

## “Changing the Face of Medicine” Opens

### *Exhibition Honors Lives and Achievements of America’s Women Physicians*

*They overcame prejudice and discrimination to create and broaden opportunities within the profession. Persistence, ingenuity and ability enabled them to advance in all areas of science and medicine. They are among the very best of America’s women physicians and now they are being saluted in “Changing the Face of Medicine,” an interactive exhibition that opened October 14, 2003 in the first floor of NLM’s Building 38.*

Tenley E. Albright, MD, a Harvard-trained surgeon and the first American woman to earn an Olympic gold medal in figure skating, donned a white jacket and scalpel, not to conduct a medical procedure but to cut the ribbon and officially open

the exhibition. Albright chaired the Ad Hoc Advisory Group that consulted with NLM on exhibition development. She was joined at that ceremony by several faces familiar to NIH, all featured in the exhibition themselves: Dr. Ruth A. Kirschstein, former Acting NIH Director and the first woman to head an NIH Institute; Dr. Vivian W. Pinn, NIH Associate Director for Research on Women’s Health; and Dr. Antonia Novello, former U.S. Surgeon General and current Commissioner for Health for the State of New York. A program later in the day saw remarks by NIH Director Dr. Elias A. Zerhouni and the first woman physician to serve in Congress, Dr. Donna M. Christian-Christensen, Delegate from the Virgin Islands. There was also a performance by a string quartet, using instruments handcrafted by pediatrics pioneer Dr. Virginia Apgar.

“Changing the Face of Medicine” features stories from a rich diversity of women physicians and a broad range of medicine that they practice in communities across the United States.

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**Dr. Tenley Albright (in white lab coat) has just used a scalpel to cut the ribbon, officially opening “Changing the Face of Medicine” at NLM. She is joined by (l. to r.): nephrologist Dr. Nancy Gary; Dr. Elizabeth Fee; Director of NIH’s Office of Research on Women’s Health Dr. Vivian Pinn; NLM Director Dr. Donald Lindberg; pathologist Dr. Mary King (partly obscured); Dr. Antonia Novello; and pediatrician Dr. Mary Ellen Avery. Drs. Albright, Avery, Gary, King, Novello and Pinn are featured in the exhibition.**

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Through personal artifacts, text panels and interactive displays, visitors will learn about:

- The first woman of color to lead a U.S. medical school (Dr. Barbara Ross-Lee);
- The first woman to direct the National Institutes of Health (Dr. Bernadine Healy);
- The chief of dermatology at Kaiser Permanente, who volunteers her time removing tattoos from former gang members (Dr. Nancy Jasso);
- The first woman appointed editor of the Journal of the American Medical Association (Dr. Catherine D. DeAngelis);
- An Army colonel who became the first woman flight surgeon to enter into combat with the 2-229th attack helicopter battalion during the Gulf War (Dr. Rhonda Cornum);
- The first and only woman to be a team orthopedic surgeon in the National Football League (Dr. Leigh Ann Curl);
- A pediatrician and surgeon who became the health correspondent for ABC television’s “Good Morning America,” reporting from around the world on a wide range of medical topics (Dr. Nancy L. Snyderman);
- The first woman appointed director of the Centers for Disease Control and Prevention (CDC) in Atlanta, Georgia (Dr. Julie L. Gerberding); and
- A woman physician who serves as chief medical examiner of Virginia, the state’s highest position in forensic science (Dr. Marcella Farinelli Fierro).

“Women waged a lengthy battle to gain access to medical education and hospital training,” noted Elizabeth Fee, PhD, Director of NLM’s History of Medicine Division. “Since winning those struggles, women from diverse backgrounds have carved out successful careers in areas as diverse as sports medicine, space medicine, and surgery.”

The exhibition has a companion Web site at [www.nlm.nih.gov/changingthefaceofmedicine](http://www.nlm.nih.gov/changingthefaceofmedicine). The site will let people around the world discover the history of America’s women physicians, and learn more about educational and professional resources for those considering medicine as a career. There is a section of the Web site called “Share Your Story,” where people can add stories about outstanding woman physicians they know, whether they are family members, mentors, or their own doctors.

“Women have brought fresh perspectives to the medical profession,” said Donald A.B. Lindberg, MD, Director of the National Library of Medicine. “They have turned the spotlight on issues that had previously received little attention, such as the social and economic costs of illness and the low numbers of women and minorities entering medical school and practice.”

“This exhibition will have the broadest possible appeal,” Lindberg continued. “Although it focuses on the personal and professional triumphs of women in medicine, its lessons in persistence, dedication and excellence will speak to people in all professions—men, women, and young people alike.”

“Changing the Face of Medicine” was curated by Dr. Ellen S. More and Manon Parry, with Kevin Schlesier serving as exhibition coordinator. The exhibition is open to the public and admission is free. Visiting hours are: 8:30 a.m.-5:00 p.m., Monday-Friday (and 5:00 p.m.-9:00 p.m., Thursdays between Labor Day and Memorial Day) and 8:30 a.m. -12:30 p.m. Saturday. NLM is closed Sundays and federal holidays. For directions, security information, and other visitor information, please consult the Library’s Web site at [www.nlm.nih.gov](http://www.nlm.nih.gov).



# The Household Products Database

## *New Site Provides Information on Health and Safety of Everyday Products*

On August 1, 2003, the National Library of Medicine's Division of Specialized Information Services announced the release of the Household Products Database (<http://householdproducts.nlm.nih.gov>), a consumer's guide that provides easy-to-understand information on the potential health effects of more than 4,000 common household products.

Some household products contain substances that can pose health risks if they are ingested or inhaled, or if they come into contact with eyes and skin. NLM's new online resource provides information on these substances and their potential health effects in consumer-friendly language. For more technical information, users can launch a search for a product or ingredient from the product's page into NLM's TOXNET system (<http://toxnet.nlm.nih.gov>), a cluster of databases on toxicology, hazardous chemicals, and related areas.

"The Household Products Database is a natural outgrowth of the work that the Library has done in recent years, educating the public about environmental risks posed by chemicals in the air, soil and water," explains NLM Director Dr. Donald A.B. Lindberg. "Last year, we unveiled Tox Town (<http://toxtown.nlm.nih.gov>), a site that introduces consumers to the toxic chemicals and environmental risks they might encounter in everyday life, in everyday places. With the Household Products site, we go inside and around the user's home and get information about common products and their potential health risks."

NLM has provided an important set of databases for toxicologists and other scientists for many years. The target audience of the Household Products Database, however, is both scientists and the general public. The database allows users to browse a product category, such as 'Pesticides' or 'Personal Care,' by alphabetical listing or by brand name. Products can also be searched by type, manufacturer, product ingredient or chemical name.

Associate Director of SIS Dr. Jack Snyder notes that another intended purpose of the database "is to alert people to what may be present in a product that they're using, and to give them some information that would increase their confidence level with regard to using—or not using—a particular product."

The Household Products Database lets users find out what's in the products under the kitchen sink, in the garage, in the bathroom, and on the laundry room shelf. It is designed to help answer questions such as:

- What chemicals are contained in specific brands and in what percentage?
- Which products contain specific chemicals?
- Who manufactures a specific brand? How can the manufacturer be contacted?
- What are the potential health effects (acute and chronic) of the ingredients in a specific brand?
- What other information is available about such chemicals in the toxicology-related databases of the National Library of Medicine?

An example of how the database can be used might be a homeowner who is trying to decide which algae-killing product to use in her swimming pool. She could select the "Landscape/Yard/Swimming Pool" category in Household Products and click on "algacide." She could then choose several brands to examine for chemical content and possible health hazards.

The record for each product shows her the ingredients from the Material Safety Data Sheet (MSDS). Designed to provide workers and emergency personnel with the proper procedures for handling or working with a particular substance, these MSDS sheets are produced by the manufacturer of the product as required by federal law.

The Household Products Database has had a very enthusiastic initial reception (some two million hits per month), and SIS hopes to improve it based on user needs and feedback.

**For information about this and other databases from NLM's Division of Specialized Information Services, please contact: [tehip@teh.nlm.nih.gov](mailto:tehip@teh.nlm.nih.gov)**

*Thanks to Colette Hochstein, Technical Information Specialist, Vera Hudson, Biologist, and Florence Chang, Information Technology Specialist, all with the Division of Specialized Information Services, for contributing this article.*



# Genetics Home Reference

## *New Web Site Takes the Mystery Out of Genes, Chromosomes and DNA*

When you hear “gene map,” do you think it’s a guide to finding the nearest Gap store? Are you the kind of person who thinks that “genetic markers” are sold at office supply stores?

