

AGENDA

Thirty-Eighth Meeting of the
BOARD OF REGENTS
National Library of Medicine

9:00 a.m., March 22-23, 1971
Board Room
Bethesda, Maryland

- I. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. Robert Ebert
- II. CONSIDERATION OF MINUTES OF LAST MEETING TAB I
(Orange book) Dr. Robert Ebert
- III. DATES OF FUTURE MEETINGS TAB II Dr. Robert Ebert
1971 and 1972 Calendars in all books
Next Meeting - June 14-15, 1971 (M-T)
Subsequent Meeting
November 18-19, 1971 (T-F)
Selection of Meeting Date - March 1972
20-21 23-24 27-28
M-T T-F M-T
- IV. REMARKS BY THE SPECIAL ASSISTANT, OFFICE OF THE ASSISTANT SECRETARY FOR HEALTH AND SCIENTIFIC AFFAIRS Dr. Raymond Moore
- V. REMARKS BY THE DIRECTOR, NIH Dr. Robert Marston
- VI. REPORT OF THE DIRECTOR, NLM TAB III Dr. Martin Cummings
- VII. LIBRARY OPERATIONS REVIEW TAB IV Dr. Joseph Leiter

Photograph of Members of the Board of Regents
in Board Room of the National Library of Medicine

LUNCH (Open Choice)

(Cafeteria in NLM on A Level, O'Donnell's Restaurant, 8301 Wisconsin Avenue,
Bethesda, Md., Governor's House Restaurant, 8400 Wisconsin Avenue, Bethesda,
Maryland (both within a few blocks walking distance))
- VIII. MEDLARS II DEVELOPMENT TAB V
Mr. Ralph Simmons
Mr. Alfred Zipf
Mr. Bruno Augenstein
- IX. EXPERIENCES WITH MEDLARS I AND PLANS FOR MEDLARS II Dr. Sune Bergstrom
Karolinska Institutet
Stockholm, Sweden

- X. REMOTE BIBLIOGRAPHIC ACCESS TAB VI Mr. Davis McCarn
- XI. 100TH ANNIVERSARY OF MEDICAL DEPARTMENT, Admiral George Davis
 U.S. NAVY (Exhibit)

ADJOURNMENT

DINNER (DUTCH TREAT) - Evans Farm Inn, Route 123, McLean, Virginia
 Cocktails: 6:45 p.m. (cash bar) Dinner: 7:45 p.m.

REGENT SPEAKER - Dr. Jack M. Layton

SUBJECT: "Dr. Walter Reed in Arizona Territory"

RECONVENE - 9:00 a.m. - March 23, 1971

- XII. REPORT OF THE ASSOCIATE DIRECTOR Dr. Lee Langley
 FOR EXTRAMURAL PROGRAMS
- a. Review of Publications Program TAB I Dr. Ann Kaufman
 (1) Consideration of Policy for (Gray book)
 Publications Program
 (2) Information on Procedure to
 Normalize Priorities
 - b. Legal Opinion with regard to TAB II Dr. Lee Langley
 FAST Task Force Recommendation
 "It is recommended that routine
 Board of Regents Review of all
 New, Renewal and Supplemental
 Applications be Eliminated."
 - c. Revised Regulations for EP TAB III Mr. Robert Walkington
 Grants Necessitated by the
 Medical Library Assistance
 Extension Act of 1970
 - d. Resource Program Policy Questions TAB IV Dr. Lee Langley
 - (1) Support of Audiovisual Activities
 - (a) Production
 - (b) Distribution
 - (c) Teaching Aids
 - (2) Support of Automation Projects
 - (3) Priorities for the Use of Resource
 Grant Funds.
 - (a) The library as a teaching
 program
 - (b) Strengthening of traditional
 services vs new roles
 - (4) Staff Review of Resource Improvement
 Grants

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| e. The Ad Hoc Committee Meeting on
Historical Translations
(1) Report of the meeting
(2) Policy recommendations | TAB V | Dr. Lee Langley |
| f. Biomedical Communications Study Section
Evaluation of the NLM Research Grant | TAB VI | Dr. Ann Kaufman |
| g. Training Grants Program
(1) Program Directors Meeting to be
Held May 9-10-11, 1971
(2) Interim Actions - Reduced periods
of support | TAB VII | Dr. Ann Kaufman |
| h. DRG Administrative Report | TAB VIII | |
| XIII. CONSIDERATION OF PENDING APPLICATIONS | | Dr. Lee Langley |
| A. RESEARCH AND PUBLICATION GRANTS | TAB IX | |
| B. TRAINING GRANTS | TAB X | |
| C. RESOURCE GRANTS | TAB XI | |
| D. INTERIM ACTIONS | TAB XII | |
| Criteria for Evaluating Resource Grants | | |
| XIV. TOXICOLOGY INFORMATION PROGRAM REVIEW | TAB VII | Dr. Henry Kissman
(Orange book) |
| LUNCH - Catered in Board Room | | |
| XV. EXECUTIVE SESSION | | |
| ADJOURNMENT | | |

THE BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE 38th MEETING

March 22-23, 1971, Bethesda, Maryland

MEMBERS PRESENT: Dr. William G. Anlyan, Mr. Bruno W. Augenstein, Dr. William O. Baker, Dr. Harve J. Carlson, Vice Admiral George M. Davis, Dr. Robert H. Ebert, Lt. General Hal B. Jennings, Dr. Jack M. Layton, Dr. Max Michael, Jr., Dr. Marc J. Musser, Dr. George W. Teuscher, Dr. Frederick H. Wagman

MEMBERS ABSENT: Dr. James C. Fletcher (resigned effective 3/12/71 to become the Director, National Aeronautics and Space Administration)
Dr. John P. McGovern, Dr. L. Quincy Mumford

INTERPRETERS: General Gerrit L. Hekhuis, M.C., USAF represented Lt. General Towner both days
Dr. Raymond T. Moore represented Dr. Steinfeld the first day
Admiral Charles L. Waite, M.C., USN and his replacement as alternate to Admiral Davis (to become effective 4/9/71) Captain Edward J. Rupnik, M.C., USN, represented Admiral Davis both days
General Thomas J. Whelan accompanied General Jennings to the first day of the meeting.

