

AGENDA

Forty-Fourth Meeting of the

BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

Board of Regents Room
Administration Building
University of Arizona
Tucson, Arizona

8:30 a.m., March 26, 1973

MEETING OPEN: 8:30 a.m. to 3:30 p.m.

- I. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. Jack M. Layton
- II. CONSIDERATION OF MINUTES OF LAST MEETING TAB I Dr. Jack M. Layton
(Orange Book)
- III. DATES OF FUTURE MEETINGS TAB II Dr. Jack M. Layton
- 1973 and 1974 Calendars in all books
Next meeting -- June 21-22, 1973 (Th-F)
Subsequent meeting -- November 29-30 (Th-F) Thanksgiving: November 22
Selection of meeting date -- March 1974
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|-------|--------|-------|
| 18-19 | 21-22 | 25-26 |
| (M-T) | (Th-F) | (M-T) |
- International Association for Dental Research, March 21-24, 1974 (Atlanta)
American Association for Cancer Research " 28-30, " (Houston)
American Society for Internal Medicine " 30-31, " (New York)
American Medical Association (Annual) June 23-27, " (Chicago)
- IV. REMARKS BY DEPUTY ASSISTANT SECRETARY FOR PROGRAM OPERATIONS, II Mr. Richard L. Seggel
- V. REPORT OF THE DIRECTOR, NLM TAB III Dr. Martin M. Cummings
- COFFEE BREAK
- VI. REPORT ON EXTERNAL SCIENTIFIC INFORMATION ACTIVITIES RELEVANT TO NLM TAB IV Mr. Melvin S. Day
- VII. REPORT OF NIH PROGRAM MECHANISMS COMMITTEE Forwarded to Members under separate cover. Mr. Melvin S. Day

XIII. EXECUTIVE SESSION

ADJOURNMENT

DINNER (Dutch Treat): Westward Look Resort
245 East Ina Road
Tucson, Arizona

Cocktails: 6:30 p.m. Dinner: 7:30 p.m.

Speaker: Dr. Raymond H. Thompson
Professor and Head
Department of Anthropology
University of Arizona
and
Director, Arizona State Museum

Topic: "Native Peoples of the Southwest"

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RECONVENE: 9:00 a.m., Tuesday, March 27, 1973, for tour of Arizona
Medical Center Library and visit to San Xavier del Bac
Historical Mission.

DEPARTMENT OF HEALTH, EDUCATION,
AND WELFARE

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
BOARD OF REGENTS

MINUTES OF 44TH MEETING
MARCH 26, 1973

BOARD OF REGENTS ROOM
ADMINISTRATION BUILDING
UNIVERSITY OF ARIZONA
TUCSON, ARIZONA

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

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Minutes of Meeting
March 26, 1973

The Board of Regents of the National Library of Medicine was convened for its forty-fourth meeting at 8:30 a.m. on Monday, March 26, 1973, in the Board of Regents Room, Administration Building, University of Arizona, Tucson, Arizona. Dr. Jack M. Layton, Professor and Head, Department of Pathology, College of Medicine, University of Arizona, and Chairman of the Board of Regents, presided.

Board members present were:

Dr. William O. Baker
Dr. Susan Y. Crawford
Mrs. Bernice M. Hetzner
Dr. William N. Hubbard, Jr.
Lt. General Hal B. Jennings, Jr.
Dr. Jack M. Layton
Dr. J. Stanley Marshall
Dr. Angelo M. May
Dr. John P. McGovern
Dr. John W. Mehl

Alternates to Board members present were:

Dr. Faye G. Abdellah representing Dr. S. Paul Ehrlich, Jr., USPHS
Brig. General George E. Reynolds representing Lt. General Robert A. Patterson
Rear Admiral Edward J. Rupnik representing Vice Admiral Donald L. Custis

1/ Pursuant to the regulations, the actions taken or opinions expressed by individual members of the Board during the review of applications are to be treated as confidential.

2/ For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications: (a) from their respective institutions, or (b) in which a conflict of interest might occur. This procedure does not apply to "en bloc" actions--only when an application is under individual discussion, and then only for applications from the Board member's own "campus," will the Board member absent himself.

3/ The Board of Regents, when considering the Extramural Programs of the NLM, sits as the National Medical Libraries Assistance Advisory Board, and concurrently discharges the responsibilities of both bodies.

Board Members absent were:

Dr. L. Quincy Mumford
Dr. Marc J. Musser

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, Assistant Deputy Director
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Dr. Lee Langley, retiring Associate Director for Extramural Programs
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, EP
Mrs. Claire S. Marwick, Committee Management Assistant

Others present included:

Mr. Richard L. Seggel, Deputy Assistant Secretary for Program
Operations, H, DHEW
Dr. John P. Schaefer, President, University of Arizona
Dr. Merlin K. DuVal, Vice President for Health Sciences and
Acting Dean, College of Medicine, University of Arizona
Mr. Alfred R. Zipf, Consultant to the National Library of Medicine

I. OPENING REMARKS

Dr. Layton opened the meeting by welcoming Regents, alternates, and guests, taking particular note of the presence of Mr. Richard L. Seggel, Deputy Assistant Secretary for Program Operations, Health; Dr. John P. Schaefer, President of the University of Arizona; Dr. Merlin K. DuVal, Vice President for Health Sciences of the University and Acting Dean of its College of Medicine; and Dr. John P. Mehl, Acting Division Director for Biological and Medical Sciences, National Science Foundation, who was attending for the first time. He congratulated Dr. Baker on his assumption of the Presidency of Bell Laboratories and Rear Admiral Rupnik on his recent promotion.

Both President Schaefer and Dr. DuVal warmly greeted the Board, the latter pointing out that Board Member Dr. William N. Hubbard, Jr., had dedicated the Medical School in the fall of 1967.

Dr. Cummings introduced the new Associate Director for Extramural Programs, Dr. Ernest M. Allen, who brings with him extensive experience in grants policy and administration.

II. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Board recommended approval of the minutes of the meeting of November 20-21, 1972, without change.

III. DATES FOR FUTURE BOARD MEETINGS

The Board reconfirmed the dates of June 21-22, 1973, for the next meeting and confirmed the dates of November 29-30, 1973, for the subsequent meeting. March 21-22, 1974, were approved tentatively.

IV. REMARKS BY DEPUTY ASSISTANT SECRETARY FOR PROGRAM OPERATIONS, H

Mr. Seggel announced that Dr. Charles C. Edwards has been appointed and is awaiting confirmation as Assistant Secretary for Health, succeeding Dr. DuVal.

Immediate and significant problems are facing the new Assistant Secretary: the filling of three top-level vacancies; the scrutinizing of evaluative studies presently underway concerning the effects of budget cuts on affected agencies; and an inquiry into the consequences of the demise of the Regional Medical Programs. The long-range objective of the Office is the development of a total-mission concept of health. Close cooperation will be sought to marshal scientific resources. While in the past there were two deputies to the Assistant Secretary, there will now be four; one will deal specifically with medical and scientific affairs. It is within the latter's purview, for example, that such matters as the Board's resolution on duplication of information systems will lie.

The Chairman pointed out that the Board's resolution was exceedingly restrained, that, in the Board's view, the National Library of Medicine should have a stronger role in all Departmental medical information activities, and that NLM's unequalled biomedical communication resources, capabilities, and expertise should be the base upon which other Departmental medical information programs and systems should be built. The Board decried the wasteful and unnecessary duplication in this area.

V. REPORT OF THE DIRECTOR, NLM

Dr. Cummings thanked Mr. Day and Dr. Schoolman for their efficient handling of Library matters during his two-month absence due to illness.

The Director announced that on March 8 Senator Kennedy introduced an omnibus bill (S.1136) calling for the extension for one year of all expiring health authorities. Secretary Weinberger, Dr. Cummings continued, in his testimony before the Kennedy subcommittee, was firm in his wish to retain only those legislative authorities which he considers necessary for continuing HEW health activities. The Secretary said that he had submitted to the Congress a separate bill calling for the renewal of the Medical Library Assistance Act for three years.

NIH hearings begin March 27, 1973, with Dr. Sherman's testimony before Congressman Flood's Subcommittee on Appropriations. Dr. Cummings will testify before the committee the following week on behalf of the NLM budget submission.

The Director reviewed the course of events in the Library's FY 72 to FY 74 budget matters, pointing out that for FY 73 the President had recommended that the NLM budget be increased \$4 million to the \$28-million level, but that the total HEW appropriations bill was subsequently vetoed. The Library is presently operating under a continuing resolution passed by Congress and the FY 73 funding is about \$500,000 greater than that of FY 72. Dr. Cummings stated that the FY 74 budget approximates the President's revision for FY 73, and that, although on the surface it appears disappointing, he believes the Library has been treated fairly. He is more concerned with cuts in personnel ceilings. The Library's 469 positions authorized by the FY 73 budget will be reduced to 447 by the end of FY 74. He sees the reduction of 22 positions as a hazard to the Library's ability to provide sustained high-quality service.

With regard to the Extramural Programs, there was little latitude allowed. Explicit instructions from the Office of Management and Budget dictated no new starts for training grants and no new Distinguished Scholar appointments.

Although professional and support staff were reduced proportionately, Dr. Cummings pointed out that, in the final analysis, the Associate Director would make the decision within each program area. If there were a choice between additional program funding and additional staff, the Library, which is a service organization, would like to have personnel ceilings restored in preference to receiving more money.

The Director once again alluded to the phaseout of training as the biggest issue at NIH and the Department. There will be roughly a one-third phaseout during the first year, which will allow the Library to honor all of its commitments to students who had been selected for training prior to this directive. Complete phaseout is scheduled by FY 76, when it is believed all the institutions and all individuals involved will have been supported in accordance with prior commitments.

Observing that almost a year had elapsed since he reported to the Board on Library services to the public, the Director called attention to the phenomenal increase in MEDLARS and MEDLINE operations, particularly the latter. NLM's interlibrary loan workload continues to rise despite the fact that there are now eleven Regional Medical Libraries.

The requests to NMAC reflect the demand for knowledge in the new audiovisual media. Dr. Cummings reported that greater emphasis is being placed on "teacher" workshops so that the medical instructors being trained in the production and use of audiovisuals can then organize workshops back at their own medical schools.

Recognizing that the drive to establish more medical schools and produce more physicians will place greater demands on NLM's services, Dr. Cummings suggested that the Library can better serve the national need in the audiovisual area by sending NLM people out to work with the universities and to create audiovisual facilities locally rather than having their staffs travel to Atlanta. This means spending considerable time with the faculty and top-level administration in developing curriculum materials and plans. An example is Drew Postgraduate Medical School in Watts.

The Director pointed out that the great increase in MEDLINE services does not, in fact, require additional personnel. Much middleman work is eliminated. The Library now gives 20 times more service with the same personnel, a tribute to Mr. Davis McCarn and his staff, and to the System Development Corporation which engineered a fine system.

Dr. Cummings agreed with Regents who expressed conviction that budget cuts will be restored eventually. The Director observed that the Secretary does indeed know the work of the Library, having spent a half-day visiting NLM. He cited three occasions on which Mr. Weinberger's comments were both positive and complimentary.

Regarding the Williams and Wilkins litigation, Dr. Cummings advised the Board that the hearings took place early in March before the seven judges of the Court of Claims. The jurors were obviously well prepared. It was clear that the Court hoped that the matter would be resolved through the legislative rather than the judicial process. For the past two or three months, library and scientific groups have been urging just such action. It is the Director's opinion that the Court of Claims may rule against the NIH Library and NLM, but, if so, it will do so in a very constrained and restricted fashion so that all libraries will not be put in jeopardy by the decision. He wished the Board to know that he and the Deputy Director have placed the highest priority on the search for new mechanisms to provide interlibrary loans.

Dr. Baker observed that in a recent conversation with Assistant Secretary of Commerce-designate, Dr. Betsy Ancher-Johnson, he made known the need for prompt review of the copyright laws which has been dangling for a decade. The Williams and Wilkins experience would constitute important information for Dr. Ancher-Johnson in this regard.

Dr. Cummings called attention to the charters found under TAB III F. He explained that the termination date of January 4, 1975, applies to all advisory bodies which will cease to exist after that date unless they can be justified for retention through statute or need. There is, throughout the government, a proliferation of advisory committees which are now subject to careful scrutiny. He feels no apprehension at all, however, regarding the Board's continuation.

The Director expressed regret that the Board has been operating at less than full strength due to inaction by the Senate last year on two Presidential nominees. Should similar fate befall the latest candidates, the Board may be lacking a working quorum.

VI. REPORT ON EXTERNAL SCIENTIFIC INFORMATION ACTIVITIES RELEVANT TO NLM

Mr. Melvin S. Day, Deputy Director, reported to the Board on a number of external scientific information activities in which NLM participates, giving special attention to the benefits derived from this collaboration. An example cited was the Library of Congress' Cataloging-in-Publication Program (CIPP) wherein NLM receives galleys of new books from the principal U.S. medical publishers and provides to them the cataloging data for publication in the books themselves. In addition, the cataloging data is included in NLM's monthly Current Catalog two to six months prior to release of the books for sale by the publishers. Provision of cataloging information in these two forms to medical libraries obviates the requirement for local cataloging and results in significant savings in processing costs. Dr. Baker praised CIPP and cited major cost savings to the nation's libraries. However, he characterized this area of activity as the most outrageous example of inertia in the library community, noting that it took the initiative of the Council on Library Resources to get started. He expressed hope that it would reach the 100% level of participation.

Dr. Cummings commented that the nation spends \$1 million a day in redundant cataloging. Although the Library of Congress does cataloging, thousands of libraries around the country spend an additional \$370 million doing their own and largely duplicating the LC effort.

Mr. Day reported that during the past year the activities of the National Libraries Task Force have concentrated on cooperative programs among the three National Libraries to provide a basis for developing and maintaining compatible services. A series of seminars has been held to brief the management and operations staffs of all three Libraries on the automation activities within each one.

The Task Force has undertaken several studies to determine the feasibility for developing common cooperative acquisition and cataloging activities, developing cooperative programs in serial acquisition and control, and providing a standard book-order form which can be machine processed.

A spin-off of the Task Force has been the establishment of the National Serials Data Program (NSDP) which was established under the auspices of the Task Force in 1967. The first phase of the program was under the administrative direction of the Library of Congress and dealt with the establishment of data requirements and the determination of the necessary format to be used. The second phase, under the administrative guidance of the Association of Research Libraries, was the National Serials Pilot Project which determined the feasibility of, and the procedures to be used in, the operation of an ongoing program. Following the completion of the Pilot Project, phase three (the current phase) was undertaken, with the National Serials Data Program being established as a separate entity outside the structure of the National Libraries Task Force. Funding continues to be shared by the three National Libraries with the Directors of the three Libraries supplying policy guidance in an advisory capacity. During 1972, the NSDP was established as the official U.S. Center for the assignment of International Standard Serial Numbers (ISSN) in developing the International Serials Data System.

To date, NLM has provided a major input by means of microfilm aperture card surrogates to identify positively each of the 18,000 "live" serials in NLM holdings. Starting on July 1, 1972, the NSDP began to input data on new serials acquired by the National Libraries and those entered into the New Serials Title Program since 1971 at the Library of Congress.

Mr. Day reported that NLM continues to be an active member of the Federal Library Committee. Its greatest success has been as a forum largely devoted to the ventilation of operating problems shared by the Federal Libraries. This past year, the committee had prepared under contract a two-part report, Automation and the Federal Library Community; and a Handbook on Federal Library Automation. The report has received wide distribution both within and outside the Federal Library community. The Handbook provides automation guidelines, a detailed summary of Federal Library automation projects, and extensive resource material.

Mr. Day mentioned briefly the activities of the American National Standards Institute's Committee Z-39 on Library Work, Documentation, and Related Publishing Practices. Dr. Leiter, Associate Director for Library Operations, NLM, now participates on working committees which develop the standards and in this way helps to ensure that NLM requirements and those of the community it represents are considered in revising existing standards or in establishing new ones. Currently, the committee is working on standards for machine input records, periodical title abbreviation, translation, book numbers, serial coding, and journal article citations.

Mr. Day reported that, in December 1971, the Director, NSF (at the request of the Chairman of the Federal Council for Science and Technology [FCST]), established a COSATI (Committee on Scientific and Technical Information) review group to review the organization, programs, and possible future roles of COSATI. In June, the group submitted its report through NSF to Dr. Edward E. David, Jr., Chairman, FCST. In October, a COSATI task group was convened to develop a recommended program for 1973-75 COSATI activities along the lines of the programmatic recommendations of the Greenberger Report.

COSATI met in January 1973 and approved the priority initiatives in the following areas:

- A. How to cope with the problems of financing Federal technical information systems and services;
- B. How to measure and evaluate the impact of technical information programs on the missions of the Federal agencies;
- C. How to improve technical information services to managers; and
- D. How to improve information support in the technology transfer process.

Dr. H. Guyford Stever, Director, NSF, and new Chairman of FCST, reported on February 22 that the Office of the President is reexamining the role and mission of the FCST, and it is expected that a number of programmatic and organizational changes will be made. It is not at all clear how these changes will affect COSATI, if at all, and, pending clarification, COSATI programs will probably remain in a static state.

Mr. Day stated that the Organization for Economic Cooperation and Development (OECD) has assigned high priority to its program of studies and, where possible, the solution of problems of the environment as they affect economic and social development. Recent OECD interest in the toxic effects of biochemicals has prompted the OECD Secretariat to convene a meeting on March 12 and 13 of directors of the leading toxicology information programs in its member countries. Dr. Henry M. Kissman, who directs the NLM toxicology information program, attended as the U.S. participant. The objective of the meeting was to explore methods for international collaboration for the building and maintenance of data bases in toxicology. As a result of the meeting, NLM has already received inquiries from the United Kingdom, Sweden, France, and Germany, which may lead to profitable collaborative efforts.

Mr. Day described the present plans of the National Cancer Institute (NCI) to establish its Cancer Information Service (CIS). NCI solicited proposals leading to a contract to help the NCI plan and implement its CIS. In order to maintain strong input from NLM in the NCI's cancer information program, Mr. Day, with the Director's approval, agreed to serve as chairman of the group which reviewed the proposals and provided its findings to NCI management. NCI selected Informatics, Inc., to set up the CIS program.

