AGENDA

58th Meeting of the

BOARD OF REGENTS

9:00 a.m., May 25-26, 1978

Board Room
National Library of Medicine

MEETING OPEN: All day on May 25 and from 9:00 to 11:00 a.m. on May 26.
MEETING CLOSED: From 11:00 a.m. to adjournment on May 26 for the review of grant applications.

. CALL TO ORDER AND INTRODUCTORY REMARKS
Dr. Martin M. Cummings

I. REMARKS BY THE ASSISTANT SECRETARY FOR HEALTH
Swearing-In of Regents
Dr. Julius B. Richmond

II. REMARKS BY THE DIRECTOR, NIH
Dr. Donald S. Fredrickson

V. ROLE OF THE BOARD OF REGENTS AS SEEN BY PAST CHAIRMAN
Dr. Joseph F. Volker

. CONSIDERATION OF MINUTES OF LAST MEETING
TAB I
(Orange Book)
Dr. Martin M. Cummings

I. DATES OF FUTURE MEETINGS
1978 and 1979 Calendars
TAB II

Selection of Dates for 1978 Fall Meeting:
October 5-6 (Thursday-Friday) or
October 12-13 (Thursday-Friday)

Selection of Dates for 1979 Winter Meeting:
January 25-26 (Thursday-Friday) or
February 1-2 (Thursday-Friday)

Proposed Dates for 1979 Spring Meeting:
May 24-25 (Thursday-Friday)

COFFEE BREAK

4/10/78
VII. OVERVIEW

A. History, Organization, and Management  TAB III  Dr. Martin M. Cummings  Mr. Melvin S. Day

B. Budget, Personnel, and Lister Hill Center Building  TAB IV  Mr. Kent A. Smith  Dr. Faye G. Abdellah, and  Admiral J. William Cox, Discussants

C. Library Operations  TAB V  Dr. Joseph Leiter  Dr. Cecil G. Sheps, and  Mr. James F. Williams, Discussants

(Photograph of Board of Regents in front of Library.)

LUNCH CATERED IN CONFERENCE ROOM "B"

D. Computer and Communications Services  TAB VI  Mr. Harry Bennett  Mr. Alfred R. Zipf, Discussant

E. Specialized Information Services  TAB VII  Dr. Henry M. Kissman  Dr. Kelly M. West, Discussant

F. Integration of NMAC and LHNCBC  TAB VIII  Dr. Harold M. Schoolman

1. National Medical Audiovisual Center Plans  Tab A  Dr. Myron J. Adams, Jr.  Dr. S. Richardson Hill, Jr. Discussant

2. Lister Hill National Center for Biomedical Communications Plans  Tab B  Dr. Lionel Bernstein  Dr. Thomas C. Chalmers, Discussant

G. Extramural Programs  TAB IX  Dr. Ernest M. Allen  Dr. Doris H. Merritt, and  Dr. Nicholas E. Davies, Discussants

COFFEE BREAK

H. International Programs  TAB X  Miss Mary E. Corning  Dr. Kelly M. West, Discussant

I. Forward Plan  TAB XI  Mr. Davis B. McCarn  Board Members

Discussion of Forward Plan
VIII. REPORT OF THE NOMINATING COMMITTEE -
Election of Chairman

Dr. Faye G. Abdellah

RECESS

DINNER .......................................................... Bethesda Naval Officers' Club
Cocktails (Cash Bar) ........................................ 7:00 p.m. "Patio Room"
Dinner (Dutch Treat) ....................................... 8:00 p.m.

SPEAKER: Dr. David A. Hamburg
President
Institute of Medicine

TOPIC: "Cutting Edges in Health Policy"

(List of dinner transportation arrangements, where appropriate, in agenda folder.)

RECONVENE: 9:00 a.m., Friday, May 26, 1978

IX. REMARKS BY NEW BOARD CHAIRMAN

X. ROLE OF NLM AS SEEN BY PAST CHAIRMAN

Dr. W. N. Hubbard, Jr.

XI. REPORT ON TASK FORCE REVIEW OF THE EXTRAMURAL RESEARCH GRANTS PROGRAM

TAB XII

Dr. John F. Sherman
Board Members

COFFEE BREAK

XII. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS

A. DRG Administrative Report

TAB XIII

B. BLRC Resolution

TAB XIV

C. Resource Improvement Grant Program

TAB XV

Dr. Ernest M. Allen
MEETING CLOSED FOR REVIEW OF GRANT APPLICATIONS

XIII. SPECIAL APPLICATIONS

(Applied Workbooks)

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LUNCH CATERED IN CONFERENCE ROOM "B"

XIV. SUMMARY STATEMENTS

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XV. REVIEW OF BOARD OPERATING PROCEDURES

(Orange Book)

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XVI. ADJOURNMENT

4:00 p.m.
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE

THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

Minutes of Meeting

May 25-26, 1978

The Board of Regents of the National Library of Medicine was convened for its fifty-eighth meeting at 9:00 a.m. on Thursday, May 25, 1978, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. Martin M. Cummings, Director, National Library of Medicine, presided. In accordance with P.L. 92-463 and the Determination of the Director, NIH, and as announced in the Federal Register on April 18, 1978, the meeting was open to the public from 9:00 a.m. to 5:00 p.m. on May 25, and from 9:00 a.m. to 1:30 p.m. on May 26, and closed from 1:30 p.m. to 3:30 p.m. on May 26 for the review, discussion, and evaluation of grant applications. A Board roster is included under Attachment "A."

Board members present were:

Dr. Thomas C. Chalmers
Dr. Eloise E. Clark
Dr. Nicholas E. Davies
Dr. S. Richardson Hill, Jr.
Dr. Doris H. Merritt
Dr. Cecil G. Sheps
Dr. Kelly M. West
Mr. James F. Williams, II

Alternates to Board members present were:

Dr. Faye G. Abdellah, representing Dr. Julius B. Richmond
Mr. Edmond Applebaum, representing Dr. Daniel J. Boorstin
Brig. General Ernest J. Clark, representing Lt. General George E. Schafer
Rear Admiral J. William Cox, representing Vice Admiral Willard P. Arentzen
Dr. William D. Mayer, representing Dr. John D. Chase
Col. John C. Richards, representing Lt. General Charles C. Pixley

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1/ For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications from their respective institutions (interpreted to mean the entire system of which a member's institution is a part) or in which a conflict of interest might occur. Only when an application is under individual discussion will the Board member absent himself. This procedure does not apply to "en bloc" actions.

2/ The Board of Regents, when considering the extramural programs of NLM, also constitutes and serves as the National Medical Libraries Assistance Advisory Board.
National Library of Medicine staff members attending this meeting included:

Dr. Martin M. Cummings, Director
Mr. Melvin S. Day, Deputy Director
Dr. Harold M. Schoolman, Deputy Director for Research and Education, and Acting Director, LHNCBC
Dr. Myron J. Adams, Director, National Medical Audiovisual Center
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Dr. Clifford A. Bachrach, Head, Medical Subject Headings Section, LO
Mr. James W. Barry, Deputy Associate Director, LO
Mr. Harry D. Bennett, Director for Computer and Communications Systems
Dr. Lionel Bernstein, Assistant Deputy Director for Research and Education
Dr. Jeanne L. Brand, Chief, International Programs Division, EP
Dr. Charles F. Bridgeman, Assistant Director for Education Resources Development
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mr. Kenneth B. Carney, Deputy Director, Office of Administration
Miss Mary E. Corning, Assistant Director for International Programs
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, EP
Mr. Benjamin Erdman, Deputy Director, LHNCBC
Mr. Joseph Gantner, Chief, Technical Services Division, LO
Mr. Charles M. Goldstein, Chief, Computer Technology Branch, LHNCBC
Mr. B. Earl Henderson, Chief, Communications Engineering Branch, LHNCBC
Dr. Henry M. Kissman, Associate Director for Specialized Information Services
Dr. Joseph Leiter, Associate Director for Library Operations
Mr. Davis B. McCarn, Special Assistant for Science Communications (Planning)
Mr. Robert B. Mehnert, Chief, Office of Inquiries and Publications Management
Mr. Kent A. Smith, Director, Office of Administration
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP

Others present included:

Dr. Julius B. Richmond, Assistant Secretary for Health
Dr. Donald S. Fredrickson, Director, NIH
Rear Adm. (selectee) Stephen Barchet, Commanding Officer, Naval Health Sciences Education and Training Command, National Naval Medical Center
Mrs. Bernice M. Hetzner, Professor of Library Science, University of Nebraska Medical Center -- Consultant, NLM
Dr. W. N. Hubbard, Jr., President, The Upjohn Company -- Consultant, NLM
Dr. Saul Jarcho, Editor in Chief, New York Academy of Medicine -- Consultant, NLM
Dr. John F. Sherman, Vice President, Association of American Medical Colleges
Mrs. Ileen E. Stewart, Executive Secretary, Special Study Section, DRG, NIH
Dr. Joseph F. Volker, Chancellor, University of Alabama System -- Consultant, NLM
Mr. Alfred R. Zipf, Executive Vice President and Senior Administrative Officer (Retired), Bank of America -- Consultant, NLM

Members of the public present:

Mr. Jeff Christy, Reporter, "The Blue Sheet"
I. OPENING REMARKS

Dr. Martin M. Cummings, NLM Director, welcomed the newly appointed Regents, the ex officio members, alternates, consultants, and guests to the 58th meeting of the Board of Regents of the National Library of Medicine. Dr. Cummings served as chairman of the meeting until a nominating committee of ex officio members could make its report in the afternoon of May 25 and a new Board of Regents' chairman could be elected and take over the duties of that office.

II. SWEARING IN OF NEW REGENTS

Dr. Julius B. Richmond, HEW Assistant Secretary for Health, administered the oath of office at 9:10 a.m., May 25, 1978, to Board of Regents' members Dr. Thomas C. Chalmers, Dr. Nicholas E. Davies, Dr. S. Richardson Hill, Jr., Dr. Doris H. Merritt, Dr. Cecil G. Sheps, Dr. Kelly M. West, and Mr. James F. Williams, II.

III. REMARKS BY THE ASSISTANT SECRETARY FOR HEALTH

Dr. Richmond noted that Secretary Califano has an interest in and commitment to the work of the National Library of Medicine. He added that no institution is more central to the support of scholarship in the health sciences than NLM—that its intramural and extramural programs are vital in building the knowledge base on which health services and programs are founded. Dr. Richmond and Secretary Califano look forward to receiving the counsel of the Regents.

The Assistant Secretary emphasized the importance of NLM's location within the National Institutes of Health. This linkage is vital because NIH would have difficulty in fulfilling its mission without the scholarly base provided by the Library.

Dr. Richmond commented on the growing concern for moving the results of research into the settings of medical practice. "Technology assessment and transfer" has been the subject of several Congressional hearings in the last few months. The Secretary recently expressed his commitment to this endeavor and will provide resources to further technology transfer from research to practice. Although inflation in the health area will make this task difficult, it is important that we undertake it. Dr. Richmond praised the work of NIH in developing consensus positions in several areas so that medical practice can benefit from scientific research. He noted that within his office he is developing an Office for Health Technology and he is gratified at how responsive NIH and NLM have been in this area.

Dr. Richmond noted with pleasure the progress being made in the construction of the Lister Hill Center building. The Library's effort to integrate the work of the National Medical Audiovisual Center with that of the Lister Hill Center is a step in the right direction. He also praised NLM's computer-science training program supported by grants. These programs are seen by the Secretary as evidence that NLM is not a static institution but one that anticipates future communications needs in the health
sciences. The Board of Regents can play an important role in reviewing these activities and guiding the Library so that it will continue its creative momentum.

Dr. Richmond concluded by saying that Dr. Henry Sigerist would be happy and proud to see the Library so firmly established and in a position to influence the future of the health sciences.

IV. REMARKS BY THE DIRECTOR, NIH

Dr. Donald S. Fredrickson echoed Dr. Richmond's comments about the progress of the Lister Hill Center building. The new facility will provide a great opportunity to assemble the varied talents necessary to plan new methods of information dissemination. The NIH Director next discussed the remarks made by Secretary Califano in a recent speech in San Francisco where he announced that he would take a long range look at the health research funded by HEW. This would begin with a planning exercise that would concentrate on maximizing the stability of research—not only in funding but in understanding the needs of other health research institutions (particularly universities) and in attracting able young scientists to lifetime commitments to medical research. In addition to ensuring a stable base to fundamental biomedical science, the Secretary is concerned about the problem of applying the fruits of health research to prevention, practice, and regulation. The Secretary has asked that the HEW health agencies consult with their advisory bodies (such as the Board of Regents) to solicit the principles on which HEW's planning effort should be based. The Regents have received a document laying out the Secretary's initiative in planning. Dr. Fredrickson said that NIH would host a national meeting later this year for the public and scientists to discuss principles for planning health research.