INTERESTS: Dr. Robert Q. Marston, Director, National Institutes of Health
Dr. Sune Bergstrom, Karolinska Institutet, Stockholm, Sweden
Dr. Fred Cole, President, Council of Library Resources, Inc.
Mr. John Sherrod, Director, National Agricultural Library
Mr. Alfred Zipf, Consultant to the NLM and Executive Vice President of the Bank of America
Dr. Ruth Davis, Director, Center for Computer Sciences and Technology, National Bureau of Standards
Mrs. Ileen Stewart, Executive Secretary, History of Life Sciences Study Section and the Biomedical Communications Study Section
Miss Marjorie L. Morrill, Continuing Education and Training Branch, Division of Professional and Technical Development, Regional Medical Programs, DHEW
Mr. Albert Feiner, Magnavox Research Laboratories, Torrance, California

STAFF: Dr. Clifford Bachrach, Dr. Robert Benford, Dr. John Blake, Mrs. Ruth Bortz, Dr. Charles Bridgman, Mr. Arthur Broering, Mr. Raymond Brown, Dr. Ralph Christenson, Mr. Peter Clepper, Mr. Lawrence Coffin, Miss Mary Corning, Mr. John Cox, Mr. Donald Dennis, Mrs. Doris Doran, Mr. Joseph Foley, Mrs. Louise Gamage, Mrs. Frances Howard, Mr. Donald Hummel, Mrs. Frances Johnson, Dr. Ann Kaufman, Dr. Leonard Karel, Dr. Henry Kissman, Dr. Lee Langley, Dr. Joseph Leiter, Mr. Davis McCarn, Mr. Peter Monk, Dr. Paulo Pamplona, Mrs. Rita Pusey, Mrs. Ann Sabin, Dr. Harold Schoolman, Mr. Ralph Simmons, Mr. Kent Smith, Mr. Stan Smith, Mrs. Barbara Sternick, Mr. Daniel Tonkery, Dr. Sharon Valley, Mr. Bruno Vasta, Mr. John Walden, Mr. Robert Walkington, Mr. Richard West, Mrs. Mary White, Dr. Harold Wooster

NOVEMBER 1970 MINUTES APPROVED, FORTHCOMING MEETINGS SCHEDULED

The minutes of the November 19-20, 1970 meeting were approved. The dates of June 14-15, 1971 were reaffirmed. The Board reconsidered its meeting date for the November 1971 meeting and selected Monday and Tuesday, November 22-23, 1971. The dates of March 27-28, 1972 were tentatively selected for the second meeting in FY 1972.

OPENING REMARKS OF THE CHAIRMAN OF THE BOARD

Dr. Robert Ebert, the Chairman, opened the meeting with a welcome to Lt. General Jennings, the Surgeon General, Department of the Army; Admiral Waite, Office of the Surgeon General, Department of the Navy; General Hekhuis, Office of the Surgeon General, Department of the Air Force; General Whelan, Office of the Surgeon General, U.S. Army; Dr. Moore, representing Dr. Jesse L. Steinfeld, the Surgeon General, U.S. P.H.S.; and Dr. Marston, Director, NIH. The Chairman also welcomed Dr. Cole, President of the Council on Library Resources; Mr. John Sherrod, Director of the National Agricultural Library; Dr. Ruth M. Davis, now with the National Bureau of Standards as Director, Center for Computer Sciences and Technology; and Professor Sune Bergstrom of the Karolinska Institutet, Stockholm, Sweden.

The Chairman announced that Dr. McGovern would not attend because of illness and that Dr. Fletcher had resigned because of his appointment as Administrator of NASA.

PRESENTATION OF PLAQUE TO DR. RUTH M. DAVIS

In token of their esteem for Dr. Ruth M. Davis, the first Director, Lister Hill National Center for Biomedical Communications, the Board of Regents awarded her a plaque for exceptional management and technical contribution. The Board stated that her leadership had been preeminent; her imagination, drive, and sound reasoning, impressive; and the progress of the Center, greater than could reasonably have been anticipated.

Dr. Cummings introduced new members of the Senior Staff of the Library:

Mr. Kent Smith, Executive Officer, Dr. Harold Wooster, Chief, Research and Development Branch, Lister Hill National Center for Biomedical Communications and Mr. Albert Feiner, Director Designate, Lister Hill Center.

REMARKS BY DR. ROBERT Q. MARSTON, DIRECTOR, NIH

Dr. Marston's remarks to the Board concerned three areas: people, money, and legislation. He said that great importance attaches to the health manpower legislation submitted by the Administration for extension of legislation expiring the end of June 1971. Of the many similarities between the Administration bill and bills introduced by others, perhaps the most important is the

Federal Government's direct interest in participating financially, with no strings attached, in the educational support of every student involved in schools of medicine, dentistry, osteopathy, and others. All previous bills required an increase in enrollment to qualify for funds under the formula portion of the bills. Current bills assert that the Federal Government has a direct and an entitlement interest in every graduate of these institutions through some form of capitation payment. The Administration bill ties the capitation payment to the number of graduates; the Staggers and the Rogers bills, the capitation to the number of students enrolled. These bills set the tone for a major examination of the needs for change in support of health manpower educational institutions and their students.

Pending in the Congress is a bill first introduced by Senator Yarborough to establish a separate cancer authority. Reintroduced by Senator Kennedy, this bill calls for removing the National Cancer Institute from the NIH; having it report directly to the President; and engaging in a "moonshot" attempt to conquer cancer. The Administration, on the other hand, has spoken strongly for the President's program, which calls for a cancer conquest program to be initiated within the NIH; managerial changes at the NIH; addition of \$100 million to the NIH cancer program for fiscal year 1972; and the further addition of as much additional money as may be needed. The Kennedy bill has generated concern within the Administration, Congress, and the scientific community.

Dr. Marston said that the juxtaposition of the 1972 budget processes and the 1971 budget decisions on the appropriation processes have led to a narrowing of the differences between the two budgets. The NIH budget for 1972 shows essentially no increase over the 1971 budget except for the \$100 million in cancer.

The NLM budget for 1972, like the NIH budget, shows essentially no increase. An increase in 1971 occurred above what had been anticipated, but did not offset the need for an increase in 1972. Dr. Marston said that Dr. Cummings, with a covering note from him, has brought this particular point to the attention of the Secretary's office.

Dr. David P. Rall will succeed Dr. Paul Kotin as Director, Environmental Health Sciences Institute, North Carolina.

Responding to a question about funding of NLM, Dr. Marston replied that at the very highest levels, the NLM is grouped conceptually with libraries in general. His office has reviewed the special problems of the NLM and has tried to outline these in terms of needs. He has endorsed an expression of concern about fiscal needs of NLM. Another element relating to NLM funding is the Administration proposal for extension of the manpower legislation having to do with health educational institutions - an outgrowth of the suggestion in the Carnegie Commission Report. The impact that it will have on the NLM's programs raises again the whole question of the role of the Library's programs and the resources needed to carry out those programs, as the biomedical communications problems continue to grow in magnitude.

REMARKS BY DR. RAYMOND MOORE, SPECIAL ASSISTANT, OFFICE OF THE ASSISTANT SECRETARY FOR HEALTH AND SCIENTIFIC AFFAIRS.

Dr. Moore emphasized two matters of programmatic import: creation of the National Institute for Occupational Safety and Health and the Presidentially authorized study on the nature and gravity of the hazards to human health and safety created by common environmental pollutants.

The new Institute grew out of a requirement of the Occupational Safety and Health Legislation. By April 28, the Institute will be legally in being; however, organizational and many other questions have yet to be resolved.

The hazards and human health study followed from passage of the Public Health Service Amendments Act last October. The Act directed a survey of the medical and other assistance available to persons affected by pollution, especially when such pollution reaches emergency levels. The Act directed also a survey of the measures, other than those relating solely to abatement of the pollution, that may be taken to avoid or to reduce the effects of such pollution on the health of individuals. This Presidential study marks the first that HEW has had in this field.