Dr. Baker opened a line of questioning which, as the discussion progressed, reflected the growing concern of the Board that there is about to take place a particularly flagrant example of waste and duplication. Dr. Baker asked what plans were being made for NLM to become a major contract resource for the NCI program. Mr. Day replied that Mr. Richard L. Holt of NCI, in the course of several conversations, had been somewhat vague, stating only that NCI had not yet moved far enough along to firm up this possibility in its future plans. It was Mr. Day's conclusion that the Library must be particularly insistent on major input into the contract. The NCI plans do call for using a number of existing services, but there is still no definite word from NCI as to what NLM's role will be in the large cancer information programs.

Dr. Baker expressed some amazement that NCI was not indeed seeking out the Library's resources and perhaps even suggesting a doubling of its size to do the job. Dr. Cummings deemed it highly unlikely that such action would be considered. NCI will not feel that it has the positions or manpower to make available to the Library. In all probability, NCI will look for a contractor in order to save its own personnel from doing this job. In addition, as in other programs, they will argue that they need the substance of their interest carefully represented by people who are experts in the field. Dr. Cummings does not think that they will attempt to "re-invent" the National Library of Medicine; that they will indeed call upon NLM for a little bibliographic resource and retrieval service, which the Library is prepared to provide.

Dr. Baker considers it a major step in mismanagement. This represents a real policy issue: For HEW to have a cancer program wandering off, as could very well happen, he finds deplorable. He regards the outline presented by Mr. Day as characteristic of initiating a great, new program without using the resources available. He believes that HEW should be aware that the national community is going to be very uneasy if indeed the program follows the route of having some outside contractor carry on the actual operation. Dr. Cummings commented that an early budget plan for CIS called for an annual budget of \$14 million, and that that effort alone would be twice the operating level of NLM.

Mr. Zipf added vigorous support for Dr. Baker's view, pointing out that the logical thing to do in industry is to look in-house before hiring an outside consultant. He sees the CIS as a reflection of great duplication throughout HEW and believes there should be some way, in these days of budget problems, to eliminate duplication which appears to exist in the biggest agency in government. He reiterated that to engage outside contractors when competence exists within government is unconscionable.

Dr. Mehl added that it seems incredibly shortsighted not to take advantage of this opportunity to improve the general data base available at NLM, that the information collected by the Cancer Program is not going to serve Cancer alone but would be of much wider use.

Dr. Hubbard questioned the implied precedent if this were in fact to become the first in a series of such enterprises. He suggested the danger that NLM might become more of a mortuary than a living instrument. He noted that the decision lies squarely in the hands of those who are looking for interdigititation; this would be a prime example. He, too, returned to the resolution of the Board and urged that it be looked upon as a major plea for action at the level of the Secretary's office, "because if this follows the natural course, its path is predictable--it will be self-contained, self-justified, and as much segregated as the managers can make it, since this is the nature of the budgeting process." He continued that, unless there is intervention at the policy level, there is no point in talking about a data base that is available for current and published biomedical information. He labeled it a crisis situation. To deal with it as anything else, he added, is to misunderstand the nature of the problem.

Summing up, the Board expressed in the strongest terms its serious concern that NCI, in developing its information program, would not take full advantage of the services, expertise, and resources of the National Library of Medicine, but instead would establish unnecessarily and at great cost its own services that would largely duplicate or overlap those already available from NLM. The Board took a dim view of an apparent lack of coordination in this area and expressed hope that the Office of the Assistant Secretary for Health would take steps to rectify the situation. The Board was particularly concerned that NCI is not utilizing in its planning process the in-house expertise already residing in the NLM, but rather plans at substantial cost to rely almost exclusively on an outside contractor. The Board believes that the NLM was established to provide basic health information support to all HEW components.

VII. REVIEW OF REPORT OF THE NIH PROGRAM MECHANISMS COMMITTEE

Mr. Day called the Board's attention to the Report of the NIH Program Mechanisms Committee which, at Dr. John F. Sherman's request, had been sent to the Board members at an earlier date for comments. He briefly reviewed its recommendations. Recommendation #1: that there be an annual review of NIH objectives, priorities, and accomplishments by advisory councils. Recommendations #2 and #3: that uniform policies and standard procedures for review, selection, and management of contracts and grants be established, refined, and implemented.

Dr. Cummings noted that, unlike most councils which do not see grants, the Board of Regents reviews both grants and contracts.

Mr. Day proceeded with Recommendation #4: that there be continuous evaluation of management practices; and Recommendation #5: that there be more effective use of existing authorities. Particular note was taken of the 6th recommendation, that "NIH take immediate and appropriate steps to improve communication with its internal staff, advisory councils and committees, and sister agencies and higher levels of Government, and scientific community and the public..."

Although the Board applauded NIH's intent to develop program mechanisms within NIH which would improve the contract and grant processing mechanisms, the Board members expressed in the strongest terms their serious concern that the report, as written, appears to deprecate targeted research activities. Any implication that targeted research involves very little in the way of intellectual effort is not only erroneous but also destructive. The Board felt that such suggestions reinforce the absurdity of setting targeted research and basic research in opposition to one another.

Dr. Hubbard spoke eloquently to the point that this report should attempt to set at rest this type of NIH thinking by being more explicitly concerned with developing mechanisms for improving support for directed activity with the same generosity and facility that it does for basic research. Having done this, NIH's further concern should be with improving and assuring the quality of both.

The Chairman asked Dr. Hubbard and Dr. Marshall to prepare a brief statement of the Board's views for transmittal to Dr. Sherman, Acting Director, NIH.

VIII. REVIEW OF PROGRAM AND POLICY ISSUES AT NATIONAL MEDICAL AUDIOVISUAL CENTER AND LISTER HILL CENTER

Dr. Schoolman called attention to the recommendations of the Priorities Review Committee, approved by the Board of Regents a year ago, and proceeded to review each, indicating the progress that had been made.

The first was the recommendation that no program to which the academic community had attached great importance could succeed without reference to their responsibilities. Therefore, the Library contracted with the AAMC to make a study and produce a report on this point. This report was published as a supplement to the Journal of Medical Education, February 1973: Educational Technology for Medicine: Academic Institutions and Program Management, under the chairmanship of Dr. Eugene A. Stead. The report was succinct and to the point. It indicated the prime areas of concern for the academic community in pursuing such programs.

Recommendation #2 had requested that the Board of Regents take a continuing interest in establishing and promoting training programs to produce individuals who combined both the health sciences and computer sciences disciplines. The Extramural Programs have been successful in establishing 5 such training programs with 19 trainees. The recent HEW policy regarding training programs will have serious consequences, both with regard to the training of people in this multidisciplinary manner and in stimulating within institutions the wish to pursue this kind of activity.

Recommendation #3 dealt with the development of a biomedical communications network. A number of plans were identified, including the development of a clearinghouse for information on all aspects of technology and medicine.

It is obvious that the clearinghouse recommendations require a coordination and unification of the National Medical Audiovisual Center (NMAC) and the Lister Hill Center (LHC), for each has an overlapping, interdigitated, and interrelated interest in this area. NMAC has been pursuing its effort of retrieving information about audiovisual and multimedia teaching materials (LHC has been engaged in such areas as Test Item Data Bank), the cataloging of computer-aided instruction, and the development of a clearinghouse for information on technology resources within educational institutions.

The NLM has entered into a contractual arrangement with the Association of American Medical Colleges (AAMC) and, through them, with the Association of American Dental Schools (AADS). Dr. William Cooper, formerly of the University of Colorado, will be the project director. A steering committee has been established to support this effort. It meets regularly on a quarterly basis with representatives from the Library, the Bureau of Health Manpower Education (BHME), and the AAMC and AADS. The contract will pursue not only the clearinghouse function but also the organization of material for production, the development of methods of evaluation, and the improvement of NMAC distribution mechanisms in order to promote the widest possible use and the greatest sharing of its resources.

Dr. Schoolman referred to some problems in the pursuit and definition of coordinated, long-range goals. He pointed out that there has been a struggle with a definition of a long-range program for the LHC since its inception. This struggle has been between the development for technology and the development of content. The point has been reached where enough information and experience are now available to resolve these issues.

Dr. Schoolman looks forward to a report from Mr. Bruno W. Augenstein who is preparing under a contract a recommended program plan for the Lister Hill Center, and one by Dr. Hilliard Jason, consultant to the Library, on the content aspect of program planning for the Center. The fundamental task to be performed is to define the most effective means by which the Library, through the LHNCBC, NMAC, and its other components, can establish its leadership role. It is believed that at an early date the Board can be presented with a prescribed program for the functional unification of NMAC and LHNCBC.

In responding to questions about the collaboration of BHME and NMAC, Dr. Schoolman indicated that moneys expended in the academic community are BHME contract funds. He noted that although these contract awards were brought to the Board's attention, the law requires approval by BHME's council. Dr. Cummings pointed to the BHME/NLM agreement as an example of leadership willing to put aside bureaucratic posture and instead enter into a close and productive collaborative effort.

IX. RML EVALUATION REPORT

Dr. Schoolman stated that the RML evaluation group met twice--once to identify its role and ground rules, and the second time, after three site visits, to look at the mechanism being used to see if it would

accomplish the purposes intended. It became clear after the three site visits that it is possible to gain a good insight into the factors that are operating in the environment in which the RML is involved. It was also clear that the RML directors, on an unsolicited basis, were not going to bring their problems to the group's attention. To develop rapport, it was the review group's judgment that a continuing relationship with the RML was necessary and that it would be accomplished by individual site visits, with the chairman for each review team maintaining a continuing responsibility to and for the region.

Also discussed was the composition of site visit teams in which RML directors participate in reviewing other RML's. It was the conclusion of the site visit chairmen that the teams should include RML directors because they are most analytical, most critical, and particularly helpful in providing a viewpoint and understanding that could be gained only by someone who had experience in operating this type of activity.

Dr. Schoolman related problems of the New York Academy of Medicine: diffuseness of management and internecine friction. Some highly effective working groups are now formulating plans for the Academy, however, and a librarian of stature is being sought.

Wayne State is a well-organized RML under dynamic leadership. Dr. Vern M. Pings, although now university librarian, maintains a very active interest in the RML.

The NLM site visit was chaired by Dr. Jack Chase who had been on the Wayne State site visit team. NLM has responsibility at three different levels: As NLM, it is a library of last resort; acting as an RML, it is on the second-access level; and for universities in the Greater Washington Area, it is the first library of access. With regard to NLM as a Regional Medical Library, the site visit team felt that NLM should exercise a stronger role in attacking the problems it faces and should take full advantage of the fact that its region (Region IV) can be a laboratory model.

When asked whether a site visit framework was being developed to gather as much information as possible in the shortest period of time, Dr. Schoolman replied affirmatively; in terms of product effect, however--the number of interlibrary loans made, or the number of MEDLINE searches done, or the cost of doing any one of these things--site visits would not directly affect the quantity output. All the data required is available. There has been a notable increase in interlibrary loans. For example, it is known that the total system is now delivering approximately 500,000 loans, with NLM accounting for something more than 150,000, an amount which is close to what it was before the institution of the RML program.

As to how the RML's could be ranked on overall effectiveness, Dr. Schoolman said that if they were ranked on the basis of services produced, the New York Academy would rank very high, but on the important criterion of effective behavioral change in greater interinstitutional collaboration, it is clear that the Academy has not made progress.

The fundamental job of the RML, Dr. Schoolman pointed out, is to instill confidence in its operation. NLM has placed deadlines upon itself to serve the RML's well. The RML's in turn have responded remarkably to the stringent turn-around requirements placed upon them. There is no question but that reduced staffing levels will present difficulties, but every effort will be made to fortify the growing confidence of participating libraries.

Dr. Layton expressed his pleasure with the report because it indicated implementation of a policy decision of the Board to examine critically where the Library's money is going and whether the programs supported are effective.

Before the lunch recess, a formal photograph was taken of the members of the Board of Regents.

X. PROPOSED CHARGES FOR NLM COMPUTER SERVICES

Dr. Schoolman called attention to the fact that the Board on several occasions has rejected the inauguration of user charges except for the purpose of effecting management controls. The danger of creating the concept that the Library should be a self-supporting institution, let alone profit-making, has been recognized. It is now believed that, from a management point of view, greater control is required.

Although the phenomenal increase in the use of MEDLINE has brought about a unit-cost reduction for delivering a search, the volume has resulted in an increase in the dollar amount that is required for covering these services. Action was necessary to (1) effect greater control over the growth of the system, and (2) make the growth of the system essentially nonreliant on the National Library of Medicine's budget. NLM assumed a fundamental responsibility for a basic underwriting that was necessary to initiate the system. The user will be assessed for the use of the system so that an increased use will not impose an additional financial burden on NLM. To cover the incremental costs, a charge will be instituted as of April 1 and by July 1 will be operational throughout the MEDLINE user community.

The current cost to be imposed on the institution is approximately \$6.00 per connect-hour, or an average of a little less than \$2.00 per search. Each institution, in providing service to both its own constituency and

the community, has been allowed to recover, if it chooses, its own operating expenses from the user. In order to keep the charges reasonably uniform, approval by NLM is required.

The estimated total cost to NLM for each search is \$9.00. Acquiring, indexing, and organizing references to the world's medical literature accounts for about 50% of the total cost, or about \$4.50, just to do it for Index Medicus and the other NLM journals. Of the \$4.50 for the total automation cost, the user is asked to pay \$2.00, or roughly 45%. These unit costs are going down very rapidly as use goes up.

Another figure of interest is the unit cost for a MEDLARS search by the batch mode, which was driven down from \$90.00 to \$70.00 to \$60.00 to \$55.00, the lowest unit cost achievable. This compares a \$55.00 MEDLARS search, fully subsidized by NLM, with the \$9.00 MEDLINE figure--a remarkable transformation. Every RML director has accepted the concept of user charges without resistance.

XI. EXTRAMURAL PROGRAMS

Three-Year Retrospective Analysis of Extramural Grant Programs

Dr. Lee Langley presented Board members with a booklet of tables and graphs showing program accomplishments from FY 70-73, the term of the Medical Library Assistance Extension Act of 1970. He discussed the six domestic programs and the international program individually.

Regional Medical Libraries

To date, seven regional grants, totaling \$618,377, have been awarded to institutions within three regions. The change from grant to contract support in 1971 was designed to promote effective funding of interlibrary loans at a unit price. Fiscal data show increases in the interlibrary loan rates to such an extent that the entire FY 73 appropriation for RML's will be used to support this service, with none left for regional grant support. The time may have come to reconsider this aspect of the program.

Resource Grants

Under the original MLAA of 1965, awards were formula-type grants. Since these were calculated on the basis of institutional library budget support, only the larger and better endowed libraries received significant amounts of money. With the Extension Act of 1970, this program changed. Two different types of awards were defined. The improvement grant program was designed to stimulate the development of basic unit libraries in community hospitals and to support the regional medical library network concept. Over the past three years, less than \$1 million has been awarded under this program. The target population was defined as those 5,900 health science libraries that do not meet minimum standards as described in the

Directory of Health Science Libraries in the United States, 1969, Chicago, AMA, 1970. Of the 282 awards made, 75% went to libraries whose budgets were less than \$10,000 per year; 60% went to hospitals having more than 200 beds; 62% went to hospitals not listed in the Directory. The target population is being served. Furthermore, the awards appear to have had a catalytic effect. A survey of ten grantees receiving awards in FY 71 showed increased use, increased interlibrary loans, additional staff, acquisitions selected from core lists or with consultation from RML or RMP advisers, training undertaken, and increases of more than 50% in the average library budget one year after the award. The continuation of this program is recommended.

The project grant program got underway slowly. The concept was unfamiliar to the library community, EP staff, and the review committee. But over the past three years there has been a marked change. At the last review committee meeting there were no split votes, only one deferral, and a 70% approval rate. From FY 71 to the present, 86 projects were awarded for a total of \$4,918,880. Several examples of projects were shown: automation, extension services, consortia, technical processing, alteration and renovation, collection development in new medical schools, and microfilms. These are large projects averaging \$60,000 each over several years. Good progress is being made on this program. It has room to grow; fair evaluation of the impact of the program will require a few more years.

Training Grants

In FY 70, most training programs were aimed at producing librarians at the entry level into the profession. The Belmont Conference in 1971 showed a need for more emphasis on retraining and for doctoral-level programs. The Board recommended implementation of a fellowship program for middle-level librarians, a phaseout of the Master's-degree program, and a new emphasis on training in health sciences and computer technology. Five computer training programs were initiated under joint sponsorship between BHME and NLM. An executive decision has been made to phase out all training grants at NIH. The grants will terminate when commitments to existing trainees have been met. The training grants program has had a far-ranging impact on the medical library community. The ultimate test will be found in the long-term performance of the graduates. An evaluation of the medical library training portions of the program is now being conducted under contract. A report of results may be available by late November.

Research Grants

The impediments to a strong research grant program lie in the absence of tradition and depth in the disciplines of biomedical communications and library research. From FY 70-72, 33 projects were supported for a total of \$2,073,418. In general, assessment of success of research grant support may be made by evaluating the published results. These projects have generated 10 books published, with an additional 8 books in preparation. Forty-two journal articles and 13 oral conference papers have appeared. Nine other articles are in preparation. The program shows progress and development, and continuation is recommended.

Publication Grants

The performance in the publication grants program is relatively creditable, except in our support for the development of bibliographies and critical reviews. These types of efforts are slow to achieve fruition and prone to delays. An analysis of the 38 titles published from 1968 through 1972, performed by using the Science Citation Index, shows 14 titles cited a total of 172 times. The rate of citation appears to be growing slowly. In general, too many grants are made to nonproductive applicants. There is a need to improve the selectivity of the review mechanism.

Distinguished Scholar Program

Because of the idiosyncratic DRG coding of the Distinguished Scholar program as a fellowship, which it is neither in intent nor in fact, this program has been included in the NIH training grant phaseout. This is unfortunate since the program was slow to develop and is only now beginning to show signs of considerable promise. Six awards were made from FY 70 through FY 72. Each appears to be achieving its objective.