No problem. Thanks to the National Library of Medicine, you can now find answers to your genetic questions. With the click of a mouse, you can go to the new NLM consumer Web site, “Genetics Home Reference,” at <http://ghr.nlm.nih.gov>. Genetics Home Reference joins [Medlineplus.gov](http://medlineplus.gov) (the consumer site for general medical information) and [Clinicaltrials.gov](http://clinicaltrials.gov) (the site that lists clinical research trials) in the lexicon of NLM’s consumer medical web sites.

By now, most of us have heard and read about the mapping of the human genome, the complete set of chromosomes and the instructional manual for a human being. We understand the basics of genetics but we want to learn more.

Genetics Home Reference is a good place to start. Created for the general public, the site’s language is written at about the high school level. Explanations are straight and simple, written in easily understandable, jargon-free English.

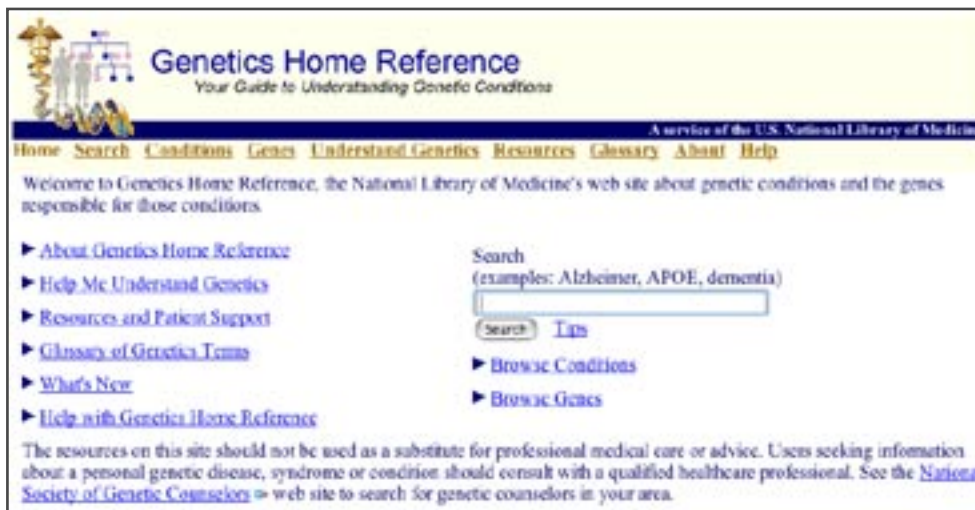
If you’re the sort of person who remembers “a little from their high school biology class,” you can take a quick refresher course by clicking the “Help Me Understand Genetics” page. There you will learn about, for example, how genes can be turned on and off in cells, what it means if a disorder seems to run in a family, and the principles of gene mutation.

If you have questions about a specific disease, you can browse either by disease/condition or by gene. If you type in Alzheimer’s disease, for instance, a page appears where the information is written in a question and answer format. You’ll find out how people inherit Alzheimer’s, the symptoms, and what treatments are available. There’s also a geographic listing of genetic counselors and information for caregivers. In addition, you can easily find details on the specific genes related to Alzheimer’s.

Other features are a glossary of genetic terms, links that take you to clinical trials related to the disorder you’re searching, and more advanced genetic information. Genetics Home Reference will be adding genetic diseases on a regular basis and the information will be updated as needed.

NLM director Dr. Donald A.B. Lindberg explains why the time is right to create such a resource: “The American public is increasingly turning to the Web for medical information. The launch of Genetics Home Reference was a logical step in making genetics and its relationship to disease more understandable to the general public.”

Knowledge about genetics is vital for a true understanding of many diseases, observes Dr. Alexa T. McCray, director of NLM’s Lister Hill National Center for Biomedical Communications, which created the new web site. Often, individuals need to make life-altering decisions because of their genetic background. We hope that Genetics Home Reference can help guide them as they make their medical choices.



Screen capture from Genetics Home Reference (<http://ghr.nlm.nih.gov>).

# NLM Launches NIHSeniorHealth.gov

*New Web Site Features Health Information,  
Talking Web, Easy Access for Older Adults, Visually Impaired*

People 60 and older constitute the fastest growing group of Internet users in the United States. So isn't it time they had their own Web site for reliable health information?

The National Institutes of Health has answered with an enthusiastic "Yes!" by launching NIHSeniorHealth.gov (<http://www.nihseniorhealth.gov>), a new talking Web site with formats and topics tailored to the needs of older people. The senior-friendly site takes advantage of techniques developed by NLM and the National Institute on Aging (NIA) designed to encourage older people to use the Internet, and this site in particular, as a resource for the best information on health and medical research.

The site was unveiled October 23rd at a Capitol Hill briefing requested by Senator Tom Harkin of Iowa. Harkin, whose state is among those with a high percentage of people age 65 and older, said, "As our population ages, good health will be important on both a policy and personal level. For all of us, that starts with the right information on prevention and treatment, which NIH is now providing seniors by means of this new and innovative Web site."

"As the nation's leading health research institution, the NIH must share what it knows with the public about keeping healthy and dealing with disease," noted NIH Director Dr. Elias A. Zerhouni. "This translation of research into everyday use is a critical part of NIH's mission."

"The use of the Internet for health information is increasing dramatically," said Dr. Donald A.B. Lindberg, director of the NLM. "But the small type, low contrast, and difficulty in navigating around many sites have been obstacles for seniors. NIHSeniorHealth.gov corrects many of those problems, as well as providing health information that is the best that NIH can offer."

To do this, the NIA and NLM brought together researchers who study cognition, Web site designers, and communications experts at the two Institutes to fashion a site that is easy for older adults to read, understand, remember, and navigate. For example, the site features large print and short, easy-to-read segments of information repeated in a variety of formats, such as open-captioned videos and short quizzes, to increase the likelihood it will be remembered. Consistent page layout and prompts help older adults move from one place to another on the site without feeling lost or overwhelmed. Each topic provides general background information, quizzes, frequently asked



**U.S. Senator Tom Harkin (D-IA) sits down at the laptop in a Capitol Hill briefing room to practice using NIHSeniorHealth.gov. His able instructors are (from left) NIA Director Dr. Richard J. Hodes, NLM Director Dr. Donald A.B. Lindberg and NLM Web Management Team Lead Joyce Backus.**

questions (FAQs), open-captioned video clips, transcripts for the videos, and photos and illustrations with captions. NIHSeniorHealth.gov also has a "talking" function, which allows users the option of reading the text or listening to it as it is read to them. Finally, in addition to being senior-friendly, the new site complies with Section 508 of the Rehabilitation Act of 1973, making it accessible for persons with disabilities.

The risk of many diseases increases with age, so the site sponsors are focusing on health topics or specific diseases that are of particular interest to older people, including Alzheimer's disease, Alzheimer's disease caregiving, arthritis, balance problems, breast cancer, colorectal cancer, exercise for older adults, hearing loss, lung cancer and prostate cancer. In coming months, topics will include aphasia, diabetes, falls, osteoporosis, sensory loss and vision changes, among others.

Along with the NIA and the NLM, other NIH components contributing topics to the Web site so far include the National Cancer Institute (NCI), the National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) and the National Institute of Deafness and other Communication Disorders (NIDCD). More Institutes and Centers will be working with the NIA and the NLM to bring on the additional topics.

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# NLM Licenses SNOMED CT® for US-wide Use

*Comprehensive Clinical Vocabulary to be Distributed Within UMLS Metathesaurus*

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On July 1, 2003, Health and Human Services Secretary Tommy G. Thompson announced that the Department has signed an agreement with the College of American Pathologists (CAP) to license SNOMED CT®, the College's standardized medical vocabulary system, and make it available without charge throughout the U.S. as part of an ongoing HHS effort to develop the National Health Information Infrastructure. That initiative encourages and aids the widespread use of modern information technology to improve the nation's health care system. The overall goals are reduced medical errors, improved patient care and reduced health care costs.

"Banks and other financial institutions all across the country can talk to each other electronically, which has streamlined customer transactions and reduced errors," Secretary Thompson observed. "We want to do the same thing for the American health care system. We want to build a standardized platform on which physicians' offices, insurance companies, hospitals and others can all communicate electronically, which will improve patient care while reducing the medical errors and the high costs plaguing our health care system."

The Department's actions open the door to establishing a common medical language as a key element in building interoperable electronic medical records systems in the U.S.

Secretary Thompson specifically cited NLM Director Donald A.B. Lindberg, MD, and Associate Director for Library Operations Betsy L. Humphreys for the key role they played in arranging the SNOMED agreement.

With terms for more than 340,000 medical concepts, the College's standardized system has been recognized as the world's most comprehensive clinical terminology database available. The licensing agreement with the CAP will make it possible for health care providers, hospitals, insurance companies, public health departments, medical research facilities and others to easily incorporate this uniform terminology system into their information systems.

