

**DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE**

**NATIONAL LIBRARY OF MEDICINE
BOARD OF REGENTS**

**Minutes of Meeting
May 13-14, 1997**

The 115th meeting of the Board of Regents of the National Library of Medicine was convened on May 13, 1997, at 9 a.m., in the NLM Board Room, Building 38, National Institutes of Health (NIH), Bethesda, Maryland. The meeting was open to the public from 9 a.m. to 3:30 p.m., followed by the closed session for consideration of grant applications until 4 p.m. On May 14, the meeting was reconvened and open to the public from 9 a.m. until adjournment at 11:50 a.m. Dr. Steven Phillips presided as Chair.

MEMBERS PRESENT

Dr. Steven Phillips, Chair
Dr. Tenley Albright
Dr. Marion Ball
Dr. Enriqueta Bond
Dr. Edwin Cortez

Dr. Michael DeBakey
Dr. Raymond Fonseca
Dr. Sherrilynne Fuller
Dr. George Nolan

EX OFFICIO MEMBERS PRESENT

Ms. Wendy Carter
Dr. Mary Clutter
Dr. Kathleen McCormick
LTC. Kristen Raines

Dr. Richard Rowberg
Col. Klaus Schafer
Capt. William Wurzel
Dr. James Zimble

MEMBERS OF THE PUBLIC PRESENT

Dr. Paul Clayton, Columbia-Presbyterian Medical Center
Dr. Vanessa Gamble, University of Wisconsin
Ms. Michele Klein, Children's Hospital of Michigan
Dr. Daniel Masys, University of California, San Diego

FEDERAL EMPLOYEES PRESENT

Dr. William Braithwaite, Office of Assistant Secretary for Planning and Evaluation, HHS
Mr. Anthony Itteilag, Deputy Director for Management, NIH
Dr. Donald A.B. Lindberg, Director, NLM
Mr. Kent A. Smith, Deputy Director, NLM

Dr. Harold Schoolman, Deputy Director for Research and Education, NLM
Dr. Michael Ackerman, Assistant Director for HPCC, NLM
Ms. Suzanne Aubuchon, Office of the Director, NLM
Mrs. Ruth Bortz, Grants Management Office, OEP/NLM
Mr. Fernando Burbano, Director, Information Systems, OCCS/NLM
Ms. Susan Buyer, Office for Health Information Programs Development, NLM
Ms. Kimberly Caraballo, Committee Management Assistant, NLM
Ms. Patricia Carson, Office of the Director, NLM
Mr. Peter Clepper, Division of Extramural Programs, NLM
Mrs. Lois Colaianni, Associate Director for Library Operations, NLM
Dr. Milton Corn, Acting Associate Director for Extramural Programs, NLM
Dr. Roger Dahlen, Biomedical Information Support Branch, OEP/NLM
Ms. Kathleen Gardner, Office of Inquiries and Publications Management, NLM
Mrs. Frances Howard, Office of the Associate Director, OEP/NLM
Ms. Betsy Humphreys, Assistant Director for Health Services Research Information, NLM
Mr. Charles Kalina, Executive Secretary, HPCCIT/NLM
Ms. Bonnie Kaps, Committee Management Specialist, NLM
Dr. Lawrence Kingsland III, Assistant Director for Applied Informatics, NLM
Ms. Lou Knecht, Bibliographic Services Division, LO/NLM
Dr. Christopher Leonard, NIH Postdoctoral Intramural Research Training Award Fellowship, NCBI/NLM
Dr. David Lipman, National Center for Biotechnology Information, NLM
Ms. Eve Marie LaCroix, Public Services Division, LO/NLM
Dr. Yo Matsuo, Visiting Fellow, NCBI/NLM
Dr. Alexa McCray, Educational Technology Branch, LHNCBC/NLM
Mr. Robert Mehnert, Office of Inquiries and Publications Management, NLM
Mr. Dwight Mowery, Grants Management Office, OEP/NLM
Mr. Donald Poppke, Executive Officer, NLM
Dr. Kim Pruit, NIH Postdoctoral Intramural Research Training Award Fellowship, NCBI/NLM
Ms. Alberta Sandel, Office of the Director, NLM
Dr. Hugues Sicotte, NIH Postdoctoral Intramural Research Training Award Fellowship, NCBI/NLM
Dr. Elliot Siegel, Associate Director, Health Information Programs Development, NLM
Dr. Melvin Spann, Deputy Associate Director, SIS/NLM
Dr. Susan Sparks, Division of Extramural Programs, NLM
Ms. Karen Wallingford, Office of Health Information Programs Development, NLM
Dr. Yanli Wang, Visiting Fellow, NCBI/NLM