International Program

The international program is a vigorous, growing program, moving from 48 active projects in FY 70 to more than 117 projects in FY 72. The exhaustion of P.L. 480 funds in Poland, Israel, and Yugoslavia, beginning with FY 72, however, will change the character of the program over the next few years. Current projects are being promoted in India, Pakistan, Egypt, and Tunisia under NSF publication funds. A significant record was achieved in the conference proceedings publication program. The average period between the conference and publication is less than one year; in one instance, publication was simultaneous with the conference. Examples of both good and bad reviews appearing in the American press of many publications emanating from this program were displayed.

Following Dr. Langley's presentation, Dr. Ernest M. Allen commented on some new developments in the Extramural Programs. Because of the phaseout of the training grants program, a lowered personnel ceiling, and the recognition of the need for continuous program evaluation, a reorganization of the EP has been proposed. The Resources Division and the Research, Training, and Publications Division will become the Division of Biomedical Information Support. A new Office of Program Planning and Evaluation has been formed, and the publication grants program has been transferred to the International Programs Division, bringing all publication support under one administration.

Dr. Allen advised the Board of a newly formed Grants Appeals Board which will arbitrate post-award disputes. This mechanism will provide the grantee with a fair hearing of his claims at the Secretary's level, assuring meaningful due process.

XII. CONSIDERATION OF PENDING APPLICATIONS

The Board of Regents, acting concurrently as the National Medical Libraries Assistance Advisory Board, reviewed 93 applications of which it approved 47. Also approved were the interim actions negotiated by the staff subsequent to the November 1972 Board meeting.

Summaries of Board actions on all Extramural Grant Programs are attached to these minutes (Attachment A).

XIII. OTHER BUSINESS

The Chairman announced the receipt of a \$500 gift for the Regents' Award Fund from the Texas Allergy Foundation.

Dr. Marshall extended, and the Board recommended acceptance of, an invitation to hold the March 1974 Regents meeting in Tallahassee, Florida.

Before bringing the session to a close, Dr. Layton appointed a nominating committee composed of Lt. General Jennings, Rear Admiral Rupnik, and Dr. Abdellah.

XIV. ADJOURNMENT

The meeting of the Board of Regents was adjourned at 5:30 p.m. on Monday, March 26, 1973.

Monday, March 26, 8:30 a.m. to 5:30 p.m.

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

May 21, 1973
Date

Martin M. Cummings
Martin M. Cummings, M.D.
Director
National Library of Medicine

Official Recorder:

Roger W. Dahlen, Ph.D.
Chief
Division of Biomedical Information
Support, EP, NLM

ACTIONS TAKEN BY THE BOARD OF REGENTS

March 26, 1973

1. Having observed that serious policy issues are involved, the Board accepted Dr. Sherman's invitation to reply to the Report of the NIH Program Mechanisms Committee. Drs. Hubbard and Marshall will prepare a statement of the Board's views.
2. The Board recommended approval for support of new academic health libraries (Attachment B).
3. The Board recommended approval of interim actions taken by the staff since the last Board meeting.
4. The Board was concerned about the number of applications on which it felt obliged to reverse the initial review group and agreed that a subcommittee should be appointed to establish guidelines. It will be composed of the Chairman, Dr. Layton, and Drs. Abdellah and McGovern. The Associate Director for Extramural Programs will assist.
5. The Board expressed appreciation to the university for its hospitality (Attachment C).
6. The Board extended best wishes to Dr. Lee Langley on the occasion of his early retirement and voiced warm thanks for his substantial contribution to its operations and to the Library during his tenure.
7. The Chairman appointed a nominating committee composed of Lt. General Hal B. Jennings, Jr., Rear Admiral Edward J. Rupnik, and Dr. Faye G. Abdellah.
8. The Board recommended acceptance of Dr. J. Stanley Marshall's invitation to hold its March 1974 meeting in Tallahassee, Florida.

APPLICATIONS APPROVED BY COUNCIL 1/
 (Arranged numerically by program)

COUNCIL DATE: MARCH 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE	APPLICATION NUMBER	SHORT TITLE		AMOUNTS RECOMMENDED
	2 R01 LM 00761-03	HISTORY OF PSYCHIATRY AND MENTAL HEALTH IN U.S., 1945-70	03	24,150
	2 R01 LM 00802-04	STATE'S RIGHTS MEDICINE IN THE OLD SOUTH, 1819-1861	04	9,133
	1 R01 LM 01431-01A2	HISTORICAL REVIEW OF MENTAL RETARDATION IN THE U.S.	01A2 02 03	27,173 26,193 13,448
	1 R01 LM 01654-01A1	NONENCLATURE FOR OPHTHALMOLOGY	01A1 02 03	46,270 53,550 55,120
	1 R01 LM 01842-01	PREPARATION OF BIOGRAPHY OF WALTER BRADFORD	01 02	13,409 13,775
	1 R01 LM 01927-01	ANNUAL REVIEW OF ALLIED HEALTH EDUCATION AND RESEARCH	01 02 03	27,400 24,600 26,400

1/ Approval recommendations are not final but are the basis upon which subsequent determinations and negotiations will determine final awards.

APPLICATIONS APPROVED BY COUNCIL
(Arranged numerically by program)

COUNCIL DATE: MARCH 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 R01 LM 01941-01	DEVELOPMENT OF ANATOMICAL SCIENCES/GALEN TO VESALIUS	01 17,095 02 19,447 03 20,025
1 R01 LM 01943-01	MAN AND NATURE IN ROBERT FLUDD'S SYSTEM OF THE WORLD	01 25,635
1 R01 LM 01954-01	REVIEW ARTICLES IN THE JOURNAL OF MEDICAL ENTOMOLOGY	01 3,990 02 5,918 03 6,054
1 R01 LM 01964-01	A PROTOTYPE HEALTH KNOWLEDGE TRANSFER SYSTEM	01 126,431 02 124,979 03 131,180
1 R01 LM 01988-01	MEDICINE AFTER DESCARTES	01 23,860 02 6,134
1 R01 LM AI 02024-01	CHIGGER MITES OF THE WORLD: LEPTOTROMBIDIUM COMPLEX	01 25,000
2 R01 HL LM 07010-17	REVIEWS ON RUSSIAN CARDIOVASCULAR RESEARCH	17 5,723 18 7,106 19 6,097 20 6,296

APPLICATIONS APPROVED BY COUNCIL
 (Arrange numerically by program)

COUNCIL DATE: MARCH 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
2 T01 LM 00127-05		05 76,022
		06 80,385
		07 82,122
6 T01 LM 00160-01A1		01A1 88,743
		02 104,930
		03 131,992
		04 159,184
		05 186,563
	TRAINING IN HEALTH COMPUTER SCIENCES	
1 T01 LM 00162-01		01 22,200
		02 28,217
		03 34,740
	HISTORY OF MEDICINE AND PUBLIC HEALTH	

APPLICATIONS APPROVED BY COUNCIL
(Arranged numerically by program)

COUNCIL DATE: MARCH 1973

INSTITUTE/DIVISION:	APPLICATION NUMBER	SHORT TITLE	ACCOUNTS RECOMMENDED
NATIONAL LIBRARY OF MEDICINE	1 G08 LM 01923-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	50,000
	1 G08 LM 01972-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	26,120
			28,373
			30,848
	1 G08 LM 01973-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	65,000
			67,600
	1 G08 LM 01980-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	6,552
			6,552
			6,552
	1 G08 LM 01981-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	25,519
	1 G08 LM 01983-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	27,666
			27,667
			27,667

APPLICATIONS APPROVED BY COUNCIL
(Arranged numerically by program)

COUNCIL DATE: MARCH 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 G08 LM 01991-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	01 14,000
1 G08 LM 01994-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	01 2,500
1 G08 LM 01997-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	01 15,998
1 G08 LM 01998-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	01 5,422
		02 1,700
		03 1,200
1 G08 LM 2003-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	01 8,045
		02 3,085
		03 3,085
1 G08 LM 02006-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	01 71,215
		02 64,730
1 G08 LM 02007-01	MEDICAL LIBRARY RESOURCE PROJECT GRANT	01 5,700*

*Subject to negotiation

APPLICATIONS APPROVED BY COUNCIL
(Arranged numerically by program)

COUNCIL DATE: MARCH 1973

INSTITUTE/DIVISION:	APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
NATIONAL LIBRARY OF MEDICINE	1 G08 LM 02009-01	01	13,666
		02	13,667
		03	13,667
MEDICAL LIBRARY RESOURCE PROJECT GRANT	1 G08 LM 02017-01	01	2,674
MEDICAL LIBRARY RESOURCE PROJECT GRANT	1 G08 LM 02019-01	01	12,500
		02	12,500
MEDICAL LIBRARY RESOURCE PROJECT GRANT	1 G08 LM 02020-01	01	14,000
MEDICAL LIBRARY RESOURCE PROJECT GRANT	1 G08 LM 02021-01	01	50,000
MEDICAL LIBRARY RESOURCE PROJECT GRANT	1 G08 LM 02025-01	01	9,045
		02	2,955
MEDICAL LIBRARY RESOURCE PROJECT GRANT	1 G08 LM 02037-01	01	26,400

APPLICATIONS APPROVED BY COUNCIL
 (Arranged numerically by program)

COUNCIL DATE: MARCH 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE	APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
	1 G04 LM 01950-01	REGIONAL MEDICAL LIBRARY GRANT	27,000
	1 G04 LM 01965-01	REGIONAL MEDICAL LIBRARY GRANT	28,751*
			27,413*
			28,423*
	1 G04 LM 02000-01	REGIONAL MEDICAL LIBRARY GRANT	23,248*
			23,775*
			24,275*
	1 G04 LM 02010-01	REGIONAL MEDICAL LIBRARY GRANT	23,375*
			23,211*
			24,256*
	1 G04 LM 02016-01	REGIONAL MEDICAL LIBRARY GRANT	25,548*
			24,452*
			24,750*
	1 G04 LM 02027-01	REGIONAL MEDICAL LIBRARY GRANT	28,715*
			30,006*
			31,374*

*Subject to negotiation

We of the Board of Regents and the staff of the National Library of Medicine would like to express our appreciation to President Schaefer, Dr. DuVal, and the staff of the University of Arizona for their great help and warm hospitality in hosting this meeting of the Regents. We also especially acknowledge our indebtedness to our Chairman, both in and out of formal session.

A G E N D A

Forty-Fifth Meeting of the

BOARD OF REGENTS

National Library of Medicine

Board Room

Bethesda, Maryland

9:00 a.m., June 21-22, 1973

June 21: MEETING OPEN from 9:00 a.m. to 12:00 noon and from 2:00 to 5:00 p.m.
MEETING CLOSED from 1:00 to 2:00 p.m. for contract discussion.

June 22: MEETING OPEN from 9:00 to 10:30 a.m.
MEETING CLOSED from 10:30 a.m. to 12:00 noon for grant review.

I. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. Jack M. Layton

II. CONSIDERATION OF MINUTES OF LAST MEETING Dr. Jack M. Layton
Minutes under TAB I (Orange Book)
Letter from Chairman, BOR/NLM, to Acting Director, NIH
re: NIH Program Mechanisms Committee Report

III. DATES OF FUTURE MEETINGS
1973 and 1974 Calendars under TAB II

Next Meeting -- November 29-30, 1973 (Th-F)
Subsequent Meeting - March 21-22, 1974 (Th-F)
Selection of Meeting Date -- June 1974
(17-18) (19-20) (20-21)
(M-T) (W-Th) (Th-F)

NOTE:

Medical Library Association	June 2- 6, 1974	San Antonio
American Nurses Association	" 9-14, "	San Francisco
American Medical Association	" 23-27, "	Chicago

IV. REMARKS BY ASSISTANT SECRETARY FOR HEALTH Dr. Charles C. Edwards

V. REMARKS BY DIRECTOR, NIH Dr. Robert S. Stone

VI. PLANS FOR CANCER INFORMATION SERVICE, Mr. Richard L. Holt
BY CHIEF, MANAGEMENT AND SCIENTIFIC
INFORMATION SYSTEMS BRANCH,
NATIONAL CANCER INSTITUTE, NIH

COFFEE BREAK

6/15/73

Agenda - P. 2

VII. REPORT OF DIRECTOR, NLM TAB III Dr. Martin M. Cummings

VIII. REVIEW OF NLM'S INTERNATIONAL ACTIVITIES TAB IV Miss Mary E. Corning

LUNCHEON -- Catered in Conference Room B

MEETING CLOSED FROM 1:00 TO 2:00 P.M. FOR CONTRACT DISCUSSION

IX. MEDLINE AND MEDLARS II--STATUS REPORT TAB V Mr. Davis B. McCarn

MEETING OPEN FOR THE REMAINDER OF THE DAY

X. PROGRESS REPORT ON LISTER HILL CENTER PROGRAM PLAN TAB VI Dr. Harold M. Schoolman

XI. REPORT ON COMPUTER-AIDED INSTRUCTION TAB VII Mr. Albert Feiner

COFFEE BREAK

XII. REPORT ON NATIONAL MEDICAL AUDIOVISUAL CENTER TAB VIII Dr. Charles F. Bridgman

XIII. REPORT ON TECHNICAL SERVICES DIVISION TAB IX Miss Elizabeth Sawyers

PRESENTATION OF FOURTH REGENTS AWARD FOR SCHOLARSHIP OR TECHNICAL ACHIEVEMENT

RECESS

XV. CONSIDERATION OF PENDING APPLICATIONS

Dr. Roger W. Dahlen

- | | |
|-----------------------|----------|
| A. Publication Grants | TAB V |
| B. Research Grants | TAB VI |
| C. Resource Grants | TAB VII |
| D. Regional Grants | TAB VIII |

ADJOURNMENT

DEPARTMENT OF HEALTH, EDUCATION,
AND WELFARE

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
BOARD OF REGENTS

MINUTES OF 45TH MEETING
JUNE 21-22, 1973

BOARD ROOM
NATIONAL LIBRARY OF MEDICINE
BETHESDA, MARYLAND

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

Minutes of Meeting 1/ 2/
June 21-22, 1973

The Board of Regents of the National Library of Medicine was convened for its forty-fifth meeting at 9:00 a.m. on Thursday, June 21, 1973, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. Jack M. Layton, Professor and Head, Department of Pathology, College of Medicine, University of Arizona, and Chairman of the Board of Regents, presided. In accordance with P.L. 92-463 and the Determination of the Deputy Director, NIH, dated June 6, 1973, the meeting on June 21, 1973, was open to the public from 9:00 a.m. to 12:00 noon and from 2:00 to 5:00 p.m., and closed to the public from 1:00 to 2:00 p.m. for contract discussion; on June 22, 1973, the meeting was open to the public from 9:00 to 10:30 a.m. and closed from 10:30 a.m. to 12:00 noon for the review, discussion, and evaluation of grant applications.

Board members present were:

Dr. William O. Baker
Dr. Susan Y. Crawford
Mrs. Bernice M. Hetzner
Lt. General Hal B. Jennings, Jr.
Dr. Jack M. Layton
Dr. Angelo M. May
Dr. John P. McGovern
Dr. John W. Mehl

Alternates to Board members present were:

Dr. Faye G. Abdellah, representing Dr. S. Paul Ehrlich, Jr.
Capt. J. William Cox, representing Vice Admiral Donald L. Custis
Dr. Laurance V. Foye, Jr., representing Dr. Marc J. Musser
Mr. John G. Lorenz, representing Dr. L. Quincy Mumford
Brig. General George E. Reynolds, representing Lt. General
Robert A. Patterson

Board members absent were:

Dr. William N. Hubbard, Jr.
Dr. J. Stanley Marshall

1/ For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications: (a) from their respective institutions, or (b) in which a conflict of interest might occur. This procedure does not apply to "en bloc" actions--only when an application is under individual discussion, and then only for applications from the Board member's own "campus," will the Board member absent himself.

2/ The Board of Regents, when considering the Extramural Programs of NLM, sits as the National Medical Libraries Assistance Advisory Board, and concurrently discharges the responsibilities of both bodies.

National Library of Medicine Staff members attending this meeting included:

Dr. Martin M. Cummings, Director
Dr. Harold M. Schoolman, Assistant Deputy Director
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Dr. Clifford L. Bachrach, Chief, Bibliographic Services Division
Dr. Harry D. Bennett, Deputy Associate Director, Computer and Communications Systems
Dr. John B. Blake, Chief, History of Medicine Division
Dr. Jeanne L. Brand, Chief, International Programs Division, Extramural Programs
Dr. Charles F. Bridgman, Director, National Medical Audiovisual Center
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mr. Kenneth G. Carney, Special Assistant, Office of Administration
Dr. Ralph P. Christenson, Chief, Customer Products and Services Development Branch, Lister Hill National Center for Biomedical Communications
Miss Mary E. Corning, Assistant Director for International Programs
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, Extramural Programs
Mr. Albert Feiner, Director, Lister Hill National Center for Biomedical Communications
Mrs. Frances H. Howard, Special Assistant, Office of the Associate Director for Extramural Programs
Mr. Jerome N. Kerkhof, Chief, Administrative Management Services
Dr. Henry M. Kissman, Associate Director for Specialized Information Services
Dr. Joseph Leiter, Associate Director for Library Operations
Mrs. Erika B. Love, Deputy Associate Director for Library Operations
Mr. Robert B. Mehnert, Chief, Office of Public Information and Publications Management
Mr. Davis B. McCarn, Associate Director for Computer and Communications Systems
Miss Elizabeth J. Sawyers, Special Assistant to the Associate Director for Library Operations
Mr. Kent A. Smith, Assistant Director for Administration

Others present included:

Dr. Henry E. Simmons, Deputy Assistant Secretary for Health, DHEW
Dr. Robert S. Stone, Director, NIH
Dr. Joseph F. Caponio, Acting Director, National Agricultural Library
Dr. Fred C. Cole, President, Council on Library Resources, Inc.
Mr. Richard L. Holt, Chief, Management and Scientific Information Systems Branch, National Cancer Institute, NIH
Dr. Hilliard Jason, Professor-on-leave, Michigan State University; Educational Consultant to Lister Hill Center
Dr. G. Burroughs Mider, Executive Officer, American Society for Experimental Pathology; Consultant to National Library of Medicine
Mrs. Ileen E. Stewart, Executive Secretary, History of Life Sciences Study Section and Biomedical Communications Study Section, DRG
Dr. Stewart G. Wolf, Jr., Marine Biomedical Institute; Consultant to the Board of Regents, NLM

Member of the public:

Ms. Nancy Meredith, Reporter, Science Information Notes

I. OPENING REMARKS

Dr. Layton, Chairman, opened the meeting by welcoming Regents, alternates, and guests, taking particular note of the presence of Dr. Henry E. Simmons, Deputy Assistant Secretary for Health; Dr. Robert F. Stone, newly appointed NIH Director; and Mr. Richard Holt, Chief of the Management and Scientific Information Systems Branch, National Cancer Institute (NCI). The Chairman observed with regret that this is the last Board meeting for General Jennings, who is retiring from active service. Dr. William O. Baker and the Chairman, whose four-year terms are expiring, are also attending their last meeting. The Chairman noted that Board member Dr. John P. McGovern has been awarded an honorary Doctor of Science degree from Kent State University.