The CAP agreement will be administered through NLM, which has issued a 5-year, \$32.4 million contract to the College for a permanent license for SNOMED CT® (Systematized Nomenclature of Medicine Clinical Terms). The licensing agreement includes the core database in both English and Spanish along with regular updates. The terms of the contract include a one-time payment—shared by the Department of Veterans Affairs (DVA), the Department of Defense (DoD) and many HHS agencies—with annual update fees to be borne by the NLM.

NLM will distribute SNOMED CT® through its Unified Medical Language System (UMLS), which incorporates, links, and distributes in a common format 100 different biomedical and health vocabularies and classifications, beginning with the 2004AA version of the UMLS, to be released in April 2004.

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## NLM Classification Updated

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The online National Library of Medicine Classification, available at <http://www.nlm.nih.gov/class/>, was issued in a newly revised edition in July 2003. This revision incorporates all new Index headings resulting from MeSH terms added to the 2003 vocabulary and selected for addition to the Index.

The new edition contains 133 new MeSH concepts and nearly seven hundred index entries were brought

into closer compliance with MeSH; in addition, four new Schedule numbers were added and 40 Schedule records were maintained since the 2002 revised edition was published February 4, 2003.

Requests for further information, plus questions and comments, should be addressed to: [custserv@nlm.nih.gov](mailto:custserv@nlm.nih.gov).

# Chemicals, Jobs and Diseases?

## *Haz-Map Database Shows How They're Related*

Located on the World Wide Web at <http://hazmap.nlm.nih.gov>, Haz-Map is an occupational health database designed for health and safety professionals and for consumers seeking information about the health effects of exposure to chemicals at work. This addition to NLM's growing family of Specialized Information Services (SIS) products links jobs and hazardous tasks with occupational diseases and their symptoms.

Chemicals and biological agents in Haz-Map are linked to industrial processes and other activities, such as hobbies. Occupational diseases and their symptoms are associated with hazardous job tasks and possible exposure

to hazardous agents. Information from textbooks, journal articles and electronic databases such as NLM's Hazardous Substances Data Bank is classified and summarized to create the database. HSDB is part of the TOXNET (<http://toxnet.nlm.nih.gov>) system of databases related to toxicology and environmental health.

Haz-Map's features include: text search capability; browsing by jobs, diseases or agents; searching hazardous agents by adverse effects; searching disease by jobs and findings; and automated searches of TOXNET. Definitions of technical terms are available by selecting hyperlinks to the glossary.



The screenshot shows the top portion of the National Library of Medicine (NLM) Fact Sheets website. At the top left is the NLM logo, a stylized 'M' with rays, followed by the text 'NATIONAL LIBRARY OF MEDICINE'. To the right of this is the large, bold text 'Fact Sheets'. Below the logo and title is a blue navigation bar with white text: 'Fact Sheet Home | Contact NLM | Site Index | Search Our Web Site | NLM Home'. Underneath this bar is another line of navigation links: 'Health Information | Library Services | Research Programs | New & Noteworthy | General Information'. The main heading of the page is 'Fact Sheet Haz-Map'. Below the heading are three images: on the left, three workers in white protective suits and hard hats are gathered around a yellow barrel; in the center, an industrial facility with large white storage tanks and yellow piping; on the right, a tractor is plowing a green field in a rural landscape.

From Haz-Map Fact Sheet, at:  
[www.nlm.nih.gov/pubs/factsheets/hazmap.html](http://www.nlm.nih.gov/pubs/factsheets/hazmap.html).

# “Asian American Health” Web Site Debuts

*Will Serve Rapidly Growing Segment of U.S. Population*

NLM has created a Web site aimed at the health needs of Asian Americans, one of the fastest growing minority populations in the U.S. The site, "Asian American Health," is at <http://asianamericanhealth.nlm.nih.gov>.

Just as special populations have special health needs, they have special health information needs. There are currently 11 million Asian Americans, and they are exceedingly diverse, coming from nearly 50 countries and ethnic groups, each with distinct cultures and traditions. They speak many languages and dialects.

Although Asian Americans in the United States suffer from many of the same health problems as the population at large, certain diseases predominate. For example,

there is a particularly high rate of liver cancer among Asian Americans, and lung cancer is their leading cause of cancer death. Vietnamese women's cervical cancer rate is five times higher than that of Caucasian women.

"There is a wealth of reliable health information in this site that Asian Americans will find useful for themselves and their families," said Donald A.B. Lindberg, MD, director of NLM. "The Web allows us to make it available free and with no registration or other strings attached," he added.

Asian American Health is the second Web site that the National Library of Medicine has created for special populations. The first, ArcticHealth, was launched in 2001.



Screen shot of <http://asianamericanhealth.nlm.nih.gov>.



# A Wise Old Owl Becomes NLM's Latest Customer Service Feature

*"Cosmo" Fits the Bill*

As more and more people go online to search for information, NLM receives hundreds of e-mailed questions each day on its customer service line (custserv@nlm.nih.gov). Because many of them are simple and are asked numerous times each day, the Library decided to develop software that would answer these queries, thus freeing up customer service representatives and reference librarians to answer more complex questions.

Based on software from a company called NativeMinds, Cosmo (Customerservice M. Owl) the wise old owl was the result. Available 24 hours a day, 7 days a week, Cosmo nests at <http://wwwns.nlm.nih.gov/>. Cosmo is familiar with hundreds of Frequently Asked Questions (FAQs). Type your question in the box and up pops an answer.

Want to get directions to the Library? Find out about parking? Just ask Cosmo. Want to know how to find older medical journal articles? Ask Cosmo. Cosmo can also tell you how to participate in a clinical trial, answer a brief question about the Library's history and give you a list of all of NLM's databases. He can also refer users to the basic health information found in MEDLINEplus and respond to drug-related questions with MEDLINEplus drug information.

NLM staff will constantly review the conversation logs and Cosmo will get even smarter over time as his base of knowledge grows and becomes adaptable to new questions. This is one wise owl!



## NLM Licenses SNOMED CT® for US-wide Use

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"We are removing many of the barriers that have discouraged wide use of standardized terminology in U.S. health information systems," said NIH Director Elias A. Zerhouni, MD. "The free availability of SNOMED is a major step forward in facilitating the electronic exchange of clinical health information, which will benefit health care, public health and medical research."

The contract between NLM and the College of American Pathologists comes after three years of negotiations, initiated by NLM and supported by all the agencies participating in the Consolidated Health Informatics ini-

tiative (CHI), which is working to adopt government-wide standards for clinical health data. CHI is the health care component of the Bush Administration's eGov Initiatives, designed to make it easier for citizens and businesses to interact with the government, to save taxpayer dollars and to streamline citizen-to-government transactions.

Details of the SNOMED license arrangement, including a list of the funding agencies, may be found at: [http://www.nlm.nih.gov/research/umls/Snomed/snomed\\_announcement.html](http://www.nlm.nih.gov/research/umls/Snomed/snomed_announcement.html)

# Papers of Florence Sabin and Fred Soper Added to Profiles in Science Archive

*Pair Brings to 11 Number of Notable Scientists Represented*

Profiles in Science ([www.profiles.nlm.nih.gov](http://www.profiles.nlm.nih.gov)), NLM's Web site celebrating 20th century leaders in biomedical research and public health, has added two more luminaries to its archive.



**Dr. Florence Sabin at the laboratory bench (between 1925 and 1938).**

**Florence Rena Sabin, MD**, (1871-1953) was an American anatomist and medical researcher. Her excellent and innovative work on the origins of the lymphatic system, blood cells and immune system cells, and on the pathology of tuberculosis, was well-recognized during her lifetime. She was also a trailblazer for women in science—the first woman to hold a full professorship at Johns Hopkins School of Medicine, the first woman elected to the National Academy of Sciences and the first woman to head a department at the Rockefeller Institute for Medical Research. In her retirement years, she pursued a second career as a public health activist in Colorado and in 1951 received a prestigious Lasker Award for this work.



**Dr. Fred Soper prepares for an inspection tour of Maranhao, Brazil (1920s).**

**Fred L. Soper, MD** (1893-1977) was an American epidemiologist and public health administrator who won a Lasker Award in 1946 for organizing successful campaigns to eradicate yellow fever and malaria between 1927 and 1945. He also made key contributions to the control of typhus fever during World War II and served as director of the Pan American Sanitary Bureau (executive agency of the Pan American Health Organization) from 1947 to 1959. Throughout his career, Soper set new standards for disease control worldwide.