V. REMARKS BY THE PAST CHAIRMAN OF THE BOARD

Dr. Joseph F. Volker, immediate past chairman of the Board of Regents, emphasized the importance of the military services to the historical development of the NLM and he praised the work of the military Surgeons General and their alternates who serve as ex officio Regents. NLM's role in the health sciences has become increasingly important as the amount of the scientific knowledge has expanded; its placement within the NIH is important symbolically for it serves as a scholarly underpinning of the research conducted and supported at NIH. The NLM and its Regents have been involved over the last decade in the great issues facing medical communications—for toxicology, cancer research, health education and instruction, etc.—not only in the U.S. but internationally. The Library is unique among the institutes at NIH and it has demonstrated the ability to both meet current needs and to bring about change in the way information is handled.

VI. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Board approved the minutes of the meeting of May 19-20, 1977.
VII. DATES FOR FUTURE MEETINGS

The Board will meet next on October 12-13, 1978. The dates of January 25-26, 1979, were selected for the following meeting. Next spring’s meeting, tentatively set for May 24-25, will feature (in addition to the regular business meeting of the Board) a special program honoring the centennial of Index Medicus.

VIII. REPORT OF THE DIRECTOR, NLM

Dr. Cummings recounted for the Regents the history of the Library from its modest beginning in 1836 in the Army Surgeon General’s Office. Following this, the Director identified several important issues now facing NLM: (1) Even though renewal of the Medical Library Assistance Act seems assured now, the delay throws the Library’s legislative authorization out of phase with its fiscal appropriation. Its tardiness means that the Library may have to carry on at last year’s level under a continuing resolution. This severely penalizes the nation’s medical libraries and scholars who depend on the Library for grant support. (2) The move of the National Medical Audiovisual Center from Atlanta to Bethesda (which will take place on completion of the new Lister Hill Center building) has given rise to some personnel unhappiness at NMAC. A number of grievances have been filed by staff there that have led to several investigations of NMAC operations. This decline in morale will undoubtedly affect the quality of NMAC programs. (3) It is increasingly difficult to recruit physicians, scientists, and technical personnel for such NLM activities as indexing and the toxicology information programs. (4) There is a basic philosophical question as to how NLM will respond to the changing social scene in American medicine. In this regard, Dr. Cummings read a 1969 statement made by Dr. W. N. Hubbard, Jr., a former Chairman of the Board, who said: "Rightly or wrongly, the policy has developed that the function of the Library is to manage information transfer in such a way that it is optimal for the user. A library as such has no social value, its value being entirely derivative from the uses to which it is put by its customers. To the extent that it is technically feasible...the Library should be concerned with all modalities of enhancement of information transfer."

In response to a question by Dr. Merritt, Dr. Cummings said that there can be no special inducement or pay increase for employees whose jobs are being moved from Atlanta to Bethesda, an area with a higher cost of living. All expenses of the move, of course, will be borne by the government. As of now, Dr. Cummings said, it appears that only 20 percent of NMAC’s employees will make the move. NLM has endeavored to keep NMAC’s employees informed of all program plans, progress of construction, etc., to make the move attractive to them.

Dr. Volker raised the question as to whether it is desirable to change the appointing authority for Regents—from the President to the HEW Secretary—as called for in the renewal legislation for the Medical Library Assistance Act. The change was proposed in an effort to reduce future delays in appointing new Regents. This question received extended discussion by the Regents, both at this point in the proceedings and on the following day. Ultimately, the Board agreed to recommend to the HEW Secretary and to the Congress that appointing authority be retained by the President, with confirmation by the Senate. See Attachment "B," Resolution of the Board of Regents.
Following Dr. Cummings' presentation, NLM Deputy Director Melvin S. Day briefed the Regents on the present organization of the Library, describing each of the NLM operating components and support services.

Mr. Kent A. Smith, NLM Assistant Director for Administration, covered the topics of the NLM budget, personnel, and construction of the Lister Hill Center building. The NLM budget has remained relatively stable for the years 1977, 1978, and 1979 (now before the Congress). The modest increases that do appear are for inflation and mandatory costs. The number of employee positions has increased, however, from 470 in 1977 to 495 in 1978.

Mr. Smith briefed the Regents on the history of the Lister Hill Center building, from the 1968 joint resolution of Congress that created the Center and called for a specialized communications facility to house the Center's programs, to the construction that is presently under way. The new building will also house the Extramural Programs, the Toxicology Information Program, and the National Medical Audiovisual Center—programs that came into being or were transferred to the Library after the construction of the present NLM building in 1962. Pressures of increased staff and a growing literature collection have also contributed to the need for additional space. Planning funds for the new building were made available to NLM in 1972; Congress appropriated funds for construction in 1976; a construction contract was let in 1977 for $13.6 million, and completion is expected in late 1979. Mr. Smith showed slides of floor layouts, architects' drawings, and progress of the construction to date. The dedication ceremony, now being planned, will be held in the spring of 1980.

IX. LIBRARY OPERATIONS

Dr. Joseph Leiter, NLM Associate Director for Library Operations, described the growth of NLM services over the last decade. The introduction of MEDLARS in the 1960s allowed the NLM to expand the number and kinds of bibliographic tools it published. The indexing that supports both bibliographic publications and online searching is performed by NLM indexers, by foreign partners, and by contractors—about one-third of the 240,000 articles per year being indexed by each. Online services were begun late in 1971 (MEDLINE) and additional data bases have come online since. Over 700 institutions are now online to NLM, performing about one million searches per year. This extensive online activity requires a large training program which is carried out at NLM, UCLA, and in the Regions.

Dr. Leiter discussed the recent NLM activity in developing information services in the area of health administration and health care delivery. NLM has improved its coverage of health care literature and is now building an online file for rapid access to this literature. This has been a joint project with the American Hospital Association and the Health Resources Administration.

Interlibrary loan (or document delivery) is a very important service of NLM that has grown rapidly in recent years. Requests for interlibrary loans declined from 1966 to 1970, when the Regional Medical Libraries were being established and began providing document-delivery services in the network. Since then, however, NLM backup services have grown to the point that the present activity (about 250,000 loan requests a year)
far exceeds earlier levels. The fulfillment rate at NLM is about 90 percent. There has also been a sizable increase both in the amount of on-site reader services being provided by NLM and the number of reference queries being answered. Automation, better organization, and increased employee productivity have allowed NLM to keep pace with the increases in interlibrary loans, reference services, and reader services.

Automation of technical services began in 1974 with the mechanization of the acquisition function. Serials processing has increased over 60 percent since the introduction of computerized methods in this area. Although cataloging has not yet profited from automation, we hope new software will result in improved performance. Library Operations staff is working closely with specialists of the Lister Hill Center to improve all phases of computerized technical processing of the literature.

Dr. Sheps commented on NLM's increasing its coverage of the literature of health care. He cautioned against placing undue emphasis on strictly hospital-related literature; it would be wise to broaden definitions in this area. On the same subject, it is important to distinguish between the literature of health care and that relating to health policy. Dr. Leiter noted that NLM is being careful not to tie NLM's new information base on health care delivery too closely to the AHA's Hospital Literature Index (which will now be produced by MEDLARS). We are characterizing the new data base broadly as one of health administration and planning.

Mr. Williams described the dependence of the nation's medical libraries on the NLM and praised the Library for its bibliographic services to the library community. He questioned the adequacy of NLM's acquisitions budget, especially in the face of sharply rising acquisitions costs. Dr. Leiter reassured the Board that the Library's administration has never failed to provide the money needed for all acquisitions. The literature budget is the highest of NLM's priorities.

X. COMPUTER AND COMMUNICATIONS SERVICES

Mr. Harry Bennett, NLM Director of the Office of Computer and Communications Systems, described the steps being taken to procure a replacement computer for NLM. This new computer will be necessary both to meet the growth of present applications (like MEDLINE) and to take care of future applications. An IBM 370/158 computer was installed at NLM in 1973; a second IBM 370/158 was added to the system in 1974. General Services Administration permission for these computers was contingent on NLM agreeing to go to a competitive procurement action for replacement computers as soon as possible. Planning for the new computer is predicated on (1) steady growth in present use and number of data bases; (2) MEDLARS applications will be supported on the new system; (3) Library Operations' internal processing; (4) five-year systems life (through 1984); and (5) that the new computer would be installed in the new Lister Hill building in 1979.

Mr. Bennett presented a schedule for the procurement, culminating in complete acceptance-testing by May 1980. The contract will be awarded on a "least-cost" basis. There is presently a question regarding the application of purchase-option credits on rental equipment in the determination of least cost. This issue is presently being addressed by HEW and the General Services Administration.

A review of workload growth and present system capacity leads to the conclusion that the present computer system will have to be enhanced to be able to handle the workload
until the new system is operating in 1980. To do this, additional main memory will be installed this summer and the computer's workload will be more evenly spread over the working day, eliminating as much as possible peaks and valleys in usage. If there are unforeseen problems in the procurement, there are standby arrangements for additional IBM equipment to be installed in 1979. This will probably not be necessary, however.

Mr. Alfred R. Zipf, consultant to the Board, said he agreed with Mr. Bennett's presentation on how to supplement present capacity until 1980. He said, however, that if the computer system being procured is installed by a supplier different from the present one (IBM), the procurement schedule is unrealistically optimistic. Since GSA will be favorable to a change in supplier, the schedule will probably slip considerably. One reason for this is the amount of programming necessary to accomplish the changeover. He also pointed out that a change from IBM hardware would cost NLM as much as a million dollars for software changes and training staff. He also indicated that NLM should receive full purchase credit on all lease items. Unless this is done, IBM will be disadvantaged on the competition. HEW Assistant Secretary for Administration supports this point of view and will discuss with GSA.

XI. SPECIALIZED INFORMATION SERVICES

Dr. Henry M. Kissman, NLM Associate Director for Specialized Information Services (SIS), outlined the history, objectives, and funding of that program. The Toxicology Information Program (TIP) is the major activity of SIS and consists of query response services, computerized services, and a number of collaborative projects. Query response (or literature search) services are provided largely by the TIP-supported Toxicology Information Response Center at the Oak Ridge National Laboratory. That Center performs literature searches for researchers in industry, government agencies, and other institutions on a cost-recovery basis ($30 per hour). The Center also prepares in-depth bibliographies for distribution via the National Technical Information Service (NTIS).

In the area of SIS's computerized services the most notable achievement is TOXLINE—Toxicology Information Online. TOXLINE is available over the same online network that provides MEDLINE service. The bibliographic information in TOXLINE (now some 450,000 references) is taken from a number of secondary literature sources. Older material (pre-1974) is contained in TOXBACK. Two other operating online services sponsored by SIS are CHEMLINE, a "chemical dictionary" file that allows users to search some 245,000 chemical substance records, and RTECS, the Registry of Toxic Effects of Chemical Substances, based on an annual publication of the same name issued by the National Institute of Occupational Safety and Health. Two online data files now being constructed are the Toxicology Data Bank (containing evaluated data on selected potentially hazardous substances to which humans are exposed) and the Laboratory Animal Data Bank (a collaborative project with other government agencies to provide computerized data on selected strains of control-laboratory animals).

In the area of publication, SIS manages several collaborative projects sponsored by the HEW Committee to Coordinate Toxicology and Related Programs: TOX-TIPS--Toxicology Testing in Progress, (a monthly current awareness bulletin on long-term toxicity testing) and Toxicology Research Projects Directory (a monthly list of reports of some
1,000 ongoing, government-supported research projects in toxicology). Both publications are sold by the National Technical Information Service. In addition, there are many bibliographies published by the staff of the Toxicology Information Response Center.