I. OPENING REMARKS

Board Chairman Steven J. Phillips, M.D. welcomed the Regents and guests to the 115th meeting of the Board of Regents of the National Library of Medicine. Dr. Phillips noted that this was the last Board meeting for him and for Dr. Edwin M. Cortez. NLM Director Dr. Donald A.B. Lindberg presented them both with mementos of their service on the Board.

II. REMARKS ON BEHALF OF THE SURGEON GENERAL

Dr. Kathleen A. McCormick, Senior Science Advisor of the Agency for Health Care Policy and Research, noted that Dr. David Satcher, Director of the Centers for Disease Control and Prevention, is the designated occupant (although his name has not yet been formally submitted) of a position that will combine Surgeon General and Assistant Secretary for Health. The current acting Assistant Secretary for Health is Dr. John Eisenberg (who is the new Administrator of the Agency for Health Care Policy and Research). Dr. McCormick announced that Dr. Audrey Manley will be Acting Surgeon General until July 1, 1997.

III. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Regents approved without change the minutes of the January 29-30, 1997, meeting.

IV. FUTURE MEETING DATES

The Board of Regents will meet next on September 23-24, 1997. Next winter's meeting will be January 27-28, 1998. The proposed dates of May 12-13, 1998, were accepted and confirmed for the meeting next spring.

V. REPORT FROM THE NLM DIRECTOR

Dr. Lindberg reported that the President's FY 1998 budget for the NLM is \$155,968,000, an increase of 3.7 percent over the FY 1997 appropriation. There are earmarks of \$2 million each for High Performance Computing and Communications and Genetics of Medicine, and close to \$1 million for inflation in Library services expenditures. The ultimate fate of the President's FY 1998 budget will not be known for some time. The House appropriation hearings went well, Dr. Lindberg said, focusing on NLM's HPCC-related programs. Several members of the House authorization committee and some 25 staff recently visited the NIH for a series of presentations; NLM was selected to show off the Visible Human Project, which the NLM Director did. Dr. Lindberg, who is the U.S. G-7 representative for health matters, reported briefly on that subject. One of the well-received projects is to establish a multilingual base for the Visible Human; others, reported to the Board at the last meeting, involve the quality of international Internet communications lines and the health data "Smart Card." NLM's Dr. Kingsland is leading our work with the Smart Card. Dr. Lindberg asked NLM Deputy Director for Research and Education, Dr. Harold M. Schoolman, to update the Board on the subject of the World Intellectual Property Organization (WIPO) treaty on database protection. The treaty has been put aside temporarily, so it is no longer the pressing issue that it was when the Board heard about it at the last meeting. The Register of Copyrights held a meeting yesterday where she said that the Congress has charged her office with producing a report (due at the end of June) detailing the pros and cons of the issue. It is unclear at this time what any subsequent legislation introduced into the Congress will contain, Dr. Schoolman said. The NLM Director reported that President Clinton has announced the formation of a 20-member Advisory Committee on High

Performance Computing and Communications, Information Technology, and the Next Generation Internet. Regent Dr. Sherrilynn Fuller, who was appointed a member, will be attending the first meeting of the Committee this week. Dr. Lindberg announced that NLM is participating in the NIH African Malaria Initiative. This initiative stems from a meeting in Dakar, Senegal, in January 1997, where NIH Director Harold Varmus committed the NLM to help establish an information infrastructure in Mali so that the malaria research community there will have access to their colleagues around the world via the Internet. In the area of new NLM staff, Dr. Lindberg asked Dr. David Lipman, Director of NLM's National Center for Biotechnology Information, to present several new staff. Dr. Yo Matsuo and Dr. Yanli Wang, both appointed as Visiting Fellows; Dr. Hugues Sicotte, Dr. Christopher Leonard, and Dr. Kim Pruit, who were selected to receive NIH Postdoctoral Intramural Research Training Award Fellowships, were also introduced by Dr. Lipman.