Dr. Layton reviewed some of the developments at NLM over the last four years. He observed that the Lister Hill Center (LHC), in the face of limited manpower and funding, has managed to demonstrate successfully several important programs for the developing Biomedical Communications Network. The cooperative venture between NLM and the American Association of Medical Colleges (AAMC) on educational technology is a valuable contribution to the health science community. Biomedical communication has been greatly enhanced by both the outstanding successes and forthrightly faced setbacks in developing MEDLARS, MEDLINE, and other on-line services. The Regional Medical Library system and the document delivery service operated by this network is another important accomplishment of the last four years. A comprehensive review and evaluation by the Board and the Extramural Programs staff has resulted in the setting of intelligent program priorities for grant support. The NLM Specialized Information Services, another recent program, has been outstandingly successful in developing and implementing the TOXLINE system for retrieval of information on poisons, pesticides, and other toxic substances. The Library Operations programs have improved immensely in the past four years--internal operations are being carried out with a high degree of competency. Finally, Dr. Layton lauded the joint programs being pursued cooperatively by NLM, the Library of Congress, and the National Agricultural Library.

Dr. Cummings introduced to the Regents Mr. Harry D. Bennett, new Deputy Director of the Office of Computer and Communications Systems. He also noted that the Library was losing the services of Mr. Seymour I. Taine, Chief of the Technical Services Division. Mr. Taine has been appointed librarian for the World Health Organization.

II. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Board recommended approval of the minutes of the meeting of March 26, 1973, changing the word "grants" on page 10, fourth paragraph, first line, to "contracts."

III. DATES FOR FUTURE BOARD MEETINGS

The Board reconfirmed the dates of November 29-30, 1973, for the next meeting, and confirmed the dates of March 21-22, 1974, for the subsequent meeting. June 19-20, 1974, were approved tentatively for the following meeting.

IV. REMARKS BY THE DEPUTY ASSISTANT SECRETARY FOR HEALTH

Dr. Henry E. Simmons, representing Dr. Charles C. Edwards, praised the Board of Regents as having a high reputation as an advisory body. He noted that even though NLM and NIH can be described as "jewels" within the Federal Government, they face the same problems of manpower and budget constraints that are felt throughout the health activities of HEW. Dr. Edwards feels that the development of a national health strategy to make the best use of the resources available is a major responsibility of his office.

Dr. Simmons and Dr. Edwards share the Board's expressed concern that the National Library of Medicine is not being used as a focal point for biomedical communications activities within the Federal Government--that there is a danger of duplicative effort on the part of other agencies. As an example of attempts to overcome this, Dr. Simmons noted that the Assistant Secretary for Health recently called together representatives of all Federal agencies with responsibilities in the area of toxicology so that their programs can be coordinated to eliminate wasteful duplication. NLM, because of its work in toxicology information services, is part of that group. Similarly, Dr. Simmons reported on a joint meeting of representatives of all the Federal agencies engaged in health activities to plan toward a coordinated budget for 1975.

In answer to a question by the Regents, Dr. Simmons stated that there are several reasons for this being a propitious time for reorganizing and giving new direction to the Department's health activities. First, the position of Assistant Secretary for Health, traditionally a staff position, has been changed to that of a line manager of all health efforts. Second, Dr. Edwards has had an opportunity to study the health structure of the Department and has reorganized health activities into five agencies that will be flexible and more easily managed than the former structure. Third, the Assistant Secretary for Health, for the first time, can now influence budget and policy for Medicare and Medicaid, as well as have a major voice in health insurance proposals. Last, Congress has decided that there will be standards of medical care set in conjunction with the health professions.

The Deputy Assistant Secretary for Health stated that a study of HEW advisory bodies has been concluded and that filling vacancies on desirable councils, such as the Board of Regents, will receive a high priority.

V. REMARKS BY THE DIRECTOR, NIH

Dr. Stone expressed his pleasure at meeting with the Regents and solicited their views on matters pertaining not only to the Library, but to any aspect of NIH's operation. Because NIH will play a large role in the overall health structure of the Department, there is a need to develop a unity of purpose and policy among the organizations that make up NIH. The Director noted that he hoped to form a group--yet unspecified in structure--made up of representatives of all senior advisory bodies at NIH to meet with him periodically as a step in that direction.

Dr. Stone recommended to the Board a report of a subcommittee of the National Academy of Sciences dealing with scientific advisory committees which he has had distributed to his advisory committee and to his staff.

VI. REPORT ON PLANS FOR CANCER INFORMATION SERVICES (CIS)

A presentation of the National Cancer Program--Cancer Information Services--was made by Mr. Richard L. Holt, Chief, Management and Scientific Information Systems Branch, Office of the Director, National Cancer Institute. The National Cancer Act of 1971 specified that the NCI Director develop information systems and services to collect, analyze, store, and disseminate useful information in the prevention, diagnosis, and treatment of cancer. Additionally, the Director is to establish an International Cancer Research Data Bank to facilitate the exchange of cancer research information between laboratory and clinical scientists nationally and internationally.

The Institute has begun by instigating a thorough requirements analysis study. This study, being conducted with the help of a contractor, is expected to identify two key items: 1) what services cancer scientists and clinicians need that they are not now receiving, and 2) what services and systems are already in operation nationally and internationally. For example, coordinating bilateral arrangements with international centers is a likely function for the National Cancer Institute to perform; a referral service identifying where to go to get information and services may be another.

Attendees at an International Cancer Research Data Bank Planning Conference, conducted by NCI in May 1972, recommended that the Institute use, and expand where possible, existing information centers, and seek to link these centers through a networking system. They further recommended that the Institute establish an international advisory group to encourage the exchange of all types of cancer research and clinical information. This advisory group has now been organized under the auspices of the International Union Against Cancer, in Geneva.

Preliminary indications from a number of meetings and interviews suggest an emphasis apart from the traditional literature services. Critical reviews, support of working group symposia, scientist exchange programs, and working clinical data registries appear to be immediate needs of cancer researchers and clinicians.

Mr. Holt noted that there have been discussions between NCI and NLM on needed cancer literature services. NCI plans to take full advantage of NLM services and expertise. MEDLINE services, vocabulary development projects, and Lister Hill Center involvement have all been discussed. Institute and Library staff will meet on a monthly basis to review plans and results of requirements analysis efforts; in addition, NLM will be asked to participate in the National Cancer Program's Cancer Information Services Coordinating Committee.

A pilot information program in the Pacific Northwest will join NCI with the Pacific Northwest Regional Medical Library, the Washington-Alaska-Montana-Idaho (WAMI) Regional Medical Program, the University of Washington Medical School, and a newly designated comprehensive cancer research center--the Fred Hutchinson Cancer Research Center--all located in Seattle. This effort will cover a six-state area.

Finally, Mr. Holt reported, the total scope of the Cancer Information Services encompasses considerably more than the information needs of individual scientists and clinicians. The Cancer Information Services will provide the NCI Director and management with programmatic information on the progress and status of ongoing activities of the National Cancer Program. Information on the scientific activities of industry and other Federal and non-Federal agencies will also be an integral part of the stored information to help program planners identify areas where new efforts should be initiated.

The budget for the Cancer Information Services is \$85,000 in FY 1973; \$500,000 is projected for FY 1974 and \$1,000,000 for FY 1975. In response to questions from Board members, Mr. Holt stated that until the requirements analysis is complete, final judgements on the future level of funding cannot be made.

VII. REPORT OF THE DIRECTOR, NLM

Dr. Cummings reported that legislation extending the Medical Library Assistance Act for one year and authorizing \$8.4 million for its provisions was signed into law by the President. Although there are no significant differences between the revised 1973 and 1974 budget figures for the Library, the 1974 personnel ceiling is reduced from 467 to 447. The Director expressed concern that such manpower reduction will hurt services; in fact, a study has revealed that Library services have already deteriorated because of manpower reductions in the past year. Workloads in circulation, interlibrary loan, reader services, and audiovisual loan and reference services continue to rise, and a lower level of overall performance is resulting as measured by throughput time and fulfillment rates. The Library has appealed the 1974 reduction in ceiling to the NIH Director.

There has been discussion in recent weeks, Dr. Cummings reported, that NLM might be transferred organizationally to the new Health Resources Administration. In response to informal queries, Dr. Cummings has indicated that the deciding factor should be whether or not the parent organization is prepared to commit the resources needed to maintain and expand the Library's collection and services. In another proposed relocation, the Director of the Center for Disease Control (CDC) in Atlanta has asked that the National Medical Audiovisual Center (NMAC) be relocated in Bethesda to free up space for CDC activities. The Library and the NIH Director's office have vigorously resisted this proposal.

The Director showed the Regents architects' drawings of the proposed Lister Hill Center building. Originally to be completed in 1976, delays have moved

this date to 1977-1978. The plans will be presented to the Fine Arts Commission and the National Capital Parks and Planning Commission for their review and approval. The new building will house the Lister Hill Center, Extramural Programs, Specialized Information Services, Office of Computer and Communications Systems, and the National Medical Audiovisual Center. There will also be conference and auditorium facilities with modern audiovisual appurtenances.

The Director reported that Mr. Day, the NLM Deputy Director, is in Russia as a member of the U. S. Delegation on Exchange of Library and Information Science. He will visit Professor Lisitsyn, Director of the All Union Institute of Medical and Medico-Technical Information in Moscow, who will in turn visit the United States in the future. Dr. Cummings noted that there is a new lobby exhibit on Civil War medicine. The Macy Foundation will collaborate with NLM in the preparation of a festschrift on American medicine for the U. S. bicentennial. John Shaw Billings participated in a similar publication in 1876. The Director also announced that the name TOXICON, for the Library's on-line system for retrieving toxicological information, has been changed to TOXLINE, because the former name had been preempted by a journal.

The Board accepted the Director's report and urged that continued efforts be made to restore our personnel ceiling. Members also opposed the transfer of NMAC from its special-purpose facilities until the new Lister Hill Center is completed.

VIII. REVIEW OF NLM's INTERNATIONAL ACTIVITIES

Miss Mary E. Corning, Assistant Director for International Programs, reported that, except for P.L. 480 projects, the Library's cooperative international programs consist primarily of sharing time, talent, and resources rather than providing funds. The Library currently has 895 partners in 88 countries for acquiring materials through exchange. The list includes Mainland China for the first time since 1966. Miss Corning showed the Regents a copy of the January 1973 Chinese Medical Journal and contrasted its contents to those of the last Chinese publications issued at the time of the Cultural Revolution in 1966. The new publication contains anonymous substantive articles in Chinese with English-language abstracts; the political material is presently contained within editorials and forewords.

NLM continues to provide technical consultation and backstopping to the Pan American Health Organization Regional Library of Medicine (BIREME) in Sao Paulo, Brazil. BIREME provides over 50,000 services annually within Brazil and will now increase its activities to other Latin American countries. New activities being initiated include an extensive training program for users, managers, librarians, and technicians; an audiovisual program; and an experiment to operate the MEDLINE data base for the provision of bibliographic services. The Ministers of Health of the Latin American countries passed a resolution this past year for the development of a Pan American scientific documentation and information network. This undertaking would require: greatly increased regional cooperation with a lessening of autonomy; resource allocation by governments; the resolution of problems relating to medical libraries, such

as strengthening basic collections, training, and increased awareness of the medical community; and improvements in the mechanisms for information transfer, such as transportation, postal service, and telecommunications. In a related development, NLM, at the request of the Gorgas Memorial Institute, has been assisting Gorgas and officials of Panama to plan the development of a Central American Health Sciences Information Center.

Miss Corning assessed NLM involvement with international organizations, such as the United Nations and the Organization for Economic Cooperation and Development, and nongovernmental ones, such as the International Council of Scientific Unions. She also presented the policy and operating aspects of NLM's eight bilateral quid-pro-quo agreements concerning MEDLARS. Under these agreements, NLM provides computer tapes, documentation, and training in return for indexing input of 12,000 to 15,000 articles per center annually. Planning is underway to determine the mechanism and conditions under which MEDLINE will be made available to all foreign centers. Sweden has the MEDLINE data base under a special quid-pro-quo arrangement and is providing services to Scandinavia. Under an experimental arrangement, the Institut National de la Sante et de la Recherche Medicale (INSERM) is using a Tymshare node in Paris to access our computer for MEDLINE services. A second meeting of the International Policy Advisory Group for the MEDLARS Centers will be scheduled later in the fall.

Under an agreement with the Agency for International Development, NLM annually provides to 48 countries where AID has health programs, 19,000 services, including interlibrary loans, MEDLARS searches, etc. Miss Corning noted that the indexed input for Index Medicus has increased tenfold in the almost 100 years of its existence. Whereas English, French, and German accounted for 85 percent of all articles in 1879, this has dropped to 73 percent in 1971. Sharp percentage decreases have occurred in the number of French and German articles, while Russian and Japanese languages are becoming more evident. There has been an increase of 11% in English-language citations due not only to the increase in the number of United States and United Kingdom journals indexed, but also to the fact that 45 additional countries are now publishing journals in the English language.

In summary, NLM's international activities--which vary in scope, mechanism, and immediate objective--all share the common criterion that they be of demonstrated value to the United States.

The Board complimented Miss Corning for her informative report.

IX. STATUS REPORT ON MEDLINE AND MEDLARS II

Mr. Davis B. McCarn, Associate Director for Computer and Communications Systems, described the development of data bases available on-line from the Library's IBM 370/155 computer. These include, in addition to MEDLINE, information on serials, cataloging, audiovisuals, and pre-1970 MEDLARS citations on-line. The serial locator information (SERLINE) and cataloging data (CATLINE) will be available for searching by late summer. In regard to older MEDLARS citations, a study has shown that pre-1970 references decline slowly in value, perhaps only five percent a year for scientific reference purposes.

Mr. McCarn presented some statistics on MEDLINE: system efficiency was 98.5 percent in May; volume of searches is now running at the rate of 200,000 per year (versus a maximum of 16,700 per year under the old, batch-mode processing system); 70 percent of the searches are being run on the NLM computer, 30 percent on the SUNY computer at Albany; there are an average of 30-35 simultaneous users of the system during afternoon peak periods; 208 people from 153 institutions have received formal MEDLINE training; most on-line searches were run by librarians in the absence of the user (although, according to a recent analysis, efficiency is not decreased and user satisfaction is increased if the user is present).

Nine discs are available on the present equipment for on-line services, Mr. McCarn noted. Since MEDLINE itself uses four of these discs, there is a problem in scheduling the other services (SERLINE, CATLINE, etc.) on the remaining discs. The old MEDLARS demand search program has been virtually phased out.

Early in FY 1974, NLM will charge MEDLINE users at the rate of 10 cents per minute and 10 cents per page. Contractual arrangements have been made with almost all MEDLINE user institutions to recover the charges.

System testing for MEDLARS II has begun, with acceptance testing to be completed by December 1973. Parallel operation should begin in early 1974. Retrieval programs for MEDLARS II come in an on-line and an off-line version. The on-line version will replace ELLHILL II, currently being used for MEDLINE; the off-line program will be used for processing large publications. The Library's plans for the replacement of the IBM 370/155 with an IBM 370/158 were presented. The new machine, which will be installed around Thanksgiving, will result in a savings to the Library of about \$100,000, as well as providing increased data storage capacity. The Board approved this plan and noted the contributions of Mr. Alfred R. Zipf and Mr. Bruno W. Augenstein who serve as consultants to this program.

X. PROGRESS REPORT ON LISTER HILL CENTER PROGRAM PLAN

Dr. Harold M. Schoolman, Assistant Deputy Director, NLM, discussed contractor progress to develop plans for the Lister Hill Center and ways to coordinate the functions of the Center with those of the National Medical Audiovisual Center in the development of the Biomedical Communications Network. Among the tasks set forth are those of assessing the Center's original goals and objectives, delineating revised goals and objectives, developing management and technical development plans, and identifying the resources required to reach the goals and objectives. The contractor has proposed a series of "levels of operation" for the Center, ranging from a simple clearinghouse function to comprehensive, operating services for the Biomedical Communications Network. Current Center resources are inadequate for even the first, or clearinghouse, level, according to the contractor. He believes that coordinating the activities of the Lister Hill Center and NMAC and reallocating existing health communications resources within DHEW may be sufficient to reach a

satisfactory level of operation that would include an in-house and contract research capability. There will be full reports by the contractor and the Lister Hill Center Subcommittee at the November Board of Regents meeting.

Dr. Hilliard Jason, consultant to the Lister Hill Center, reported on one aspect of his study of possible joint functions of the Center and NMAC--that related to the establishment of an educational resources group. The functions of this group might include intramural basic research, applied research, seminars and workshops, teacher development programs, liaison with the academic community, participation in educationally related grant and contract decisions, and the continuing education of staff. Such joint efforts would require the talents of various disciplines, including education and the social sciences.