*Launched in 1998, Profiles in Science makes the personal and professional archival collections of prominent scientists, physicians and others who have advanced the scientific enterprise available to the public through modern digital technology.*

# NLM Defines Standard Content Model for Electronic Archiving and Publishing of Journal Articles

*New Tool Will Improve Efficiency, Increase Accuracy*

NLM has announced the creation and free availability of a standard model for archiving and exchanging electronically journal articles.

Since the mid-1990s, scholarly journals have been striving to make their content available on the Web for greater distribution, ease of searching and retrieval, or just to have a web presence. "These electronic files are created to meet the needs of the Internet—usually without much thought given to long-term archiving of the content," says Dr. David J. Lipman, Director of the Library's National Center for Biotechnology Information (NCBI). "Today we release two Document Type Definitions (DTDs) that will simplify journal publishing and increase the accuracy of the archiving and exchange of scholarly journal articles."

NCBI created the Journal Publishing DTD to define a common format for the creation of journal content in XML. The advantages of a common format are portability, reusability, and the creation and use of standard tools. Although the Publishing DTD was created for electronic production, the structures are robust enough to support print publication as well. Built using the same set of elements, the Archiving and Interchange DTD also defines journal articles, but it was created to provide a common format in which publishers, aggregators, and archives can exchange journal content.

These DTDs and the Tagset from which they were created are in the public domain. Complete information and documentation can be found at <http://dtd.nlm.nih.gov>.

To keep the DTD relevant to the publishing and archiving communities, NLM is creating under the PubMed Central Advisory Committee an XML Interchange Structure Working Group to advise on recommended changes and additions to the Tagset.

NCBI will encourage the use of the Publishing DTD to define the incoming data for PubMed Central (PMC; <http://www.pubmedcentral.gov>) for journals that do not already have content in SGML or XML. PMC is NLM's digital archive of life sciences journal literature.

NLM is planning to create other DTDs from the Tagset, including one for textbooks and one for online documentation. Because all of these types of publications will be tagged using the same elements and attributes, publishing tools created for the Tagset will be applicable to all of these document types. This confluence of tagging models will greatly simplify the publication and archiving of content at the National Library of Medicine and in the journal publishing industry in general.

Inquiries about the DTD may be directed to Jeff Beck of the National Center for Biotechnology Information, 301-435-5992 (telephone) or 301-480-0109 (fax).

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## NLM launches NIHSeniorhealth.gov

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Many at NLM had a role in the creation of NIHSeniorHealth.gov. Working with Eve-Marie LaCroix, Chief of NLM's Public Services Division, and NLM Public Liaison Officer Kathleen Cravedi, NLM's Web Management Team, led by Joyce Backus, used NLM's expertise in developing best fit technology to construct a Web site that translated NIA's research into a senior-friendly design. NLM's Wei Ma, Chief of the Applications Branch, Office of Computer and Communications Systems, under the leadership of OCCS Director Dr. Simon Liu, created enhancements to increase the site's accessibility for older adults, including the cutting-

edge "talking" function and the color contrast buttons, for low vision users.

NIHSeniorHealth.gov is expected to serve as a model for Web designers seeking to make sites accessible for older adults. The NIA and NLM have developed a booklet, *Making Your Web Site Senior Friendly: A Checklist*, which gives guidelines that can be used to update any Web site with cognitive aspects of aging in mind. To order a copy of that publication or to obtain further information about the Web site contact the National Library of Medicine at [publicinfo@nlm.nih.gov](mailto:publicinfo@nlm.nih.gov).

## Early Modern Childbirth

The 16th century woodcut shows a pregnant woman sitting in a birthing chair, attended by three women, at least one of whom (seated, at left) is a midwife. This image was published in *Ein schön lustig Trostbüchle von den Empfengknussen und Geburten de Menschen (A Very Cheerful Booklet of Encouragement Concerning the Conception and Birth of Man)* in 1554. The book was written by Jaco Rueff (1500-1558), a surgeon and obstetrician in Zurich. Rueff was responsible for the instruction and examination of midwives in Zurich and, indeed, had copies of his book sent to all the midwives in the region.

Much of Rueff's book is essentially copied from Eucharisu Rösslin's *Der Swangern Frauwen und Hebammen Rosegarten (The Rose Garden for Pregnant Women and Midwives)*, 1513, the first printed work dealing exclusively with obstetrics—and also intended as an instruction guide for midwives. In the later work, Rueff added some new material from his own experiences and placed more emphasis on the use of instruments as aids to childbirth. In this image, for example, one can see the obstetrical instruments and equipment on the table behind the women, whereas in Rösslin's almost identical image, the background is plain. Rueff advocated new obstetrical instruments such as the toothed duck beak forceps and the use of internal and external manipulation for footling (feet first) presentations.

Some version of the birthing stool or chair had been used for millennia there being evidence of its use in Egyptian papyri and the Old Testament. The chair shown here incorporated certain early modern technical innovations, such as the sloping back that allows the birthing woman to recline slightly during contractions. One scholar even argues that this birthing chair was itself a technical innovation inspired by male professionals as a way to gain control over the birthing process and to displace earlier practices in which pregnant women sat on the laps of their birthing attendants. As male midwives and obstetrical attendants gradually wrested control of the birth process from female midwives and from women themselves, the birthing chairs would be replaced by flat beds, these being more convenient to the person in charge of the "delivery."

Birthing chairs are now making something of a comeback in modern obstetrics as case-control studies are



Everything old is new again, apparently— this 16th century woodcut shows an expectant mother in a birthing chair, a device that's making a comeback in the 21st century.

finding that their use may reduce the pain of childbirth, diminish perineal trauma, decrease the need for episiotomies, and increase the mother's satisfaction with her birthing experience.

This article, by Elizabeth Fee and Roxanne Beatty of NLM's History of Medicine Division and Theodore M. Brown of the Departments of History and of Community and Preventive Medicine at the University of Rochester, Rochester, New York, first appeared in the March 2003 issue of the *American Journal of Public Health*. The illustration is from NLM's Prints and Photographs Collection. Most of the Prints and Photographs Collection may be viewed through the online database "Images From the History of Medicine," at <http://www.ihm.nlm.nih.gov/>.

# Meet the NLM Associate Fellows

## *Class of 2003-04 Represents Diverse Backgrounds and Interests*

One of NLM's great success stories is its Associate Fellowship Program. Formerly a one-year postgraduate training fellowship at the NLM, it now includes an optional second-year program component. The Associates Program is designed to prepare librarians for future leadership roles in health sciences libraries and in health services research and, indeed, former Associates hold key posts in many libraries, and medical and information-related institutions, around the U.S.

The newest class of NLM Associate Fellows has now come on board. Here's an introduction to this talented group.

**Theodora A. Bakker** received her Master's of Library and Information Science (MLIS) in August 2003 from the University of Illinois. She has experience as a graduate assistant in the Library of the Health Sciences at the University of Illinois as well as additional experience in the Geology Library. Her undergraduate degree is in philosophy.

**Lonelyss B. Charles** received her MLIS in August 2003 from the University of Pittsburgh. As a Highmark Fellow in the library school, Charles worked on a project to facilitate access to information resources for minority health consumers. She also has several years experience in business and public relations. In addition to the MLIS, she holds a master's degree in education and BA in French and liberal arts.

**Erinn E. Faiks** received her Master of Science in Information (MSI) in April 2003 from the University of Michigan, specializing in the Library and Information Services program within the School of Information. She has four years of library experience in the Public Health Information Services and Access unit of the University of Michigan. She also has experience at the Taubman Medical Library and the English Language Institute Library at Michigan. Her undergraduate training was in Spanish and linguistics.

**Barbara J. Few** received her MSI in April 2003 from the University of Michigan, specializing in the Human-Computer Interaction program within the School of Information. She has experience as an intern at Michigan's Taubman Medical Library. She holds BS and MS degrees in nursing, and comes to the program following a solid career in nursing practice and developing nursing performance improvement programs.

**Julie K. Gaines** received her MLIS in May 2003 from the University of South Carolina. She has experience as a graduate assistant at the Lexington Medical Center Library as well as graduate intern experience developing Web pages at the South Carolina State Library. She also has three years experience supervising children at a children's home. Her undergraduate training was in exercise studies and mathematics.

*continued on page 14*



The NLM Associate Fellows, Class of 2003-04. They are (clockwise, from far right): Lonelyss Charles, Theodora Bakker, Jeffery Loo, Nancy Pulsipher, Erinn Faiks, Julie Gaines, Barbara Few and Andrea Ryce.

# NLM Awards Salute Excellence, Innovation and Length of Service

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November wouldn't be November at the NLM without the eagerly-awaited NLM Honor Awards.

This year's standing-room-only ceremony, held November 17th in the Lister Hill Auditorium, saluted excellence, innovation, special achievement and length of service.