VI. REMARKS BY THE NIH DEPUTY DIRECTOR FOR MANAGEMENT

Mr. Anthony Itteilag reported that NIH is responding to a request from Rep. John Porter (R-IL) to have a study conducted of its administrative resources and practices with the goal of (1) maximizing how they serve NIH research purposes and (2) assuring that they are effective and efficient. Administration includes, for example, budget, procurement, grant processing, and information technology. This study is related to the government-wide Reinvention Initiative, spearheaded by Vice President Gore. NIH has been told by the Congress to reduce its "research management and support costs" to the 1995 level, and then to maintain this level in 1996 and 1997. The present review is being conducted by an outside group--Arthur Anderson and Company. A final report is on track to be delivered by the end of the summer. A second matter reported by Mr. Itteilag was that of information technology: he is the acting NIH Chief Information Officer (CIO) while a permanent, high-level CIO is being recruited who would report directly to Dr. Varmus. The organizational structure for information technology within the Director's Office needs to be looked at. At present, there are several areas of information technology expertise at NIH: the Division of Computer Research and Technology (a major NIH component), an Information Resources Management Policy Office, and a separate telecommunications operation within the Office of Research Services (the last two are within Mr. Itteilag's operation). These three will be combined under the new CIO. A final area, and perhaps the most important, is the need for an NIH-wide strategy to manage its information technology, for example, standards for e-mail, a secure internal and external network environment, World Wide Web standards and features, a centrally coordinated electronic directory, and so forth.

VII. REPORT ON PRICING POLICY

Mr. Kent Smith, NLM Deputy Director, reported on the deliberations and recommendations of the NLM Pricing Committee, set up more than a year ago to review NLM's database pricing policies and practices. The NLM Act permits the Library, with the advice of the Board of Regents, either to charge for services or to provide them free as a public service. Over the years, NLM has charged for some (access to the MEDLARS databases and interlibrary loan, for example), and provided others

free (reference assistance, onsite access). Mr. Smith described the pricing practices and how they have evolved between 1970 and the present. In recent years there has been a shift in attitude on the part of various Congressional committees; the emphasis is now less on recovering costs and more on providing more widespread access. By FY 1997, language in the Congress Report embraced the Internet as a route for delivering more health information to more people and the NLM received appropriated funds that would allow it to reduce its fees while serving more health professionals, especially those in rural and urban medically underserved areas. The Clinton Administration is encouraging Federal agencies to use the World Wide Web to deliver more health information to both health professionals and the public. At a recent House Appropriations Committee hearing, NLM's Director testified that the Library is exploring whether it would be possible to offer MEDLINE without charge to those who use the Web. He also said that NLM was almost ready to announce a service known as PubMed, which will allow users to request the full text of medical journal articles cited in MEDLINE. Several weeks later, Dr. Michael DeBakey, in providing citizen testimony before that Committee, said that "The Library could provide access to its immense MEDLINE database of references and abstracts to all citizens of the U.S., without charge over the World Wide Web."

Mr. Smith said that the NLM Pricing Committee, after carefully weighing all factors, is recommending that the Library enter into a transition plan that will allow for the introduction of free MEDLARS service for Web users and to make provision, through subsidy, for health professionals who are located in areas where there is no local Web access. This recommendation was bolstered the finding that NLM's costs are dropping because of new systems architectures, less reliance on value-added telecommunications networks, reduced client search software costs, and a projected reduction of administrative costs related to registering and billing users. The greatly reduced bottom line gap between costs and available funds would be \$4 million, a figure, Mr. Smith said, that is administratively manageable. The Committee is recommending the following principles for future access to MEDLARS:

- There will be a single Web-based system, with a choice of simple or sophisticated search interfaces.
- All Web-based access will be free, beginning within the next month or so.
- There will be no registration required. This will alleviate any privacy concerns that the general public might have.
- Health professionals without Web access will be subsidized.