Following these presentations, Dr. Stewart G. Wolf, Jr., who has worked with the LHC Subcommittee as a consultant, emphasized the importance of convincing the Department of the need for additional personnel and resources to develop the communications networks and systems, the potential of which the Lister Hill Center has already demonstrated. Dr. William O. Baker suggested that there be liaison between the educational resources group described by Dr. Jason and the newly established National Institute of Education which has a mandate (and funds) to improve the quality of all education, from kindergarten to postgraduate and continuing education. The Board indicated that NLM should not try to establish an Institute of Medical Education but rather keep these activities fully integrated within the present NLM long-range plans.

XI. REPORT ON COMPUTER-ASSISTED INSTRUCTION (CAI)

Mr. Albert Feiner, Director of the Lister Hill Center, described the Center's efforts in setting up a program for the interinstitutional sharing of computer-assisted instruction programs. The network now consists of some 70 organizations--medical and dental schools, hospitals, and professional associations--which use CAI programs developed by Ohio State University, the University of Illinois, and Massachusetts General Hospital. The network is now being used over 2,400 hours per month, representing some 20,000 student interactions.

The programs are for a variety of purposes, from teaching physicians' assistants and nurses through undergraduate, graduate, and continuing medical education. About 70 percent of the CAI network use is by medical students; the remainder by faculty, staff, and allied health personnel. Terminals are usually used by groups of students, rather than by individuals, increasing the effectiveness of the learning experience. The interaction within a small group is one of the most valuable aspects of CAI.

The response to the network, after only four full months of operation, has been encouraging. There is now no question that the schools will use CAI in their curricula, often modifying the programs for their own needs. A recent meeting of network users revealed that CAI had beneficial application in remedial learning, flexible scheduling, and improving curriculum and teaching effectiveness.

A final determination on how to charge for the network services has not yet been made, but in all probability there will be a charge schedule in effect by the end of the year. Communications costs are comparable to those of MEDLINE. Dr. Cummings noted that the real test of its value to the schools will be when the users are asked to pay for the service. Other questions dealing with expanding the network into allied health fields are unresolved.

XII. REPORT ON THE NATIONAL MEDICAL AUDIOVISUAL CENTER (NMAC)

Dr. Charles F. Bridgman, Director of the National Medical Audiovisual Center, used a modular teaching package on ophthalmoscopy as an example to discuss a program to evaluate self-instructional materials. The evaluation showed that the three-and-one-half-hour package reduced instructional time by about one-half and increased student performance. Cost effectiveness is yet to be determined upon analysis of computer data. The package Dr. Bridgman demonstrated is sold by the GSA National Audiovisual Center for \$55, and comprises slides, audiotapes, three-dimensional models, and study guides.

The NMAC Director reported that sound/slide presentations on videotape are very easy to handle and offer great dollar savings over the traditional motion picture medium. The Center's videotape duplication service is very popular, with costs approximately one-half that of reproducing a motion picture print.

Dr. Bridgman reviewed the ongoing cooperative program with health science professional societies such as the American Physiological Society to identify and evaluate good health science audiovisual instructional materials. About one in ten is classed as high quality and entered into the NMAC distribution system.

Dr. McGovern and Dr. Layton commented on the gratifying development and direction of NMAC programs in the last three to four years. Consultant Stewart Wolf emphasized the importance of additional manpower and fiscal resources to continue and expand the Center's work.

XIII. REPORT ON TECHNICAL SERVICES DIVISION (TSD)

With the development of library networks over the last five years, the National Library of Medicine, as well as the entire biomedical library community, has become more and more dependent upon the ability of the Technical Services Division to supply technical backup for acquisitions and cataloging. Personnel and other budgetary constraints which have occurred over the past few years have had a particularly deleterious effect on the Division's capabilities to maintain its service commitments. With this fact in mind the Division has been undergoing a self-study during the past few months to reassess its goals and objectives and to identify areas where functions and procedures can be streamlined or consolidated in an effort to obtain and process literature as expeditiously as possible, operating within the existing constraints of manpower and budget.

Before describing the steps which have been taken to identify trouble areas and propose solutions, a brief statement of where the Technical Services Division fits within NLM's administrative framework and the functions it performs was presented. Miss Sawyers also described at some length the development of on-line files. Two major files were discussed--CATLINE, which when operational will contain full bibliographic data for the approximately 130,000 items cataloged since 1965, and SERLINE, which will contain bibliographic and locator data for approximately 6,000 substantive biomedical journal titles.

The self-study which the Division has been undergoing began with a reevaluation of TSD goals and objectives. The study then identified procedures which could be realigned or streamlined and ways in which the new on-line files could be used. Three functions--dissemination, procurement, and serial receipt control--were separated out for further discussion.

A number of improvements have been made in the dissemination of bibliographic information, the most important of which is the Cataloging-in-Publication Program at the Library of Congress. This program makes it possible to print the bibliographic description for cataloging in the books themselves. Several steps have also been taken in the procurement area in an effort to improve the speed with which items are received by NLM. Among these are the Express Cataloging Service and standing orders with U. S. and foreign book dealers. In the area of serial receipt control, the available personnel is being realigned to provide manpower for the all-important task of claiming missing issues. In addition, existing automated systems are being examined to see whether they are applicable to the inventory problems of receipt control.

Although certain functions have suffered in the past because of cutbacks in manpower, Miss Sawyers felt that the realignment of personnel and the streamlining of current procedures will help halt this trend and will allow the fulfillment of the Division's responsibilities as a backup to the Regional Medical Library Network.

The Board applauded Miss Sawyers' report and reemphasized the need to join positions for this vital library function.

XIV. EXTRAMURAL PROGRAMS (EP)

Application Review Guidelines

Dr. Allen reported on his April 1973 meeting in Houston with Drs. Abdallah and McGovern, appointed by the Chairman at the March meeting of the Board to redefine review procedures for EP grant applications. The procedures recommended by this ad hoc group are similar to NIH standards with one notable exception: typically, NIH councils, recommending approval on the basis of merit for a proposal which had been disapproved on merit by the initial review group (IRG), send the application in question back to the IRG for further consideration. The ad hoc members extended the referral procedure to include all proposals for which the Board's merit recommendation differs from the IRG's merit recommendation. As in the past, three categories considered by the primary review group will come to the special attention of the Extramural Programs Subcommittee: those

recommended for approval for over \$50,000 in the first year; those on which a split vote was cast (where minority was 2 or more members); and those for which a policy issue required attention. The revised guidelines, which the Subcommittee recommended for approval, were adopted as Board policy.

DRG Administrative Report

Calling attention to the Division of Research Grants' Administrative Report, Dr. Allen observed that DRG has recommended the termination of the History of Life Sciences Study Section. Approval is expected in the light of efforts to reduce the number of government advisory committees. Mrs. Ileen E. Stewart, the Study Section's Executive Secretary, said that application review would be accomplished with ad hoc reviewers. Dr. Allen pointed out that the report also included an announcement of the revised standards established by the Office of Management and Budget, described in its Circular No. A-102, for streamlining the administration of Federal grants to State and local government agencies.

NLM's Position on Indirect Costs

The Associate Director informed the Board that DHEW has accepted the Library's position that indirect costs should not be allowed as part of Resource Project Grants.

Review of P.L. 480 Projects

The review of Public Law 480 projects has been under consideration for some time. Dr. Allen brought to the Subcommittee several alternatives for reviewing P.L. 480 projects and pointed out the advantages and disadvantages. The Subcommittee discussed the review procedures and concurred with the current practice of initial review for scientific merit by respective ad hoc panels of subject area specialists selected by staff and consultants. The Subcommittee also indicated that it favored a mechanism under which "specials" (over \$50,000, split votes, and policy issues) would be considered by the EP Subcommittee. Following the Subcommittee's report on this preference, the Board adopted the resolution documented in Attachment A1. Summary sheets for all P.L. 480 applications, not just those the Subcommittee will review, will be provided as background material.

Biomedical Library Review Committee (BLRC) Changes

Dr. Allen advised the Board of administrative changes in the Biomedical Library Review Committee, announcing that Dr. Doris H. Merritt has been appointed Chairman and Dr. Roger W. Dahlen Executive Secretary. New members who will begin their terms of service as of July 1, 1973, are Dr. Lois DeBakey, Miss Nancy M. Lorenzi, and Dr. Josiah Macy, Jr.

Multi-Media Proposals

In May, Dr. Allen and Dr. Bridgman met in Atlanta with BLRC members Drs. Slamecka, Cooper, Thompson, and Sharry to determine how to assist applicants interested

in multi-media proposals and how best to assist BLRC members in the evaluation of these proposals. As a result of their deliberations, Dr. Bridgman, who will attend the next meeting of the BLRC for briefing purposes, is developing a checklist which will be included in all application kits and guidelines for furnishing BLRC members specific information relative to individual grant requests. It was understood and agreed that any information provided by NMAC should avoid any judgments of merit on an overall project.

Policy Considerations

The Regents heard the Subcommittee's view that in most cases cumulative indexes of single journal titles should be the responsibility of either the publisher or the sponsoring organization, and that the user is not inconvenienced by using a general bibliography. By resolution, a policy was established that the Board of Regents would not support the publication of cumulative indexes of a single journal title that is already under bibliographic control. (Attachment A2)

With regard to applications for support of collection reclassification, Mrs. Hetzner, speaking for the Subcommittee, commended the librarians' desire to standardize classification systems but assured members that the lack of such unification was a deterrent neither to efficient management nor to good service at any level. A resolution was therefore passed that the Board of Regents should not support library collection reclassification projects. (Attachment A3)

In view of the new policies either proposed or enunciated at this meeting, General Jennings suggested that it would be useful for members to receive before the next meeting a compilation of all Board policies. Dr. Allen agreed to develop such a compilation, as requested.

Dr. Dahlen presented a newly developed approach to grant and program evaluation. It involved the broader, interrelated concept of program objectives as differentiated from a simple focus on grant mechanisms. After discussing some basic goals, Dr. Dahlen analyzed how 1971-1973 funds allotted by grant mechanisms would appear in the framework of program objectives or overall aims. The Board agreed enthusiastically that the approach was a useful and valuable one and would provide them with considerable assistance in establishing program priorities. Dr. Dahlen was asked to prepare for the next meeting a similar analysis projected for 1974 approvals. The Regents believe that in view of the present unsettled funding situation, formal action to accept the program objectives as policy should be deferred for the time being.

XV. CONSIDERATION OF PENDING APPLICATIONS

Dr. Dahlen reminded Board members of conflict of interest and confidentiality procedures.

A motion was passed to ratify actions of the initial review group as presented in the Gray Book of applications, other than those considered by the EP Subcommittee. Mrs. Hetzner abstained on an application from her institution. Interim actions taken by the Extramural Programs' staff since the last Board meeting were brought to the Regents' attention.

Summaries of Board actions on all Extramural grant programs are attached to these minutes (Attachment B).

XVI. ADJOURNMENT

The meeting of the Board of Regents was adjourned at 12:45 p.m. on Friday, June 22, 1973.

* * * * *

Thursday, June 21, 1973, 9:00 a.m. to 5:00 p.m.
Friday, June 22, 1973, 9:00 a.m. to 12:45 p.m.

* * * * *

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

Martin M. Cummings

8/17/73

Martin M. Cummings, M.D. (Date)
Executive Secretary

Jack M. Layton, M.D.

Jack M. Layton, M.D.
Chairman

(Date)

8/2/73

Robert B. Mehnert
Chief
Office of Public Information
and Publications Management

ACTIONS TAKEN BY THE BOARD OF REGENTS

June 21-22, 1973

1. The Board elected John P. McGovern, M.D., Chairman for 1973-1974.
2. The Board presented to Manfred J. Wasserman, of the Library's History of Medicine Division, the 1973 Regents Award for Scholarship or Technical Achievement.
3. The Board ratified the appointment of Albert R. Jansen, Ph.D., Visiting Professor of Medical Ethics at the University of California, San Francisco, as Visiting Scholar at the National Library of Medicine.
4. The Board endorsed the Library's and NIH's position of vigorously resisting relocating the National Medical Audiovisual Center until the Lister Hill Center building has been constructed.
5. The Board adopted four policies recommended by the Subcommittee for Extramural Programs (Attachment A).

POLICIES RECOMMENDED BY THE SUBCOMMITTEE FOR EXTRAMURAL PROGRAMS
AND ADOPTED BY RESOLUTION OF THE BOARD OF REGENTS

June 22, 1973

1) Re: Review of **P.L. 480** Projects

The Extramural Programs Subcommittee of the Board of Regents, recognizing the **multidisciplinary, biomedical** nature of projects in the Public Law 480 program, concurred with the current practice of initial review for scientific merit by respective ad hoc panels of subject-area specialists selected by staff and consultants. The Subcommittee recommended, however, that proposals which involved split votes, policy issues, or the award of **\$50,000** (equivalent) or more in any one year, be referred for final review and recommendation by the Subcommittee.

Additionally, copies of Summary Sheets on all approved Special Foreign Currency projects, will be sent to the Subcommittee on a regular basis for overall review of program activities and consideration of any identifiable relationship to current program objectives. Such review by the Subcommittee could lead to recommendations to the Board of Regents and the Director, National Library of Medicine, as to emphases that might be effected through subsequent Special Foreign Currency projects.

2) Re: Cumulative Indexes of Single Journal **Titles**

It is the policy of the Board of Regents not to support the publication of cumulative indexes of a single journal title that is already under bibliographic control.

3) Re: Library Collection Reclassification Projects

It is the policy of the Board **of** Regents not to support library collection reclassification projects.

4) Re: Revised Guidelines for Review of Applications

Applications reversed by the Board on the basis of merit will be returned to the initial review group for further consideration. These include applications disapproved by the Board after a recommendation of approval by the Biomedical Library Review Committee, as well as those approved by the Board after a disapproval, which is current **NIH** practice.

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

COUNCIL DATE: JUNE 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE	APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
	2 R01 LM 00877-03A1	03A1 SCIENTIFIC COMMUNICATION IN BIOLOGICAL SCIENCES	15,293
	1 R01 LM 02054-01	01 02 03 THE HISTORY OF THE MEDICINAL USES OF VEGETABLE GUMS	16,014 5,098 6,908
	1 R01 LM 02058-01	01 02 03 HISTORICAL STUDY OF NEOPLASMS HISTOGENESIS	6,805 6,038 6,340
	1 R01 LM 02071-01	01 02 03 THE HEALTH CARE OF BLACKS IN THE ANTE-BELLUM SOUTH	9,895 10,195 9,995
	1 R01 LM 02074-01	01 REVIEW OF INFORMATION NEEDS & USE STUDIES IN MEDICINE	21,903
	1 R01 LM 02089-01	01 02 CITATION AND DEMAND PATTERNS OF BIOMEDICAL JOURNALS	20,579 8,542

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

COUNCIL DATE: JUNE 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 R13 LM 02090-01	SYMPOSIUM ON AMERICAN FOLK MEDICINE	10,461
1 R01 LM 02096-01	CLOTHING FOR THE ELDERLY - AN ANNOTATED BIBLIOGRAPHY	7,738
1 R01 LM 02097-01	HUGH CABOT (1872 - 1945): A STUDY IN MEDICAL REFORM	10,131
		7,895
1 R01 LM 02099-01	A HISTORY OF EXPERIMENTAL PARAPSYCHOLOGY, 1930-1947	36,287
1 R01 LM 02100-01	MEDICAL PHYSIOLOGY OF TEMPERATURE	34,300
		34,300
1 R01 LM 02109-01	PROJECTS IN TRADITIONAL CHINESE MEDICINE	24,737
		35,097

APPLICATIONS RECOMMENDED FOR APPROVAL BY COUNCIL
 (Arrange: numerically by program)

COUNCIL DATE: JUNE 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE		AMOUNTS RECOMMENDED
1 R01 CA LM 15,408-01		01	12,694
		02	11,730
	REPORT ON CURRENT PLANT REMEDIES OF MIDDLE AMERICA	03	11,592
2 R01 MH LM 17,859-01		05	10,122
		06	10,500
	HISTORY OF MENTAL HOSPITALS IN THE UNITED STATES TO 1900	07	10,900
1 R01 GM LM 20,847-01		01	25,000
	MEASURING THE USEFULNESS OF POLARS-PAIRS	02	25,000

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

COUNCIL DATE: JUNE 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 G08 LM 02098-01	01 MEDICAL LIBRARY RESOURCE PROJECT GRANT	42,900
	02	44,100
1 G08 LM 02118-01	01 MEDICAL LIBRARY RESOURCE PROJECT GRANT	22,402
1 G08 LM 02129-01	01 MEDICAL LIBRARY RESOURCE PROJECT GRANT	18,425
1 G08 LM 02130-01	01 MEDICAL LIBRARY RESOURCE PROJECT GRANT	20,000
	02	20,000
1 G08 LM 02133-01	01 MEDICAL LIBRARY RESOURCE PROJECT GRANT	11,969
1 G08 LM 02134-01	01 MEDICAL LIBRARY RESOURCE PROJECT GRANT	19,104

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

COUNCIL DATE: JUNE 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 G08 LM 02135-01		01 16,029
		02 7,580
	MEDICAL LIBRARY RESOURCE PROJECT GRANT	03 6,391
1 G08 LM 02144-01		01 6,493
	MEDICAL LIBRARY RESOURCE PROJECT GRANT	

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

COUNCIL DATE: JUNE 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 G04 LM 02080-01		
	01	19,980
	02	20,051
	03	21,805
	PROPOSAL FOR A PROGRAM DEVELOPMENT OFFICER FOR MCRML STATION	
1 G04 LM 02081-01		
	01	26,611
	02	26,015
	03	27,311
	IOWA MEDICAL LIBRARY SERVICE COORDINATOR	

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
Bethesda, Maryland

A G E N D A

46th Meeting of the

BOARD OF REGENTS

Board Room
National Library of Medicine

9:00 a.m., November 29-30, 1973

Meeting OPEN all day on November 29 and from 9:00 to 10:45 a.m. on November 30.
Meeting CLOSED from 10:45 a.m. to noon on November 30 for grant review.