REPORT OF THE DIRECTOR, NLM

Dr. Cummings reminded the Board that 1971 marks two significant anniversaries in the history of the Library: the 135th year since the establishment of the Library, which grew out of the Library of the Office of the Surgeon General, U.S. Army; and the tenth anniversary of the dedication of the Library's present quarters. Also, 1971 is either the 99th or the 100th anniversary of the Index Catalog - 99th by virtue of its publication date and 100th by virtue of its completion.

Today the NLM contains over 1.3 million items in its collection, uniquely organized to meet needs of health professionals and students in the health professions. In the coming year, the Library expects to make 115,000 inter-library loans; will likely respond to some 80,000 reader requests from readers who come to work in the facility; will provide about 11,000 reference services and about 28,000 special computer searches through the MEDLARS program; will index 230,000 medical articles from the journal literature; and will catalog 17,500 books and monographs. Indexing and cataloging will be performed with the assistance of domestic and foreign participating organizations which share these tasks with NLM. MEDLARS I, operational since January 1964, contains 1½ million citations to literature since that date. In 1964 MEDLARS entered 144,000 articles into the computers; last year 225,000. In this enormous input task, the Library has collaboration from seven foreign countries. Through MEDLARS, the Library produces Index Medicus, Cumulated Index Medicus, the Current Catalog and its cumulations, and some 23 special recurring bibliographies.

Dr. Cummings said that he has been delighted with the response of the medical community to Abridged Index Medicus (AIM), produced by the Library during the present fiscal year. AIM contains references derived from 100 English-language clinically-oriented journals primarily directed to serving the practitioner. The subscription response from physicians and from small medical libraries has been enthusiastic.

Regarding MEDLARS II, the Library is still deeply disappointed in the performance of the contractor in development of this system; serious slippage has occurred. Furthermore, cost estimates exceed those of the original contract; however, the Library is still within its budgetary capability to complete the system if, in the Board's judgment, the system - with the present contractor, should be completed.

Dr. Cummings said that the Board would see later this morning a highly successful demonstration of the Library's first on-line bibliographic service, the AIM-TWX system developed by the Lister Hill Center.

The Library instituted a fee for service about a year ago for interlibrary loans to foreign countries. As the Board predicted, the number of requests from abroad has declined. A careful examination reveals that there has been no lessening of need for the service. The decline in requests stems from administrative difficulty in obtaining dollar exchange.

The Library has stopped providing MEDLARS service abroad. The foreign MEDLARS network which stretches from Australia to Sweden now provides these services.

For the second year, the Library has sold its MEDLARS tapes to the Japanese Information Center for Science and Technology even though the Japanese still are not using these tapes operationally for services in Japan.

The Library has completed all of its arrangements for selling MEDLARS tapes to profit-making institutions domestically. Sales will be handled by the Department of Commerce. A full year's tapes will cost \$30,000.

Under the Medical Library Assistance Act, the Extramural Programs have provided almost 600 awards to medical, hospital, and allied health libraries in all states except Alaska for strengthening collections, professional staffs, and readers' services. The Library, furthermore, supports ten Regional Medical Libraries. It is negotiating with these institutions to convert from grant supported to contract supported service activities.

Since the last Board meeting, the Assistant Secretary for Health and Scientific Affairs has designated the Director of the Library to serve as his Deputy for Biomedical Communications. In this capacity the Director is heavily engaged in being responsive to the Office of Science and Technology, which has asked every Department of the Government to report on its expenditures for scientific information and communication. The Director has also been asked to respond to questions addressed to the Department by the Office of Budget and Management. These questions deal with basic aspects relating to publications, information systems management, and related matters.

Dr. Cummings remarked that he has been delighted with the leadership brought by Dr. Charles Bridgman to the National Medical Audiovisual Center. Dr. Bridgman has been exquisitely sensitive to the policies and guidelines developed last year by the Board, particularly with regard to innovative media development and distribution of audiovisual materials for health education.

The Library is working very closely with Dr. Kenneth M. Endicott, Director of the Bureau of Health Manpower Education, to develop a common set of programs through which to use resources of the NMAC in behalf of professional education and manpower training, and has reached the following general understanding:

For those productions which the Bureau wishes to develop, it will provide funds on a cost reimbursable basis and professional manpower to join the Library's highly skilled technical capabilities in script writing and professional production. It appears that units involved in dental education and nursing education are prepared to utilize the resources at NMAC.

Dr. Cummings commented on how pleased he has been with the leadership and technical competence brought to the Toxicology Information Program by Dr. Henry Kissman. Dr. Kissman has demonstrated the capability of the Library and the Toxicology Information Program to be responsive to the original PSAC report and plans. The Toxicology Information Program has completed plans for creation of a MEDLARS-based abstract journal to be called The Health Effect of Environmental Pollutants, an important sequel to the highly successful index generated by the Library, Selected References on Environmental Quality As It Relates to Health. The Library has received a number of compliments for this index not only from subscribers to this new service but also from agencies such as the Environmental Protection Agency and the Food and Drug Administration.

The relations between the Lister Hill Center and NASA remain excellent. Also, the NLM maintains good relations with the National Science Foundation, Food and Drug Administration and the other two national libraries.

The Library has, in essence, had no budget increase from 1968 to 1972. It has had to absorb the usual, incessant, inflated uncontrollable costs during this five-year period. A memorandum to Dr. Egeberg, which was endorsed by Dr. Marston, clearly points out that the NLM cannot be expected to maintain the level of service that will be satisfactory to the user community with a continued static budget. During this 5-year period, the Library has had a reduction of some sixty-nine positions. Despite mechanization and the introduction of other short-cuts in technical processing, the Library can no longer guarantee to provide efficient services with the present level of manpower.

There are essentially little more than cost-of-living increases in one or two programs and no cost-of-living increase in most programs. The brightest note in the FY 1972 budget is an authorization for seven additional positions in the Lister Hill Center.

The budget for the Extramural Programs shows no significant change.

In response to questions from the Board, the Director estimated that a 5% increase (\$1 million) would be required just to offset inflation, and a \$15 million increase over the next five-year period would be required for any significant progress. For 1972, the Lister Hill Center requires an increase of \$1 million, and the Extramural Program, \$2 million. With reference to the Toxicology Information Program and the President's Science Advisory Committee (PSAC) request and recommendation for development of a comprehensive computer-based information resource, at least a \$10 million commitment must be obtained. Dr. Cummings indicated that for 1972, the Library's budget should be increased by \$3.5 million-- \$1 million for cost-of-living increases and \$2.5 million for program development.