On the issue of subsidization, Mr. Smith reported that, as a test, he had staff look into online access in South Carolina. A 1989 outreach study showed that users in only 18 of 46 counties had MEDLARS access through the value-added telecommunications networks. Today, there are MEDLARS users in 42 counties. In only 5 counties are there MEDLARS users who do not have local Internet access, but even in these cases users can secure access at 25 cents per call in a neighboring county. As a last point, Mr. Smith said that in the last few days the Federal Communications Commission has announced a program of support for libraries and schools to connect to the Internet under provisions of the 1996 Telecommunications Act.

represented on the Council DCAL has four goals to establish local collaborations that would train and benefit all members; to strengthen HIV/AIDS collections with books, serials, and videos, to establish a DCAL presence on the World Wide Web, with PCS at each site, and to promote DCAL through community outreach Among the information resources provided by DCAL are an online catalog, the health reference center database, NLM's AIDS databases, the WWW site, and local library resources The coalition office fielded 455 reference queries in 13 months--from the HIV-affected community, students, health professionals, and HIV organizations The web sites and linked PCS were heavily used. Training was critical and needed to be ongoing, Ms. Klein said Forty-eight sessions of beginning and advanced courses were held, with 238 trainees--community organization staff, cases managers, library staff, nurses, ministers, and volunteers Among the lessons learned. DCAL should have emphasized more the out-patient clinics, modem access (14.4 kilobits/sec) is too slow for many purposes, meeting attendance was variable (and improved greatly when refreshments were served), access to NLM's Internet Grateful Med was problematic via modem (but there was no problem when a direct Internet connection was used), refresher training courses were needed, many users were not familiar with personal computers, and there was "information overload" for many web users The project brought a new perspective to the librarians involved and brought them closer to the patients they ultimately serve DCAL is a true outreach project in the sense that it takes a variety of people outside of their own organization to work with others

Following Ms Klein's presentation, Dr Tenley Albright said that this project demonstrates many of the facets of outreach that the Board has been concerned with in recent years The idea of using a public library as a prominent consortium member now seems obvious, but not long ago we were still discussing the propriety of whether and how to provide information directly to the public

Dr. Lindberg said that he was disappointed to hear about the problems they had in connecting to Internet Grateful Med via modem, the problem seems to lie with the local Internet Service Provider

X. REPORT FROM THE NATIONAL CENTER FOR BIOTECHNOLOGY INFORMATION

Dr. David Lipman, Director of the NLM's NCBI, reported that at its most recent meeting, the NCBI Board of Scientific Counselors reviewed favorably the work of senior scientist Dr. Stephen Altschul on statistical approaches to sequence analysis The Counselors also discussed GenBank and related services, they advised that the NCBI phase out the flat-file CD-ROM version of GenBank.

Dr. Lipman also briefly reported on the International Advisory Committee for the Nucleotide Sequence Databases, the group that reviews the work of the three international centers that handle DNA sequences (GenBank at NLM/NIH, EMBL at Cambridge, U K , and the DDBJ at the Center for Information in Biology in Japan) There is an informal collaborators meeting to discuss technical issues that precedes the meeting of the International Advisory Committee Dr. Lipman described several of the agreements arrived at involving, for example, retaining original accession numbers as sequences are subsequently changed or corrected, and also the Centers starting to accession protein sequences One issue that is problematic for the NCBI is the proposal to call all three databases by

one name. Dr. Lipman said that for several reasons (which he enumerated), the three databases are not, in fact, equivalent.

XI. REPORT OF THE NOMINATING COMMITTEE

Dr. James Zimble, Chair of the Nominating Committee, placed in nomination the name of Dr. Michael DeBakey for Chairman of the Board of Regents. Dr. DeBakey was elected unanimously.