- I. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. John P. McGovern
- II. CONSIDERATION OF MINUTES OF LAST MEETING Dr. John P. McGovern
- Minutes under TAB I (Orange Book)
- III. DATES OF FUTURE MEETINGS
- 1974 Calendar under TAB II
- Next Meeting -- March 21-22, 1974 (Th-F)
Subsequent Meeting -- June 19-20, 1974 (W-Th)
Selection of Meeting Date -- November 1974
- | | | | |
|---------|---------|---------|---------------------------|
| (19-20) | (21-22) | (26-27) | |
| (T-W) | (Th-F) | (T-W) | Thanksgiving: November 28 |
- Note: American College of Chest Surgeons November 3-7, 1974
American Medical Association, Clinical December 1-4, 1974
- IV. REMARKS BY ASSISTANT SECRETARY FOR HEALTH Dr. Charles C. Edwards
- V. REMARKS BY DIRECTOR, NIH Dr. Robert S. Stone
- VI. REPORT OF DIRECTOR, NLM TAB III Dr. Martin M. Cummings
- VII. REPORT ON INTERNATIONAL AFFAIRS TAB IV Mr. Melvin S. Day
Miss Mary E. Corning
- COFFEE BREAK
- VIII. STATUS REPORT--TOXICOLOGY INFORMATION SERVICES Dr. Henry M. Kissman
TAB V Discussant:
Dr. G. Burroughs Mider
- LUNCHEON -- Catered in Conference Room B.
- IX. DESIGN FOR LISTER HILL CENTER BUILDING Mr. Kent A. Smith
TAB VI Mr. J. Roy Carroll, Jr.

11/23/73

X. LONG-RANGE TECHNICAL PLANS FOR LISTER HILL CENTER
 TAB VII
 COFFEE BREAK

Mr. Bruno W. Augenstein
 Discussants:
 Dr. William O. Baker
 Mr. Alfred R. Zipf

XI. STATUS REPORT--MEDLARS II
 TAB VIII
 RECESS

Mr. Davis B. McCarn
 Discussant:
 Mr. Alfred R. Zipf

DINNER (Dutch Treat).....Bethesda Naval Officers' Club
 8901 Wisconsin Avenue
 Bethesda, Maryland

Cocktails (Open Bar): 6:30 p.m. Anchor Room

Dinner: 7:30 p.m. Oak Leaf Room

Speaker: Dr. W. N. Hubbard, Jr.

Topic: "The Uses of Scientific Explanation"

RECONVENE: 9:00 a.m., November 30, 1973

XII. REPORT OF ASSOCIATE DIRECTOR FOR
 EXTRAMURAL PROGRAMS

Dr. Ernest M. Allen

A. Review of Council Procedures
 "Guidelines for Adjustments by Staff in Time or
 Amount of Grant Award" TAB I (Gray Book)

B. DRG Report TAB II

C. Policy Compendium distributed to
 Board of Regents TAB III

D. Reactivation of Special Scientific Projects Program

E. Report on publication activities of International
 Programs Division: P.L. 480 Program and Publication
 Grant Program TAB IV

Dr. Jeanne L. Brand

F. Report on September 1973 field trip to Israel and
 Poland re: P.L. 480 Projects TAB V

Dr. W. N. Hubbard, Jr.

COFFEE BREAK

MEETING CLOSED FROM 10:45 A.M.-12:00 NOON FOR GRANT REVIEW

- | | | |
|-------|---------------------------------------------------------------------------|--------------------------------------------|
| XIII. | CONSIDERATION OF PENDING APPLICATIONS | Dr. Roger W. Dahlen
Dr. Jeanne L. Brand |
| | A. New members of Biomedical Library Review
Committee | TAB VI |
| | B. Research Grants | TAB VII |
| | C. Resource Grants | TAB VIII |
| | D. Regional Grant | TAB IX |
| | E. Publication Grants | TAB X |
| | F. Documents for guidance in grant evaluation (<u>Green Book</u>) | |
| XIV. | MANAGEMENT BY OBJECTIVES--RESOURCE AND
REGIONAL MEDICAL LIBRARY GRANTS | Dr. Ernest M. Allen |
| XV. | OTHER BUSINESS | Dr. John P. McGovern |
| XVI. | ADJOURNMENT | |

Private Board Luncheon

Conference Room B.

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DEPARTMENT OF HEALTH, EDUCATION,
AND WELFARE

NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
BOARD OF REGENTS

MINUTES OF 46TH MEETING
NOVEMBER 29-30, 1973

BOARD ROOM
NATIONAL LIBRARY OF MEDICINE
BETHESDA, MARYLAND

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
THE BOARD OF REGENTS OF THE NATIONAL LIBRARY OF MEDICINE

Minutes of Meeting 1/ 2/
November 29-30, 1973

The Board of Regents of the National Library of Medicine was convened for its forty-sixth meeting at 9:00 a.m. on Thursday, November 29, 1973, in the Board Room of the National Library of Medicine, Bethesda, Maryland. Dr. John P. McGovern, Professor and Chairman, Department of the History of Medicine, Graduate School of Biomedical Sciences, University of Texas, and Chairman of the Board of Regents, presided. In accordance with P.L. 92-463 and the Determination of the Deputy Director, NIH, dated October 11, 1973, the meeting on November 29, 1973, was open to the public from 9:00 a.m. to 5:00 p.m.; on November 30, 1973, the meeting was open to the public from 9:00 to 10:45 a.m. and closed from 10:45 a.m. to 2:00 p.m. for the review, discussion, and evaluation of grant applications.

Board members present were:

Dr. Eloise E. Clark (November 29 only)
Dr. Susan Y. Crawford
Vice Adm. Donald L. Custis (November 29 only)
Mrs. Bernice M. Hetzner
Dr. W. N. Hubbard, Jr.
Dr. J. Stanley Marshall
Dr. Angelo M. May
Dr. John P. McGovern

Alternates to Board members present were:

Dr. Faye G. Abdellah, representing Dr. S. Paul Ehrlich, Jr.
Col. Mims C. Aultman, representing Lt. Gen. Richard R. Taylor
Capt. J. William Cox, representing Vice Adm. Donald L. Custis (November 30)
Dr. Laurance V. Foye, Jr., representing Dr. Marc J. Musser
Mr. John G. Lorenz, representing Dr. L. Quincy Mumford
Brig. Gen. George E. Reynolds, representing Lt. Gen. Robert A. Patterson

1/ For the record, it is noted that members absent themselves from the meeting when the Board is discussing applications: (a) from their respective institutions, or (b) in which a conflict of interest might occur. This procedure does not apply to "en bloc" actions. Only when an application is under individual discussion, and then only for applications from the Board member's own "campus," will the Board member absent himself.

2/ The Board of Regents, when considering the Extramural Programs of NLM, sits as the National Medical Libraries Assistance Advisory Board, and concurrently discharges the responsibilities of both bodies.

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, Assistant Deputy Director
Dr. Ernest M. Allen, Associate Director for Extramural Programs
Dr. Clifford L. Bachrach, Chief, Bibliographic Services Division, LO
Mr. Harry D. Bennett, Deputy Associate Director, Computer and
Communications Systems
Dr. Jeanne L. Brand, Chief, International Programs Division, EP
Dr. Charles F. Bridgman, Associate Director for Educational Resources
Development
Mr. Arthur J. Broering, Deputy Associate Director for Extramural Programs
Mr. William H. Caldwell, Deputy Chief, Bibliographic Services Division, LO
Dr. Ralph P. Christenson, Chief, Customer Products and Services Development
Branch, LHNCCB
Miss Mary E. Corning, Assistant Director for International Programs
Dr. Roger W. Dahlen, Chief, Division of Biomedical Information Support, EP
Mr. Albert Feiner, Director, Lister Hill National Center for Biomedical
Communications
Mr. B. Earl Henderson, Acting Chief, Network Engineering Communication
and Operations Branch, LHNCCB
Mrs. Frances H. Howard, Special Assistant, Office of the Associate Director
for Extramural Programs
Dr. Hilliard Jason, Consultant to Lister Hill National Center for
Biomedical Communications
Dr. Henry M. Kissman, Associate Director for Specialized Information Services
Dr. Joseph Leiter, Associate Director for Library Operations
Mrs. Nina W. Matheson, Chief, Office of Program Planning and Evaluation, EP
Mr. Hector L. Maynez, Chief, Network Plans and Management Branch, LHNCCB
Mr. Davis B. McCarn, Associate Director for Computer and Communications
Systems
Mr. Robert B. Mehnert, Chief, Office of Inquiries and Publications Management
Mr. Kent A. Smith, Assistant Director for Administration
Mr. Stanley R. Smith, Acting Chief, Technical Services Division, LO
Dr. Harold A. Wooster, Chief, Research and Development Branch, LHNCCB

Others present included:

Dr. Charles C. Edwards, Assistant Secretary for Health, DHEW
Dr. Robert S. Stone, Director, NIH
Mr. Bruno W. Augenstein, Vice President, SpectraVision, Inc.
Dr. Joseph F. Caponio, Acting Director, National Agricultural Library
Mr. J. Roy Carroll, Jr., Carroll, Crisdale & Van Alen, Architects and Planners
Dr. Fred C. Cole, President, Council on Library Resources
Professor E. Deland, Senior Consultant, SpectraVision, Inc.
Dr. Dean Gillette, Executive Director, Systems Research Division,
Bell Telephone Laboratories
Dr. G. Burroughs Mider, Executive Officer, American Society for
Experimental Pathology; Consultant to National Library of Medicine
Mr. Elisha Safford, Jr., Carroll, Crisdale & Van Alen, Architects and Planners
Dr. David Steinhardt, Senior Consultant, SpectraVision, Inc.
Mrs. Ileen E. Stewart, Executive Secretary, Biomedical Communications
Study Section, DRG
Mr. Alfred R. Zipf, Senior Administrative Officer, Bank of America;
Consultant to National Library of Medicine

I. OPENING REMARKS

Dr. John P. McGovern, Chairman, opened the meeting by welcoming Regents, alternates, and guests, taking particular note of the presence of Dr. Charles C. Edwards, Assistant Secretary for Health; Dr. Robert S. Stone, Director of NIH; and Dr. Eloise E. Clark, Division Director for Biological and Medical Sciences, NSF, who was attending her first meeting as ex officio Regent. The Chairman also recognized Dr. Abdellah's recent appointment by Secretary Weinberger as Director for Nursing Home Affairs, and her receiving the HLW Distinguished Service Award and an honorary Doctor of Laws degree from Rutgers University. Dr. McGovern announced that NLM Director Martin M. Cummings has been chosen for a Rockefeller Public Service Award for 1973, the most prestigious award a Federal civil servant can receive. Presentation ceremonies will take place in Washington on December 5.

The Chairman voiced his concern over the fact that there are now only six Presidentially appointed Regents instead of the ten called for by the NLM Act. Dr. McGovern believes this to be an inadequate number to satisfactorily fulfill the obligation to "advise, consult with, and make recommendations to the Secretary" and to constitute the subcommittees established to oversee the various NLM programs.

II. CONSIDERATION OF MINUTES OF PREVIOUS MEETING

The Board recommended approval of the minutes of the meeting of June 21-22, 1973, correcting the reference to the "Association of American Medical Colleges" in paragraph two of page 3.

III. DATES FOR FUTURE BOARD MEETINGS

The Board reconfirmed the dates of March 21-22, 1974, for the next meeting, and confirmed the dates of June 19-20, 1974, for the subsequent meeting. The dates of November 21-22, 1974, were approved tentatively for the following meeting.

IV. REMARKS BY THE ASSISTANT SECRETARY FOR HEALTH

Dr. Edwards thanked the Regents for the thoughtful advice and counsel they provide. He and the Secretary have discovered in their foreign travels that the Library and its programs are held in high esteem all over the world. The Assistant Secretary attributed this to the outstanding leadership of Dr. Cummings and the wise policy guidance of the Board of Regents. Dr. Edwards asserted that he and Dr. Stone share the concern of Dr. McGovern and the Board about the less than full complement of Regents serving. He was confident that the situation would be alleviated in the next four to six weeks. A letter to the Secretary from the Board on this matter would be appropriate and helpful.

Dr. Edwards remarked that in spite of tight Federal budgets and personnel ceilings, the recent reorganization of health activities in the Department holds out promise for effective leadership in this area. It is undeniable that these changes coupled with several resignations have made this transition more difficult and have affected morale, but the situation has stabilized. Dr. Edwards noted that several new health initiatives will be forthcoming in the near future. The most important of these are programs for National Health Insurance and Professional Standards Review Organizations. As the Federal resource for biomedical communications, the Library will undoubtedly be involved in these and other new programs.

In response to a question from Dr. Stone, Dr. Edwards was not optimistic about the prospect of construction funds for the Lister Hill building in the next few years. The Assistant Secretary noted that the HEW budget for Fiscal Year 1975 will be about the same in terms of total dollar amount as 1974. The distribution of funds among programs and priorities will be different, however, since there has been greater input by H into formulating the 1975 budget. Dr. Cummings commented that he was encouraged by the action of the Assistant Secretary in creating a Departmental Toxicology Information Coordinating Committee. This was in response to a recommendation from the Board of Regents that there be better coordination of the Department's information activities in this area.

Dr. W. N. Hubbard, Jr., voiced his belief that information transfer, unlike disease, defies categorization and that because it is a "system in being" it must be supported for its own purposes. Otherwise it will not be available to aid other, more categorized, programs. He also noted that although it will be necessary in this time of "retrenchment" to be more critical of information services provided to foreign countries, many countries cannot maintain currency with the world's biomedical literature except through NLM's programs of access. Dr. Hubbard hoped that it would be possible to protect the generic function of biomedical information transfer from both the trend toward categorization and the tendency to cut back foreign services because of scarce resources. Dr. Cummings commented that many of the problems with foreign access originated in the "fee for service" policy which applies to the loan of library material. In countries with health missions supported by the Agency for International Development, the Library is reimbursed for services by that agency.

V. REMARKS BY THE DIRECTOR, NIH

Dr. Stone complimented the Director and Mr. Kent A. Smith, Assistant Director for Administration, for their leadership in ensuring that the 1974 NIH Combined Federal Campaign reached its goal. He noted that NIH is drafting further guidelines to protect the rights of human subjects in biomedical research and solicited the Regents' comments on these. There is a possibility of an inter-council meeting of representatives of the major NIH advisory groups, including the Board of Regents. Although plans are not yet firm, such a meeting would provide a valuable opportunity to develop cross-linkages. The comments of the Regents on this subject are welcome. Dr. Stone also invited the Regents to make known their views at the hearings on DHEW to be held by Senator Ribicoff early next year.

VI. REPORT OF THE DIRECTOR, NLM

Dr. Cummings brought to the attention of the Board that their chairman, Dr. McGovern, has been the recipient of numerous awards in the past year, including an honorary L.H.D. from Kent State University and an honorary Doctor of Science degree from the University of Nebraska. The Director announced that the U.S. Court of Claims has dismissed the Williams & Wilkins copyright suit and found the United States (viz. NLM and NIH) "free of liability." This is not a triumph over the publishing industry, Dr. Cummings said, but a recognition that the public's interest is more important than commercial, private interests. It also demonstrates the importance of libraries to the medical community and to society at large. The case may be appealed to the Supreme Court.

Using slides, the Director briefed the Regents on the current state of the Library, including some problem areas. He presented the Library's general and specific objectives used for program planning, current organizational structure, and budget and personnel data. The Director believes that the budget levels are reasonable, but that Library programs may suffer because of lowered personnel ceilings. Dr. Stone recognizes this problem and has allowed NLM to request from the Office of Management and Budget a restoration of manpower to the 1973 level.

Dr. Cummings said that he was pleased with the growth of MEDLINE usage (searches are now being done at the rate of about 200,000 per year, in spite of the recently instituted user charges) and the widespread geographic dispersion of terminals around the country. In addition, there is heavy usage by the 40 MEDLINE centers in a number of Federal agencies. The Pharmaceutical Manufacturers Association is providing MEDLINE access to some 45 commercial users. However, the quid pro quo arrangements with foreign partners, under which NLM provides MEDLARS computer tapes in exchange for indexing input, are not an undisguised blessing. NLM no longer has the in-house capacity to index the quantity of biomedical literature necessary for MEDLARS--and if for some reason the flow of foreign citations were interrupted, the Library would be hard put to maintain the currency of its bibliographic retrieval services. Traditional NLM services, such as reference and interlibrary loan, continue to grow at a manageable rate. Dr. Cummings presented statistics showing the high rate of growth in the costs incurred by research libraries. Leading the statistics is the phenomenal increase in expenditures for books. The Director noted, however, that Index Medicus was still by far the least expensive of the major medical reference tools.

Dr. Cummings discussed with the Regents the objectives of the Health-Education-Telecommunications (HET) program as a backdrop for later discussion about the Lister Hill Center's role. A policy committee at a high level in the Department has been set up to oversee and coordinate the various HET activities within DHEW, especially as they relate to other Federal agencies such as NASA. The Library is represented on the committee. The Director expressed concern, however, that the committee is becoming less involved in policy considerations and more involved in the day-to-day operation of programs. On occasion, delayed decisions at this level have resulted in increased costs for the program. Dr. Cummings also reported that the NLM collaborative agreement with the AAMC

to inventory and evaluate existing audiovisual materials and stimulate the production of new materials for use in health education is working well.

VII. REPORT ON THE TOXICOLOGY INFORMATION PROGRAM (TIP)

Dr. Henry M. Kissman, Associate Director for Specialized Information Services, described the action by Dr. Edwards during the current year to form, at the prompting of the Board, a DHEW Toxicology Coordinating Committee. A sub-committee for toxicology information is being formed and will be chaired by Dr. Kissman. After reviewing the background and charter of TIP, Dr. Kissman discussed the status of certain of the Program's projects.

TOXLINE, an on-line bibliographic retrieval service for toxicology information, has been in successful operation for over a year. TOXLINE provides on-line access, for a fee, to a single computerized file of citations and abstracts from existing information bases, such as International Pharmaceutical Abstracts, Abstracts on Health Effects of Environmental Pollutants, and Chemical Biological Activities (CBAC). For the use of those information files that are proprietary (such as CBAC) there is an additional use fee. Although there are now some 70 user organizations subscribing to TOXLINE, there is a need for greater access by academic institutions and hospitals. It is planned in 1974 to bring TOXLINE in-house to be run with the ELHILL programs developed for MEDLARS II. This will result in economics of operation and expanded availability, including access by foreign users.