REPORT OF LIBRARY OPERATIONS

Dr. Joseph Leiter, Associate Director, Library Operations, discussed the following:

1. New products -- Abridged Index Medicus, Cumulated Abridged Index Medicus, Semi-weekly Catalog Proof Sheets, Tissue Culture Bibliography, Selected References on Environmental Quality as it Relates to Health, New Literature Searches, Library Network/MEDLARS Technical Bulletin, and Audiovisual MEDLARS Orientation Packages;
2. Expansion of existing services and development of new services -- Integration of document delivery and of MEDLARS services with the Regional Library Network, establishment of new MEDLARS centers in Japan and Canada and negotiations with Belgium, field testing of AIM-TWX at NLM and at MEDLARS centers, integration of audiovisual cataloging with the NLM catalog file (in cooperation with NMAC), development of prototype book catalogs for the Naval Medical Research Library, and commercial production of NLM catalog card sets;
3. Improvement in the quality of products and services -- Airlifting of foreign Index Medicus serials, timeliness of Index Medicus and of MEDLARS products; throughput time for interlibrary loans, MEDLARS search services, reader services, quality control procedures for indexing and for MEDLARS searches, evaluation of the Library's acquisition policies and practices, and review and assessment of the Index Medicus and the MEDLARS data base; and
4. Cost of Library procurement -- The results of a brief study that analyzed the effect of inflation on the cost of periodicals and monographs during the period of 1960-1970, and the impact of increased costs on the acquisition of rare books for the History of Medicine Division.

Dr. Leiter concluded his presentation with a successful, live demonstration of AIM-TWX.

MEDLARS II DEVELOPMENT

Mr. Ralph A. Simmons, Associate Director for the Library's Computer and Engineering Services, reported on a staff review of the MEDLARS II project, which is under contract to Computer Sciences Corporation. The principal occurrences since the November Board meeting are these:

Report of a CSC technical audit, Board of Regents consultants' review, preparation of hardware recommendations, detailed procedural design, project control document, detailed schedule of sub-events, and IBM systems support.

In their technical audit, CSC summarized the status of the project as follows:

- a. design -- nearing completion but requires extensive documentation and NLM approval;
- b. software -- the major portion has been completed and further progress can only be made after acceptance of design;
- c. project problems -- analysis of causes concluded and corrective actions undertaken. (The report did not attempt to discuss the details concerning delays but to report status and plans for the completion of the project.)

The technical audit led CSC to the following conclusions and recommendations:

- a. that the system does meet each of the functional, contractual and design requirements;
- b. that a separate task force be set up within the project dedicated toward the development of proper system testing;
- c. that a complete rescheduling of the project is necessary (This schedule was included in the report); and
- d. that a separate task force within the project organization be established to plan and conduct the acceptance testing required by the contract.

The audit report concluded that the design and implementation of the MEDLARS II system are basically sound and that the problems of a technical nature deal with the process by which the system was developed.

Based on its detailed review of the audit report, the Library's principal criticism is not with what is presented but with what is missing. The report lacks evidence that the system will perform adequately.

A Board of Regents consultants' review, independently conducted in mid-December by two computer and systems experts from the Bank of America and two from RAND, confirmed the conclusions of the Library review and were reported to the Board by Mr. Zipf and Mr. Augenstein. The consultants' findings suggest that the contractor has not performed well and that NLM must examine alternatives in seeking to complete the system.

The Library has requested departmental approval to upgrade the IBM 360/50 to an IBM 370/155. Although the MEDLARS system objectives have not changed since the original justification of the project, the software system developed by CSC has exceeded the capability of the hardware proposed originally. This is attributable to the development of a very generalized data management system rather than a specialized software package with limited capabilities. In addition, the computer facilities are intended to support all program elements of the Library; some of the other applications to be accommodated are the Audiovisual Distribution System for NMAC, a chemical name-matching system for the toxicology program, and the AIM-TWX on-line project developed under the Lister Hill National Center.

On the basis of an analysis made by staff and IBM, the Library has recommended lease instead of purchase for the upgrading of equipment. The present intent of the Library calls for installation of the central processor and transmission control unit in July or August, with peripherals to be added over a period of about six months.

From its evaluation of the detailed procedural design, the NLM staff agreed that major sections are, in general, acceptable. The acceptable sections deal with objectives, description of data flows, single item input processing and file descriptions, analysis of MEDLARS II publications, and conversion capability. The principal objections to the detailed procedural design were poor organization and presentation; detailed procedures for obtaining objectives were not included; the production system design was inadequately covered; the relationship of ADP with functional modules was inadequate; and file maintenance procedures were unclear. In addition, the design document contained a significant number of inconsistencies, and cataloging details were inadequate.

The NLM felt that the project control document is generally acceptable, but CSC was attempting to shift responsibilities of the contract and had failed to provide adequate scheduling detail. Documentation identification was incomplete; conversion roles of NLM and CSC were not clearly defined; the acceptance test plan timing appeared inadequate; and the operational test plan was too general.

Software progress was difficult for NLM to evaluate, although the test output on the Linotron and the high speed printer were successful. CSC is now involving their own software personnel more closely with their own design personnel. In some critical areas of design, a number of their own software personnel are telling their own management personnel that they, the former, do not know how to fulfill design events.

Mr. Simmons, in discussing NLM schedule and cost estimates, said that it is his view that it would cost the Library \$270,000 to go through the testing necessary to make the system dependable for production. Therefore, Mr. Simmons arrived at a total cost of \$3,970,000, and availability of the system not earlier than June, 1972. The most recent CSC cost estimates now are \$3,648,000, with a system available for testing by mid-November, 1971.

In view of all circumstances, Dr. Cummings had addressed a letter to Dr. Nashman, East Coast Vice-President of CSC, with these specific instructions:

Hold cost to \$17,500 a week; provide plans for software documentation by May 1; provide COSMIS and LPS (software pieces) design specifications by May 1; provide documentation by August 31 for software developed by July 31; limit system development to the basic MEDLARS I capabilities, including augmented vocabulary capability; provide, by May 1, demonstrations of conversion of vocabulary and citation files, the creation and maintenance of the index citation file, the creation and maintenance of the vocabulary file, conversion of MEDLARS I to MEDLARS II, and a complex demand search with output on the line printer; and provide estimates of the total production environment.

The CSC response to this letter in effect reiterated their previous position while stressing their problems in handling personnel.

Mr. Simmons now recommended to the Board and the Director that the Library allow delivery of selected demonstrations as late as May and insist on a plan and schedule for documentation; and that the Library evaluate demonstrations and the CSC projection of the production environment. Then, if these demonstrations are acceptable to NLM, the Library should renegotiate the contract and plan to proceed to completion of the initial system. In event the demonstrations are unacceptable, the Library should terminate the contract with CSC; develop, review, and select from alternatives; and plan actions accordingly.

The alternatives for the development of the capabilities originally intended for the EXTENDED phase of the MEDLARS II system have been examined by the Library staff. Mr. Zipf and Mr. Augenstein pointed out that the success of the AIM-TWX experiment conducted by the Lister Hill National Center in conjunction with Library Operations has led to consideration of AIM-TWX as a major replacement for the on-line search and retrieval capabilities of MEDLARS II. Although technical problems remain to be solved, this substitution is believed to be the best solution for the Library.