XII. INTEGRATION OF NMAC AND LHNCBC

Dr. Harold M. Schoolman, NLM Deputy Director for Research and Education, briefed the Regents on steps being taken to integrate the functions of the National Medical Audiovisual Center and the Lister Hill National Center for Biomedical Communications. These two NLM components will be combined when the new building is complete and NMAC moves to Bethesda from Atlanta. A task force appointed by the NLM Director has made a number of recommendations concerning the integration: bibliographic functions at NMAC should be moved to NLM’s Library Operations in Bethesda (completed); a senior NMAC staff member should be moved to Bethesda to act as liaison (completed); NMAC and Lister Hill Center planning should be integrated (scheduled for summer of 1978); and NMAC and the Lister Hill Center should be functionally integrated under a single administrative head (this has in effect been done with the creation of the position of Deputy Director for Research and Education with line responsibility for the two divisions as reflected in the latest NLM organization chart).

Dr. Schoolman described the change in mission of the National Medical Audiovisual Center after it became part of the NLM in 1967. At that time it was largely a production-oriented activity for audiovisuals; after the transfer the mission was examined by the Board of Regents and audiovisual production was limited to certain projects in which it could be shown to be innovative or experimental in health-science education. This reorientation gave rise to problems among the staff, who had been largely engaged in production. Retaining the staff to NMAC's new mission was only partially successful. The impending move has accentuated staff problems and, as a result, there have been a number of complaints and grievances culminating in a request by Congress for an audit of NMAC by the General Accounting Office (GAO). Mr. Kent Smith presented the findings of the GAO audit and NLM's response. The GAO investigated the following allegations:

1. NMAC was incurring excessive costs because it was contracting for audiovisual production rather than producing in-house.

2. NMAC was lax in enforcing contract deadlines and was receiving poor quality work from contractors.

3. NMAC was not fully or productively using its personnel and equipment.

Although GAO found that the first allegation was inappropriate and lacked perspective, they did conclude that NMAC's contract administration needs improvement and that better utilization of personnel and equipment is required. The GAO indicated that NMAC's underlying problem has been the lack of an adequate and specific plan of action and assessment of how to accomplish its mission in the most cost-effective manner. In response to GAO's several recommendations, NLM noted that a thorough
evaluation of NMAC's mission, strategic objectives, and needed resources is being made as part of the process of integrating NMAC and LHC. NLM will carefully monitor all NMAC recruitment actions in light of the integration and will work closely with the Center for Disease Control and the Civil Service Commission in Atlanta to try to place employees who do not wish to move to Bethesda. Requests for purchase of equipment at NMAC will be reviewed carefully, and any equipment that will not be moved to Bethesda will be declared surplus for use by other government organizations.

Dr. Cummings said it would be desirable to have members appointed to the Lister Hill Center and National Medical Audiovisual Center Subcommittee of the Board of Regents to examine NMAC—not only the programs but the administrative arrangements—in the context of the GAO audit and NLM's response. On the second day of the meeting Dr. Richardson Hill, Jr. (Chairman), Dr. Nicholas E. Davies, and Dr. Thomas C. Chalmers were appointed to the LHC-NMAC Subcommittee.

XIII. NATIONAL MEDICAL AUDIOVISUAL CENTER

Dr. Myron J. Adams, Jr., Director of the Center, characterized NMAC's role broadly as one of improving the quality and use of audiovisual instructional materials in the health professions. NMAC's mission today is largely directed toward R&D, training, and consultation; although there is still an important role in AV production, this area has been deemphasized in recent years. A joint funding arrangement with the Bureau of Health Manpower (Health Resources Administration) ensured that NMAC's programs would cover the health professions broadly. Recently, however, Bureau funds for this arrangement have disappeared and there is now a question of whether the kind of activity that was jointly sponsored should be continued by NMAC alone. Dr. Adams briefly described the scope of NMAC's activities and the Center's organization. He also discussed a recent NMAC-conducted survey of audiovisual facilities in the health professional schools.

Dr. Adams described the needs of the health professional community in the area of audiovisuals. The need for improved access has been addressed by the development of AVLINE (Audiovisuals Online), which is now available nationwide, and also by the Center's loan and sales program. To respond to the need to improve the quality of audiovisual instructional materials, NMAC has put emphasis on producing a few high-quality teaching films on carefully selected topics in the hope that these will be emulated by other AV producers. NMAC has developed a successful regional workshop program to share the fruits of its R&D efforts with others around the country. Health professional schools frequently express a need for expert consultation on the development of their own AV instructional facilities; NMAC responds by providing knowledgeable staff for consultation and advice.

Following Dr. Adam's presentation, Dr. Hill commented on the plethora of reports and studies done on NMAC over the last decade. It would be useful to consolidate the recommendations in these reports and see which ones have been accomplished before embarking on a new study. Dr. Sheps commented that NMAC could perform a very valuable role in bringing some order to the "terrible mess" that most institutions have made of their audiovisual programs. He said that too often schools look on their AV facility as a "toy" that confers instant modernity on them, but there is little intelligent thinking about how it is to be used, or for what instructional purpose.
XIV. LISTER HILL NATIONAL CENTER FOR BIOMEDICAL COMMUNICATIONS

Dr. Lionel Bernstein, NLM Assistant Deputy Director for Research and Education, presented to the Regents some recent figures from an NSF study on the cost of scientific and technical information transfer. The total annual cost in the U.S. is estimated at $11.6 billion. The portion of this devoted to biomedical science and technology information transfer has been extrapolated to be $1.65 billion (90 percent of which is for books and journals). Information-transfer costs amount to 30 percent of the total spent on the R&D. Products of R&D of the Lister Hill Center potentially could have a great influence on how efficiently information is transmitted within the health community. For example, the work of the Center in improving automated library methods can benefit the researcher by making the relevant published material available to him more quickly. The Center's Computer Technology Branch and Communications Engineering Branch can contribute to improved distribution of textual and visual information to the health community and can contribute to advances in electronic publishing.

Present projects of the Computer Technology Branch are in the areas of computer systems technology, library automation, advanced information systems, and computer-based education materials. The Communications Engineering Branch has supported satellite communications systems and conducted experiments in broadband communications. The Health Professions Application Branch, the Center's newest component, was created to couple substantive aspects of medicine with new technology. Its current major project is the prototype hepatitis data base the purpose of which is to take a discrete body of published information (in this case viral hepatitis), organize and "synthesize" it, and put it into a computerized form useful and accessible to the practitioner.

Following Dr. Bernstein's presentation, Dr. Chalmers said the prototype hepatitis data base has exciting possibilities for the practicing physician. Too often in the past the sole synthesizer, packager, and presenter of information for the physician has been the pharmaceutical firm, the drug-route salesman, and the throwaway magazine. The Library, in putting together a body of consensus knowledge on a subject like hepatitis, and making it easily and rapidly available, is pioneering in an effort that has tremendous potential for improving the dissemination of medical knowledge.

XV. INTERNATIONAL PROGRAMS

Miss Mary E. Corning, NLM Assistant Director for International Programs, described the objectives, scope and activities of NLM's international programs. NLM is probably the only Federal institution that has an extensive international involvement and that does not spend U.S. money abroad. In 1975 the Regents reaffirmed that NLM has one principal objective in its international programs: to improve U.S. research, education, and services in the health-related sciences. These cooperative programs are based on a sharing of time, talent, and resources; and, although the mechanisms may vary, NLM programs must be of demonstrated value to the U.S. Programs are modified to reflect U.S. needs and foreign capabilities. The Board of Regents is involved not only as a body in reviewing these programs, but Regents participate in site visits.
There are six categories of international programs as follows and examples were given of each: (1) Exchange of publications between NLM and over 800 foreign institutions in 87 countries; (2) providing library services such as interlibrary loans to foreign institutions; (3) Public Law 480 program support of historical and scholarly publication projects paid for in foreign currency from the sale of surplus agricultural commodities; (4) providing technical consultation to foreign countries and international organizations interested in establishing biomedical communications resources; (5) participating in a number of international organizations; and (6) cooperating with ten countries and one international organization (Pan American Health Organization) under a quid pro quo arrangement where in return for access to NLM data bases, the foreign institution provides indexing input to our data base. The principle of the quid pro quo relationship was reaffirmed by the Board in 1975.

Miss Corning described the nature of these arrangements, the participating countries and their mode of access to NLM data bases (tapes, online, or a combination), the role of the International MEDLARS Policy Advisory Group, and the new quid pro quo effective January 1978, (Tables 1-3).

Miss Corning also reviewed current interest in international health as illustrated by activities from the White House, Congress, and HEW. As an example, two years ago the President's Special Assistant for Health Issues met with the health ministers of countries with which the U.S. does not have full diplomatic relations, including Cuba. At that time the Cuban Minister of Public Health listed two top priorities vis-a-vis the U.S.: biomedical information and obtaining certain drugs. He was especially interested in obtaining MEDLARS and other NLM services. As a result of a visit of Miss Corning to Cuba at the invitation of the Minister, a Cuban journal has been reviewed and accepted for inclusion in Index Medicus; NLM and the Ministry agreed to exchange biomedical publications, and NLM accepted two Cubans for training.

XVI. ROLE OF NLM AS SEEN BY PAST CHAIRMAN

Dr. W. N. Hubbard, Jr., President of The Upjohn Company, was introduced by Dr. Cummings as the only person ever to be selected by two different Presidents to serve on the Board; he was elected Chairman three times during his two terms. Dr. Hubbard emphasized the two basic characteristics of NLM's function: its archival responsibility and its outreach function. NLM has improved its mechanisms for outreach and archival responsibility by being an innovator in library science.

There are several areas in which change has been especially evident in the last 15 years. The Library has paid increasing attention to the educational process. Today this is a vital part of NLM programs. The development of a national network of medical libraries is now a reality. Specialized data bases, available over the network, are being used by many health professionals and it is important to ensure the integrity of the data bases. The Lister Hill Center has been involved in many successful programs and its prospects for the future with its new building are excellent. The development and adoption of a set of policies by the Board of Regents was a most useful undertaking—they set the direction for NLM staff who develop, under the Board's guidance, implementing plans and strategies.

-12-
### TABLE 1

**QUID PRO QUO**

**TAPES**

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*Additional Fees for Proprietary Files (CAS, BIOSIS, ASHP)*

### TABLE 2

**QUID PRO QUO**

**TAPES**

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### TABLE 3

**CURRENT QUID PRO QUO**

**ONLINE ACCESS**

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75 USER CODES

*Additional Fees for Proprietary Files (CAS, BIOSIS, ASHP)*
Dr. Hubbard enumerated the publics that NLM serves. These include the armed forces and Veterans Administration, represented on the Board by ex officio members; health students and faculty; investigators in the basic and the clinical sciences; and health practitioners. In addition to these traditional publics, there are new groups that require attention from the Library: those working in public health organizations and services, and personal health services—ensuring an informed public is most important for health and an area too often neglected in the information distribution systems.

Dr. Hubbard said that the Regents' first obligation is to become knowledgeable about the Library. Regents should advise NLM from the standpoint of their own constituencies—not to be seeking special benefits but in order to give the Library a rounded perspective. Board members should take every opportunity to speak on behalf of NLM—to become spokesmen for the institution. Related to this, the Regents should inform their elected representatives about NLM (especially in the representatives' local settings rather than in Washington, where a petitioner's voice is frequently lost in the crush of legislative business). Summing up, Dr. Hubbard said that NLM is a change agent and that the job of the Regents is to influence this change.

XVII. REPORT ON TASK FORCE REVIEW OF THE EXTRAMURAL RESEARCH GRANTS PROGRAM

Dr. Cummings introduced Dr. John F. Sherman, Vice President of the Association of American Medical Colleges and a member of the Biomedical Library Review Committee, who served as Chairman of the Task Force to examine the Library's Extramural Research Grants Program and to make recommendations to the Director of NLM and the Board of Regents. The inadequate number of high-quality proposals had led to the need for the evaluation.

Dr. Sherman noted that the Task Force was charged by the Director, NLM, and staff to respond to the following points:

1. What kind of research is germane to the program interests of NLM?
2. How should NLM address the problem of research manpower and training needs?
3. How should NLM establish priorities and distribute limited research funds?
4. What kind of collaboration in this area should NLM foster with other awarding agencies?
5. How should the results of research projects supported be made available?
6. How should the research grants program be evaluated?

The findings and recommendations of the Task Force were presented to the Board at this meeting and the report is contained in the agenda book. The Task Force members agreed that a greater degree of coordination among the agency programs was desirable, and that
NLM should take the lead in initiating this coordination. The matter of additional funding was examined carefully and modest increments were suggested over the next few years as the most responsible way to justify the recommendations in the three major areas—the regular research grants program, the training activity, and the research in computer-based medicine.