XII. REPORT FROM EXTRAMURAL PROGRAMS

Dr. Milton Corn, NLM Acting Associate Director for Extramural Programs, reviewed NLM's research grant program over the 15-year period 1982-1996 with focus on changes in the informatics subfields receiving funding. Review was restricted to RO1 (investigator-initiated research projects), and R29 (FIRST awards to new investigators with an appropriate research project). The subfield classification system used was adapted from the table of contents of the 1996 Yearbook of Medical Informatics. During this period, NLM awarded 108 grants in these two research categories. Resource and training grants were not included.

Results by 5-year periods (number of grants):

Knowledge Processing	24
Biotechnology	19
<i>Cognition/Education</i>	16
Computerized PT Record	15
Information Systems	15
Decision Support	12
Image/Signal Processing	6
Health Care Management	4

First 5-year period vs. third 5-year period (percent of total for each period):

	<u>1982-1986</u>	<u>1992-1996</u>
Knowledge Processing	36	13
<i>Biotechnology</i>	4	12
<i>Cognition/Education</i>	20	8
Computerized PT Record	4	18
Information Systems	14	13
Decision Support	18	13
Image/Signal Processing	4	10
<u>Health Care Management</u>	<u>0</u>	<u>13</u>
TOTALS	100%	100%

[Material in italics not original]

In general, numbers were too small for statistical analysis, but several trends were of interest: relative drop in knowledge processing, a basic research area relative drop in education-related projects, predictable increases in biotechnology, signal processing, and health care management

New areas of interest, not surprisingly, attract an increased number of grants with inevitable decrease in awards to the other categories. However, the changes are not uniform and it does appear that interest in the various subfields of medical informatics has shifted over the years, and will probably continue to do so. A similar analysis performed on all applications received, rather than only on those receiving awards, would be of interest.

XIII. HEALTH STANDARDS OF THE NII: DATA STANDARDS AND PRIVACY ISSUES

Betsy L. Humphreys, NLM Assistant Director for Health Services Research Information, said that in any discussion of using the NII for health care and public health, two concerns are repeatedly voiced: the need for privacy protection and the need for health data standards. NLM has a strong interest in improving methods for protecting electronic health data and in promoting health data standards so that the full potential of health applications of advanced information technology can be achieved. The passage of the Health Insurance Portability and Accountability Act of 1996 (HIPAA) has substantially improved the outlook for positive action on both privacy and data standards.

Dr. William Braithwaite, Senior Policy Advisor, Office of the Assistant Director for Planning and Evaluation, HHS, was instrumental in drafting the standards and privacy provisions of the law and now co-chairs the implementation effort. He described the law's requirements and the current status of implementation. In late 1995, NLM commissioned and provided the principal funding for a National Research Council study of "best practices" for protecting the privacy of electronic health data. Dr. Paul Clayton of Columbia-Presbyterian Medical Center and chair of the NRC study committee discussed the report. The results of the study are being reviewed and will be applied as appropriate by the 19 telemedicine projects NLM funded in September 1996. Some of these projects are particularly focused on testing advanced techniques for protecting electronic health data.

Dr. Daniel Masys of the University of California, San Diego described one of these efforts. Although the NRC study and the NLM/AHCPR Large-Scale Vocabulary test discussed at the last Board meeting were initiated well before the passage of HIPAA, the results of both are arriving at a time when they can provide useful information to those implementing the new law.