Individual and group Awards for Special Acts or Services went to 204 employees. Quality Step Increases went to 54 members of the NLM staff. Forty-two NLM staffers received length-of-service awards, including Frances Sandridge, Jennie Hunt and Esther Lawrence, who have each given 40 years of service to the federal government.

Other staff members who had received prizes from prestigious organizations outside the Library were also acknowledged for their achievements.

In a new high-tech twist, NLM Executive Officer Jon G. Retzlaff welcomed attendees with videotaped presentation in which members of the NLM staff were singled out for their accomplishments in news footage.

NLM Director Dr. Donald A.B. Lindberg then addressed the audience and awardees, sizing up 2003 as a year of notable accomplishments. Among these, the opening of the "Changing the Face of Medicine" exhibition, the launch of "Go Local" on MEDLINEplus and the addition of Tox Town and the Household Products Database to the Specialized Information Services Division's growing family of consumer resources.

The following employees received awards in 2003:

## NATIONAL INSTITUTES OF HEALTH MERIT AWARDS

**Patricia A. Bosma**, for her dedicated management of the selection and acquisition of the modern biomedical literature for the National Library of Medicine's collection.

**Joseph P. Fitzgerald**, for his organization, coordination and friendly leadership in effectively orchestrating the Turning the Pages historical medical books program.

**Julia C. Player**, for her successful management of NLM's Interlibrary Loan Unit which provides document delivery services to thousands of libraries in the U.S. and most countries abroad.

NLM IT Security Leadership Team Group Award, to **Jules P. Aronson, Rand Huntzinger, Dr. Dar-Ning Kung** and **Dr. Phillip L. Thomas**, for superior work securing the existing network infrastructure and establishing a technological and procedural framework for the long-term protection of NLM's IT assets.

## PHILLIP C. COLEMAN AWARD

**Judy C. Jordan**, for providing equal employment opportunities and fostering a positive work environment for her employees.

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## 2003-04 NLM Associate Fellows

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*continued from page 13*

**Jeffery L. Loo** received his MLIS degree in May 2003 from the University of British Columbia in Vancouver. He has experience as a graduate academic assistant in the Woodward Biomedical Library at UBC and has held various positions at public and academic libraries. He also has experience as a research assistant in a chemistry laboratory, with the Canadian Biotechnology Secretariat, and with the Centre for Health Evaluation and Outcome Sciences. His undergraduate training was in chemistry.

**Nancy Pulsipher** received her MSI in April 2001 from the University of Michigan, specializing in the Library and Information Services program within the School of Information. As graduate research assistant, she worked on projects related to information services for Native Americans. She has three years of reference and library

instruction experience in the Public Health Information Services and Access unit of the University of Michigan. She also has experience in a Patient Education Resource Center and the Social Work Library at Michigan. Her undergraduate training was in humanities and business administration.

**Andrea N. Ryce** received her MLIS degree in May 2003 from the University of British Columbia in Vancouver. She has experience as a graduate academic assistant in the Woodward Biomedical Library at UBC. She has additional varied experience in public and academic libraries, including a project on digitizing and cataloging an editorial cartoon collection. She has a BA in English literature.

For more information on the Associate Fellowship Program: <http://www.nlm.nih.gov/about/training/associate/proginfo.html>

# Paul Rogers Receives Distinguished Service Award

*Congress's "Mr. Health" Has Been NLM's Steadfast Friend*

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With a handshake, a set of handsome bookends and heartfelt words of thanks, Eugenie Prime, chair of NLM's Board of Regents, presented that body's Distinguished Service Award to the Honorable Paul Rogers February 10, 2004.

Rogers served for 24 years as a member of the U.S. House of Representatives, retiring in 1979. In the 1960s and 1970s, he was an ardent supporter of the National Library of Medicine on Capitol Hill.

For example, as a result of the "Rogers Report," emanating from the House Subcommittee on Reorganization, which he chaired, NLM established a research center for biomedical communications. That led to the Joint Resolution of the Congress that created the Lister Hill National Center for Biomedical Communications in 1968. That resolution also called for the construction of a new facility, the Lister Hill Center (Building 38A), and, as Prime noted in her comments, "The efforts of Paul Rogers and his colleagues resulted in securing the funds to make that a reality."

Rogers was also an advisor to NLM Director Dr. Donald A.B. Lindberg's long-range planning initiatives in the mid-1980s. In 1989, he served on the Library's Outreach Planning Panel, which issued an influential report on the importance of improving the dissemination of health information.

Rogers' accomplishments in health policy are considerable. "When I list just some of the legislation he sponsored over his long career in the Congress," Chairperson Prime continued, "you will understand why he came to be known as 'Mr. Health:' the Migrant Health Act; the Clean Air Act; the Health Manpower Training Act; the National Cancer Act; the Heart, Lung, and Blood Act; the Emergency Medical Services Act; the Community Health Centers Act; and the National Health Promotion and Disease Prevention Act."



**Former Congressman Paul Rogers (center) receives the NLM Board of Regents' Distinguished Service Award from Regent Ernest L. Carter, MD, PhD, Director, Telehealth Sciences and Advanced Technology Center, Howard University, and Board Chair Eugenie Prime, Manager of Corporate Libraries, Hewlett Packard Company.**

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Clearly, Rogers' imprint is still seen on many activities at NLM. As Eugenie Prime noted, "The last of the acts I mentioned, the National Health Promotion and Disease Prevention Act, passed in 1976, is especially relevant to what we at the National Library of Medicine are today engaged in. For in it we can see that Paul Rogers was an early proponent of the idea that the federal government has a responsibility to disseminate information directly to the public for the improvement of the public health."

*The NLM Board of Regents serves as the advisory body to: the Secretary, HHS; Assistant Secretary for Health; the Director, NIH; and the Director, NLM, on all important aspects of policy regarding the Library and is the final review body for NLM's extramural grant program.*

# NAMES IN THE NEWS

RECOGNIZING  
AND HONORING  
THE NLM COMMUNITY



**Dr. Valerie Florance**

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**Valerie Florance, PhD**, has been promoted to the position of Deputy Director of Extramural Programs. Dr. Florance has graduate degrees in medical anthropology and library sciences and completed her doctoral studies in information sciences at the University of Maryland. Her research interests center on online presentation of information for clinical problem solving, and her editorial in the *Annals of Internal Medicine*, "The Informationist: A New Health Profession?," coauthored with Dr. Frank Davidoff, has evoked widespread discussion within the medical information community and a new training fellowship. Before coming to NLM in February 2001, Dr. Florance was Project Director for better\_health@here.now at the Association of American Medical Colleges (AAMC) and for IAIMS: The Next Generation. Other past appointments include Director of the E.G. Miner Library at Rochester, and positions at Welch Library at Johns Hopkins and Eccles Library at the University of Utah. In addition to her new responsibilities as Deputy Director, EP, Dr. Florance will continue to serve as Program Officer for a broad portfolio of programs including clinical informatics research, publications and IAIMS, among others.

# NAMES IN THE NEWS...



**David Gillikin**

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**David Gillikin** has been named the new head of the MEDLARS Management Section, Bibliographic Services Division. Before joining the NLM in August, he was responsible for project development and management of Web publishing projects at Highwire Press, including the daily operation and production processing for the 335-journal site hosted by Highwire. From 1996 to 2001, Gillikin worked for the American Association for the Advancement of Science, where he managed the transition of the content of Science and other AAAS publications to the Web. Earlier in his career he worked for BRS Technologies, where he served as project manager for MEDLINE, EMBASE, PDQ and other databases. Gillikin has a master's degree in library science and has completed coursework towards a PhD degree in biochemistry.

**Kathi Canese**, a librarian with the National Center for Biotechnology Information's PubMed team, placed 20th in her age group at the 25th annual Ironman Triathlon World Championship in Kailua-Kona, Hawaii, in October 2003. The talented 45 year old swam 2.4 miles, biked 112 miles and ran a marathon (26.2 miles) in 12 hours, 49 minutes and 4 seconds.



**Kathi Canese**

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## NAMES IN THE NEWS....

**H. Kenneth Walker, MD**, former NLM Board member (1991-95) and chair (1994-95), was the 2003 recipient of Emory University's Marion V. Creekmore Award for



**Dr. Kenneth Walker**

Internationalization. The prize is given each year to an Emory professor or staff member who excels in the advancement of the University's commitment to internationalization. Dr. Walker, professor of medicine and associate professor of neurology at Emory and deputy chief of medicine at Atlanta's Grady Memorial Hospital, has served as co-director of the Atlanta-Tbilisi Healthcare Partnership for more than a decade. This collaborative effort unites medical and academic institutions in the Republic of Georgia with their Atlanta, Georgia counterparts.

