450 metabolism, kinetics, transporter and structure. The information is organized by category (therapeutic area), drug name, enzyme, reaction, and type. The database includes about 11 000 entries, 5000 reactions, 3000 references and 6500 structures in mol format. http://www.fqspl.com.pl/?a=product_view&id=40
- ✦ Antibodies - MSRS Primary Antibody Database - lists 125,000+ primary antibodies from 600+ companies worldwide. Each search lists all the antibodies found according to criteria and are sort able in 10 fields including: antibody, host, antigen species, label, form, clone number, isotope, unit, product number and company. The database is regularly update and we accept antibody listings from companies, laboratories, and individuals without any charge. <http://www.antibodies-probes.com>
- ✦ Arabidopsis thaliana Database - The Arabidopsis thaliana Database (AtDB) Project provides genomic and related data about Arabidopsis. <http://www.arabidopsis.org/home.html>
- ✦ BioFrontier / P450 – Bio Frontier/P450 is a system, which enables every user to search for information about Human Cytochrome P450. It uses a structure formula or reaction formula as a search query. In addition to the searching function, the system can also predict information about unknown metabolites by analyzing detain the system. http://www.fqspl.com.pl/?a=product_view&id=16
- ✦ Biolinks - A subdivision of www.bioplanet.com. This site contains a comprehensive list of genetic related database links. <http://www.bioplanet.com/links.htm>
- ✦ Blocks WWW Server - A service for biological sequence analysis at the Fred Hutchinson Cancer Research Center in Seattle, Washington, USA.
<http://www.blocks.fhcrc.org/>
- ✦ BRENDA-The Comprehensive Enzyme Information System - BRENDA is the main collection of enzyme functional data available to the scientific community. The enzymes are classified according to the Enzyme Commission list of enzymes. Some 3500 "different" enzymes are covered. <http://www.brenda.uni-koeln.de>

BIOLOGICAL LIBRARIES

- ✦ Biology Library - Falconer Biology Library at the Stanford University.
<http://www-sul.stanford.edu/depts/falconer/index.html>
- ✦ California Digital Library - The California Digital Library was founded in 1997 by University of California President Richard Atkinson, who called it "a library without walls". The Library is built on the extensive base of UC knowledge and experience in developing and distributing digital materials. <http://www.cdlib.org/>
- ✦ E.W. KING LIBRARY - Welcome to the homepage of the E.W. King Library, which provides resources to support the King College Community. The library houses over 90,000 books and bound periodicals, with over 600 current periodical and newspaper subscriptions, 1800 compact discs, 700 video tapes, and a U.S. Government Document depository. Convenient access is offered to all of these resources, as well as 425 electronic databases access at public computer terminals. <http://www.king.edu/library/home.htm>
- ✦ Entrez- Simultaneously search multiple life sciences databases at the National Center for Biotechnology Information (NCBI). <http://www3.ncbi.nlm.nih.gov/Entrez>
- ✦ Iona College Libraries - Welcome to Iona's libraries. Our four libraries, two on the New Rochelle Campus and those on the Manhattan and Rockland Campuses, are here to meet your information needs and to provide comfortable spaces for individual and group study. You'll find materials for research and teaching, as well as ample electronic access to databases and Internet resources. <http://www.iona.edu/library/library.htm>
- ✦ Library of Congress - The Library preserves a collection of more than 119 million items, more than two-thirds of which are in media other than books. These include the largest map, film and television collections in the world. In addition to its primary mission of serving the research needs of the U.S. Congress, the Library serves all Americans through its popular Web site and in its 22 reading room son Capitol Hill. <http://www.loc.gov/>
- ✦ Life Science Library - The Life Science Library (LSL) was established in May 1996 with a goal to provide better service and enhance more efficient use of resources among the life sciences related institutes, namely Botany, Zoology,

Biological Chemistry, Molecular Biology, Biomedical Sciences and Bio Agricultural Sciences.

- + http://www.sinica.edu.tw/lib/lsl/index_e.htm
- + MBG: Library - The Missouri Botanical Garden Library is one of the world's finest botanical libraries. Founded in 1859 by Henry Shaw, the library is an essential part of the Garden's research program. It is used in conjunction with the herbarium by Garden research staff, botany students, and visiting scientists from around the world. Horticulturists, landscape designers, historians, biographers, and Garden members also use the library. <http://www.mobot.org/MOBOT/molib/>
- + Queen's University Libraries (Kingston, Canada) Home Page - Queen's Libraries are a network of eight campus libraries providing specialist information and research services to the Queen's Community. Together, the Libraries are committed to supporting the teaching and research programs of the University, through judicious allocation of resources among the three components of the Academic Library at the eve of the 21st century: Collections, Access, Services. <http://stauffer.queensu.ca/>

BIOLOGICAL RESEARCH CENTERS

- + Albert Einstein Comprehensive Cancer Center - The Albert Einstein Comprehensive Cancer Center (AECCC) is one of the largest academic cancer centers on the east coast and is among the top 10 NCI - funded cancer centers in the United States. More than 100 scientists and physicians share expertise and technologies in innovative research that addresses the causes, treatment, and prevention of cancer. <http://leper1.ca.aecom.yu.edu/>
- + Albert Einstein Comprehensive Cancer Center- Tertiary education and research in public health disciplines. Certificate, diploma, bachelor, masters and PhD degree education. Develop protocols and conduct research. Multi-skilled consultants. Short courses, seminars and conferences. <http://www.acithn.uq.edu.au/>
- + Biochemistry, Structural Biology & Chemistry at The Rockefeller University- Molecular research at Rockefeller employs the full range of modern tools, including X-ray crystallography, nuclear magnetic resonance spectroscopy, electron microscopy, mass spectrometry, computer simulation and chemical synthesis, as well as the techniques of molecular biology and genetics. Close collaboration between Rockefeller scientists investigating a wide range of biological systems is a hallmark of research in this area. <http://www.rockefeller.edu/research/bio.htm>
- + BioMolecular Engineering Research Center – Bio Molecular Engineering Research Center, specializing in Bioinformatics research, protein functional profiles, protein structure prediction, genome analysis and visualizations, and promoter analysis. <http://bmerc-www.bu.edu/>
- + BioMolecular Networks Initiative - This web site describes the Pacific Northwest National Laboratory's Biomolecular Networks Initiative research into cell signaling, proteomics, cellular observatory, virtual cell, microbiology, and bioscience software. <http://www.biomolecular.org/index.html>