Mr. Williams took exception to the statement in Item 3 of the report that most library schools are not preparing their students properly for research. He stated that library schools across the country are trying to effect improvements. He would like to see the emphasis not so much on post-masters' training, but on an orientation in research built at the library school level and supported at that level. Dr. Sherman, agreeing that this area deserves further exploration, explained that the Task Force had to deal with the inevitable conflict between "training for service" and "training for other than service." There seemed to be a need either for training a special group of librarians for research or for matching the service-orientation with an existing research activity.

Dr. Cummings encouraged the Board to provide Mr. Davis B. McCarn, Special Assistant for Science Communications (Planning) of NLM, with suggestions that might be incorporated in the revision of the NLM Forward Plan. This Plan, to be examined by the Board at the coming October meeting, will address some of the issues raised in the Task Force report on research grants. The Board of Regents accepted the report in principle and asked staff to develop specific proposals for discussion, reexamination, and recommendation at future Board meetings.

XVIII. EXTRAMURAL PROGRAMS ORIENTATION

Dr. Ernest M. Allen, NLM Associate Director for Extramural Programs, drew the Board's attention to the "Public Health Service Grants Policy Statement," including the supplement of Extramural Programs policies that had been adopted by the Board of Regents during the years. He invited Board members to identify any policy for illumination or discussion at any time. A copy of the booklet and supplement will be mailed to all Board members.

Dr. Allen then proceeded with the review of the Library's Extramural Programs and the workings of the NIH grants programs in general. Specifically, the NLM grants program, authorized by the 1965 Medical Library Assistance Act (MLAA) and its extensions in support of medical libraries, includes: Resource Project and Improvement Grants, Special Scientific Project Grants, Publication Grants, Research Grants, Training Grants in Health Sciences and Computer Technology, and the Regional Medical Library Program, which is administered through contracts. Fiscal authorizations in connection with the MLAA have been either on the basis of three-year or one-year extensions. Dr. Allen familiarized the new members with the initial review procedure of grant applications, the role of the Board's Extramural Programs Subcommittee in the review process, and the Board's responsibilities as an advisory body and as the final peer review body for grant applications.

In conclusion, Dr. Allen pointed to two major issues that the Extramural Programs will address during the coming year:

A. Expansion and improvement of the Research Grant Program, particularly in the areas of computer-based medicine and career development.

B. Support of small community hospital libraries, with particular emphasis on modifying the existing Improvement Grant Program, and the need for local union lists.
XIX. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS

Dr. Allen brought before the Board three issues that needed the Regents' attention.

1. Modification and Change in Review of the Improvement Grant Program:

The Extramural Programs proposed the following modifications to the Medical Library Resource Improvement Grant Program:

   a. Give equal priority to applications from single institutions and consortia.

   b. For single institutions, reduce support to one year and provide a budget of up to $4,000 to purchase information materials and additional funds to cover expenses for training librarians.

   c. For consortia, two types of NLM support may be awarded:

      1. Necessary support, as justified and approved following review, for personnel and planning expenses covering two years.

      2. Up to $4,000 in the second year (with a matching requirement for each consortium member of up to $1,000) for the purchase of information materials.

Dr. Allen noted that the Board's Extramural Programs Subcommittee at its meeting on May 24 was in disagreement as to whether the "matching" requirement of up to $1,000 imposed on each consortium member should also be imposed on the single-institution grantee. The Board favored the matching requirement, so as to be more confident at the time of the grant award that the institutional commitment would continue. Mrs. Hetzner recommended strongly that the requirement be made to have someone specifically designated at the institution to handle the acquired books and journals and interact with the rest of the library network. In order to make this requirement successful, a commitment from the hospital administrator will be necessary. It was Mr. Williams' opinion that a feeling of commitment of the institution is essential and that it can be achieved only through the matching-money requirement. The Board advised therefore that the matching requirement of up to $1,000 for both the single institution and for each member of the consortium be instituted, with the understanding that the matching funds shall be for library expenses over and above the current operating budget.

Dr. Allen then informed the Board that the review procedure for the Improvement Grant applications will be changed to comply with the Board's recommendations. Beginning in June, applications will be reviewed by three librarian members of the Biomedical Library Review Committee. After this initial review and a review by one member of the Board's Extramural Programs Subcommittee, the full Subcommittee will consider applications for which there was a split vote at initial review or which was identified by a Board member or by staff for special discussion. In view of the revised review procedure, the Board recommended that all Improvement Grant applications not recommended for approval at this meeting be deferred for review under the revised procedure.

2. Need for National Index of Audiovisual Materials:

The Biomedical Review Committee recommended that the Board examine the need for a comprehensive national index of audiovisual materials as a companion piece to AVLINE. A copy of their recommendation to the Board is under Attachment "C."

-16-
The Board asked that this issue be referred to the Lister Hill Center and National Medical Audiovisual Center Subcommittee of the Board for examination and be brought back for discussion at the October meeting.

3. Board Operating Procedures:

As required annually, the Regents reviewed the Board Operating Procedures—"Guidelines for Adjustments by Staff in Time or Amount of Grant Award"—and reaffirmed them without revision.

MEETING CLOSED FOR REVIEW OF GRANT APPLICATIONS FROM 1:30 TO 3:30 P.M.

XX. RESEARCH, RESOURCE, TRAINING, SPECIAL SCIENTIFIC PROJECT AND PUBLICATION GRANT APPLICATIONS

Before proceeding with the consideration of pending applications, Dr. Dahlen informed Board members and consultants of confidentiality and conflict-of-interest procedures and reminded all Regents and consultants to sign, at the conclusion of the grant review, the statement certifying that they had not participated in the discussion of any application where conflicts of interest might occur.

The Board concurred with the recommendations of the Extramural Programs Subcommittee. A total of 161 applications was reviewed, of which 91 were recommended for approval, 49 for disapproval, and 21 for deferral. Grant applications recommended for approval by the Board are listed in the summary actions (Attachment "E"). Interim actions taken by EP staff since the last Board meeting in May 1977 were noted.

XXI. ADJOURNMENT

The meeting was adjourned at 3:30 p.m. on Friday, May 26, 1978.

* * * * * * * * * * * * * * * * * * * * * *

Wednesday, May 24, 1978, 9:00 a.m. to 4:00 p.m.
(EP Subcommittee - List of Attendees under Attachment "D")
Thursday, May 25, 1978, 9:00 a.m. to 5:15 p.m.
Friday, May 26, 1978, 9:00 a.m. to 3:30 p.m.

* * * * * * * * * * * * * * * * * * * * * 

-17-
ACTIONS TAKEN BY THE BOARD OF REGENTS

1. The Board passed a resolution, recommending to the HEW Secretary and the Congress that appointing authority of Board members be retained by the President, with the advice and consent of the Senate (see Attachment "B").

2. The Board unanimously accepted the recommendations of the Nominating Committee and elected Dr. Kelly M. West Chairman of the Board of Regents for the year 1978-1979.

3. The Chairman appointed the following Board members to the Lister Hill Center and National Medical Audiovisual Center Subcommittee of the Board of Regents: Dr. S. Richardson Hill, Jr. (Chairman), Dr. Thomas C. Chalmers, and Dr. Nicholas E. Davies.

4. The Board concurred with recommendations of the Extramural Programs Subcommittee. Grant applications recommended for approval are listed in the summary actions (Attachment "E").

5. The Board reviewed two versions of suggested regulation language covering charges for loans and recommended approval of the wording suggested by NIH General Counsel (Attachment "F").

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.

Martin M. Cummings, M.D.  Date: 6/29/78
Executive Secretary

Kelly M. West, M.D.  Date: 7/3/78
Chairman

Robert M. Mehnert
Chief, Office of Inquiries and Publications Management

-18-
BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

CHALMERS, Thomas C., M.D. (8/3/79) President and Dean Mount Sinai School of Medicine of the City University of New York One Gustave L. Levy Place New York, NY 10029 212-650-6233

DAVIES, Nicholas E., M.D. (8/3/81) Resident Physician Emory Hospital Emory Professional Building 15 Collier Road, N.W. Atlanta, GA 30309 404-355-1690

HILL, S. Richardson, Jr., M.D. (8/3/80) Resident University of Alabama in Birmingham University Station Birmingham, AL 35294 205-934-3493

ERRITT, Doris H., M.D. (8/3/80) Dean, Office of Research and Sponsored Programs Indiana-Purdue University at Indianapolis 55 Lansing Street Indianapolis, IN 46202 317-264-8287

SHEPS, Cecil G., M.D. (8/3/80) Professor of Social Medicine University of North Carolina at Chapel Hill Chase Hall 132A Chapel Hill, NC 27514 919-966-5011

WEST, Kelly M., M.D (8/3/79) Professor of Biostatistics and Epidemiology College of Health University of Oklahoma Health Sciences Center P. O. Box 26901 Oklahoma City, OK 73190 405-271-2445

WILLIAMS, James F., II (8/3/81) Medical Librarian Vera P. Shiffman Medical Library Wayne State University 4325 Brush Street Detroit, MI 48201 313-577-1168

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Alternate

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WELSH, William J. Deputy Librarian of Congress 10 First Street, S.E. Washington, DC 20540 202-426-5215

continued...

6/1/78
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Xley, Charles C., Lt. Gen., MC, USA
Surgeon General
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Richards, John C., Col., MC, USA
Chief, Graduate Medical Education Branch
Education and Training Division
U.S. Army Medical Department
Personnel Support Agency
Washington, DC 20314 202-693-5455

EXECUTIVE SECRETARY

CUMMINGS, Martin M., M.D.
Director
National Library of Medicine
Bethesda, MD 20014 301-496-6221

6/1/78
RESOLUTION

In view of the broad scope of the responsibilities and constituencies of the National Library of Medicine, its Board of Regents, at its meeting on May 26, 1978, recommends that appointments to the Board continue to be made by the President, with the advice and consent of the Senate.

THEREFORE: The Board of Regents recommends that Section 203(a), Title II of S. 2450; and Section 102, Title I of H.R. 12347, be deleted from these bills now pending before the Senate and the House of Representatives respectively.

National Library of Medicine
May 26, 1978
RESOLUTION OF THE BIOMEDICAL LIBRARY REVIEW COMMITTEE - JUNE 29, 1977

Currently, there is no comprehensive national index of media available for use in medical, nursing, dental, veterinary, pharmacy, and allied health schools, hospitals, in-service and continuing education. Such an index is of use to librarians and educators who now must maintain hundreds of catalogs, pamphlets and lists of materials available and manually search through them in order to identify potential items to meet the information needs of the patrons. Such an index could serve as a companion piece to AVLINE, a more highly selective, evaluated data base.

The BLRC recommends that the Board of Regents examine this need and the work now being done for AVLINE, or other media activities of NLM, to see if something can be worked out for NLM to respond to this need.
BOARD OF REGENTS
Extramural Programs Subcommittee Meeting
May 24, 1978

ATTENDEES

Subcommittee Members Present:
Dr. Faye G. Abdellah
Mrs. Bernice M. Hetzner (consultant)
Dr. Saul Jarcho (consultant)
Dr. Doris H. Merritt
Mr. James F. Williams, II

NLM Staff Present:
Dr. Martin M. Cummings, Director
Mr. Melvin S. Day, Deputy Director
Dr. Harold M. Schoolman, Deputy Director for Research and Education
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Dr. Jeanne L. Brand, Chief, International Programs Division, EP
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support
Mrs. Helen S. Bennison, Grants Management Specialist, EP
Mrs. Ruth Bortz, Contracts and Grants Management Specialist, EP
Mr. Peter Clepper, Program Officer, EP
Mrs. Karin K. Colton, Committee Management Assistant
Mrs. Doris Doran, Program Officer, EP
Mrs. Fances H. Howard, Special Assistant to the Associate Director, EP
Miss Maureen Malone, Librarian, Office of Program Planning and Evaluation, EP
Mrs. Kathleen M. Nichols, Grants Management Assistant, EP
Mrs. Marguerite Pusey, Grants Management Specialist, EP
Dr. Dorothy A. Stroup, Program Officer, EP
Mr. Randall Worthington, Program Officer, EP
Dr. Galina Zarechnak, Program Officer, EP
APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
(Arranged numerically by program)  COUNCIL DATE:  MAY 1978

INSTITUTE/DIVISION:  NATIONAL LIBRARY OF MEDICINE

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### INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

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APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
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APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
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APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/  
(Arranged numerically by program)  

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1/Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.
APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
(Arranged numerically by program)

COUNCIL DATE: MAY 1978

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

<table>
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</table>

1/Approval recommendations are not final but are the basis upon which subsequent BID determinations and negotiations will determine final awards.
PROPOSED MODIFICATION TO REGIONAL MEDICAL LIBRARY PROGRAM REGULATIONS

Current Language 1/

Medical Library Assistance Act
Public Law 95-53, Section 398

Provides that Regional Medical Libraries shall receive support "(a) to modify and increase their library resources, and to supplement the resources of cooperating libraries in the region, so as to be able to provide adequate supportive services to all libraries in the region as well as to individual users of library services, and (b) to provide free loan services to qualified users, and make available photoduplicate or facsimile copies of biomedical materials which qualified requesters may retain."