**Dr. Ralph P. "Chris" Christenson** died July 18, 2003 at his home in Portland, Oregon. A pioneer in medical education, Dr. Christenson served as chief of customer



**Dr. Ralph Christenson**

products and services at NLM's Lister Hill Center from 1969 to 1974. Trained as a physician, Dr. Christenson gave up a thriving practice in obstetrics and gynecology to assist NLM in the creation of an interactive online computer system (the Abridged Index Medicus) that would evolve into today's MEDLINE. As former NLM Director Dr. Martin M. Cummings observed, "He understood the information needs of health professionals and used his experience wisely in guiding these activities. American medicine is indebted to him for his quiet but effective contributions to better health communications."

## NAMES IN THE NEWS...

**S. Richardson Hill, Jr., MD**, President Emeritus and Distinguished Professor of Medicine Emeritus of the University of Alabama at Birmingham, died July 4, 2003. Dr. Hill served on the NLM Board of Regents from 1978 to 1980 and chaired that body from 1979 to 1980. He was a member of many prestigious committees and advisory groups in the health field and was recognized as one of the nation's leading authorities in the area of health manpower training and the delivery of health care services.



**Dr. Richardson Hill**

**The Honorable Paul G. Rogers**, chair of the non-profit Friends of the National Library of Medicine, has been awarded the Adam Yarmolinsky Medal by the Institute of Medicine. Rogers, an attorney, served in the U.S. House of Representatives for 24 years, during which time he became known as "Mr. Health" because of the important health legislation passed under his leadership. The Yarmolinsky Medal salutes the achievements of an IOM member from a discipline outside the health and medical sciences.



**Hon. Paul Rogers**

Former member of NLM's Biomedical Library Review Committee **Naomi Broering** has been honored as the 2003 recipient of the Medical Library Association's Marcia C. Noyes Award. The award is the highest professional distinction of the MLA, a 6,000-member professional organization. Broering is currently Library Director of the Dr. William C. Herrick Community Health Care Library in La Mesa, California. Under her leadership, the Herrick Library offers both printed consumer health information and Web-based services to community residents, patients and their families.

# Pats on the Back

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- ★ Yahoo!, the popular World Wide Web directory, has named NLM's Household Products Database (<http://houseproducts.nlm.nih.gov>) one of its "NEW & NOTABLE SITES."
- ★ Yahoo! also selected the "Changing the Face of Medicine" Web site one of its "Picks." That site, chronicling NLM's current exhibition on America's women physicians, is at <http://www.nlm.nih.gov/changingthefaceofmedicine/>.
- ★ *U.S. News & World Report* hailed MEDLINEplus ([www.medlineplus.gov](http://www.medlineplus.gov)) as a highlight of the National Institutes of Health's suite of online resources. The article, in the November 17, 2003 issue, also singled out ClinicalTrials.gov (<http://clinicaltrials.gov>) and NIH Senior Health (<http://nihseniorhealth.gov>) for recognition.
- ★ *USA TODAY* chose NLM's "Dream Anatomy" Web site as a "Hot Site" in its Web guide. That site, based on NLM's popular 2002-03 exhibit by the same name, is at <http://www.nlm.nih.gov/dreamanatomy>.
- ★ ClinicalTrials.gov (<http://clinicaltrials.gov>) has been chosen one of the "Top 50" programs in the 2004 Innovations in American Government Awards competition. The prestigious awards are sponsored by the Ash Institute for Democratic Governance and Innovation at Harvard University's Kennedy School of Government. By making it to this round of the competition, ClinicalTrials.gov is in the top 7 percent of the initial applicant pool.
- ★ NLM's Medicinal Herb Garden, located east of the main entrance to Building 38 (the main Library), was a winning entry in the 17th Annual Beautification Awards program, sponsored by the Keep Montgomery County (Maryland) Beautiful Program. The garden is maintained by the Potomac Unit of The Herb Society of America.

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## NLM Awards

*continued from page 14*

### EEO SPECIAL ACHIEVEMENT AWARD

"NLM Reads" Steering Committee Group Award, to **Cassandra R. Allen, Karen B. Casey, Dr. Keith W. Cogdill, James T. Dean, Dr. Stephen J. Greenberg, Yuen Yin K. Kwan** and **Dr. Angela Ruffin**, for their mentoring program which supports NLM employees of all grades, allowing staff the opportunity to discuss issues that promote a more positive and emotionally safe work environment.

### NLM DIRECTOR'S AWARD

**William R. Leonard**, for outstanding work in video production crucial to the continuing development of a quality visual presence for the National Library of Medicine here and throughout the world.

**Melanie A. Modlin**, for advancing the National Library of Medicine's Outreach Program through superior writing and editing and for exemplary management of the Visitors Program.

**Karen D. Riggs**, for significant contributions in leading the award process and achieving a 59% increase in small purchases, while continuing to provide outstanding customer service.

### BOARD OF REGENTS AWARD

**Dr. Stephen T. Sherry**, for his advisory role in employing DNA forensic methods to help identify victims of the World Trade Center tragedy.

### FRANK B. ROGERS AWARD

**Christa F.B. Hoffmann**, in recognition of leadership and vision in the reinvention of the production, dissemination and maintenance of the NLM Classification.

### 2003 MERIT AWARD

**Jane Bortnick Griffith**, as part of a Group under the Office of the Director, NIH, for outstanding leadership in assisting the biomedical research community to implement the Health Information Portability and Accountability Act.

### NIH SPECIAL ACT OR SERVICE AWARDS

**Rita A. Richey**, as part of a Group under the Office of the Director, NIH, for outstanding contribution in the creation of a Standard Operating Procedures Manual which provides a wealth of information for NIH Institute and Center Scientific Review and Evaluation Award Officers and other NIH staff involved in the use of SREA Grant.

# Products & Publications

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## NLM Annual Report Available Free of Charge

NLM's most recent annual report, the 2003 Programs and Services, is now available at no cost. To get a copy, e-mail your request to [publicinfo@nlm.nih.gov](mailto:publicinfo@nlm.nih.gov). Please include your postal mailing address.

## List of Serials Indexed for Online Users, 2003

Although NLM no longer prints this book, the List of Serials indexed is available in a ".pdf" format. NLM designed this resource to provide bibliographic information for serials from which articles are indexed. More detailed bibliographic data and information about indexing coverage for serials cited in PubMed can be found in LOCATORplus, NLM's online catalog, at <http://locatorplus.gov>.

The 2003 edition of LSIOU contains 10,192 serial titles, including 4,579 titles currently indexed for MEDLINE, cited alphabetically by abbreviated title, followed by full title. Download the List of Serials Indexed for Online Users in Adobe Acrobat PDF format: <ftp://nlmpubs.nlm.nih.gov/online/journals/lsiweb.pdf>.

## MLA Bulletin Added to PubMed Central Web Site

In December, the National Center for Biotechnology Information released the full archives of the Bulletin of the Medical Library Association on the PubMed Central Web site (<http://pubmedcentral.gov/>). The BMLA archives go from v.1, 1911 through v.89 n.4, 2001. Then the title is available as the Journal of the Medical Library Association from v.90 n.1 2002 -.

The archives can be viewed directly at: BMLA (v.1 1911 - v.89 n.4 2001) <http://www.pubmedcentral.gov/tocrender.fcgi?action=archive&journal=72>

Journal of the Medical Library Association (v.90 n.1 2002 - ) <http://pubmedcentral.gov/tocrender.fcgi?action=archive&journal=93>

## MeSH Publication Changes

For many years, NLM has published several MeSH publications each year:

- three MeSH "tools" (the Annotated Alphabetic MeSH, the MeSH Tree Structures, and the Permuted MeSH); and

*continued on page 20*

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## Quote Unquote

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*"That is the essence of science: ask an impertinent question and you're on your way to a pertinent answer."*

--Jacob Bronowski (1908-74)  
English historian and mathematician

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*"Knowledge is of two kinds. We know a subject ourselves or we know where we can find information upon it."*

--Samuel Johnson (1709-84)  
English author and lexicographer

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*"Health and intellect are the two blessings of life."*

--Menander (4th century B.C.)  
Greek dramatist

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*Thanks to Erinn Dumas, a student at Virginia State University, Petersburg, VA, and an employee of NLM's Office of Communications and Public Liaison during her breaks from school, for collecting these quotations.*

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## Products & Publications

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*continued from page 19*

- the Medical Subject Headings Supplement to Index Medicus (familarly known as the "Black and White" MeSH), which combines the Alphabetic arrangement and the Tree Structures in a single publication.