The other functional activities intended to be supported by on-line capabilities will be reviewed and priorities established. Alternatives will be sought for the development of these capabilities as appropriate. The EXTENDED phase of MEDLARS II will not be developed by CSC.

In the Board discussion which followed, Mr. Augenstein said that a number of Board members are pessimistic about the ability of the contractor to perform on schedule. The architecture of the system is quite faulty in many respects. Mr. Zipf expressed the thought that the Government process is at fault also because the contract was awarded to the lowest bidder rather than to the most capable bidder. Mr. Zipf said that there is an outside possibility that the project can be salvaged, but only in the kind of environment in which the Library and the contractor perform the contract as a united team. In response to a question from Mr. Zipf, Dr. Baker replied that we are not beyond the state-of-the-art in hardware or in systems potential. Mr. Augenstein agreed with Dr. Baker but added that although every operation proposed in the system can be programmed, the problem lies in the time element - seconds, or milliseconds, or even less. To make the system useful in the Library's sense requires very short times.

Dr. Cummings remarked that although the Library is by no means pleased with what has happened, it does have options not yet presented to the Board. Further discussion was left for the Executive Session.

EXPERIENCE WITH MEDLARS I AND PLANS FOR MEDLARS II

Dr. Bergstrom introduced his report with the following background history:

In January 1964, the Swedish Medical Research Council approached NLM and suggested cooperation in the development of MEDLARS I. The British did the same at a later date, but started at once to reprogram for their KBS-9. A year later, Sweden did likewise.

When the State Department decided to offer MEDLARS to the Organization for Economic Cooperation and Development (OECD) at the beginning of 1966, all OECD members were invited to participate if they would agree to index 60,000 articles. The NLM was prepared to start a third center in Europe. Despite six meetings over the next eighteen months, OECD could not agree; each country wanted a center of its own. Finally, after eighteen months, it was proposed that any country with interest in having people trained to use MEDLARS and with an actual volume of 500 searches a year would be qualified to be given training and the tapes to establish a center on a quid pro quo basis.

The NLM negotiated bilateral agreements with Sweden and with England, and both countries agreed to do a certain amount of indexing. Subsequently, France qualified for a center and Germany obtained training both in Stockholm and the United States. Initially, Sweden processed German searches; now Germany processes its own.

Sweden offers extensive training for its Scandinavian neighbors. The training period has been reduced to four weeks. Since 1968, Sweden has given two courses yearly for trainees from Sweden, Norway, Denmark, Finland, and Belgium. Germany this year has sent eleven trainees, and Sweden's first trainee from Poland is enrolled in this spring's course. Eastern European countries have a large interest in the program. Under its contract, Sweden is permitted to supply searches to Eastern Europe.

Since the beginning of MEDLARS services in Sweden, all costs have been carried by the Swedish Medical Research Council. For two years, the Swedish center had a special grant from the Scandinavian Culture Corporation so that the center would be able to supply 100 searches for each country free of charge.

Stockholm processes retrospective searches quarterly and now charges for them. Since the charge was initiated, demand has decreased by about 50%.

Sweden concentrates mainly on monthly recurring searches, because most active research workers have need for a continuing service. Approximately 400 monthly searches in Scandinavia are paid for at a rate of \$60.00 a year for the twelve monthly searches. Sweden was supplying Germany with 1200-1300 searches per month, but since February, Germany is processing its own.

The Swedish delivery schedule is four weeks - a serious drawback for retrospective searches. Faced with the MEDLARS II program and the likelihood that the 7090 program would be phased out, the Swedish center decided to reprogram. By January, the center had a complete system running on a 360/50 and is now running it on a new Government computer unit, a 360/55. By next month turn-around time should be one week to ten days.

The Australians received the 360/50 version in January and now have it in operation.

The Swedish center expects to stay with MEDLARS I for several years for retrospective and for monthly profiles and then use the ELHILL II and III programs.

Although NLM offered MEDLARS to the World Health Organization (WHO) in 1966 or 1967, and a WHO survey indicated a need of 12,000 searches a year for developing countries and for WHO's own experts, WHO has taken no action to establish a center.

Dr. Bergstrom referred to a critical review of WHO's information system by him and Dr. Leiter. He is interested in starting a WHO research and development effort in the field of human reproduction to improve documentation and literature service in that field. Dr. Bergstrom would like to have NLM cooperate in this effort.

A very crude estimate of the number of papers related to human reproduction is 20,000 annually, of which (50-) 60% are indexed in MEDLARS. A considerable part of the remainder is indexed by Chemical Abstracts (CAC) and Biological Abstracts (BA). It is proposed to establish a "subfile" or specialized IM file for human reproduction at the Biomedical Documentation Center at Karolinska Institutet in Stockholm (BMDC), since part of the Karolinska Institutet has been assigned as a WHO research and training center in human reproduction. This Specialized Index Medicus file would contain the present INDEX MEDICUS (MEDLARS) coverage of the literature. To this would be added - by a special indexing effort at BMDC - articles, reports and reviews, including reports and information collected by other WHO centers and units of various kinds, to yield one consolidated special IM file in Stockholm. It would be formatted and organized to the new ELHILL II AND III, including addresses of the authors, and, when wanted, abstracts. The whole subfile would be directly accessible.

The ELHILL System with direct access to the AIM-TWX file by terminals will be installed at Karolinska Institutet during the summer of 1971.

The advantage of utilizing and expanding an existing system is obvious from an economic point of view. The system could be in full operation from January 1, 1972. It is also especially valuable as WHO-Geneva is planning to install a MEDLARS operation on the same hardware as that of the center in Stockholm. All systems and programming efforts at BMDC could therefore be directly utilized at WHO and other centers.

The present MeSH-vocabulary is insufficiently developed for the needs of the whole field of human reproduction; it is, therefore, proposed that an immediate effort be made to develop such a vocabulary in cooperation with NLM. Special notice must be taken of hormones, drugs, and other chemicals of interest, teratogenicity, toxicity, etc. An international group of specialists should assist in this effort.

It is proposed to produce and send monthly profile or retrospective searches to countries that do not have MEDLARS services or do not have any foreign currency. Dr. Bergstrom said that he had made site visits to Poland, Hungary, and Russia and had sent some searches to these countries. It is pathetic to see what tremendous impact this has on them, how isolated they are, and how slowly they get access to literature.

A special effort is planned for recording clinical trial data, side effects, etc. in the systems and formats evolved in other WHO projects. Contacts and efforts to cooperate with existing documentation and abstracting services of different kinds should be undertaken.

From the site visits it has already been found that a great need exists for immediate services of the type BMDC is already performing (~1500 monthly profiles were distributed in January 1971). Funds are listed for covering the cost of 500 human reproduction profiles to be sent to scientists in member countries where this type of service is not available and is needed. A similar retrospective service should also be available.

The data base and the data system should contain a complete cross-indexed file to authors and workers in the field, and their addresses, interest, and competence profiles compiled and updated continually and automatically from the published literature and from within the WHO network of cooperating centers and other units. The file would also be available by direct access from WHO Headquarters in Geneva.

