HSLS is pleased to announce the availability of PathwayAssist™, a software tool for visualization and exploration of biological pathways, gene regulation networks, and protein-protein interactions.

Researchers in the signal transduction field, and those wanting to analyze gene expression data from microarray and SAGE experiments will find this software useful.

**How PathwayAssist™ Works**

PathwayAssist™ contains an automated natural language processing-based information extraction system called MedScan, and a database of protein interactions and cellular pathways known as ResNet (Research Network). MedScan is a text mining tool that can extract biological interactions by reading digital text documents (e.g. biomedical journal articles and abstracts). It efficiently scans sentences, searching for co-occurrences of biological terms to locate connecting verbs — such as binds, inhibits, modulates or phosphorylates — between the co-occurring terms. ResNet is a repository of over 500,000 biological interactions for more than 50,000 proteins (human, mouse, rat, yeast, drosophila, and C. elegans) extracted from the current literature.

By combining MedScan’s powerful search algorithm with the ResNet repository of biological interactions, PathwayAssist can:

• identify biological interactions among genes of interest from the published literature, and provide links to the supporting sentences in the matching journal article citations (for articles available online through PubMed);
• connect two molecules with the shortest possible path;
• import a list of genes and arrange them into a pathway;
• import affymatrix gene expression results and display as a heat map, as well as a pathway map;
• find common upstream and downstream regulators of a gene;
• display array results according to subcellular localization.

PathwayAssist is a PC compatible software package that requires the Windows 2000 or XP operating system, and a recommended system configuration of 2.0 GH CPU, 512 RAM and 2 GB of disk space.

HSLS currently provides five concurrent user licenses for Pathway Assist. For download information, please contact Ansuman Chattopadhyay (412-648-1297, ansuman@pitt.edu) or Yi-Bu Chen (412-383-6887, ybchen@cbmi.pitt.edu)

--Ansuman Chattopadhyay
Director’s Reflections...

A Crystal Ball: Cloudy or Clear?

The essential role of library leaders is, first, to predict how information will be organized and accessed in the future, and, second, to develop strategies to get from where we are to where we want to be.

One of the more interesting predictive reports about the future of libraries was published recently by Thomas Frey, executive director of the DaVinci Institute, a non-profit futurist think tank in Longmont, Colo. According to Frey, libraries through the ages have been great storehouses of information containing “the fundamental building blocks of information for all humanity.” Today, however, information that was once scarce and difficult to find, is now vast and readily available online.

Below are listed the report’s ten key trends that will impact library development in the future. How many match your predictions?

Trend #1 – Communication systems are continually changing how people access information. From the invention of the telegraph in 1844, through the development of the World Wide Web, online search engines, Web browsers, Google and meta-searching in recent years, the pace of change is accelerating. We still don’t know what will be the “ultimate form” of communication.

Trend #2 – All technology ends. All technologies commonly used today will be replaced by something new. Media formats are changing. “Every device, tool, piece of hardware, equipment, and technology that we are using today will go away, and be replaced by something else. That something else will be faster, smarter, cheaper, more capable, more durable, work better, and look cooler than anything we have today.”

Trend #3 – We haven’t yet reached the ultimate small particle of storage. But soon. When we find the “ultimate small storage particle,” we can develop better standards for permanent information storage, and more opportunities for better “information experiences” for library users.

Trend #4 – Search technology will become increasingly more complicated. Today’s searches based primarily on text will expand to include images and media with attributes such as texture, mass, tone, speed, volume, color and others.

continued on page 3
New Web Pages Help You Choose and Use Library Databases

HSLS has developed *Quick Facts* information pages to help library users choose which databases to search, understand essential information about each database, and connect to online search help.

Each page typically includes the following information:

- Subjects Covered
- Database Content
- Dates Covered
- Full Text Availability
- Remote Access
- Update Frequency
- Search Help
- Database Publisher

Selected resources also link to a “Fact Sheet” with more information about the resource, including search tips and special features.

These pages are available on the *Online Help: Fact Sheets and User Guides* page at <www.hsls.pitt.edu/guides/> or by clicking on the ‘more info’ links next to the databases on the *Databases by Title* list at <www.hsls.pitt.edu/resources/databases/titles>.

Special thanks to Carolyn Polgardy, who designed and developed many of these information pages while doing a field placement at HSLS as part of her Masters in Library and Information Sciences (MLIS) degree at the School of Information Sciences.

--Ammon Ripple

---

Director’s Reflections...

continued from page 2

Trend #5 – *Time compression is changing the lifestyle of library patrons.* Life is faster, and the timeframe for delivering information is shrinking.