Health Insurance Portability and Accountability Act of 1996: Progress on Implementing Standards

Dr. Braithwaite briefly described the goals of the Kennedy-Kassebaum Health Insurance Portability and Accountability Act of 1996 to improve the efficiency and effectiveness of the health care system by standardizing the electronic data interchange of certain administrative financial transactions. It assigns the HHS Secretary the responsibility for adopting standards for health care transactions, unique health identifiers, code sets, security, and privacy. These standards will apply to all health

plans, clearinghouses, and those providers who choose to interact electronically and will supersede most related state laws. An expanded National Committee on Vital and Health Statistics serves as an advisory body to the Secretary and to the Congress on these issues. The implementation time line is very short: draft privacy regulations are to be submitted to the Congress by this August; by February 1998, all standards must be adopted by HHS; by August 1999, Congress must enact privacy legislation that covers individually identifiable health information in general (or, in the absence of Congressional action, the HHS Secretary has the power to issue privacy standards by February 2000). February 2000 is also the deadline for compliance with the standards adopted earlier. The HHS Secretary and the National Committee for Vital and Health Statistics are to make recommendations to the Congress regarding any actions needed to promote full electronic medical records.

Dr. Braithwaite briefly described the management team structure within HHS that will manage the implementation of the requirements. Dr. Lindberg commented on the tight timetable for implementation of the standards and asked about plans for testing, for example, in specific states, before national deployment.

For the Record: Protecting Health Information, a Recent Report of the National Research Council

Dr. Paul Clayton, Chair of the Department of Medical Informatics and Director of Clinical Information Services at Columbia-Presbyterian Medical Center in New York City, reported on the recently released National Research Council study titled *For the Record: Protecting Electronic Health Information*. He chaired the NRC committee that produced the study, which was commissioned and principally funded by the National Library of Medicine. The object of the study was to identify today's "best practices" and the obstacles to making such best practices widespread. Dr. Clayton briefly outlined the advantages of having patient records organized and available in electronic form. The threat to privacy is greater from insider abuse from unauthorized outside or hacker intrusion, he noted. The NRC Committee agreed that the biggest threat was that economic decisions about individuals would be made by employers and others on the basis of information about current and potential health problems. Patient information now legally flows in many directions after it leaves the primary care site: insurance claims, pharmacy transaction data, immunization reports, birth certificates, communicable disease data, occupational therapy data--all go different places, and their safeguards are usually not adequate. The Committee made a number of technical recommendations that could be implemented in the short term by 90% of health care providers. There were also recommendations in the area of institutional policy, both those that could be implemented immediately, and longer term recommendations. One recommendation was that each institution should designate an official to be responsible for privacy issues. Also, patients should be made aware when they sign consent forms of all the places their data might go. An audit log--tracking every person who sees a record--is probably the biggest deterrent to the abuse of information, Dr. Clayton said. In sum, the NLM's investment produced a valuable report: now we must see whether its recommendations are considered, discussed, and implemented.

Patient-Centered Access to Secure Systems Online (PCASSO): Picturing Private Health Data on the Public Internet

Dr. Daniel Masys said that the PCASSO project at the University of California (San Diego), funded by the NLM, applies technological solutions to some of the problems of systems security addressed in the National Research Council study. These include user authentication, access controls, audit trails, and protection of external electronic communications, among others. Security cannot be just be added to an existing system, he said, but must be derived from the development process and design specification when building a system. The purpose of PCASSO is to provide secure access over the Internet for electronic patient information by enabling providers and patients to view medical data online and to do this in a way that is published and verifiable so that others can use the architecture. PCASSO recognizes five roles: primary and secondary caregivers, patient, researcher, and administrator. The system has a "high-assurance architecture," that is, role-based access privileges are at the level of the operating system, not the application. Dr. Masys said that the project is about seven months into Phase One--off-the-shelf (when available) components are being built and integrated into PCASSO. He described several of the components being used for storing and encrypting data and said that the system will soon be tested in a laboratory setting. Phase Two will be the deployment of the system within the UCSD health care environment. This will include a subset of the 5 hospitals, 45 affiliated community sites, 19,000 annual inpatient admissions, and 590,000 annual outpatient visits that make up the UCSD system. Phase Two will provide a point and click interface to clinical data for providers and patients, e-mail notification of changes to the record, and a viewable audit trail of who has been looking at the records. There will be an "FDA-like" evaluation to find out if the system is safe and effective. One important question to be answered is what will be the effect of giving patients easy day-to-day access to the records? Will PCASSO increase beneficial communication between providers and patients? We have already learned that military security models are not well suited for health care and that current Java security measures are not sufficient. One avenue to solving this may be to impose draconian software discipline on the client stations.