Sales of the MeSH tools have been declining steadily for a number of years, while use of the MeSH browser, other resources on the MeSH home page and the MeSH database in Entrez has climbed. Due to the greater coverage, flexibility, and currency of MeSH browser, NLM's own indexers and catalogers no longer use the print publications. The printed MeSH tools do not reflect more than 100,000 MeSH Supplementary concepts, which are updated nightly, nor the infrequent, but highly important, additions to MeSH main headings that are made between annual editions of the vocabulary. The most recent examples of such additions are "Severe Acute Respiratory Syndrome" and "SARS Virus."

In 2004, NLM plans to cease publication of the MeSH "tools" and simultaneously to expand the content in the "Black and White" MeSH. The expanded "Black and White" MeSH will include additional listings (e.g., geographicals, publication types, new headings by category), a primer on the use of the MeSH and more detailed material on indexing and cataloging practices. The "Black and White" MeSH is available from the Government Printing Office and can be ordered separately from printed Index Medicus. NLM will announce ordering information for the "Black and White" MeSH when it becomes available.

### Specialized Information Services List Serv

Want to receive concise updates on the resources, services and outreach efforts in toxicology and environmental health of NLM's Division of Specialized Information Services (SIS)? It's easy. Join the "NLM-Tox-Enviro-Health-L" Announcements List by registering at this Web site: <http://sis.nlm.nih.gov/Tox/ToxListServ.html>

### What Happened to the Unique Identifier (UI)?

MEDLINE citations have in recent years contained two accession number elements, the MEDLINE Unique Identifier (UI) and the PubMed Identifier (PMID). The MEDLINE ID displays as the "UI" element on the MEDLINE display format in PubMed. Beginning with the 2004 version of MEDLINE, NLM will no longer export MEDLINE UI. At that time, the PMID will be the only accession number exported to licensees and used in PubMed. NLM does not believe there is any purpose in having two different identifiers for the same record. Thus, any projects dependent on the MEDLINE UI must be changed to use the PMID. A simple MEDLINE UI/PMID Matcher is available via ftp to assist those who wish to modify links that currently exist based on MEDLINE UIs. It is at: <http://eutils.ncbi.nlm.nih.gov/v/entrez/publisher/uidpmid.cgi/>.

#### **COMING SOON...**

#### **Special Supplement on "Libraries in the Digital Age"**

- ★ What is the role of the library in the 21st century?
- ★ Is there room for both computers and books as libraries reinvent themselves as knowledge management centers?
- ★ What do these new physical and virtual information hubs look like? What exciting models are already in existence? What lessons do they teach?

NLM NEWSLINE wants to clue you in on the robust renaissance that's underway in the world of libraries. Be on the lookout for our upcoming special supplement, "Libraries in the Digital Age."

The following references cite works that discuss the products and services of the NLM. If you know of other appropriate citations for this column, please send reprints or references to Melanie Modlin, Editor, *NLM NEWSLINE*, Office of Communications and Public Liaison, NLM, Bethesda, MD 20894, or e-mail to: mm354i@nih.gov. (NOTE: Some of the articles listed may be outside the scope of the NLM collection and therefore are not available from the Library on inter-library loan.)

Akella AB. On making science freely available. *Science*. 2003 Feb 28;299(5611):1314.

Antani S, Long LR, Thoma GR, Lee DJ. Evaluation of shape indexing methods for content-based retrieval of x-ray images. *SPIE Proc*. 2002;5021:405-16.

Antani S, Long LR, Thoma GR, Stanley RJ. Vertebra shape classification using MLP for content-based image retrieval. In: *IJCNN 2003 [CD-ROM]*. Proceedings of the International Joint Conference on Neural Networks; 2003 Jul 20-24; Portland, OR. Piscataway (NJ): IEEE; c2003. p. 160-65.

Anton B. Issues and impacts of the changing nature of scientific communication. *Optom Vis Sci*. 2003 Jun;80(6):403-10.

Aymard S, Falco L, Dufour JC, Joubert M, Fieschi M. Modeling and implementing a health information provider on the Internet. *Stud Health Technol Inform*. 2003;95:89-94.

Berman JJ. A tool for sharing annotated research data: the "Category 0" UMLS (Unified Medical Language System) vocabularies. *BMC Med Inform Decis Mak*. 2003 Jun 16;3(1):6.

Bickley SR, Glenn AM. The Cochrane oral health group trials register: electronic searching and beyond. *J Dent Educ*. 2003 Aug;67(8):925-30.

Brennan PF, Aronson AR. Towards linking patients and clinical information: detecting UMLS concepts in e-mail. *J Biomed Inform*. 2003 Oct;36(4-5):334-41.

Cantor MN, Sarkar IN, Gelman R, Hartel F, Bodenreider O, Lussier YA. An evaluation of hybrid methods for matching biomedical terminologies: mapping the gene ontology to the UMLS. *Stud Health Technol Inform*. 2003;95:62-7.

Conn VS, Isaramalai SA, Rath S, Jantarakupt P, Wadhawan R, Dash Y. Beyond MEDLINE for literature searches. *J Nurs Scholarsh*. 2003;35(2):177-82.

Crabtree AB. Medical library technology enhancements making access easier and delivery more satisfying. *J Greene Cty Med Soc*. 2003 Sep;61(9):16-7.

CRID: bringing information closer to the needs of its users. *Disasters*. 2003 Jul;Suppl:1-4.

Crowell J, Zeng Q, Ngo L, Lacroix EM. A frequency-based technique to improve the spelling suggestion rank in medical queries. *J Am Med Inform Assoc*. Forthcoming 2004.

Cuggia M, Mougin F, Le Beux P. Indexing method of digital audiovisual medical resources with semantic Web integration. *Stud Health Technol Inform*. 2003;95:715-20.

Delwiche FA. Mapping the literature of clinical laboratory science. *J Med Libr Assoc*. 2003 Jul;91(3):303-10.

Devos P, Dufresne E, Renard JM, Beuscart R. SIGAPS: a prototype of bibliographic tool for medical research evaluation. *Stud Health Technol Inform*. 2003;95:721-6.

Doig GS, Simpson F. Efficient literature searching: a core skill for the practice of evidence-based medicine. *Intensive Care Med*. 2003 Dec;29(12):2119-27. *Epub* 2003 Sep 03.

Dooley EE. Household products database. *Environ Health Perspect*. 2003 Dec;111(16):A875.

Friedman C, Liu H, Shagina L. A vocabulary development and visualization tool based on natural language processing and the mining of textual patient reports. *J Biomed Inform*. 2003 Jun;36(3):189-201.

Fonger GC, Knoblen J, Publicker S, Wexler P, Whiting G. World Wide Web biomedical, chemical, and toxicological information resources from the National Library of Medicine. In: Salem H, Katz SA, editors. *Alternative toxicological methods*. Boca Raton (FL): CRC Press; c2003. p. 473-8.

Ford G, Thoma GR. Ground truth data for document image analysis. In: *SDIUT '03. Proceedings of the Symposium on Document Image Understanding Technology*; 2003 Apr 9-11; Greenbelt, MD. College Park (MD): University of Maryland, Institute for Advanced Computer Studies; 2003. p. 199-205.

Gillespie LD, Gillespie WJ. Finding current evidence: search strategies and common databases. *Clin Orthop*. 2003 Aug;(413):133-45.

Glover J. Searching for the evidence using PubMed. *Med Ref Serv Q*. 2002 Winter;21(4):57-65.

Gore G. Searching the medical literature. *Inj Prev*. 2003 Jun;9(2):103-4.

Happe A, Pouliquen B, Burgun A, Cuggia M, Le Beux P. Automatic concept extraction from spoken medical reports. *Int J Med Inf*. 2003 Jul;70(2-3):255-63.

Hardiker NR. Logical ontology for mediating between nursing intervention terminology systems. *Methods Inf Med*. 2003;42(3):265-70.

Hauser S, Sabir T, Thoma G. OCR correction using historical relationships from verified text in biomedical citations. In: SDIUT '03. Proceedings of the Symposium on Document Image Understanding Technology; 2003 Apr 9-11; Greenbelt, MD. College Park (MD): University of Maryland, Institute for Advanced Computer Studies; 2003. p. 171-7.

Huang Y, Lowe HJ, Hersh WR. A pilot study of contextual UMLS indexing to improve the precision of concept-based representation in XML-structured clinical radiology reports. *J Am Med Inform Assoc.* 2003 Nov-Dec;10(6):580-7.

Jacquemart P, Zweigenbaum P. Towards a medical question-answering system: a feasibility study. *Stud Health Technol Inform.* 2003;95:463-8.

Jain NC. Medline indexes more journals than Index Medicus. *Natl Med J India.* 2003 May-Jun;16(3):177.

Jasco P. MEDLINE plus; Webster's New World Medical Dictionary; X-Plain Tutorials. Online. 2003 Nov-Dec;27(6):56-8.