Xerox service of copies is envisioned only on a very selective basis. This service would be provided to laboratories in countries where such services do not exist.

Dr. Bergstrom closed his presentation by the question: "Where in the world would we be without the work and the initiative of NLM?" He complimented NLM for its development of AIM-TWX and indicated a desire by the Swedish Government to use this system.

REMOTE BIBLIOGRAPHIC ACCESS

The following presentation was made by Mr. Davis McCarn, Acting Director of the Lister Hill National Center for Biomedical Communications.

Since June 1970 the Lister Hill National Center for Biomedical Communications has been providing an experimental on-line, remote-access bibliographic service called AIM-TWX. The AIM stands for the Abridged Index Medicus, the 100 most important English-language serials in clinical medicine, the last five years of which comprise the data base for the service (now about 130,000 citations). Access is also available through the teletypes and IBM 2741's on the Standard Telephone Network. Over 40 medical schools, hospitals, libraries, and biomedical research institutions have used this service which allows rapid, interactive bibliographic searches.

At the request of the Director, NLM, the Lister Hill National Center for Biomedical Communications, in collaboration with other elements of the Library, has undertaken a review of the extent to which the programs, ELHILL II, under development by the System Development Corporation could meet on-line bibliographic service objectives of MEDLARS II. The preliminary conclusion of this review is that ELHILL II, with modifications, can meet the goals of the MEDLARS II (Extended) system in the provision of remote-access bibliographic services. If operated on the planned IBM 370/155 computer, the system would provide responsive access to 40 or more simultaneous users. On the basis of this conclusion, the problems of actually implementing the on-line system have been studied.

Planning for the on-line, remote-access bibliographic service has been based, in part, on experience gained from the AIM-TWX experimental service and, in part, on projections of the service goals of the NLM. Six major decision areas have been investigated; these include (1) the probable total demand for the service and the numbers of communication lines required to meet these demands; (2) the improvements required in the presently planned ELHILL II in order to meet service goals of MEDLARS II (Extended); (3) hardware requirements, schedules, and costs to implement the service; (4) data base alternatives; (5) communication network alternatives; and (6) decentralized computer service alternatives. Progress in each of these areas is described below.

Senior staff members of the NLM provided the Lister Hill Center with a minimum list of users of the planned service. This list included all the medical schools and the major biomedical research institutions. Based on present AIM-TWX request rates, the preliminary estimate of demand is approximately 70,000 requests per year. Servicing this request rate would require 22 telephone lines into the computer. If the service were extended to half the hospital and academic libraries with serial holdings of over 150 titles, the request rate might rise to over 180,000 per year and would require 57 telephone lines. (Present MEDLARS demand searches number less than 20,000 per year in the United States). Either of these request rates could probably be handled by the IBM 370/155.

The capabilities in the present ELHILL program were reviewed in comparison with MEDLARS I and II to determine those which needed to be added to the ELHILL program. A joint review defined a group of 15 required improvements costing about \$100,000. The present program will be available to run on the NLM computer in July 1971; the improvements could be added by November or December 1971.

The Office of Computer and Engineering Services (OCES) reexamined the planning for the IBM 370/155 and determined that the equipment on order would allow the provision of the remote-access bibliographic service. In addition, that office computed the additional cost to the NLM of providing the service over and above the costs of the planned applications; that additional cost amounted to about \$12,000 per month for 8 hours of service per day. If the system averaged 30 simultaneous users, a single search would cost about one dollar for computer services.

The Library Operations staff has conducted a study of data base alternatives. Detailed data on Priority I and Priority II journals have been developed for material published in 1969, and alternative data base configurations have been investigated. It now appears feasible to provide a data base of great general utility with 400,000 to 500,000 citations. The Lister Hill Center staff conducted an operations analysis of data base alternatives and concluded that trade-offs between depth (in years) and breadth (in serial titles) were such that there were no clear optima and any reasonable decision between these would meet essentially the same portion of the needs.

The Lister Hill Center has been investigating communication alternatives. The use of the regular dial telephone network would be expensive and communication costs would exceed computer costs by a factor of ten. Alternatives being investigated include use of the Federal Telephone System (FTS), Inward Wide Area Telephone Service (INWATS), development of a multiplexor network, and connection to the multi-computer network of the Advanced Research Projects Agency (ARPA). Preliminary calculations have been completed on a multiplexor network through Boston, New York, and Philadelphia to NLM. Such a network would cut communication costs for an average search by a factor of five. Preliminary discussions have been held with ARPA and planning is underway to test that network from the SDC computer. A contract has been signed with the National Bureau of Standards to assist in communications planning.

The use of multiplexors is cheaper than duplicating the system on other computers; however, to provide backup and alternative facilities for test of the system, consideration is being given to operating the system at System Development Corporation, and another smaller configuration.

In summary, it appears both feasible and desirable to provide an improved remote-access bibliographic service from the NLM in 1971. Such a service could provide inexpensive access to a large data base. Its availability could reduce the substantial annual expense of the MEDLARS Search Centers. Planning is well under way to develop this service. The Library is now in the process of obtaining the software programs, which will run on any 360 or 370 computer system with adequate core memory.

Dr. Baker expressed the view that the Library was working at exactly the right scale and that the system would likely be a pattern for others.

100th ANNIVERSARY OF MEDICAL DEPARTMENT, U. S. NAVY (EXHIBIT)

Vice-Admiral George M. Davis, the Surgeon General, U. S. Navy, briefly commented on the 100th anniversary of the Navy Medical Department and directed the Board's attention to the exhibit presently in the lobby of the Library.

EXTRAMURAL PROGRAMS 1/ 2/ 3/
REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS

After reviewing the 1971 Budget of \$6 million, the 1972 Budget, which carries no significant change, and a "need" budget of \$8 million, Dr. Langley and his staff presented the following policy and information items:

Policy for Support of Publication Projects -- Because the applications recommended for approval in a given year may exceed available funds, the Board was asked whether program priorities should be assigned in addition to priorities based on merit review. The Board's subcommittee, when considering the question, said that since there is presently no discrepancy between the money requested and the money available, the problem does not exist. The Subcommittee agreed that until the Library is completely overwhelmed with applications, they would rather not have a firm policy decision on which programmatic requests will be funded. Instead, they would like to look at all applications at each round of

1/ Proceedings of meetings are restricted unless cleared by the Office of the Director, National Institutes of Health. The restriction relates to all material submitted for discussion at the meetings, the agenda for the meetings, and supplemental material, and all other official documents.

2/ For the record, it is noted that members absent themselves from the meeting room when the Board has under individual discussion applications (a) from their respective institutions, (b) in which a conflict of interest might occur.

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

meetings and make decisions at that time. The Subcommittee urged the Staff to program actively to stimulate publications in the fields of librarianship and biomedical communications. Should the Library reach a point where decisions along policy lines must be made, priority should be given to publications in these two fields. The Board concurred in the recommendations of its Subcommittee.