In response to a question from Dr. Sherrilynne Fuller, Dr. Masys said that the security constraints that prevent unauthorized access (for example, a user must have a "named relationship" with the patient) could be overridden in an emergency. Also, the medical library has an important role in PCASSO--the librarians will install the software on user workstations, provide initial training to the users, and then be a resource for answering inquiries.

XIV. REPORT FROM THE REGENTS OUTREACH SUBCOMMITTEE

Dr. Tenley Albright gave a brief report on yesterday morning's meeting of the Board's Subcommittee on Outreach and Public Information. She distributed a selection of newspaper and magazine clippings about NLM's programs culled from the past several months. Dr. Michael DeBakey (chair of the Subcommittee) is helping NLM make a 30-second PSA on "good information is the best medicine." He will also help make the announcement about free MEDLINE, that was discussed by the Board yesterday. Dr. Albright said that it is gratifying to see the NIH Director cite in his Congressional

testimony the Library's Human Gene Map and Visible Human Project as examples of successful NIH initiatives. In sum, she said, the NLM has made great strides in outreach over the past several years.

XV. THE BLACK HOSPITAL MOVEMENT: 1920-1945

Dr. Milton Corn, Acting NLM Associate Director for Extramural Programs, said that the Board does not often hear about the NLM publication grant program. Small grants to scholars for up to 3 years help support the preparation of book-length manuscripts; many of these have been in the history of medicine. Dr. Corn introduced to the Board Dr. Vanessa Gamble, an Assistant Professor of the History of Medicine at the University of Wisconsin, who received such a grant. Using slides to illustrate her talk, she spoke to the Regents about her research on "The Black Hospital Movement, 1920-1945." Her work focuses on the movement by black medical leaders to improve black hospitals as way to maintain accreditation and to provide most of the opportunities for black medical professionals to train and practice during that era. Dr. Gamble is now preparing the manuscript for publication.

CLOSED PORTION OF THE MEETING - May 13, 1997 3:30 p.m. - 4:00 p.m.

This portion of the meeting was closed to the public in accordance with the determination that it was concerned with matters except from mandatory disclosure under Sections 552b(c)(4) and 552(c)(6), Title 5, U.S. Code and Section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2).

There was a discussion of procedures and policies regarding voting and confidentiality of application materials, committee discussions and recommendations. Members absented themselves from the meeting during discussion of and voting on applications from their own institutions, or other applications in which there was a potential conflict of interest, real or apparent. Members were asked to sign a statement to this effect.

Grant Review

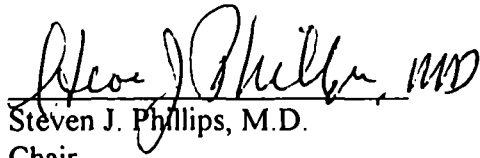
The Council reviewed 56 applications requesting \$40,043,661 and recommended 42 applications with a total cost of \$23,430,134.

XVI. ADJOURNMENT

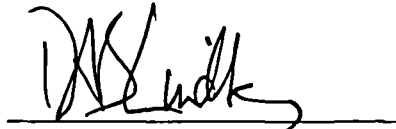
The meeting was adjourned at 11:50 a.m.

CERTIFICATION

I hereby certify that the foregoing minutes are accurate and complete



Steven J. Phillips, M.D.
Chair
Board of Regents, NLM



Donald A.B. Lindberg, M.D.
Director
National Library of Medicine

ATTACHMENTS

1. Roster - NLM Board of Regents (Attachment A)
2. Meeting of the Extramural Programs Subcommittee was held from 2 p.m. to 3 p.m. on May 12, 1997. (Attachment B)
3. Meeting of the Subcommittee on Pricing of NLM Services was held from 3 p.m. to 4 p.m. on May 12, 1997. (Attachment C)
4. Meeting of the Subcommittee on Outreach and Public Information was held from 8 a.m. to 9 a.m. on May 13, 1997. (Attachment D)