Jimba M, Joshi AB, Sherchand JB, Wakai S. One journal for Medline. *Lancet.* 2003 Apr 19;361(9366):1388-9.

Kahn TJ, Ninomiya H. Changing vocabularies: a guide to help bioethics searchers find relevant literature in National Library of Medicine databases using the Medical Subject Headings (MeSH) indexing vocabulary. *Kennedy Inst Ethics J.* 2003 Sep;13(3):275-311.

Kim J, Le DX, Thoma GR. Automated labeling algorithms for biomedical document images. In: Callaos N, Margenstern M, Zhang J, Castillo O, Doberkat EE, editors. *SCI 2003. Proceedings of the 7th World Multiconference on Systemics, Cybernetics and Informatics*; 2003 Jul 27-30; Orlando, FL. Vol. 5, Computer science and engineering 1. Orlando (FL): International Institute of Informatics and Systematics; c2003. p. 352-57.

Landro L. Using the Web to evaluate perils in the home. *The Wall Street Journal.* 2003 Aug 14:D5.

Le DX, Thoma GR. Automated document labeling for Web-based online medical journals. In: Callaos N, Chien BC, Dong J, Li W, editors. *SCI 2003. Proceedings of the 7th World Multiconference on Systemics, Cybernetics and Informatics*; 2003 Jul 27-30; Orlando, FL. Vol. 2, Computer science and engineering. Orlando (FL): International Institute of Informatics and Systematics; c2003. p. 411-15.

Lee DH. [Taehan Kan Hakhoe Chi] (The Korean Journal of Hepatology) and Index Medicus(Medline/PubMed)]. *Taehan Kan Hakhoe Chi.* 2003 Mar;9(1):35-41. Korean.

Lee DJ, Antani S, Long LR. Similarity measurement using polygon curve representation and Fourier descriptors for shape-based vertebral image retrieval. *SPIE Proc.* 2003;5032: 1283-91.

Lee DJ, Bates D, Dromey C, Xu X, Antani S. An imaging system correlating lip shapes with tongue contact patterns for speech pathology research. In: Krol M, Mitra S, Lee DJ, editors. *CBMS 2003. Proceedings of the 16th IEEE Symposium on Computer-Based Medical Systems*; 2003 Jun 26-27; New York. Los Alamitos (CA): IEEE Computer Society; c2003. p. 307-13.

Lindberg DA. Biomedical informatics: precious scientific resource and public policy dilemma. *Trans Am Clin Climatol Assoc.* 2003;114:113-20; discussion 121.

Lindberg DA, Mehnert R. National Library of Medicine. In: *Encyclopedia of library and information science.* New York: Marcel Dekker, Inc.; 2003. p. 2013-22.

Long LR, Antani S, Lee DJ, Krainak DM, Thoma GR. Biomedical information from a national collection of spine x-rays: film to content-based retrieval. *SPIE Proc.* 2003;5033: 70-84.

Long LR, Antani SK, Thoma GR. A prototype content-based image retrieval system for spine x-rays. In: Krol M, Mitra S, Lee DJ, editors. *CBMS 2003. Proceedings of the 16th IEEE Symposium on Computer-Based Medical Systems*; 2003 Jun 26-27; New York. Los Alamitos (CA): IEEE Computer Society; c2003. p. 156-62.

Mao S, Kim J, Le DX, Thoma GR. Generating robust features for style-independent labeling of bibliographic fields in medical journal articles. In: Callaos N, et. al., editors. *SCI 2003. Proceedings of the 7th World Multiconference on Systemics, Cybernetics and Informatics*; 2003 Jul 27-30; Orlando, FL. Vol. 3. Orlando (FL): International Institute of Informatics and Systematics; c2003. p. 53-6.

Marquet G, Burgun A, Moussouni F, Guerin E, Le Duff F, Loreal O. BioMeKe: an ontology-based biomedical knowledge extraction system devoted to transcriptome analysis. *Stud Health Technol Inform.* 2003;95:80-5.

Mary V, Le Duff F, Mougin F, Le Beux P. Method for automatic management of the semantic network ambiguity in the UMLS: possible application for information retrieval on the Web. *Stud Health Technol Inform.* 2003;95:475-9.

McBride W, Ferrario C, Lyle PA. Hypertension and medical informatics. *J Natl Med Assoc.* 2003 Nov;95(11): 1048-56.

Moorman PW, van der Lei J. An inventory of publications on computer-based medical records: an update. *Methods Inf Med.* 2003;42(3):199-202.

Murphy LS, Reinsch S, Najm WI, Dickerson VM, Seffinger MA, Adams A, Mishra SI. Searching biomedical databases on complementary medicine: the use of controlled vocabulary among authors, indexers and investigators. *BMC Complement Altern Med.* 2003 Jul 7;3(1):3.

Murphy SA. Research methodology search filters: are they effective for locating research for evidence-based veterinary medicine in PubMed? *J Med Libr Assoc.* 2003 Oct;91(4):484-9.

Ogunyade TO, Oyibo WA. Use of CD-ROM MEDLINE by medical students of the College of Medicine, University of Lagos, Nigeria. *J Med Internet Res [Internet].* 2003 Jan-Mar;5(1):e7. Available from: <http://www.jmir.org/2003/1/e7/>

Poynton MR. Recall to precision: retrieving clinical information with MEDLINE. Clin Nurse Spec. 2003 Jul;17(4):182-4.

Rahman M, Fukui T. Biomedical publication--global profile and trend. Public Health. 2003 Jul;117(4):274-80.

Sankar P. MEDLINE definitions of race and ethnicity and their application to genetic research. Nat Genet. 2003 Jun;34(2):119; discussion 120.

Sarkar IN, Cantor MN, Gelman R, Hartel F, Lussier YA. Linking biomedical language information and knowledge resources: GO and UMLS. In: PSB 2003 [Internet]. Proceedings of the 8th Pacific Symposium on Biocomputing; 2003 Jan 3-7; Lihue, Hawaii. Stanford (CA): Stanford University, Department of Genetics; 2003 Jan 24 [cited 2003 Feb 23]. p. 427-50. Available from: <http://www.smi.stanford.edu/projects/helix/psb03/sarkar.doc>

Savoie I, Helmer D, Green CJ, Kazanjian A. Beyond Medline: reducing bias through extended systematic review search. Int J Technol Assess Health Care. 2003 Winter;19(1):168-78.

Schiavo JH. Searching MEDLINE through PubMed: a guide for dental health professionals. LDAJ. 2003 Fall;62(3):20-1, 28.

Stewart MG, Kuppersmith RB, Moore AS. Searching the medical literature on the Internet. Otolaryngol Clin North Am. 2002 Dec;35(6):1163-74, v-vi.

Stubbs J. Health care: information-packed Web site just what the doctor ordered. Atlanta Journal-Constitution. 2003 Mar 17:A11.

Walker FL, Thoma GR. A SOAP-based tool for user feedback and analysis. In: Nixon C, Burmood J, compilers. InfoToday 2003 collected presentations; 2003 May 6-8; New York. Medford (NJ): Information Today; 2003. p. 313-22.

Wessel CB, Wozar JA, Epstein BA. The role of the academic medical center library in training public librarians. J Med Libr Assoc. 2003 Jul;91(3):352-60.

Xu X, Lee DJ, Antani S, Long LR. Localizing contour points for indexing an x-ray image retrieval system. In: Krol M, Mitra S, Lee DJ, editors. CBMS 2003. Proceedings of the 16th IEEE Symposium on Computer-Based Medical Systems; 2003 Jun 26-27; New York. Los Alamitos (CA): IEEE Computer Society; c2003. p. 169-74.

Yang S, Guo J, Mitra S, Nutter B, Ferris D, Long LR. A wavelet-based multi-spectral codec for efficient detection of cervical neoplasia from encoded cervical images. In: Krol M, Mitra S, Lee DJ, editors. CBMS 2003. Proceedings of the 16th IEEE Symposium on Computer-Based Medical Systems; 2003 Jun 26-27; New York. Los Alamitos (CA): IEEE Computer Society; c2003. p. 68-73.

Yates WD. Electronic archiving with PubMed central--next steps into the future. Can Vet J. 2003 Feb;44(2):101-2.

Zweigenbaum P, Baud R, Burgun A, Namer F, Jarrousse E, Grabar N, Ruch P, Le Duff F, Thirion B, Darmoni S. Towards a unified medical lexicon for French. Stud Health Technol Inform. 2003;95:415-20.

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## Correction

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NEWSLINE regrets that it presented erroneous information about NLM's "Access to Health Information Projects" in a previous issue. The correct list of projects funded through this program in 2003 appears at:

<http://www.nlm.nih.gov/news/ehealth4public.html>

We apologize for any inconvenience.



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