1/ Requires free loan services (i.e., provision of original materials) but is silent regarding reimbursement for photoduplicate copies.

Existing Implementing Regulations
Part 59a, Subpart C, 59a.37(b)(2) (1967)

Provides that "qualified persons and organizations shall be entitled to free loan services, and to the extent grant funds are used to provide photoduplicated or facsimile copies of biomedical materials, the copies shall be made available without charge to such persons or organizations."

2/ Advice by General Counsel, NLM, is that regulation language is more restrictive and expressly requires provision of free photoduplicated copies of materials.

Current Language 2/

Proposed Modification 3/

Suggested language by General Counsel:
"Qualified persons and organizations shall be entitled to free loan services, or, in lieu of loans, photoduplicated or facsimile copies of biomedical materials may be made available on a cost participation basis (which may include charging individual users reasonable fees) provided equal access to the health information resources of the region and of the national network is assured."

Suggested language by Regulation Office:
In an effort to rewrite all of Subpart C in "plain English" as directed by President - "Operation Common Sense":
"Each awardee agrees to provide free loan services to qualified persons or organizations or, in lieu of loans, to make available photoduplicated or facsimile copies of biomedical materials which qualified requesters may retain. A reasonable fee may be charged for copies to recover expenses or to pay royalties, if applicable. The Secretary may require or permit cost participation provided equal access to the health information resources of the region or of the national network is assured."

3/ Proposed modification will bring regulations in line with Public Law.
DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

AGENDA

59th Meeting of the
BOARD OF REGENTS

9:00 a.m., October 12-13, 1978

MEETING OPEN: All day on October 12 and from 9:00 to 11:15 a.m. on October 13.
MEETING CLOSED: From 11:15 a.m. to adjournment on October 13 for the review of
grant applications.

. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. Kelly M. West
I. REMARKS BY THE ASSISTANT SECRETARY FOR HEALTH Dr. Julius B. Richmond
II. REMARKS BY THE DEPUTY DIRECTOR, NIH Dr. Thomas E. Malone

V. CONSIDERATION OF MINUTES OF LAST MEETING TAB I Dr. Kelly M. West
(Orange Book)

V. DATES OF FUTURE MEETINGS TAB II
1979 Calendar

Next Meeting: January 25-26, 1979 (Th-F)

Spring Meeting: May 24-25, 1979 (Th-F)

Selection of Dates for Fall 1979 Meeting:

October 4-5 (Th-F) or October 11-12 (Th-F)

NOTE: American Society for Information Science
Annual Meeting -- October 14-18, 1979
Minneapolis

9/13/78
VI. REPORT OF THE DIRECTOR, NLM

COFFEE BREAK

VII. REPORT ON NATIONAL MEDICAL AUDIOVISUAL/
LISTER HILL CENTER

VIII. REPORT OF THE LHC-NMAC SUBCOMMITTEE

LUNCH CATERED IN CONFERENCE ROOM "B"

IX. CONTINUATION OF REPORT OF LHC-NMAC
SUBCOMMITTEE

Discussion by Board

X. PLANS FOR HEALTH CARE DATA BASE

XI. INTERNATIONAL PROGRAMS

XII. HISTORY OF MEDICINE DIVISION

COFFEE BREAK

XIII. PROBLEMS ASSOCIATED WITH COMPUTER
PROCUREMENT

Discussion by the Assistant Secretary
for Management and Budget, DHEW, and
NLM Board Consultant

XIV. DIRECTOR'S AWARD PRESENTATION

RECESS

DINNER ........................................... Bethesda Naval Officers' Club
Cocktails (Cash Bar) ..................... 6:30 p.m. "Patio Room"
Dinner (Dutch Treat) ..................... 7:30 p.m.

SPEAKER: Colonel Robert J. T. Joy
Chairman, Dept. of Military Medicine and History
Uniformed Services University of the Health Sciences

TITLE: "Yellow Fever as an Epidemiological Model"

RECONVENE: 9:00 a.m. Friday, October 13, 1978
XV. TRAINING PROGRAM IN HEALTH SCIENCE AND COMPUTER TECHNOLOGY  
TAB X  
Dr. Roger W. Dahlen

XVI. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS  
TAB XI  
Dr. Ernest M. Allen

A. Report on Health Science Library Management Intern Program  
Tab A

B. Discussion of Career Development Programs  
Tab B

XVII. NLM PUBLIC LAW 480 AND PUBLICATION GRANT PROGRAMS  
TAB XII

A. Briefing  
Tab A  
Dr. Jeanne L. Brand

B. Site Visit Report to Egypt  
Tab B  
Dr. Saul Jarcho

COFFEE BREAK

XVIII. REGIONAL MEDICAL LIBRARY PROGRAM -- COST-SHARING PLANS  
TAB XIII  
Mr. Arthur J. Broering

IX. SPECIAL APPLICATIONS  
(Gray Workbook)

A. Research  
TAB I  
Dr. Roger W. Dahlen

B. Resource  
TAB II

C. Training  
TAB III

X. SUMMARY STATEMENTS

A. Publication  
TAB IV  
Dr. Jeanne L. Brand

B. Research  
TAB V  
Dr. Roger W. Dahlen

C. Resource  
TAB VI

D. Special Scientific Project  
TAB VII

E. Training  
TAB VIII

F. Improvement  
TAB IX

XI. ADJOURNMENT  
Dr. Kelly M. West
DEPARTMENT OF HEALTH, EDUCATION
AND WELFARE

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE

BOARD OF REGENTS

MINUTES OF 59th MEETING
October 12-13, 1978

BOARD ROOM
NATIONAL LIBRARY OF MEDICINE
BETHESDA, MARYLAND
The Board of Regents of the National Library of Medicine was convened for its fifty-ninth meeting at 9:00 a.m. on Thursday, October 12, 1978, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. Kelly M. West, Professor of Biostatistics and Epidemiology, College of Health, University of Oklahoma Health Sciences Center, and Chairman of the Board of Regents, presided. In accordance with P.L. 92-463 and the Determination of the Director, NIH, and as announced in the Federal Register on August 22, 1978, the meeting was open to the public from 9:00 a.m. to 5:00 p.m. on October 12, and from 9:00 a.m. to 12:15 p.m. on October 13, and closed from 12:15 p.m. to 1:00 p.m. on October 13 for the review, discussion, and evaluation of grant applications. A Board roster is included under Attachment "A."

Board members present were:
Dr. Thomas C. Chalmers
Dr. James C. Crutcher (October 12)
Dr. S. Richardson Hill, Jr.
Dr. Doris H. Merritt
Dr. Julius B. Richmond (October 12)
Dr. Cecil G. Sheps
Dr. Kelly M. West
Mr. James F. Williams II

Alternates to Board members present were:
Dr. Faye G. Abdellah, representing Dr. Julius B. Richmond
Rear Admiral Stephen Barchet, representing Vice Admiral Willard P. Arentzen (October 12)
Brig. General Ernest J. Clark, representing Lt. General Paul W. Myers (October 12)
Dr. William D. Mayer, representing Dr. James C. Crutcher
Col. John C. Richards, representing Lt. General Charles C. Pixley (October 12)
Mr. William J. Welsh, representing Dr. Daniel J. Boorstin

Unable to attend:
Dr. Eloise E. Clark
Dr. Nicholas E. Davies

1/ For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications from their respective institutions (interpreted to mean the entire system of which a member's institution is a part) or in which a conflict of interest might occur. Only when an application is under individual discussion will the Board member absent himself. This procedure does not apply to "en bloc" actions.

2/ The Board of Regents, when considering the extramural programs of NLM, also constitutes and serves as the National Medical Libraries Assistance Advisory Board.
National Library of Medicine staff members attending this meeting included:

Dr. Martin M. Cummings, Director
Mr. Melvin S. Day, Deputy Director
Dr. Harold M. Schoolman, Deputy Director for Research and Education
Dr. Myron J. Adams, Director, National Medical Audiovisual Center
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Dr. Clifford A. Bachrach, Head, Medical Subject Headings Section, LO
Mr. James W. Barry, Deputy Associate Director, LO
Mr. Harry D. Bennett, Director for Computer and Communications Systems
Dr. Lionel Bernstein, Director, Lister Hill National Center for Biomedical Communications
Mr. Albert H. Berkowitz, Chief Reference Services Division, LO
Dr. John B. Blake, Chief, History of Medicine Division, LO
Dr. Jeanne L. Brand, Chief, International Programs Division, EP
Dr. Charles F. Bridgman, Assistant Director for Education Resources Development
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mr. Kenneth B. Carney, Deputy Director, Office of Administration
Miss Mary E. Corning, Assistant Director for International Programs
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, EP
Dr. Dean Darby, Chief, Educational Training and Consultation Branch, NMAC
Mr. Benjamin Erdman, Deputy Director, LHNCBC
Mr. Charles M. Goldstein, Chief, Computer Technology Branch, LHNCBC
Mr. B. Earl Henderson, Chief, Communications Engineering Branch, LHNCBC
Dr. Henry M. Kissman, Associate Director for Specialized Information Services
Dr. Richard Lasco, Chief, Educational Research and Evaluation Branch, NMAC
Dr. Joseph Leiter, Associate Director for Library Operations
Mr. Robert B. Mehnert, Chief, Office of Inquiries and Publications Management
Dr. Stewart H. Rowberry, Chief, Materials Development Branch, NMAC
Mr. Kent A. Smith, Director, Office of Administration
Mr. Richard T. West, Chief, Office of Program Planning and Evaluation, EP

Others present included:

Dr. Thomas E. Malone, Deputy Director, NIH
Dr. Michael F. Halasz, Executive Secretary, Communicative Sciences Study Section, DRG, NIH
Mrs. Bernice M. Hetzner, Professor of Library Science, University of Nebraska Medical Center -- Consultant, NLM
Dr. Saul Jarcho, New York Academy of Medicine -- Consultant, NLM
Mrs. Ileen E. Stewart, Executive Secretary, Special Study Section, DRG, NIH
Mr. Alfred R. Zipf, Executive Vice President and Senior Administrative Officer (Retired), Bank of America -- Consultant, NLM

Members of the public present:

Mr. Jeff Christy, Reporter, "The Blue Sheet"
I. OPENING REMARKS

Dr. Kelly M. West, Chairman, welcomed the Regents, ex officio members, alternates, consultants, and guests to the 59th meeting of the Board of Regents.

II. REMARKS BY THE ASSISTANT SECRETARY FOR HEALTH

Dr. Julius B. Richmond, HEW Assistant Secretary for Health, identified two important health policy issues currently facing HEW. The first is the question of how best to support medical research in an era of budgetary constraints. The Secretary recognizes that we must have strategies to support the research enterprise. The recent NIH conference to set goals out of which we can develop a five-year health research strategy is part of this process. The entire Administration, including the President and his Science Advisor, Frank Press, is very supportive of basic research.

The second policy issue—international health—is also one that has the full backing of the Secretary and the President. The Secretary, at the World Health Assembly last May, committed this country to active support of efforts in tropical disease research and improving health communications. Next year the U.S. delegation will be accompanied by Mrs. Carter. The WHO Director General said at the last Assembly that the World Health Organization plans to emphasize primary health care so that by the year 2000 basic services will be available to all in the world. A later international conference on primary care, held in the Soviet Union, reaffirmed the importance of this approach to improving health. As the various countries develop their strategies to achieve this goal they will look to the NIH and NLM for support.