In addition to TOXLINE, which locates the desired literature, TIP is planning for a system to retrieve the data or information actually desired. Creation of systems and files for data retrieval will be much more difficult than for bibliographic retrieval since the data files do not exist and will have to be assembled. Projects already under way in this area include building a TOXLINE Chemical Dictionary--a file of compounds mentioned in TOXLINE; a data file on the clinical toxicology of some 19,000 commonly used commercial products; and a broad-based Toxicology Data Bank built around hazardous chemical-compounds to which populations are exposed. Peer review of the evaluated data in the last-mentioned file will be desirable before the file is made accessible to the public.

Dr. Kissman reviewed the NLM-funded activities at the Oak Ridge National Laboratory. Chief among these is the Toxicology Information Response Center which answers queries from the professional community by conducting searches of the toxicological literature. A charge scheme, handled by the National Technical Information Service, has been established for these services. It is too early to tell how well the billing and collecting procedures work, but the charge mechanism seems to have reduced the demand for searches, especially by the academic community. Some of the general interest bibliographies produced under this program are sold by the National Technical Information Service.

Dr. G. Burroughs Mider complimented the direction of the Toxicology Information Program under Dr. Kissman and applauded the decision to bring the operation of

TOXLINE in-house. He commented, however, that the proposal that toxicological data be evaluated by peer review before being made available on-line may be unrealistic. As the information available grows exponentially, the peer review mechanism may be unable to keep pace. Dr. Mider feels that the proposed Toxicology Data Bank is the key to success for the entire program. In light of the dismissal of the Williams & Wilkins copyright suit, Dr. Mider also questioned the wisdom of paying royalty fees for the use of proprietary information files contained in the TOXLINE system. Dr. Cummings, in response to this last point, said he felt it proper on the one hand to resist paying a license fee to make single photocopies of journal articles and on the other hand to agree to pay a fee for using information that an organization has assembled, organized, and repackaged into a machine-readable data base.

VIII. STATUS OF PLANS FOR LISTER HILL BUILDING

Mr. Kent A. Smith, Assistant Director for Administration, recounted the history and the specific steps that have taken place to date in the development of plans for the construction of the Lister Hill National Center for Biomedical Communications. The Lister Hill Center will be constructed adjacent to the present Library building and will contain some 200,000 gross square feet of space. As presently envisioned, it will rise ten stories above grade. Three levels will be below grade. There will be a podium-type base of the ten-story tower superstructure. The base will provide linkage to the present Library and the adjacent three-level parking garage. The Center will contain offices, conference rooms, an auditorium, biomedical communications laboratories and exhibit areas, computer and communications facilities, audiovisual production rooms, and necessary service facilities. The new structure will house the staff of the Lister Hill Center, the National Medical Audiovisual Center now in Atlanta, the Extramural Programs, the Specialized Information Services, the Office of Computer and Communications Systems, and a small portion of Library Operations.

In July 1973, a significant milestone in the architectural and engineering design of the Center was reached with the completion of the formal design concepts. On September 6, 1973, the National Capital Planning Commission approved these preliminary site and building plans. The Commission did, however, indicate that before the final plans are prepared the following items should be considered:

1. Reduce the number of parking spaces to be provided and encourage employees to use the forthcoming Metro rapid transit system or car-pooling arrangements;
2. Locate or screen the four rooftop microwave antennas so that they are not visible from the surrounding area or buildings;
3. Restudy the treatment of the entrance court and large expanse of roof area at the first floor level to improve its appearance and visibility; and
4. Consider reducing the height of the podium above ground.

Following Mr. Smith's presentation, Mr. J. Roy Carroll, partner in the Philadelphia architectural firm of Carroll, Grisdale & Van Alen, briefed the Regents on the present stage of the planning and development of the Lister Hill Center. With the help of slides, Mr. Carroll showed the Regents different views and elevations of the proposed structure, emphasizing that these represented a first or concept stage of design. Revised plans, which include consideration of the suggestions of the National Capital Planning Commission, are in preparation and will be presented to the Board at a future meeting.

Dr. Cummings then called the Board's attention to recent reports issued by both the House and Senate appropriations committees calling for completion of construction of the Lister Hill Center before "the space problem becomes acute" at NLM. The Director believes that when the architectural and engineering plans are completed, accepted, and presented to the Congress, construction funds will be approved by that body. When the funds will be released for construction is another question.

IX. LONG-RANGE TECHNICAL PLANS FOR THE LISTER HILL CENTER

Mr. Bruno W. Augenstein presented to the Board a contract report prepared under his direction by SpectraVision, Inc.--"Study of Management and Technical Development of the Biomedical Communication Network." The study finds that the promise of a Biomedical Communications Network (BCN) to alleviate current health care concerns is very great, but it has yet to be demonstrated and evaluated with sufficient rigor; and that there are numerous programs intersecting BCN interests, but these are not comprehensive, integrated, or systematic. Therefore, for the Lister Hill Center to demonstrate the utility of a BCN, a very substantially enlarged program over that currently planned will be needed. The study proposes two optional alternative levels of LHC support--a level of some \$18-20 million over a five-year period, and a level of about \$50 million over the same time span. The former level is, in the view of the study, the minimum support level at which the Lister Hill Center can maintain a clearly recognizable performance superiority in the BCN area (which is rapidly burgeoning). The higher level of support would allow for considerable experience in actually operating a prototype Biomedical Communications Network. Both levels of support define programs significantly different from either the current LHC plans or the Technical Development Plan of 1968. The program proposed by the report would continue present LHC programs; deepen substantially their research and development, experiment design and engineering, and evaluation support; and would add a major new BCN experiment--a telecommunications-linked "Public Medical Utility." The proposed plan includes provision for the evaluation of the impact of this last concept on health care and delivery functions by means of an intensive, long-term experiment affecting a large population. There are no basic technological impediments to the development of a BCN, Mr. Augenstein emphasized.

Mr. Augenstein estimated that a nationwide Biomedical Communications Network would save between 10 and 20 percent (\$6 to \$10 billion) of the total annual expenditures on our health care system. This saving would be made possible by increased efficiency in utilizing present resources. To realize this great potential, however, it will be necessary first to support a large

number of long-term prototype experiments to demonstrate the cost/benefit advantages. This should be the main task of the Lister Hill Center. It requires a substantial amplification of the present program and a Federal commitment to a long experimental period of from five to ten years.

Mr. Alfred R. Zipf, consultant to the Library, responded with his opinion that although there are no technological impediments to the plan recommended by the contract study, before expending funds of the magnitude called for, there should be a better analysis of the cost benefits involved. Before such an ambitious program could be sold to the Administration and the Congress, there would need to be extensive study and input from the user community concerning potential benefits. In reply, Mr. Augenstein noted that a number of potential users of a Biomedical Communications Network were consulted in the study. Unfortunately, those who would benefit most in the medical community have the least knowledge and "feel" for the benefits of the BCN. He acknowledged that ascertaining and countering preconceived negative attitudes toward innovative applications of modern technology would be very important. Dr. Hilliard Jason, consultant to the Lister Hill Center, stated that one of the greatest needs of the hospitals and physicians is a system of "legible, accessible, mobile health records for patients." Mr. Augenstein agreed that such a system should indeed be a part of a BCN.

Dr. Dean Gillette of the Bell Telephone Laboratories, consultant, noted the enormous difficulties in evaluation. He listed several criteria: Do people use the service? Can the system be paid for out of operational expenses (as opposed to grant or other subsidy)? Has anybody else picked up the idea? Dr. Gillette pointed out that the Kaiser-Permanente plan for a medical data system, after five years of preparation, was aborted because grant support ceased before implementation. This, in a sense, is the most devastating form of evaluation. Dr. Cummings agreed with Dr. Gillette's comments about evaluation and described the Lister Hill Center effort to have subscribers to the Computer-Assisted Instruction (CAI) network pay for the services rather than have all costs borne by the Library. He suggested that the SpectraVision proposal might be examined to identify projects that the Library could test, demonstrate, evaluate, and then withdraw from their support. To this end, he felt the more modest of the two alternative plans put forward by Mr. Augenstein would be appropriate. Mr. Zipf agreed with the Director that the Lister Hill Center should serve as a catalyst for projects and then withdraw from them. Taking the proposals in a "piecemeal" fashion rather than as a monolithic whole would be more in keeping with the Center's role.

Dr. Hubbard commented that the proposed experiment, based on the concept of a "Professional Medical Utility," was a concept monumental and awesome in its scope. He has doubts about the value of the proposed experiment because of a lack of baseline data against which to measure differences. There would be a real problem in extrapolating data from the experiment to the general population. Although he is in full sympathy with the proposal, the experiment is not described in enough detail to allow rational decision-making. It is more a demonstration based on intuitive assumptions than an experiment, and as such it would not seem to merit the expenditure of the large sums attached to it. Mr. Augenstein replied that the list of objectives in the full report would make clearer the distinction between "experiment" and "demonstration."

X. STATUS OF MEDLARS II DEVELOPMENT

Using a terminal connected to the new IBM 370/158 computer, Mr. Davis B. McCarn, Associate Director for Computer and Communications Systems, demonstrated the ELHILL III program of the MEDLARS II system. So far, the prototype vocabulary and journal authority files are available for searching on MEDLARS II. Most of the documentation for MEDLARS II has been completed in draft form and received from Systems Development Corporation (SDC). Mr. McCarn noted that the new system has a number of decided advantages in input flexibility, proofreading, record selection and formatting, retrieval, publication flexibility and quality control, and a greater variety of management information. Training classes for MEDLARS II were conducted at NLM in September for staff with program responsibilities.

The new ELHILL III system will be completely phased in by the beginning of February, Mr. McCarn reported. There will be a planned overlap of the present system and ELHILL III until we are confident that the new system can take over completely. English abstracts (for about 60 percent of the MEDLINE citations) will be input into MEDLARS II, probably beginning with the 1974 journal issues. It is planned that the TOXLINE service will be run on the NLM computer after the MEDLARS II software has been installed, tested, and accepted.

There are now some 200 MEDLINE user institutions, Mr. McCarn reported. The system is being used heavily--serving an average of over 30 simultaneous users. To help alleviate this load, users have been asked to make greater use of the SUNY computer which also provides MEDLINE searching. The average search time is about 12 minutes at an average MEDLINE cost to the user of \$1.52 per search. Usage of MEDLINE, which declined after the announcement was made last April that the Library would begin charging for MEDLINE searches, has since returned to the April level, albeit the climb has been at a slower rate than previously.

Mr. Zipf, commenting upon Mr. McCarn's presentation, remarked that the development and implementation of MEDLARS II is now progressing very well. He was concerned, however, that acceptance testing of the system segments would be complete before the entire system is running successfully. Mr. McCarn assured the Regents that the Library will not sign off on acceptance testing until the entire integrated system is operational.

XI. INTERNATIONAL ACTIVITIES

Deputy Director Melvin S. Day reported on the June 18-19 US-USSR Symposium on Scientific and Technical Information, organized under the US-USSR Agreement on Cooperation in the Fields of Science and Technology. Mr. Day was among eight U.S. information specialists from Federal agencies, industry, and universities who participated in the Symposium in Moscow. The Symposium was hosted by N. B. Arutiunov, Director, Information Directorate, State Committee for Science and Technology, Council of Ministers of the USSR. Mr. Day described the new USSR single integrated State scientific and technical information system. The Americans were told that about \$1 billion is spent annually in the Soviet Union for the "all-union" (national) information activities; this figure does

not include funds for regional and local information centers and libraries. After the two-day Symposium, the group spent 10 days visiting information organizations in Moscow, Novosibirsk in Siberia, Yerevan in Armenia, and Kiev in the Ukraine. An official report of the trip has just been published and Mr. Day offered to make it available to the Regents on request.

From October 2-14, Dr. Arutiunov headed a 13-man USSR delegation on a return visit to this country. After breaking up into smaller groups, the Russians visited some 25 American institutions, including NLM. As an outgrowth of this Symposium, the following topics for cooperative development were agreed on:

1. Development and testing of a common communications format for exchange of bibliographic data;
2. Improvement in methods for forecasting information requirements and services; and
3. Development of usable means for estimating the cost/benefit returns of information services.

Mr. Day also reported on a UNISIST steering committee meeting held November 5-9 in Paris. UNISIST grew out of a recommendation to the UN by a 1971 UNESCO-sponsored meeting that an international network of voluntary cooperating information systems be developed. In 1972, UNESCO organized a UNISIST program and established two groups--a steering committee of 18 members and an advisory group. At the November 1973 meeting of the steering committee, a bureau was set up consisting of a chairman (Yugoslavia), three vice chairmen (US, USSR, and Tunisia), and three "observers" (Federal Republic of Germany, Argentina, and the United Kingdom). The bureau will meet every four months (whereas the steering committee will not meet for another two years). All policy issues will be referred to the bureau, all technical issues to the advisory committee. Mr. Day will be the US member of the advisory committee.

Following Mr. Day's presentation, Miss Mary E. Corning, Assistant Director for International Programs, reviewed international activities relating to the USSR, People's Republic of China, Pan American Health Organization, and our eight foreign MEDLARS partners. She reported that in addition to the USSR Agreement in Science and Technology, there is a separate US-USSR Agreement for Cooperation in the Field of Medical Science and Public Health. It was under this agreement that the USSR Minister of Health Boris Petrovsky visited the Library in 1972. At that time he requested Dr. Cummings to receive the Director of the All-Union Research Institute of Medical and Medico-Technical Information (VNIIMI), Dr. Yuri P. Lisitsyn, to explore potential areas of cooperation.

Dr. Lisitsyn visited the Library in September 1973 for two weeks. The nature of the discussions was determined by Dr. Lisitsyn's position that he was not here to make any official commitments. Accordingly, he was given a full opportunity to meet with policy, program, and operating officials of the Library; but, at the same time, NLM was able to obtain some information concerning the organization of medical information services in the USSR. Professor Lisitsyn's institute (VNIIMI) is within the Ministry of Health and includes the State

Central Scientific Medical Library. VNIIMI has approximately 400 employees (excluding the Library) and is responsible for publication, research, and coordination of health information activities. VNIIMI is concerned primarily with the clinical aspects of medicine; its major departments are Bibliography, Problems of Medicine, Research on Science Information Activities in Other Countries, Reference Information Services, and a Computer Center and Publication House. There is a planned network of medical libraries in the USSR which would attempt to relate the State Central Scientific Medical Library to regional and local libraries. There is also planned a separate network of medical information services which distinguishes between the practicing physician and the scientific worker as the ultimate user.

The policy discussions with Professor Lisitsyn covered computer-based storage and retrieval systems (MEDLARS/MEDLINE); republication of Index Medicus in the USSR; vocabulary development and indexing; exchange of literature; joint collaboration through WHO; and exchange of personnel. It is clear that, although the USSR lacks sophisticated computers at this time, it is very interested in MEDLARS/MEDLINE. In September, Secretary Weinberger (under the Health Agreement) headed a U.S. Delegation to the Soviet Union. The Joint Communiqué which resulted included the following:

"The Secretary and the Minister also agreed . . . 6. To examine the possibility of sharing through computer terminals and otherwise the information assembled by the US National Library of Medicine and the USSR Institute of Medical Information."

Communication links between the USSR and US were explored, ranging from a leased telephone line to entering the NLM computer by international TELEX. Soviet communication costs would be very high for either arrangement. The NLM position is that any sharing of MEDLARS/MEDLINE with the Soviet Union would be done on the same quid pro quo basis as with our other foreign partners. It was concluded that there is common interest but no immediate action can be taken.

With regard to the USSR republication of Index Medicus, Professor Lisitsyn had no position, although prior to his visit the Library had requested that this be discussed. The Library's position is that:

1. The Library has not given and will not give permission to the Soviets to continue their republication of Index Medicus for sale;
2. The USSR may purchase the number of copies of Index Medicus it requires and pay for them in rubles which would be deposited in an NLM account in the Soviet Union. The NLM would then use these monies to purchase Soviet literature; and
3. The Soviets raised the question of a royalty, and Dr. Cummings indicated that this would be a matter to be discussed with General Counsel.

No commitments were made as a result of Professor Lisitsyn's visit but we believe that he will recommend to the Minister of Health that biomedical communications be made a formal part of the US-USSR Agreement on Health.

Miss Corning also reported on a visit of librarians from the People's Republic of China. Although the group represented a number of Chinese institutions, no medical librarians were in the delegation. The visitors presented to the NLM

a Chinese pharmacopoeia. Subsequently, NLM learned that an older edition was in the Library but not cataloged. We are now taking action to catalog other rare historical Chinese, Japanese, and Korean literature in the Library but not entered into the collection. This delegation's visit was followed by another People's Republic of China group, consisting of engineers, physicists, and physicians.

Progress of the Pan American Health Organization Regional Library of Medicine was also described, indicating that two new activities were being undertaken--an experimental project using the MEDLINE data base in Brazil, and the development of an audiovisual program.

The second meeting of the International MEDLARS Policy Group is scheduled for December. The group will consider non-U.S. use of MEDLINE extension of services to other countries/regions; on-line systems and networking; technical cooperation and coordination; and the future direction of the existing bilateral quid pro quo arrangements under which NLM provides MEDLARS tapes in return for indexing input to the system. The Library is standardizing these arrangements for all our partners, and there will be a choice as to the nature and level of cooperation. The Library is proposing three possible basic agreements: to provide (a) MEDLARS tapes; (b) tapes plus retrieval programs and documentation; and (c) direct access to the NLM computer. An annual dollar value for each of these levels has been established which could then be converted to a quid pro quo arrangement for indexing or other service to the NLM: Tapes, \$50,000 annually; Tapes and Software, \$100,000 first year, \$60,000 successive years; and On-line Access to NLM Computer, \$50,000 annually.

XII. EXTRAMURAL PROGRAMS (EP)

Dr. McGovern opened the second day's session by welcoming Mrs. Ileen E. Stewart, Executive Secretary of the Biomedical Communications Study Section, then calling for a review of Extramural Programs by Dr. Ernest M. Allen, Associate Director.