Trend #6 – *Over time, we will be transitioning to a verbal society.* Keyboards as the primary interface between people and electronic information will fade away. We will shift from written to primarily verbal information exchange.

Trend #7 – *The demand for global information is growing exponentially.* We need to understand other societies, cultures, systems and languages.

Trend #8 – *The stage is being set for a new era of global systems.* The Internet is already a global information system. Other international systems, such as global ethical standards and global intellectual property agreements, will emerge. Libraries play a key role by archiving and disseminating the basic units of information for these systems to develop. Libraries themselves will be a global system.

Trend #9 – *We are transitioning from a product-based economy to an experience-based economy.* Reflecting the needs of an increasingly mobile society, users will experience the library in new and unusual formats. Books and journals themselves will change from “words on a page” to novel digital manifestations of information.

Trend #10 – *Libraries will transition from a center of information to a center of culture.* Libraries will expand beyond repositories of facts and information to cultural centers and gathering places reflecting the identity and personality of their unique constituencies.

At HSLS, our crystal ball is sometimes clear and sometimes cloudy, but our constant goal is to deliver cutting-edge information technology and services to our users.

--Barbara Epstein

---

<www.davinciinstitute.com/page.php?ID=120>
New Avenues to Older Journal Literature

Older journal literature can be an important resource for answering contemporary scientific questions. While many electronic journals are available only as far back as the mid-1990s, recent additions of backfiles allow access to the archives of important journals including *Nature*, *Proceedings of the National Academy of Sciences*, and many more.

Full-text articles from the electronic version of the science journal *Nature* are now available to HSLS patrons back through 1987. Both Ovid MEDLINE and PubMed citations provide corresponding links to this older literature.

Full-text content of the *Proceedings of the National Academy of Sciences* (PNAS) is now accessible historically to 1915 (volume 1, issue 1) via Ovid MEDLINE or the PNAS Web site <www.pnas.org>. Individual issues of both *Nature* and *PNAS* may be browsed via PITTCat for the Health Sciences <http://pittcat.hsls.pitt.edu>, or the HSLS E-Journals list at <www.hsls.pitt.edu/resources/ejournals/titles>.

PubMed Central (PMC), an archival database of several hundred thousand full-text life sciences articles, provides another option for accessing older journal literature. It is produced by the National Center for Biotechnology, a division of the National Library of Medicine at the National Institutes of Health. Historical coverage of journal literature in PMC varies — some dating back to the early 1900s, with the eventual goal of providing electronic access to all journal issues archived at PMC. Examples of indexed journals include *Journal of Bacteriology* since 1916, *Infection & Immunity* since 1970, and *Cell Regulation* since 1989 (published as *Molecular Biology of the Cell* since 1992).

Most PMC articles have a corresponding entry in the PubMed database. However, at the present time, PubMed citations for articles published before 1966 do not link to the corresponding full text article in PubMed Central. Citations and links for these pre-1966 articles will be selectively added to PubMed, beginning later this year.

To access PMC journals, use the PubMed Central link located under Related Resources on the left side menu of the PubMed home page. PMC can be searched as a database by using either the basic or advanced search features available on the PMC home page.

Providers of full-text articles are working to add more early print issues to their collections because the importance of this literature in answering today’s biomedical questions is immeasurable.

--Jill Foust
The Annals of Pharmacotherapy is now providing a service to help consumers, patients, and their caregivers understand the content of current medical articles published in this journal. Summaries of articles are presented in a brief, easy-to-understand question-and-answer format with explanations pertaining to a drug’s purpose and use, how the study was conducted, and the author’s conclusions or recommendations. References to the complete article are provided.

These article summaries are intended to help patients understand the latest research developments and clinical information that may relate to their prescribed medications. It is clearly stated that the summaries are for informational purposes only, and should be used as an opportunity to promote discussions with their healthcare providers.

View current “For Our Patient” summaries, as well as all available summaries at <www.forourpatients.info> or <www.theannals.com>. You may also search summaries by topic.

Although the service was developed for the layperson, it also will be useful to non-healthcare professionals, educators, or healthcare providers who are responsible for patient education.

—Michelle L. Burda

Remembering Laurabelle Eakin

When Laurabelle Eakin was head of Reference and Circulation at Falk Library in the late 1960’s, MEDLARS, a predecessor of today’s MEDLINE, was introduced as a new-fangled way to automate library research. Prior to that, searching for research articles was a time-consuming activity that was done by paging through heavy volumes of Index Medicus, and copying citations by hand. Miss Eakin spent six months in residence at the National Library of Medicine for MEDLARS training. When computerized MEDLARS searches became available at the University of Pittsburgh in 1970 under Miss Eakin’s supervision, Falk Library was one of the first academic health sciences libraries to offer this advanced service to our users.