Normalizing or Standardizing Priority Scores on Grant Applications -- The problems of relating priority scores from different study sections and from the same study section over a period of time are now being evaluated by an NIH-wide committee. This committee is now developing a procedure to normalize all priority scores to a common mean. The two methods now in use at NIH to normalize priority scores are the decile method and the "Z score," or normalization, method. The decile method is a procedure by which the "raw" priority scores are taken in priority order from each Study Section and then divided into a distribution of tenths. The "Z score" method is a procedure of converting raw scores to distributions with a common mean. The common mean used by the Heart Institute (240) is based on a four-year study of the priorities given by their Study Sections. The formula for converting a raw score to a standard score with a common mean and a common standard deviation, called standardization, is

$$\text{Standard Score} = \frac{\text{Raw Score} - \text{Mean}}{\text{Standard Deviation}} \times \text{New Standard Deviation} + \text{New Mean}$$

The Subcommittee decided that since the Library deals with very small numbers of grants in the three primary review committees, to engage in the suggested procedures would not be mathematically feasible. The Subcommittee requested, however, that Staff manipulate the scores by the suggested procedures, and see if the manipulations significantly alter the priority list.

Board of Regents Review of Grant Applications Under the Medical Library Assistance Extension Act of 1970 -- The FAST group which reviewed the NLM's programs recommended that the Board of Regents not routinely review all grant applications submitted under the Medical Library Assistance Extension Act of 1970. The Board of Regents, at its meeting in November of 1970, raised the question as to whether it is legal for grants to be awarded without Board review.

The General Counsel's Office, DHEW, has informally stated that although the Board must review every application for construction funds, it need not review individual applications for support of resources, training, research, publications, or special scientific projects. At present, there is a regulatory requirement for Board review of individual grant requests in the Regional Medical Library Program.

Regulations (42 CFR Part 59 a, Subpart D) -- grants for special scientific projects, and for research and development (including demonstrations) in medical library science -- Draft proposed Regulations under P.L. 91-212 --

The draft regulations prepared by the Office of the General Counsel with the assistance of NLM staff generally follow the language and format of Part 52 which governs the general research grant regulations for the research institutes of NIH. The decision to develop a new and complimentary set of regulations for the Library's research and special scientific projects programs was necessitated by specific changes in the language of the Extension Act.

A new provision has been added permitting the transfer of an existing grant from a grantee to any other eligible person or institution upon application by such persons in accordance with the regulations; the grantee would be required upon request by the Secretary to transfer such equipment purchased with grant funds. A proviso is included for the protection of grantees to the effect that no transfer of a grant may be made where the original grantee remains ready and able to continue the project in accordance with the original terms and conditions of the award. Such provision will prove useful where, for example, a university is the named grantee and the principal investigator accepts a position at another institution. In effect, such provision will enable him to "take" the grant with him, including equipment, and continue to conduct the project at his new location.

Also, a section has been drafted to conform with the recent NIH policy on the disposition of grant related income set forth in the NIH Manual, Ch. 5601 (7/1/70). Briefly, such policy provides that where grant related income is anticipated, NIH may prescribe at the time of award, the time and the method of reporting, and the disposition of the NIH share of such income. In all other cases, the grantee may elect the manner of disposition of such income within certain specified options.

The Staff sought the Board's opinion as to whether this policy may be lenient to the point of allowing grantees to profit from windfall gains if unanticipated income derives from a grant. Furthermore, the Staff expressed the view that the language in this section needs revision.

Because the matter of income is such an important one, the Board felt that NLM should maintain some measure of control. The Board concurred in approval of the regulations in general with the understanding that wording changes to improve the language in the section will be acceptable to the Board.

Resource Improvement Grant Applications -- Medical Library Resource Grant Program -- The FAST group recommended that in the Resource Program the current procedure of having Committee review of all new, renewal, and supplemental applications be modified to permit staff review, approval and awarding of certain types of applications. The Committee and staff were advised to develop criteria to determine which applications require outside review and which do not. The NLM concurred in this recommendation and on February 3, 1971, a plan for staff review of certain Resource Grants was presented to the Committee for their consideration. The Committee unanimously approved the staff review procedure which is based on seven criteria for evaluation of applications.

The Committee also endorsed a staff proposal that a one-year \$3,000 non-renewable "Resource Improvement Grant" be made to institutions for the purpose of establishing a library, or for the purpose of expanding or improving present libraries having inadequate resources relative to their needs and user population.

The Subcommittee of the Board concurred in both actions of the Biomedical Library Review Committee and yet another to the effect that no application for a \$3,000 resource improvement grant be recommended for disapproval. All such applications would be funded in accordance with an assigned priority. (See "Consideration of Pending Applications")

Resource Project Grant Proposals for Library Automation -- Medical Library Resource Grants are intended to aid in the establishment, improvement, and expansion of the Nation's health science libraries. Under the provisions of the amended Resources Program it is to be expected that many applications for these Project Grants will be concerned with the automation of library procedures. Rapidly changing technology, and the consequent changes in the library environment make it increasingly difficult to keep abreast of the latest developments in library automation.

The Committee believes that if they are to evaluate Resource Project Grant proposals for library automation effectively and equitably, they need concise, factual information concerning the present "state of the art." They, therefore, recommended that an "ad hoc" committee consisting of experts in the field of library automation be established. This committee would: (1) review the characteristics of the Grant Program and of the grant review mechanism; (2) consider the subject of automation as it relates to some of the specialized problems in health science libraries; (3) prepare a report which would describe, in less technical terms than are usually found in the literature, the current status of library automation. In the interim, the Biomedical Library Review Committee deferred action on all pending applications until their next meeting, by which time they will have the benefit of the "ad hoc" committee's report.

The Subcommittee of the Board viewed this as a sensible approach to a difficult problem, and the Board concurred in the Biomedical Library Review Committee's recommendations.

Resource Grant Support of Audiovisual Activities -- The Library is now receiving Resource Project Grant applications in which the "project" is the establishment of a complete audiovisual library. Slide, tape, and film production facilities are being requested, and many of the "Learning Resource Centers" in academic institutions are considering grant requests to create individual learning labs with an array of systems including closed circuit television and dial access retrieval.

The Biomedical Library Review Committee believes that some policy guidelines should be established to assure proper and effective use of grant funds in this library service area. The Committee thinks that the production of audiovisual material is not an appropriate library activity. Also, while the

Committee acknowledges that the library should be an important component of the total educational effort of the institution, it believes that the library should not be the source and the center of an institution's educational program.

The Subcommittee of the Board agreed with the Biomedical Library Review Committee, and the Board concurred in the feelings of both the review committee and the Subcommittee.

Recommendations of the NLM "Ad Hoc" Committee on Historical Translations --
An Ad Hoc Committee on Historical Translations, convened by the Library, met to evaluate current NLM P.L. 480 historical translating activities, and to assist in the development of criteria for funding new historical translations.

The Committee affirmed the need for NLM's assuming an expanded role in sponsoring the English-language translation and publication of significant works in the history of medicine, in the history of biomedical sciences and studies relating to medicine and culture, for use not only by scholars in the field, but for a wider audience in the U.S. community of physicians, health scientists, and medical students.