BIOLOGICAL SEARCH ENGINES

- + BioFinder-Biologicalsearchengine. http://www.biofinder.org/index_e.html
- + 123genomics.com- Genomics, bioinformatics, proteomics, microarray and related information. <http://www.123genomics.com>
- + 360 Web Directory - A searchable web directory of quality websites categorized by topics, offering free listings for life time. <http://www.360webdirectory.com/>
- + AardvarkTravel.net Travel Search Engine - The world's leading travel search engine. <http://www.aardvarktravel.net>
- + ALL Species ToolKit - The species search engine, the first phase of the All Species Toolkit Project, was just completed. It currently has more than 1 million entries, with each name linked to the databases which contain information about that specific species. <http://www.speciestoolkit.org>
- + allbiosolution.com a complete information - all information related to biotechnology and bio informatics. <http://www.allbiosolution.com>
- + Ask Palm@elegansNet - The search kit for Palm pilot providing rapid and organized searches with best search and clustering engines: Google, Vivisimo, PubMed, and more. <http://members.tripod.com/C.elegans/Ask-palm.htm>
- + Bio directory and search engine for everything - Bio directory and search engine. <http://www.iraniha.bizland.com>
- + Bio Online -The oldest and most highly trafficked web portal for life science researchers. <http://www.bio.com>
- + Provides links to the latest news related to life sciences and a comprehensive web directory. <http://www.bio.sk>

CONCLUSIONS

E resources/web resources are important for research and development especially in the area of biological sciences. Realization of available data in different forms like databases, IR, Consortia, etc scattered through various institution geographically. The library professional have to be given training or to be enhanced with ICT skills and have to be given training for updating their skills so that they will indentify many open access e-resources databases related to biological sciences that are available and provide links through the library e portal for accessing e resources. All the University Libraries covered under the present study, render in addition to conventional resources, e-resources services under UGC-INFONET E-Consortia programme. The university library is rendering facility of innumerable number of e-resources available on the internet on various subjects. These resources could be websites, archives of working papers/preprints/ journal articles, E-prints, directories, etc. By giving link facilities are made to access open sources services e-journals through DOAJ, e-books through DOAB, Back volumes of journals through J-STORE, theses databases –ETD.

BIBLIOGRAPHICAL REFERENCES

- 1.Ajuwon, Grace Ada and Rhine (2008).Health Information & Libraries Journal (25)3, 175–185,
- 2.Anasi, S. (2008). Internet use pattern of undergraduate students at the University of Lagos, Nigeria. University of Dar es Salaam Library Journal, 8(1), 1-15.
- 3.Asemi, A., &Riyahiniya, N. (2007). Awareness and use of digital resources in the libraries of Isfahan University of Medical Sciences, Iran. Electronic Library, 25(3), 316-327.
- Adithya Kumari, H. and Mahadevamurthy, M. Ali K S and Hydar Ali, (2013, August 19-20). Use of Social Media among Dental Students of Farooqia Dental College, Mysore: A Study. Paper presented at the International Conference on Open Access – Scholarly Communication Reincarnated: A Futuristic Approach, Bangalore University, Bangalore, KA ISBN: 8185216479
- 4.Adithya Kumari, H., HydarAli, and Mahadevamurthy, M.(2014). Access to Electronic Information Resources by the Users of Al-Ameen Institute of Management Studies, Bangalore: A Study. National Conference on Management of Modern Libraries (NACML).SEARCH & Department of Library & Information Science, KMC, Manipal University. Manipal. ISBN:9788184248692
- 5.Chandrashekara, M, Hydar Ali, and Mulla, K R "Internet usage by the students of kendriaya Vidyalaya, Mysore: A survey" KLA Bulletin October (2011): 1. Print.(ISSN: 0976-688X)
- 6.Eke, H. N. (2010). The perspective of e-learning and libraries in Africa: challenges and opportunities. Library Review, 59(4), 274-290.
- 7.Fenton, J. (2010). Renew Your Skills with Online Resources. Alki, 26(1), 12-14
- 8.Fletcher, G., & Greenhill, A. (1995). Academic referencing of Internet-based resources. The Australian Library Journal, 44(4), 177-187.
- 9.Krishnamurthy, M. M. (2007). Consortia-based resource sharing and accessing e-journals. Information Studies, 13(3), 171-177.
- 10.Kumar, B. S., & Kumar, G. T. (2010). Perception and usage of e-resources and the internet by Indian academics. Electronic Library,28(1), 137-156.
- 11.Noruzi, A. (2007). Webotherapy: reading web resources for problem solving. Electronic Library, The, 25(6), 741-756.
- 12.Oduwole, A. A., &Oyewumi, O. (2010). Accessibility and use of web-based electronic resources by physicians in a psychiatric institution in Nigeria. Program: Electronic library and information systems, 44(2), 109-121.



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