The Library's present involvement with the PAHO Regional Library of Medicine in Sao Paulo, Brazil, is a model for other similar regional developments. Bilateral arrangements with other countries should also be encouraged. NLM's Assistant Director for International Programs, Miss Mary Corning, has been most helpful and effective in working on these collaborative arrangements. The USSR and Cuba are interested in improving the effectiveness of their biomedical communications, the Assistant Secretary said, and China is also interested in greater involvement with the U.S. health community. Summing up, Dr. Richmond noted that we have a deep interest in nurturing the research enterprise, extending our efforts with WHO and its regional arms, and increasing our involvement with individual countries in the area of health.

In response to a question from the Chairman about a possible reorganization of the Public Health Service, Dr. Richmond said that the PHS was being studied at the level of the Assistant Secretary's Office, not at the level of the component agencies. There should be no effect on the NIH or NLM of the study's recommendations. It is occasionally suggested that the NLM, the National Center for Health Services Research, and the National Center for Health Statistics be brought together organizationally, but this idea is not viewed favorably by Dr. Richmond and his staff. He believes that the linkage between NIH and NLM is a natural one.

III. REMARKS BY THE NIH DEPUTY DIRECTOR

Dr. Thomas E. Malone, NIH Deputy Director, described the intradepartmental competition for money, especially in the face of recent emphases on cost containment,
pursuit of fraud, efficient management, prevention, nutrition, technology transfer, etc. Dr. Fredrickson expanded the "borders" of NIH modestly recently when he created the position of Associate Director for Medical Applications of Research. Similarly, PHS has created the Office of Health Technology. The purpose of both offices is to help identify in ongoing research those things that are ready for testing and application in medical practice. Dr. Malone said that NIH's conference on the principles of research, mentioned by Dr. Richmond, was successful and that the information and recommendations coming out of the conference are still being synthesized. It will be of high priority to get these recommendations into the budget process. He emphasized the importance of NLM and its Board of Regents to the institutes of NIH and to HEW's programs in international health communications.

Dr. Sheps commented that NIH's involvement in technology assessment, consensus activities, and standard-setting need not impair NIH's primary function to support and perform research. Dr. Malone agreed, saying that technology assessment is much easier than technology transfer. NLM's Lister Hill Center will have an important role in this latter activity. Dr. Richmond said that the consensus meetings that have been arranged by NIH's Office of Medical Applications of Research are extremely important for pointing out future directions. In response to a question from Dr. Chalmers about how to reach the practicing physician with pertinent information stemming from research, Dr. Richmond said that a Departmental task force was studying the matter of knowledge dissemination; NLM and its Lister Hill Center will have an important role in this area.

IV. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Board of Regents approved the minutes of the meeting of May 25-26, 1978.

V. DATES FOR FUTURE MEETINGS

The Board will meet next on January 25-26, 1979. The dates of May 24-25, 1979, were selected for the following meeting. Next fall's meeting was tentatively set for October 4-5, 1979.

VI. REPORT OF THE DIRECTOR, NLM

Dr. Cummings informed the Regents about a number of important staff changes at the Library: appointment of Dr. Lionel Bernstein as Director of the Lister Hill Center; Dr. A. Donald Merritt as Special Assistant to the Deputy Director for Research and Education; Grace McCarn as Chief of the Bibliographic Services Division; the retirement of Davis B. McCarn, Assistant Director for Science Communications (Planning); the transfer of Melvin S. Day, NLM Deputy Director, to the National Technical Information Service, where he will be director; and the appointment of Kent A. Smith, Assistant NLM Director for Administration, as Acting Deputy Director of the Library.

Dr. Cummings reviewed the last five years' history of NLM appropriations and personnel levels. In current dollars, the appropriation has been fairly level, declining slightly in the last few years. Staff levels have also been fairly constant over the years, with an increase in FY 1978 of 23 positions. The Director also reviewed several statistical indicators of levels of services: interlibrary loans and reader services have increased tremendously in the last several years, with a leveling off last January probably due
to the new copyright law. The number of online centers and the number of online searches performed on NLM's databases continue to grow rapidly (over one million searches in the last fiscal year) with no sign of leveling off. In response to a question from Dr. Sheps, Dr. Cummings said that money collected from the online centers covers the costs of the service "from the walls of NLM to the users." Last year a half million dollars was turned over to the U.S. Treasury from online charges. Mr. Welsh, Deputy Librarian of Congress, supported Dr. Cummings' caution that returning large sums to the Treasury has its dangers: the money taken in by two revenue-producing activities at the Library of Congress is now used to offset appropriated funds, resulting in pressures to raise prices to produce more revenues. The Director also noted that in the last year NLM emphasized increasing the number of hospitals connected to the online network. We expect the network to grow by 25-50 institutions next year. A recent test to "stress" the system showed that our present computer capacity was adequate to handle projected workloads; the limiting factor was not computer capacity but the number of communication lines to the computer.

In the area of legislation, the Director said that the Medical Library Assistance Act is still stalled in Congress because it is tied in with legislation for the National Cancer Institute and the National Heart, Lung, and Blood Institute that is receiving close review. The HEW 1979 appropriation bill is still in Congress—the compromise figure for NLM is likely to be about $42 million, several million dollars over the President's budget.

Dr. Cummings noted the rapid progress in building the Lister Hill Center Building. Mr. Kent Smith showed slides of the construction. The building is about 70 percent complete, Mr. Smith said, and it should be finished by next September, 6 months ahead of schedule. The dedication is planned for May 22, 1980, and will include tours, an afternoon ceremony with prominent members of the health community and members of the Board, an evening Board of Regents' dinner, and a publication based on the speeches and presentations featured at the dedication and dinner.

Dr. Cummings reported that both Secretary Califano and the Chairman of the House Subcommittee concerned with NLM legislation have responded to the Board's resolution concerning the appointing authority for Regents. Dr. West said that the Secretary's response indicated that the Department favors appointment of Regents by the Secretary rather than by the President. This would speed up future appointments and also bring the Board in line with other HEW advisory groups whose members are appointed by the Secretary. The renewal legislation for the Medical Library Assistance Act, now in Congress, provides for Secretarial appointments of Regents.

VII. REPORT OF THE LISTER HILL CENTER/NATIONAL MEDICAL AUDIOVISUAL CENTER

Dr. Harold M. Schoolman, NLM Deputy Director for Research and Education, said that the resolution of the Biomedical Library Review Committee (BLRC) concerning the adequacy of AVLINE has been examined by the LHC-NMAC Subcommittee of the Board of Regents. The Subcommittee concluded that because there have been so many modifications to AVLINE since the resolution was made, Dr. Schoolman should brief the BLRC and describe the current status of the data base. The Subcommittee was concerned, however, with the scope and coverage of AVLINE, particularly as to patient education and public education material. The Subcommittee had also been asked to examine the contract procedures at NMAC, in light of the General Accounting Office
The Subcommittee concluded that the issue was too complicated, and that there was too little time, to make definitive judgments. Since most of the comments in the GAO report had to do with work under collaborative arrangement between NMAC and the Bureau of Health Manpower, and since that arrangement has since been terminated, and since NMAC's remaining contract operation was being reoriented in light of the impending merger of NMAC with the Lister Hill Center, the Subcommittee felt it could more profitably spend its time on examining the Center's future role.

Dr. Schoolman commented briefly on the Subcommittee's meeting on September 7-8, a detailed account of which is now being prepared by staff. One important aspect of the Subcommittee's review was an agreement that interaction between industry, the Lister Hill Center staff, and the academic community was very important and should be continued. Two ad hoc consultants have agreed to serve for this purpose—Dr. Stephen Abrahamson, Chairman and Director, Department of Medical Education, University of Southern California, School of Medicine; and Dr. William Stanley Brown, Head, Computer Mathematics Research Department, Bell Laboratories.

Dr. Schoolman reported that the organizational design for the new Lister Hill Center would be proposed in the near future. This would include mission statements (general and specific), staffing patterns, and position descriptions for staff. The organizational design will be finished by the first of the year.

VIII. REPORT OF THE LHC-NMAC SUBCOMMITTEE

Dr. S. Richardson Hill, Jr., Chairman of the Board's LHC-NMAC Subcommittee, reported on the two meetings of the Subcommittee and its consultants, the first held at NMAC in Atlanta, the second at NLM. The integration of NMAC and LHC presents the Library with a great opportunity, he said. NLM has been successful in expanding its traditional roles and it now has the challenge to redefine its boundaries and move into new activities. There is an immediate need to develop organizational, operational, and staffing plans for an integrated LHC/NMAC. The Board of Regents should aid NLM staff in this planning. The Lister Hill Center, ideally a primary Federal focal point for health sciences education, needs to have its scope and boundaries carefully defined. For example, should patient education and public education be within its purview? Although AVLINE provides adequate access to health sciences audiovisual materials, more is needed in patient and public education materials. The withdrawal of NMAC from the arena of patient and public health has left a void in the distribution of these materials. The Subcommittee feels that NMAC should not resume its involvement with these materials but that the Center does need to do more for patient education.

The new LHC needs to define its relationships with the health science community. There are four possibilities: competitive—where intramural developments are similar to those in the universities and industry; collaborative—where intramural activity is augmented by contracts; supportive—where the Center funds independent investigation in the universities; passive—where the Center merely notes and records the current state of the art. The Subcommittee feels that the relationship between the LHC and the health science community should be explicitly stated for every LHC program. The Board of Regents can be helpful in giving guidelines for determining these relationships. The
Subcommittee also believes that the new LHC will have to have an extramural capability for both grants and contracts. This should be worked out by collaboration with the present NLM Extramural Programs.

There were several general issues identified by the Subcommittee. The first, the need for outside review and consultants, was already mentioned by Dr. Schoolman. Second, guidelines are needed from the Board as to when it is appropriate for the LHC to operate in a competitive mode with industry. Generally, where market incentives are great enough, the LHC should not become involved in funding projects. A related issue has to do with the credibility of LHC’s intramural work. For example, although there is general agreement that the LHC should not undertake curriculum development, it may have a proper role in research and development in how to design a curriculum. A final issue was how far the LHC should carry a project. The Subcommittee believes that the Center should pursue projects until they warrant testing in the general marketplace. Ideally, the Center would turn over operational control of a new system to another branch of the Library (as was done for MEDLINDEX). This may not always be possible, however. For example, the complexity of the hepatitis data bank now being developed by LHC and the larger “knowledge system” of which it will be a part may require it to be operated by the Center rather than another component of NLM.

In reviewing the present and proposed programs of the combined LHC/NMAC, the Subcommittee had a number of specific proposals. The audiovisual loan program should be moved from NMAC to NLM’s Library Operations. Several considerations in this area were noted: scope and coverage policy for audiovisuals and the conditions under which they may be lent; some audiovisual productions cost more to lend than to give away; videodisc technology and high-speed digital transmission should be explored for their application to the audiovisual loan program; commercial distribution for audiovisuals should be explored; and the archival function for audiovisuals should be the responsibility of Library Operations—a highly selective archival policy is needed. The proper locus for most media development, the Subcommittee felt, were the universities and commercial sector.

The new LHC should continue its programs of training and consultation to increase awareness and effective utilization of new communication technologies. It is important to explicitly define LHC’s mission and objectives in this area both for staff and LHC’s constituency. LHC’s present computer and communications engineering programs are well conceived but need a narrower focus, so that proposed projects do not outstrip the available resources. The field is so large, it is doubtful that the small amount of available resources can exert a meaningful influence unless the focus is considerably narrowed. One approach would be to limit the field by content—supporting only certain subject areas; another approach would be to limit the type or purpose of support. The Subcommittee was enthusiastic about LHC’s information transfer program—the hepatitis data bank—and strongly supports its continuation and strengthening. Summing up, Dr. Hill said that, although the Subcommittee was critical in several areas, it was impressed by the number and caliber of programs of LHC and NMAC and the competence of staff. There is a solid nucleus on which to build and take advantage of the opportunities presented by the amalgamation of the two organizations.
Dr. Chalmers, a member of the Subcommittee, commented on the difficulty of updating audiovisual material. It is an enormous problem to constantly review audiovisual materials to assure that they reflect the latest knowledge, but this is an important task. Dr. Abdellah urged that the scope and mission of the LHC be reviewed to ensure that non-M.D. health professionals are represented in its programs.

Dr. Sheps emphasized the crucial importance of the Board's role in planning for the new LHC. He felt the work of the Subcommittee should continue and that all issues should be laid out for the consideration of the full Board. Individual Regents, after they receive the Subcommittee's final report, should give their comments to Dr. Hill. Dr. Sheps put his proposal in the form of a motion and, after discussion, the Regents agreed to accept Dr. Hill's oral report, to provide (along with NLM staff) their comments on the report to Dr. Hill, to conduct further discussions on the matter at the January meeting and to review then the organizational, staffing, and mission statements being prepared by Dr. Schoolman, and to take final action on recommendations for the integration of LHC and NMAC at the May 1979 meeting.