Laurabelle Eakin passed away on September 23, 2005 at the age of 88. She began at Falk Library as head of Reference & Circulation in January 1958, and subsequently served as head of Readers’ Services, assistant director, and director from 1975-1985. Many Pittsburgh medical librarians remember the class in Medical Literature that Miss Eakin taught for many years at what was then known as Pitt’s Graduate School of Library and Information Sciences.

Miss Eakin had a long and varied career in libraries. She received an AB Degree from Grove City College in 1938, and a BS degree in library science from Western Reserve University in 1946. She worked as librarian at Verona High School (Verona, Pa.) and East Deer Twp High School (Creighton, Pa.), and was chief librarian at the Veterans Administration Hospital in Pittsburgh from 1950-1957.

--Barbara Epstein

Laurabelle Eakin, former director of Falk Library, was responsible for bringing computerized MEDLARS literature searching to the University in 1970, making Falk Library one of the first academic health sciences libraries in the country to offer this advanced service to its users.
Information influences the clinical decision-making process, often resulting in changes to patient care. With two questions arising for every three patients in office practice, and an average of five questions per patient encounter in academic settings, access to information at the point of care is essential.

Two point-of-care (POC) products provided through HSL Online — FIRSTConsult and UpToDate — offer full-text results for immediate use, and have clinically relevant content that maps closely to the clinical task (e.g., differential diagnosis). Even so, they are very different products, and each offers unique advantages.

FIRSTConsult is formatted into four outlined sections that are accessible from the left navigational toolbar:
- Differential Diagnoses
- Medical Topics
- Patient Education
- Procedures

FIRSTConsult follows the conceptual process, beginning with the chief complaint through treatment options. Designed for rapid evaluation, the 350 chief complaints and 1,500 possible diagnoses can display by age and prevalence. For example, the FIRSTConsult chart on the right shows at a glance that in adults 45-65 years, acute dyspnea is more commonly caused by asthma than myocardial infarction. Another POC feature is provided through the Summary of Therapeutic Options under the Treatment section of Medical Topics. FIRSTConsult’s design conveys information quickly, and it uses a bulleted format for a simplified visual appearance. It’s updated weekly, offers over 30 procedural videos, and includes links to rated evidence such as systematic reviews, guidelines, and randomized controlled trials.

UpToDate is a collection of original topic reviews that provides a digest of information in paragraph format. The comprehensive, clinically applicable discussions are well referenced with diagrams and illustrations. Drug queries link to concise drug monographs through Lexi-Comp Online, and patient education materials can be accessed via the table of contents. While a new version of UpToDate is released every few months, literature reviews of over 330 journals and other updates are performed continually.

Both products have a single search box without limits or Boolean logic (“and,” “or,” “not”), retrieve information within a minute, and offer navigational aides. Only FIRSTConsult is available via remote access. Each product serves a purpose in the quest for readily applicable clinical databases. Consider these two POC products for instant access to information to support clinical decision-making.

—Michele Klein-Fedyshin

References:
NEWS

Donald Graham has joined the Falk Library staff as a circulation assistant. He holds a BS degree in nursing from the University of Pittsburgh.

In addition to her duties as operations manager of the Computer and Media Center, Nicole Muehlbauer has been named production/graphics editor of the HSLS Update. She will be responsible for the layout and graphics of the library newsletter.

Ahlam A. Saleh has joined HSLS as a reference librarian. She received her MD and MLS degrees from the University at Buffalo, and her undergraduate degree in biology from Canisius College. Saleh completed an internship in family medicine at the University of Massachusetts Medical Center, and held various positions in University at Buffalo libraries while completing her degree at the School of Informatics, Department of Library and Information Studies.

Farewell to Tracey Spear, Falk Library circulation assistant, who has taken a position at Duquesne University.

PRESENTATIONS

To showcase the services offered by the Health Sciences Library System, Ansuman Chattopadhyay, HSLS information specialist in Molecular Biology and Genetics, Yi-Bu Chen, assistant information specialist in Molecular Biology and Genetics, and Charles Wessel, coordinator of Affiliated Hospital Services, hosted an exhibition booth at the University of Pittsburgh SCIENCE2005 meeting October 6 and 7. During the meeting, they answered questions from attendees regarding the HSLS Molecular Biology and Genetics Information Services, and distributed fact sheets about various bioinformatics software, databases, and training workshops offered by HSLS.