As required each November, Dr. Allen presented for Board reexamination the "Guidelines for Adjustments by Staff in Time or Amount of Grant Award," operating procedures which were adopted in 1964, amended in 1968, and reaffirmed annually. The Board again reaffirmed the guidelines without revision. (Attachment A-1)

Calling attention to the Division of Research Grants' Administrative Report, under the second item--MODIFIED NIH RESEARCH TRAINING PROGRAM--Dr. Allen reported that General Counsel has raised a question concerning the "pay-back" provision, whereby "recipients who do not subsequently engage in full-time research and/or teaching careers of acceptable character for a period equivalent to their training support will be required to reimburse the Federal Treasury." Comment followed that the Treasury's record of recouping funds in sponsored programs is exceedingly poor. Concerning the item on the new fellowship program, Dr. Allen said that its clinical-research design is not suitable for NLM's participation.

In response to the Board's June request for a compilation of policies which govern NLM's extramural programs, there were mailed to Regents in advance of the present meeting a base document citing NIH policies and a supplement indicating how NLM's policies differ therefrom. A new DHEW policy statement, expected shortly, may dictate certain changes.

Dr. Allen was pleased to announce that Dr. Cummings has succeeded in restoring the Special Scientific Projects Program, which was in peril of phaseout because it had been characterized erroneously as a fellowship program.

Publication Support Activities

Dr. Jeanne L. Brand, Chief of the International Programs Division, reported to the Board on the publication support activities of the Library: the domestic Publication Grant Program, authorized by the Medical Library Assistance Act of 1965, as amended, and the Special Foreign Currency Program, authorized under Public Law 480 in 1958, which supports projects with U.S.-owned local currencies in certain countries. Both programs are intended to promote the dissemination and exchange of scientific information important to the progress of medicine and the public health.

Since the domestic program was authorized in 1965, 92 projects have been supported at a total cost of \$4,133,135. Of the 92, 41 are still active; 51 have been completed, contributing to the literature 76 publications, with five more in press. Only four projects are unlikely to prove fruitful. Under the Library's Special Foreign Currency Program, 297 projects have been activated in six countries since 1965, for a total of \$5,483,194 (equivalent). Of the 297 projects, 189 have been completed and published; 25 others are in press. Only three are not expected to produce publications.

Two major problems have arisen in the foreign program: (1) in some countries, P.L. 480 funds are being exhausted, and (2) in others, where funds are ample, even abundant, indigenous conditions do not lend themselves to biomedical communications projects. In Israel, where P.L. 480 funds have come to an end, a U.S.-Israel Binational Science Foundation--hopefully a prototype--was established, whereby both the United States and Israel contributed \$30 million (equivalent) to a capital fund, yielding annual interest of \$2.1 million to continue the collaborative biomedical activities previously funded under P.L. 480. In Poland, although a considerable sum of zlotys remains, anticipated depletion stimulated, in March 1973, the signing by DHEW and the Polish Ministry of Health and Social Welfare of a Memorandum of Understanding to continue collaboration, but limiting future support to nine priority areas. Biomedical communications, at present, is not in itself one of the nine major categories. It appeared initially that the Library's activities in this regard, therefore, could be pursued only where biomedical communications could be fitted appropriately into any of the nine categories. Recent discussions with the Office of International Health, however, have indicated a greater flexibility in the activation of projects falling outside the nine areas.

Dr. W. N. Hubbard, Jr., commented on his September 1973 field trip to Israel and Poland with Dr. Brand and Dr. Jack M. Layton, immediate past Chairman of the Board. Dr. Hubbard pointed out that the P.L. 480 Program was intended to serve both recipient and benefactor. He identified two broad mechanisms through which benefits accrue: overall support of the biomedical sciences, and a different approach to biological problems. In the first instance, the American scientist acquires knowledge in the health sciences to which he might not otherwise have access. In the second, the manner in which a foreign scientist approaches a biological or medical problem depends on conditions peculiar to his own country and the level of scientific development achieved. Different approaches offer the American researcher and medical practitioner varied perspectives and a broader framework within which to consider common problems.

In assessing the quality of publications produced under the program, Dr. Hubbard considers them scientifically useful, a judgment supported by reviews by first-rank American scientists. Concerning costs, Dr. Hubbard predicted that the serious difficulties experienced by the publishing industry in this country and the dramatic cost increases noted will very likely occur in the rest of the world; publishing overseas will cease to be less expensive.

To force the NLM biomedical communications program in Poland to become exclusively subject-matter limited would, in Dr. Hubbard's view, cripple its efficiency as a transmitter. He sees the successes achieved in Israel and Poland as a means to justify extension of library programs into developing countries where stability is assiduously pursued and where improvement of health care is a priority, but where information transfer is a formidable problem. He suggested that perhaps programs under AID (Agency for International Development) might be invested with greater emphasis on access to the kind of tools the Library has to offer.

XIII. CONSIDERATION OF PENDING APPLICATIONS

The Chairman announced that the meeting was now closed to the public for the consideration of grant applications. Dr. Roger W. Dahlen, Chief of the Division of Biomedical Information Support, reminded Regents of confidentiality and conflict-of-interest procedures.

The Board concurred with recommendations of the EP Subcommittee and approved actions of initial review groups on Research, Resource, and Regional Medical Library grant applications. Interim actions taken by EP staff since the last Board meeting were brought to the Regents' attention.

Dr. Dahlen advised the Board that because of limited funds available for Research grants, payment of any of the approved but unfunded applications might be deferred until after the March meeting, at which time all applications for funding in 1974 would be known.

Dr. Brand presented for the Board's consideration Publication grant applications. With one exception, study section actions were recommended for approval en bloc.

Summaries of Board actions on all Extramural grant programs are attached.
(Attachment A-3)

XIV. MANAGEMENT BY OBJECTIVES--RESOURCE AND REGIONAL MEDICAL LIBRARY GRANTS

Dr. Allen described to the Board a management by-program-objectives approach to the Resource and RML grant programs, first introduced at the June 1973 meeting. He observed that three of the specific NLM objectives outlined on the previous day by Dr. Cummings are related to Extramural Programs, and that one is specifically an EP responsibility: to strengthen the Nation's medical libraries and information services through resource, research, and publication support. Utilizing a three-dimensional matrix, Dr. Allen defined the program objectives and priorities, first by category--(a) medical libraries and librarianship, (b) biomedical information services, (c) education and knowledge transfer, and (d) history of medicine; then by level of utilization--local, sub-regional, and regional; and finally by the degree of networking activity--institution, consortia, Regional Medical Library, and Biomedical Communications Network.

The fundamental objective of the Resource and RML grant programs is to channel resource funds primarily into grants that contribute to Regional Medical Library development. The operational objective is to:

1. Identify program priorities to use in funding,
2. Stimulate definition of regional priorities at regional levels,
3. Assess program performance, and
4. Develop program guidelines for anticipated new demands.

Dr. Allen reviewed the funding commitments in the light of the program objectives and the approved but yet unfunded projects, with direct reference to a critical consideration: Should collection development projects be continued? After presenting pros and cons, Dr. Allen proposed to the Board that collection development awards for each region be suspended until such region develops an adequate regionwide resource-sharing plan.

Dr. Cummings noted that in an effort to respond to local needs, the Library has devoted an extraordinarily large portion of the Resource grant budget to improving library collections--an estimated \$10 million since 1965.

The consensus of ensuing discussion was that:

1. The ordering of priorities by objectives provides the Board with essential guidelines for decision-making, particularly important in view of limited funds available;
2. Having gone as far as feasible in the stimulation of local development, the Library should now concentrate its energies on providing regionally based resources accessible to as many health professionals as possible; and
3. There is need for better understanding at the administrative level and more clearly defined guidelines to facilitate better regional planning

The Board approved the proposed moratorium. (Attachment A-4)

Dr. Allen next discussed Improvement Grants and voiced the need for an extensive evaluation of the program. While there is ample evidence that the Library

is indeed reaching small institutions requiring aid, ways can probably be found to bolster and broaden assistance. The question arose as to whether NLM could accomplish a survey with in-house expertise. The response was that (a) since it is an NLM-funded project, a more objective result could be achieved by an outside group; that (b) while one-half of one percent of all appropriations is set aside for evaluations and studies, these same funds may not be used in-house; and that (c) such a study on the part of the Library would not be well received by the institutions to be studied.

XV. OTHER BUSINESS

It was noted that the Board's appointed members now number only six instead of ten, and that this reduced number is inadequate to man the subcommittees vital to the Board's successful performance. The Regents recommended the approval of a resolution requesting the Secretary to expedite the appointment of four "leaders in the fields of medical, dental, or public health research or education," as required by law. (Attachment A-2)

The Chairman appointed an executive committee of the Board composed of Dr. J. Stanley Marshall, Dr. W. N. Hubbard, Jr., and himself. He also asked Dr. Faye G. Abdellah, Dr. Laurance V. Foye, Jr., and Captain J. William Cox to constitute a working group to review the SpectraVision report recommendations for the Lister Hill Center program and report to the Board at its next meeting.

XVI. ADJOURNMENT

The 46th meeting of the Board of Regents was adjourned at 2:00 p.m. on Friday, November 30, 1973.

Thursday, November 29, 1973, 9:00 a.m. to 5:00 p.m.
Friday, November 30, 1973, 9:00 a.m. to 2:00 p.m.

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

Martin M. Cummings, M.D. 125/74
Martin M. Cummings, M.D. (Date)
Executive Secretary

John P. McGovern, M.D.
John P. McGovern, M.D. (Date)
Chairman

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

ACTIONS TAKEN BY THE BOARD OF REGENTS

1. The Board reaffirmed the written guidelines for Extramural Programs' staff to use in adjusting amounts of grant awards. (Attachment A-1)
2. The Board recommended for approval a resolution requesting the Secretary to expedite the appointment of four Regents who are "leaders in the fields of medical, dental, or public health research or education," as required by law. (Attachment A-2)
3. The Board concurred with recommendations of the Extramural Programs Subcommittee and recommended approval of the actions of initial review groups on Research, Resource, and Regional Medical Library grant applications. (Summary in Attachment A-3)
4. The Board recommended approval of the Extramural Programs' staff proposal for a moratorium on collection development support.
5. The Chairman appointed an executive committee composed of Dr. J. Stanley Marshall, Dr. W. N. Hubbard, Jr., and himself.
6. The Chairman appointed to a working group to review the Spectra-Vision report recommendations for the Lister Hill Center program Dr. Faye G. Abdellah, Dr. Laurance V. Foye, Jr., and Captain J. William Cox. The group will report to the Board at its next meeting.

GUIDELINES FOR ADJUSTMENTS BY STAFF
IN TIME OR AMOUNT OF GRANT AWARD

1. Staff is authorized to exercise its responsibility to negotiate downward from the Board recommendation:
 - (a) Where activities or items can be adequately accomplished at a smaller cost than that recommended by the Board;
 - (b) Where statute, regulation, or policy requires elimination of certain items of expenditure; or
 - (c) Where the applicant voluntarily restricts the scope of his project to less than that recommended by the Board.

2. Staff is authorized to exercise its judgment and responsibility for upward revision in the dollar amount of award whenever such revision is for the purpose of carrying out the objectives of the proposal within the scope recommended by the Board.
 - (a) This authorization will cover those factors which deal with administrative adjustments in budget, such as orderly termination, institution-wide salary increases, and pro-rata adjustment of budgets to accommodate changes in project period dates.
 - (b) This authorization is not to be limited to any specific set of **circumstances**, but extends to any adjustment of the budget that is not for the purpose of altering scientific content or scope of the project.
 - (c) There should be no arbitrary limitation, either as a dollar amount or **percentage** of approved grant, on staff negotiation. Rather, the purpose of the budget adjustment should be the limitation on staff authorization.

3. Staff will report all budget adjustments in excess of \$500 to the Board at the next available meeting to permit review of the effect of these guidelines. Board confirmation of each administrative **action** will not, however, be required.

Adopted: 11/ 6/64
 Reaffirmed: 6/24/66
 Reaffirmed and amended: 6/20/68
 Reaffirmed: 11/21/69
Reaffirmed: 11/20/70
 Reaffirmed: 11/23/71
 Reaffirmed: 11/21/72
 Reaffirmed: 11/30/73



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
BETHESDA, MARYLAND 20014

//
November 30, 1973

NATIONAL LIBRARY OF MEDICINE

The Honorable Caspar W. Weinberger
Secretary of Health, Education, and Welfare
Washington, D.C. 20201

My dear Mr. Secretary:

The Board of Regents of the National Library of Medicine has directed me to forward to you the attached resolution of the Board unanimously adopted on 30 November 1973.

This Board has always operated through subcommittees reviewing the library's several programs. Intimate appreciation of detailed operation contributes invaluable to the Board's deliberations. Because of the severe reduction in numbers of appointed Regents, the workload is now too great to continue this practice.

We believe in addition that a question may well be raised as to the legality of some of our actions both because our numbers on occasion may be insufficient to meet the legal requirements of a quorum, and also because our current composition does not appear to comply with law.

We are cognizant of your frequently expressed support of the library's activities and know that you will do everything you can to alleviate this situation.

Sincerely yours,

John P. McGovern, M.D.
Chairman
Board of Regents of the
National Library of Medicine

Attachment

WHEREAS: The Board of Regents of the National Library of Medicine is charged by law to "advise, consult with, and make recommendations to the (Secretary) on important matters of policy in regard to the Library ..." and

WHEREAS: To adequately perform this function, subcommittees of the Board of Regents have necessarily been established to maintain close observation and review of Library programs, including the Extramural Programs, the Lister Hill National Center for Biomedical Communications, and the National Medical Audiovisual Center, and

WHEREAS: The appointed members of the Board of Regents now number only six instead of ten, which number constitutes the minimum for a quorum.

THEREFORE: In order that the Regents be able to perform their duties, be it resolved that the Board of Regents most urgently requests the Secretary to expedite appointment of four "leaders in the fields of medical, dental, or public health research or education" as required by law.

National Library of Medicine
November 30, 1973

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

COUNCIL DATE: NOVEMBER 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
2 R01 LM 00050-07	PRELISTERIAN ANTISEPTIC SURGERY PRACTICES	13,302
2 R01 LM 00617-04	POLAROGRAPHIC AND RELATED ELECTROCHEMICAL DATA	47,150 47,100 47,700
2 R01 LM 01206-04	ATLAS OF PROTEIN SEQUENCE AND STRUCTURE	62,287 64,426 66,672
1 R01 LM 01702-01A1	ESTABLISHING AN INFORMATION SYSTEM FOR BIOETHICS	66,381 64,760 82,120
1 R01 LM 01953-01A1	MEDICAL SCIENCES LIBRARIES AND INSTRUCTIONAL TECHNOLOGY	33,770
1 R01 LM 02070-01	COMPARATIVE HISTORY OF AGING	10,322 10,738
1 R01 LM 02189-01	WELLINGTON'S SURGEON-GENERAL: SIR JAMES MC GRIGOR	3,000

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

COUNCIL DATE: NOVEMBER 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE		AMOUNTS RECORDED
1 R01 LM 02209-01		01	63,450
	PUBLICATION OF AN ATLAS ON THE PATHOLOGY OF TROPICAL DISEASE		
1 R01 LM 02211-01		01	108,088
	EXTENDED UTILIZATION OF BIOMEDICAL INFORMATION	02	106,821
		03	65,533
1 R01 LM 02214-01		01	18,547
	BIOMEDICAL LITERATURE DYNAMICS	02	21,867
1 R01 LM 02218-01		01	23,400
	EVALUATION OF AN INFORMATION FILTERING SYSTEM	02	23,543
1 R01 LM 02220-01		01	18,563
	ALKALOID-BEARING PLANTS AND THEIR ALKALOIDS, III	02	28,728
1 R01 LM 02223-01		01	14,489
	FACTORS INFLUENCING THE EFFICACY OF NATIONAL MEETINGS	02	10,537

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

COUNCIL DATE: NOVEMBER 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE	AMOUNTS RECOMMENDED
1 RO1 GM LN 20705-01		12,899
		5,705
	BIBLIOGRAPHY ON THE GENETICS OF DROSOPHILA	5,914
		6,131
		13,076
1 RO1 MH LM 24,592-01		7,690
	MODELS OF MADNESS IN ANTIQUITY	7,690

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

COUNCIL DATE: NOVEMBER 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER	SHORT TITLE		AMOUNTS RECOMMENDED
3 GCS LM 01697-02S1		02S1 03S1	6,742 3,000
	MEDICAL LIBRARY RESOURCE PROJECT SUPPORT		
1 GCS LM 02119-01		01	20,588
	MEDICAL LIBRARY RESOURCE PROJECT SUPPORT		
1 GCS LM 02153-01		01 02 03	9,667 3,050 1,750
	MEDICAL LIBRARY RESOURCE PROJECT SUPPORT		
1 GOS LM 02181-01		01 02	8,160 7,070
	MEDICAL LIBRARY RESOURCE PROJECT SUPPORT		
1 GOS LM 02198-01		01	13,487
	MEDICAL LIBRARY RESOURCE PROJECT SUPPORT		
1 GOS LX 02228-01		01	22,687
	MEDICAL LIBRARY RESOURCE PROJECT SUPPORT		
1 GOS LM 02236-01		01 02 03	19,600 16,425 10,475
	MEDICAL LIBRARY RESOURCE PROJECT SUPPORT		

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

COUNCIL DATE: NOVEMBER 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

AMOUNTS
RECOMMENDED

APPLICATION NUMBER SHORT TITLE

1 603 LM'02248-01

01

18,750

MEDICAL LIBRARY RESOURCE PROJECT SUPPORT

1 603 LM 02249-01

01

21,050

MEDICAL LIBRARY RESOURCE PROJECT SUPPORT

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

COUNCIL DATE: NOVEMBER 1973

INSTITUTE/DIVISION: NATIONAL LIBRARY OF MEDICINE

APPLICATION NUMBER

1 604 LM 62235-01

SHORT TITLE

HEALTH INFORMATION NETWORK OF THE PACIFIC

AMOUNTS
RECOMMENDED

01
02
03

27,966
29,138
30,337