The concluding discussion on this topic centered around the desirability of NLM becoming involved with patient education. Mr. Williams pointed out that NLM has performed its functions well with regard to health professionals, but that it might be dangerous to dilute this effort by extending it to patient education. It was pointed out by Dr. Jarcho that the Board is already on record as saying that patient education is out of scope for NLM. Dr. Cummings noted that HEW's Bureau of Health Education was established with responsibilities in patient and public education and that furthermore these activities are outside of NLM's responsibility as defined by the National Library of Medicine Act. The Director said that it would be proper for NLM to provide tools to health professionals for their use in patient education. Dr. Chalmers affirmed that this latter role was indeed what the Subcommittee had in mind during its deliberations on expanding AVLINE to include more patient-education material.

IX. PLANS FOR HEALTH CARE DATA BASE

Dr. Clifford A. Bachrach, Head of NLM's Medical Subject Headings Section, discussed with the Regents NLM's new data base available to online users, called the health planning and administration data base, or "file health" for short. It will be available on the network next month and will contain citations to literature concerned with health manpower and other health resources, and with the planning, organization, financing and management of health services.

In 1976 NLM surveyed the journals held by several libraries with strong health administration interests and journals recommended by some of the experts who had attended a meeting NLM conducted to explore its needs in this field. NLM then began indexing 70 of the most promising of these serials. In 1977, NLM concluded an agreement with the American Hospital Association (AHA) which further increased NLM's coverage. Under the agreement, the literature contents of the NLM MEDLARS system has been supplemented by additional material that is of special interest to AHA, and the camera-ready copy for the hospital literature index is provided to the AHA by the National Library of Medicine.
Initially, the new database will contain citations from these three sources: relevant citations from MEDLINE journals, citations from the 70 supplementary journals NLM added, and the remaining citations added for the Hospital Literature Index.

As early as possible, NLM will add citations from two additional sources. The first of these will be citations to non-serial items from the Library's own CATLINE file of NLM acquisitions. The second step will be to include citations furnished by the National Health Planning Information Center (NHPIC) of HEW's Health Resources Administration. The NHPIC data base contains citations to books and journals (many of which duplicate what NLM already holds) and also technical report literature of a type that NLM does not acquire. These technical reports represent studies sponsored by Federal, state, and local government agencies and will be a valuable enrichment to NLM's new database. At present, the NHPIC database is on a computer accessible only by that organization.

Dr. Sheps, commenting on the new database, said the extensive collaboration between NLM and the National Health Planning Information Center is most gratifying. The services available from the Health Planning and Administration database will be most valuable to the health community. The accessibility to "fugitive" literature is especially important. Dr. Sheps said that NLM will now have the opportunity to prepare specialized bibliographies on such subjects as preventive measures, primary care, etc. Another opportunity will be for the Lister Hill Center to be able to use this accumulating information in developing communication and educational programs.

Mr. Williams suggested that the new database will generate great increases in requests for interlibrary loans—how will NLM provide access to documents from out-of-scope journals and technical reports? Dr. Leiter, NLM Associate Director for Library Operations, explained that the institutions which provide peripheral information for the database have also agreed to provide for interlibrary loans of the documents. In many cases the National Technical Information Service (NTIS) will be the source for the documents. There will be a source for all materials cited in the database, Dr. Leiter emphasized.

X. NLM INTERNATIONAL PROGRAMS

Miss Mary E. Corning, NLM Assistant Director for International Programs, described the current status of NLM's quid pro quo arrangements with eleven foreign partners: Australia, Canada, France, Germany, Iran, Japan, Mexico, South Africa, Sweden, United Kingdom, and the Pan American Health Organization. Two recent developments have led NLM to reexamine these arrangements. The first of these is the fact that the European Economic Community is developing a network to serve information needs in those countries—of the nine members of the EEC, three are present MEDLARS partners and a fourth (Italy) will soon become one. The second is a request from the National Center of Scientific and Technical Information of Israel to access Bibliographic Retrieval Services (BRS), a commercial organization in the U.S. which licenses the MEDLARS tapes through the NTIS to provide services in the U.S. NLM has granted permission to BRS and Israel for two months of experimental tests by Israel of BRS MEDLARS tapes through telecommunication linkages.
After reviewing all aspects of the present arrangements, NLM has decided to maintain the present partnerships at the national level. Present and future partners will continue to have exclusive use of MEDLARS in their own country or in a region specified in the agreement. They will not provide service to anyone in the country of another partner, but they could arrange service to another nonpartner country. Both U.S. and non-U.S. institutions may license tapes and provide services internationally but not in an NLM partner country. In addition to the MEDLARS tapes being available for license from the National Technical Information Service, NLM will also license the ELHILL software (as it existed on October 1, 1978) through NTIS. The dollar value of the software, under a licensing agreement, will be $50,000, consistent with the value for the NLM foreign MEDLARS partners.

NLM needs to be sensitive to future international network developments and may modify its arrangements in the future.

Miss Corning next described the history of the development of the U.S.-Egyptian bilateral agreement on health cooperation. She had negotiated with the Minister of Health in 1975 to include in a memorandum of understanding, signed by both the Egyptian Minister of Health and the HEW Assistant Secretary for Health, a paragraph on biomedical communications which would permit the development of future activity. In recent discussions with the Egyptian Minister, Egypt will begin by developing a health information resource center. The physical and administrative location of this center would be decided by the Egyptians. Once this action is taken, NLM can provide excess credits at the Universal Serials and Book Exchange, Inc., and technical consultation. If the Egyptians place a high enough priority on the development of this information resource, it could qualify for dollar funding under the U.S./AID commodity input plan.

Miss Corning also brought the Regents up to date on the current status of NLM's involvement with the Soviet Union. A memorandum of understanding, signed in 1977, has three parts: items that can be implemented immediately (interlibrary loan, exchange of material and persons, etc.); projects that can be developed as models (development of nomenclature for public health and toxicology/pharmacology projects, for example); topics that were deferred, such as computer technology or transfer of our computer systems. There have been six Telex messages, but no specific developments since the signing of the agreement. We believe that the USSR is waiting until it has developed a competitive computer-based medical bibliographic network which it intends to use in the Soviet Bloc and developing countries.

The World Health Organization terminated its agreement with NLM at the end of 1977. This raises the important question of how developing countries can receive health information services. WHO's Advisory Committee on Medical Research, chaired by Dr. Sune Bergstrom, Director Emeritus of the Karolinska Institute, is emphasizing tropical diseases. A subcommittee on information (of which Dr. Cummings is a member) is arranging for a Recurring Bibliography on tropical diseases to be computer-prepared by NLM, printed by the Regional Library in Iran, and distributed by WHO.

Miss Corning ended her presentation by commenting on the current interest in international health by the White House, Congress, and HEW. The White House special task force on international health lost its architect with the resignation of Dr. Peter Bourne, and it is not settled yet how the task force will continue. The Congress amended
the PHS Appropriation Act of 1978 to authorize the HEW Secretary to commission a study by the Institute of Medicine; this study has been completed. Senator Javits has introduced legislation that would remove the Fogarty International Center from NIH and put it in the Secretary's Office of International Health, establish a legislative base for that Office, and establish a nongovernmental institution to work with developing countries (to be named after Senator Humphrey).

XI. COMPUTER PROCUREMENT

Mr. Harry Bennett, Director of NLM's Office of Computer and Communications Systems, reviewed progress on procuring the computer system to replace the present IBM 370/158 computer. The contract will be awarded in December 1978 and we expect the replacement computers to be installed and operating in the new Lister Hill Building by May 1980. Mr. Bennett said that the purchase would be a "least-cost procurement"—mandatory requirements are established, vendors not meeting mandatory requirements are eliminated, and the least expensive proposal remaining would be selected. Certain differences in costs are not considered however: in-house conversion costs, the cost of parallel operation of the old and new systems during testing, personnel costs for training, rental credits, and certain intangible costs. It is expected that the cost will be somewhere in the range of $12-20 million.

The question of rental credits was important in this purchase. The General Services Administration originally ruled that NLM could not allow any consideration for certain presently rented equipment against the purchase price of the new system. Since this could amount to a saving of $600,000, NLM asked HEW to support its request and to ask for a reversal of the GSA position. With the weight of HEW support, GSA reconsidered its decision and reversed its position.

Mr. Bennett also reported on the status of interim actions taken since the last Board meeting. Additional memory for the present IBM 370 system has been installed. Steps have been taken to balance the workload by running large jobs at night so that more of the system's capacity will be available during the day. If there are problems with the conversion to the new system in late 1979, steps have been taken to ensure that additional equipment is quickly available to prolong the life of the present system.

Mr. Leonard D. Schaeffer, Administrator-designate of HEW's Health Care Financing Administration, who, in his earlier position as HEW Assistant Secretary for Management and Budget, was instrumental in getting GSA's initial decision reversed on the issue of purchase credits, described for the Regents the procurement process as it applies to computers. Mr. Alfred R. Zipf, consultant to the Library in the area of computers, thanked Mr. Schaeffer for his intervention on NLM's behalf. Mr. Zipf said that the complex procurement process is coming along well.

XII. HISTORY OF MEDICINE DIVISION

Mr. John B. Blake, Chief of NLM's History of Medicine Division, detailed for the Regents the development of that organization since its beginning in 1942. The historical part of the NLM collection was shipped out to Cleveland at that time, where it remained until the present NLM building was built in the early 1960s and the collection was shifted to Bethesda. Using 1961 as a benchmark, Dr. Blake presented some figures pertaining to the historical collections. From 35,000 pre-1801 monographs in 1961 the collection
has been enriched by 60,000 pictures (1962), 25,000 pre-1801 pamphlets and theses (1963), and 400,000 journals, monographs, pamphlets and theses (1968) mostly from the 19th century. These were transferred from the general collection to the historical. In addition, HMD purchases historical materials and also receives them from benefactors as gifts. Expenditures for books totaled $135,000 (3,937 volumes) in the decade 1959-1968; these figures were increased to $700,000 for 9,381 volumes for the ten years 1969-1978. In recent years the number of historical books purchased has been decreasing, primarily because fewer books that NLM would like to acquire are being offered at reasonable prices. The $80,000 or so NLM now expends annually on such purchases, however, is entirely adequate to maintain and improve the collection.

Dr. Blake described the Division's efforts to catalog the historical collections. In 1967 HMD published a catalog of its 16th century holdings (4,600 items). The initial cataloging for the 17th century collection (14,000 items) has been completed and a book catalog is being prepared. The 18th century collection, because of its size, will have a short-title catalog (now in press). Much of the 19th century material—books and journals—is already cataloged. However, a sizable number (300,000) of dissertations and pamphlets have only rudimentary bibliographic records.

In the area of public service, Dr. Blake noted that interlibrary loans have increased from 500 in 1961 to over 2,000 in 1978; in addition, the Division sent out some 2,000 photographs from the prints collection in 1978. With the move to the present building, HMD began offering reader services. Requests from readers numbered over 7,000 in 1978. The policy of the History of Medicine Division is the same as that for the NLM as a whole: to make material available without charge on interlibrary loan, charging only for special photographic services.

Among the Division's other functions are the publication of the annual Bibliography of the History of Medicine. The Bibliography was computerized in 1975 and NLM is now able to publish it more rapidly at less expense. The computerization has allowed NLM to offer a separate data base, called HISTLINE, searchable from institutions on the online network. Scholarly publication is also an important activity of the Division's professional staff members.

Dr. Blake concluded by showing the Regents several figures of pre-Columbian sculpture from a group of 39 recently purchased by NLM from Dr. Abner Weisman of New York. These figurines—many showing disfigurement and signs of disease of their human subjects—will be put on display in the new Lister Hill Center Building. Most of the sculpture are from cultures on the west coast of Mexico and date from about 300 B.C. to 300 A.D.

XIII. AWARD

The 1978 NLM Director's Award was presented by Dr. Cummings to Mr. Clement Fowler of the National Medical Audiovisual Center. Mr. Fowler was cited by the Director for his work in the "design, direction, and coordination of an exhibit on health science communications technology displayed in the lobby of the Library last year. The enthusiasm, creativity, and high professional standards manifested in your design and mounting of this exhibit represented an exceptional service in the advancement of the Library's mission."