Jonathon Erlen, history of medicine librarian, and Ammon Ripple, head of Reference Services, presented a poster titled “Suffering, Justice, and Biomedical Ethics in Recent Doctoral Dissertations,” at the annual meeting of the American Society for Bioethics and Humanities in Washington, DC, October 20-22, 2005.


PUBLICATIONS


# HSLS Schedule of Classes January-February 2006

Class schedules are subject to change. Please consult the online class calendar at [www.hsls.pitt.edu/services/instruction/calendar](http://www.hsls.pitt.edu/services/instruction/calendar) for the most current information. Classes are held in the Falk Library CMC Classroom 2 unless noted.

## HSLS ORIENTATION

**Introduction to HSLS Resources and Services at Falk Library** (Meet inside entrance to Library)
- Thursday, January 5: 12 noon - 1:15 p.m.
- Monday, January 9: 10 a.m. - 11:15 a.m.
- Tuesday, January 17: 2 p.m. - 3:15 p.m.

Also offered upon request to groups or individuals. Call 412-648-8796.

**Introduction to HSLS Resources and Services at Western Psychiatric Institute & Clinic (WPIC) Library**
Offered upon request to groups or individuals. Call 412-246-5507.

## SEARCHING DATABASES

**Ovid MEDLINE-Getting Started**
- Wednesday, January 4: 9:30 a.m. - 11:00 a.m.
- Tuesday, January 24: 1 p.m. - 2:30 p.m.
- Friday, February 3: 9 a.m. - 10:30 a.m.
- Monday, February 13: 5 p.m. - 6:30 p.m.

**Ovid MEDLINE-Advanced Searching**
- Wednesday, February 8: 10:30 a.m. - noon

**PubMed-Getting Started**
- Tuesday, January 10: 10 a.m. - 11:30 a.m.
- Thursday, January 26: 5 p.m. - 6:30 p.m.
- Wednesday, February 1: 10 a.m. - 11:30 a.m.
- Friday, February 24: Noon - 1:30 p.m.

**PubMed-Advanced Searching**
- Thursday, February 9: 2 p.m. - 3:30 p.m.

**IACUC Searching Using Ovid MEDLINE & AGRICOLA**
- Thursday, February 2: 1-2:30 p.m.

## MOLECULAR BIOLOGY AND GENETICS RESOURCES

**Introduction to Vector NTI**
- Wednesday, January 4: 1 p.m. - 3:30 p.m.
- Wednesday, February 1: 1 p.m. - 3:30 p.m.

**Introduction to PathwayAssist**
- Wednesday, January 18: 1 p.m. - 3:30 p.m.
- Wednesday, February 15: 1 p.m. - 3:30 p.m.

**DNA Analysis Tools**
- Wednesday, February 22: 1 p.m. - 3:30 p.m.

**Sequence Similarity Searching**
- Wednesday, February 8: 1 p.m. - 3:30 p.m.

**Protein Information Hubs**
- Wednesday, January 25: 1 p.m. - 3:30 p.m.

**Genetic Information Hubs**
- Wednesday, January 11: 1 p.m. - 3:30 p.m.

## SOFTWARE TRAINING

**EndNote Basics**
(*Note: This class is usually full. Please arrive 15 minutes in advance to ensure seating.)
- Friday, January 20: 9 a.m. - 11 a.m.
- Tuesday, January 31: 1 p.m. - 3 p.m.
- Tuesday, February 28: 9:30 a.m. - 11:30 a.m.

**Adobe Photoshop for Beginners**
- Wednesday, January 18: 10 a.m. - noon
- Tuesday, February 21: 9 a.m. - 11 a.m.

**Advanced PowerPoint**
- Wednesday, January 25: 9 a.m. - 11 a.m.
- Monday, February 27: 10 a.m. - 11 a.m.

**PowerPoint for Presentations and Advanced PowerPoint**
(*Combined class - please plan to attend the entire session.)
- Wednesday, February 22: 9 a.m. - 1 p.m.

## LUNCH WITH A LIBRARIAN

These informal, brown-bag lunches are held in Falk Library Conference Room B. Bring your own lunch. Drinks and dessert are provided. See [www.hsls.pitt.edu/services/instruction/lunchlibrarian/](http://www.hsls.pitt.edu/services/instruction/lunchlibrarian/) or call 412-648-1251 for more information.

**Drugs Information @ Your Desktop**
- Wednesday, January 11: Noon - 1 p.m.

**Finding and Using E-Books: Quality Information at Your Fingertips**
- Thursday, January 19: Noon - 1 p.m.

**Advanced Google: Tips and Strategies for Getting More from Google**
- Thursday, February 16: Noon - 1 p.m.

**Google Scholar vs. MEDLINE for Health Sciences Literature Searching**
- Thursday, February 23: Noon - 1 p.m.

## SPECIAL TOPICS CLASSES

Many classes on special topics are offered upon request to groups or individuals. For a list of all HSLS classes, see [www.hsls.pitt.edu/services/instruction/desc](http://www.hsls.pitt.edu/services/instruction/desc). To request a class, call 412-648-8796 or e-mail medlibq@pitt.edu.

## CUSTOMIZED CLASSES

Customized classes can be developed for your department, course, or other group. For more information, see [www.hsls.pitt.edu/services/instruction/customizedinstruction](http://www.hsls.pitt.edu/services/instruction/customizedinstruction).

All classes are open to faculty, staff and students of the schools of the health sciences at the University of Pittsburgh and UPMC. No registration required. Seating for classes is first-come, first-served until the class is full. Classes marked with an asterisk (*) qualify for American Medical Association Category 2 continuing education credit. Detailed course descriptions are available at [www.hsls.pitt.edu/services/instruction](http://www.hsls.pitt.edu/services/instruction).
Introducing www.antimicrobe.org

www.antimicrobe.org is a reference tool for physicians, microbiologists, and pharmacists who are interested in pathogens and antimicrobial agents. Victor L. Yu, professor of medicine, University of Pittsburgh, and chief, Infectious Disease Section, VA Pittsburgh Healthcare System is editor-in-chief of this resource. Content is based upon his textbooks Antimicrobial Therapy and Vaccines, Vol. I: Microbes, and Antimicrobial Therapy and Vaccines Volume II: Antimicrobial Agents. Also contained in this resource is HIV Clinical Manual, edited by David D. Ho.

Each of these texts can be browsed independently by clicking on the specific book link. For instance, to locate a microbial pathogen, click on the Microbes link below the picture of that textbook. Select the specific microbial pathogen listed in alphabetic order within the sections titled Bacteria, Mycobacteria, Rickettsia, Fungi, Viruses, Parasites, and Miscellaneous.

To locate information on a specific antimicrobial agent (e.g. pharmacokinetics, dosing, adverse effects, indications, etc.), click on the Antimicrobial Agents link below the picture of that textbook.

For easy chapter reading a “Sliding Table of Contents” is available to allow simplified navigation through the structured content.

A unique feature of www.antimicrobe.org is the Mycin Query Search, which provides search templates for locating specific therapeutic recommendations from drug choice, dosing, routes of administration and end-point-monitoring. To use this search, click the Mycin Search Query link following the name of any individual pathogen in the Microbes textbook. Contained in the Mycin Query Search is a feature called Guided PubMed Search, providing a quick, albeit limited, pre-defined PubMed search on the given topic.

To access www.antimicrobe.org go to the HSLS Database by Title page under the letter “W” at <www.hsls.pitt.edu/resources/databases/titles/W>.

--Charlie Wessel

An example entry for the pathogen Histoplasma Capsulatum (Histoplasmosis) with Mycin Query Search links.
### HSLS Holiday and Winter Recess Hours

HSLS libraries will maintain regular hours* during the holiday season, *with the following exceptions:*

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FALK LIBRARY</strong></td>
<td>8:30 a.m. - 5:00 p.m.</td>
<td>CLOSED</td>
<td>8:30 a.m. - 5:00 p.m.</td>
<td>9:30 a.m. - 2:00 p.m.</td>
<td>CLOSED</td>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>CLOSED</td>
<td>8:00 a.m. - 5:00 p.m.</td>
<td>CLOSED</td>
<td>CLOSED</td>
<td>8:00 a.m.- 5:00 p.m.</td>
</tr>
<tr>
<td><strong>WPIC LIBRARY</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UPMC SHADYSIDE LIBRARIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 23</td>
<td>8:30 a.m. - 5:00 p.m.</td>
<td>CLOSED</td>
<td></td>
<td></td>
<td></td>
<td>8:00 a.m. - 4:30 p.m.</td>
<td>CLOSED</td>
<td>7:00 a.m. - 3:30 p.m.</td>
<td>CLOSED</td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 25 - 26</td>
<td>CLOSED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 27-29</td>
<td>8:30 a.m. - 5:00 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 30</td>
<td>8:00 a.m. - 4:30 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>January 1 - 2</td>
<td>CLOSED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CHILDREN’S HOSPITAL LIBRARIES</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 23 - 26</td>
<td>CLOSED</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7:00 a.m. - 3:30 p.m.</td>
<td>CLOSED</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 27 - 30</td>
<td>7:00 a.m. - 3:30 p.m.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 31 – January 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*The schedule of *regular hours* for the HSLS Libraries is available at <www.hsls.pitt.edu/about/hours>.