-12-
XIV. TRAINING PROGRAM IN HEALTH SCIENCE AND COMPUTER TECHNOLOGY

Dr. Roger W. Dahlen, Chief of the Extramural Programs' Division of Biomedical Information Support, NLM, briefed the Regents on this program. He presented data on the positions currently held by past trainees and sought recommendations from the Regents for future program directions.

Of the eleven training grants in computer technology, five began in 1972, two in 1974, three in 1975, and one in 1977. Ten of these grants are still active. Dr. Dahlen acknowledged difficulties in tracking the trainees after they have graduated from the program. Seven program directors, however, have responded to recent inquiries and supplied data. The statistics showed that 65 individuals have so far completed the training program—29 of these were predoctoral trainees, with eight receiving the Ph.D. as part of their experience under the training grant; and 36 were postdoctoral trainees. The current positions held by those reporting are in the following fields: 22 in university faculty—18 in medical departments and four in other departments; 12 in self-employment—7 in private practice and five are consultants to the health-care community; six in health-related computer industry; four in state and local governments, working with health-planning agencies; ten in postdoctoral programs, including residency programs; four are students; two are in other fields, not utilizing their computer training; and the whereabouts of five are unknown. The total NLM funding for all training grants from 1972 to 1976 amounted to approximately $3.0 million—estimated cost per individual is $20,000—and the average time spent in the training program per individual is about one and one-half years.

The Chairman expressed his concern that NLM had a real problem with respect to career-ladder possibilities for these trainees; i.e., although they have acquired this specialized training, the number of department heads and deans who can afford to employ them is limited. Dr. Doris H. Merritt advised that the Board not focus wholly on the medical faculty to employ these trainees, since the goal of the program, as originally set, was to reach the "practicing physician" so that he would be able to use the acquired computer knowledge to serve his patients better. Dr. Abdellah, citing a similar NIH training program involving the nurse/scientist, alerted the Board that a major accumulation of these types of people under faculty should be averted and a dispersion factor into all areas should be advocated. Dr. Chalmers suggested that it may be worth considering the possibility of making this training available to students before they enter medical school or during medical school.

XV. REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS - DISCUSSION OF NEW CAREER-DEVELOPMENT PROGRAMS

Dr. Ernest M. Allen, NLM Associate Director for Extramural Programs, referred to the Task Force Report on Review of the Extramural Research Grant Program which was discussed at the May meeting and accepted by the Board at that time. He presented three staff recommendations on the implementation of the report:

1. That NLM assume an important role in urging greater coordination among research and demonstration programs in information science, supported by HEW and other federal agencies.

It was suggested by Dr. Allen that a group like the Association of American Medical Colleges initiate a first meeting of interested agencies to ascertain the kind of support
they are presently providing in this area and what their prior roles have been, and then secure an agreement for one of the agencies to take the lead. Staff will investigate the possibilities further and report the progress to the Board at a later meeting.

2. Initiate a small number of major studies (program projects) in the areas of new methods for representation of medical knowledge, frequently referred to as "computer-based medicine."

3. Attract individuals to the field of biomedical communications and provide them with an appropriate background and an understanding of the particular characteristics of the health sciences.

Addressing himself to these recommendations, Dr. Allen presented the two proposed career development programs (a detailed description was included in the agenda book): (1) Research Career Development Awards in Medical Information Science, and (2) New Investigator Research Grants in Medical Information Science. As to the mechanics, Dr. Allen suggested that it would be helpful to accept the already established NIH policies and procedures when announcing the new program.

Dr. Schoolman commented that he is in agreement with the criteria to be applied, namely, the characteristics of the applicant, the nature of his research, and the environment in which he is going to work. However, he objected to having one application for the research component and another for the career development aspect; instead, NLM should strive to arrive at a means by which a single judgment can be achieved. Dr. Schoolman also favored one review each year by a select committee. He recommended that NLM start with what it wants to accomplish and see whether or not that approach is acceptable to NIH.

Dr. Allen indicated that NLM should use a standing, formally chartered advisory committee, such as the Biomedical Library Review Committee, supplemented with consultants, since it is almost impossible to establish a new committee.

Dr. Cummings commented on the discussions by stating that NLM is better served, when considering these unique problems, to operate within the terms of its own existing authority on training. It is not always expedient and in the best interest of the community the Library serves to use NIH authorities. He proposed that the talents of the Board and its consultants as well as the skills and experience of the NLM staff be tapped to work on the development of new programs, to serve new needs, and, where necessary, to try and make NIH see the advisability for differing guidelines to fit the Library programs.

Concluding the discussions, the Regents recommended that for career development awards which include as part of their arrangement a research project, one grant application be submitted with two face pages and two budget pages, so that the applicant would have to write one application only.

XVI. REGIONAL MEDICAL LIBRARY PROGRAM - COST-SHARING PLANS

Mr. Arthur J. Broering, NLM Deputy Associate Director for Extramural Programs, presented a brief status report on the implementation of RML cost-sharing plans to be applied in the eleven regions.
The RML Program is one of six authorized under the Medical Library Assistance Act and its extensions. Since the first Regional Medical Library was established in 1968, the document-delivery service has been a major component of the program. Approximately 50% of RML program funds are allocated for document-delivery service. Mr. Broering provided data on the past and present levels and volume of this service. The RMLs will implement the cost-sharing plans beginning in January 1979. They will include provisions for a maximum unit charge for document-delivery services; however, the specific charge levied on a user will vary from region to region or within regions depending upon the extent to which local or state governments or other institutions or organizations underwrite all or part of the costs. Because the impact of the fee-for-service aspect of the plans is not known, the document-delivery service will be closely monitored and results will be reported at future Board meetings. In consideration of the potential impact of the document-delivery plans on the smaller institutions, the Chairman noted that the advisory groups of the RMLs included users of the system in addition to providers and that it was therefore advisable to get their input as the plans are developed and finally implemented.

XVII. NLM PUBLICATION GRANT AND PUBLIC LAW 480 PROGRAMS

Dr. Jeanne L. Brand, Chief of the Extramural Programs International Programs Division, NLM, reviewed the Publication Grant Program and the Public Law 480 or Special Foreign Currency Program. Both programs provide financial support for non-profit, biomedical publications of significance to the U.S. health needs and goals.

The domestic Publication Grant Program was authorized in 1965 by the Medical Library Assistance Act and its extensions. Since the beginning of this program in 1966, 415 awards have been made, totalling almost $8.0 million. The support given is selective and excludes biomedical textbooks, commercially viable studies for the production of curriculum materials, the initial reporting of original biomedical research findings, proceedings of annual meetings, and projects of local interest only. By Board policy, long-term or large-scale projects are also excluded in order to maximize results with the limited funds available. A serious effort has been made in the last several years to increase the number of projects directly related to health-care delivery.

Under the program, support is given to seven major types or projects: analytic, critical reviews and biomedical monographs, studies in the history of medicine, secondary literature tools, projects in librarianship and information science, periodical publications, translations or conference proceedings, and publication subventions.

The Special Foreign Currency Program (Public Law 480) is not funded by appropriations in U.S. dollars, but by special foreign currencies, made available originally through a 1958 amendment to the Agricultural Trade Development and Assistance Act. The Public Law 480 Program complements and extends the Library's domestic mission by developing international activities which draw upon foreign biomedical resources and manpower for the preparation of publications useful to U.S. health professionals. They include analytic critical reviews and biomedical monographs, secondary literature tools in the health sciences, English-language translations, and proceedings of significant international symposia and conferences. The Program is currently active in Poland, Yugoslavia, India, Egypt, Pakistan, and in Israel under awards from the U.S. - Israel Binational Science Foundation. Poland, Yugoslavia, and Egypt have organizational arrangements to continue programs after funding ceases.
Dr. Brand presented a series of slides to the Board analyzing current trends in both programs and illustrating some of the books which had been published with support from these programs in the last two years.

XVIII. REPORT ON SITE VISIT TO EGYPT

Dr. Saul Jarcho, Consultant to the Board of Regents, gave a brief description of his site visit to Egypt in March of this year together with Dr. Brand. The purpose of the trip was to review ongoing foreign currency projects and to assess the potential resources—human and institutional—for further studies in the history of medicine and in critical reviews on biomedical topics of mutual priority interest to the U.S. and Egypt. It became evident that Egypt possesses the learning and talent for the development of a program of high-level scholarship in the history of medicine.

Dr. Jarcho specifically drew attention to two research projects that might be undertaken by the Library: One is the translation into English of the "Canon of Medicine" of Avicenna, which was written in the eleventh century and recognized as a complete treatise in five volumes of medical knowledge of the period. It is still influential in Islam, particularly in Pakistan, and among Moslems in India. The American Research Center in Egypt has already shown a great deal of interest in sponsoring the project, and a competent team of scholars to undertake the project is being assembled. The other project is one regarding the history of medicines, specifically among the very extensive field of Coptic literature. There is much Coptic material available and it might warrant at least a preliminary search to find out if the project is worth pursuing.

MEETING CLOSED FOR REVIEW OF GRANT APPLICATIONS FROM 12:15 to 1:00 P.M.

XIX. RESEARCH, RESOURCE, TRAINING, SPECIAL SCIENTIFIC PROJECT, PUBLICATION, AND IMPROVEMENT GRANT APPLICATIONS

Before proceeding with the consideration of pending applications, Dr. Dahlen informed the Board members and consultants of confidentiality and conflict-of-interest procedures and reminded all Regents and consultants to sign, at the conclusion of the grant review, the statement certifying that they had not participated in the discussion of any application where conflicts of interest might occur. The Board concurred with the recommendations of the Extramural Programs Subcommittee. A total of 57 applications was reviewed, of which 29 were recommended for approval and 28 for disapproval. Grant applications recommended for approval by the Board are listed in the summary actions (Attachment C). Interim actions taken by EP staff since the last Board meeting in May 1978 were noted.
XX. **ADJOURNMENT**

The meeting was adjourned at 1:00 p.m. on Friday, October 13, 1978.

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Wednesday, October 11, 1978, 2:00 to 4:30 p.m.
(EP Subcommittee — List of Attendees under Attachment B)
Thursday, October 13, 1978, 9:00 a.m. to 5:00 p.m.
Friday, October 13, 1978, 9:00 a.m. to 1:00 p.m.

* * * * * * * * * * * * * * * * *

**ACTIONS TAKEN BY THE BOARD OF REGENTS**

1. The Board accepted the oral report of the LHC-NMAC Subcommittee, presented by its Chairman, Dr. S. Richardson Hill, Jr., on the integration of the two centers, with further discussions to follow at the January meeting and final action on recommendations at the May 1979 meeting.

* * * * * * * * * * * * * * * * *

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.

*Kent A. Smith 11/15/78*  
Acting Director, NLM

*Kelly M. West 11/20/78*  
Chairman

Robert M. Mehnert  
Chief, Office of Inquiries and Publications Management
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<td>RUTCHER, James C., M.D.</td>
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<td>CUMMINGS, Martin M., M.D.</td>
<td>Director National Library of Medicine</td>
<td>Bethesda, MD 20014 301-496-6221</td>
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9/18/78
BOARD OF REGENTS

Extramural Programs Subcommittee Meeting

October 11, 1978

ATTENDEES

Subcommittee Members Present:

Dr. Faye G. Abdellah
Mrs. Bernice M. Hetzner (Consultant)
Dr. Saul Jarcho (Consultant)
Dr. Doris H. Merritt
Mr. James F. Williams II

NLM Staff Present:

Dr. Martin M. Cummings, Director
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Dr. Jeanne L. Brand, Chief, International Programs Division, EP
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, EP
Mrs. Helen S. Bennison, Grants Management Specialist, EP
Mr. Peter Clepper, Program Officer, EP
Mrs. Karin K. Colton, Committee Management Assistant
Miss Annette B. Green, Grants Data Clerk, EP
Mrs. Frances E. Johnson, Program Officer, EP
Mrs. Kathleen M. Nichols, Grants Management Assistant, EP
Mrs. Marguerite Pusey, Grants Management Specialist, EP
Dr. Dorothy A. Stroup, Program Officer, EP
Mr. Randall Worthington, Program Officer, EP
Dr. Galina V. Zarechnak, Program Officer, EP
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1/ Approval recommendations are not final but are the basis upon which subsequent BID determination and negotiations will determine final awards.
APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL 1/
(Arranged numerically by program)  

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