The Committee made specific recommendations on translation of primary sources, translation of secondary sources, reprinting of out-of-print classics, foreign language facsimile reproductions, and identification and preservation of primary source materials in medical history. The ad hoc committee, furthermore, made procedural recommendations on funding, establishing translation priorities, publication and distribution of translations, scientific review of completed manuscripts, and U.S. scholarly collaboration with foreign scholars. Finally, the committee provided review and recommendation of specific historical studies for translation and publication.

Training Grant Program Directors Meeting -- Dr. Kaufman announced that the Research, Training, and Publications Division of the Library's Extramural Programs is organizing a two-day conference of NLM-sponsored Training Grant Program Directors. The conference will take place on May 9-10-11, 1971, at Belmont House. Participants will include the program directors, one representative each from the Board of Regents, the Biomedical Library Review Committee, and the Biomedical Communications Study Section, a consultant expert on training in the health sciences, and appropriate NLM staff; the total not to exceed 30 individuals.

Biomedical Communications Study Section Evaluation of NLM Research Grants --
Dr. Kaufman announced that at the request of the Extramural Programs, and with concurrence of the Director, NLM, the principal investigators of two research grants presented reports of their research at the January 27 meeting of the Biomedical Communications Study Section. Following the presentations and a question-and-answer session, the study section discussed the projects in private. This seminar session was an experiment in NLM-study section communication and program evaluation. The study section is planning a workshop on four topics in biomedical communications.

Commendation by the Subcommittee to the Associate Director for Extramural Programs and His Staff -- At the close of the presentations by Dr. Langley and his staff, the Board Subcommittee for Extramural Programs commended Dr. Langley for his exceptional presentation of complex and difficult material, particularly with respect to policy.

Consideration of Pending Applications

The Board of Regents, acting concurrently as the National Medical Libraries Assistance Advisory Board, reviewed the following grant applications:

Research and Publication Grants	Reviewed	14	\$443,252
	Approved	4	30,996
	Disapproved	9	349,756
	Deferred	1	62,500
Training Grants	Reviewed	3	295,098
	Approved	1	101,742
	Disapproved	2	193,356
Resource Project Grants	Reviewed	87	\$2,579,504
	Approved	10	111,066
	Disapproved	64	1,769,178
	Deferred	13	699,260
Resource Improvement Grants		135*	

* Board concurrence for Staff review only

Summaries of Board actions on all Extramural Grant Programs are appended to these minutes.

APPOINTMENT OF A NOMINATING COMMITTEE TO NOMINATE THE NEXT
CHAIRMAN AND VICE-CHAIRMAN OF THE BOARD OF REGENTS

The Chairman, Dr. Ebert, appointed Dr. Layton, Dr. Hekhuis and Mr. Augenstein to nominate the next Chairman and Vice-Chairman of the Board and to present their nominations to the Board in June. Dr. Ebert asked Dr. Layton to serve as Chairman of this nominating committee.

The Board reconsidered its meeting date for the November 1971 meeting and selected Monday and Tuesday, November 22-23, 1971.

TOXICOLOGY INFORMATION PROGRAM REVIEW

Dr. Henry M. Kissman, Associate Director, Specialized Information Services, provided a background description of factors leading to establishment of the program and discussed its mandate, its resources, its fiscal constraints, its services, its plans for the future, and basic principles which have to be applied to information activities of this nature.

The basic mission of the Toxicology Information Program is the implementation of the 1966 President's Science Advisory Committee (PSAC) Report on the Handling of Toxicological Information. Specifically, that PSAC Panel recommended "that the establishment of a computer-based system for handling toxicological information...be given high priority within (the Department of) Health, Education and Welfare and be established with a speed commensurate with the urgency of the need."

When the program was located in the National Library of Medicine in 1967, the Library estimated that it would take approximately \$10 million over a 5-year period, plus even-leveled support thereafter, to bring this program to fruition within the parameters outlined by PSAC. The resources which actually became available to this program during the period 1967-1971 are only about 40% of what had been expected during the planning and initiation period. This refers both to funding and to personnel resources.

Since its beginning, the program has enjoyed the valuable advice of a special Committee of the Division of Medicine of the National Academy of Sciences -- the Toxicology Information Program Committee, or TIPCOM. It was on the advice of this Committee that the program, in 1969, restricted its aims severely and concentrated on pesticide toxicology as a first step and as a model for other sections of the general toxicology field.

The over-all objectives of TIP are to create automated or computerized toxicological information and data banks from the literature, from the files of collaborating government agencies, and from such other data files as can be obtained. The program has the further objective of establishing information and data services for the scientific community.

The scientific literature, including primary and secondary journals, reports, and monographs, is an obvious source of such information and data. However, as the 1966 PSAC Panel found, a great deal of toxicology data not appearing in the published literature are contained in the files of Government agencies and of industries.

Using the literature to build an abstract or article file costs about \$200-\$250 per compound. The cost of data extraction from an existing file is approximately \$150-\$200.

Last June, the Director of the Library took an important step by declaring that the personnel and financial resources of TIP would be made fully available to "mobilize" relevant toxicology data in the files of cooperating Government agencies. The principle of using one's own funds to support the creation of data systems for other agencies has some significant consequences. The primary beneficiary of such a policy is the agency whose systems are being transformed into modern computer-based systems at no cost to its management. It becomes very hard for such an agency to say "no" to such a proposition. The ultimate beneficiary is, of course, the scientific community.

In its files, the FDA had 400 primary pesticide petitions and 600 secondary, or derivative, petitions. These files have now been moved with the pesticide petition evaluation function to the Office of Pesticides of the Environmental

Protection Agency. An existing data extraction contract of TIP with the University of Pennsylvania was restructured in part so that the contractor now extracts designated data from these files. The contractor personnel are extracting data for input into the selected computer system (Mark IV data management system of Informatics, Inc.).

In another example of collaboration with a Government Agency, TIP is involved in building a central data management system and data bank for pesticide community studies in the Division of Community Studies, EPA (formerly FDA). The Pesticide Community Studies program has for the last five years operated an epidemiological study of persons occupationally exposed to higher doses of pesticides.

In a cooperative effort involving TIP, FDA, and Division personnel, the following activities were accomplished:

- (1) design of a computerized central data bank for the entire project;
- (2) creation of an edit and translation program which will convert all of the incoming data (Some of the contractors have data processing systems of their own and can deliver their data in machined form) in a uniform manner to the central system (over 50% complete); and
- (3) design of a set of procedures -- still to be implemented -- which will salvage a portion of the 5-year, 100,000 form backlog file into the central system.

Last week, at a general conference of Division of Community Studies personnel, contractors, and TIP and FDA personnel, the system was formally turned over to the Division of Community Studies for operation.

Under an existing contract, the literature from 1967-1970 is being searched for publications containing information about drug-drug and drug-chemical interactions. At present, this project represents the major activity of TIP in the drug toxicology field. It is planned to publish a Drug Interaction Bibliography With Selected Excerpts to direct attention of physicians and others in the health professions to the problem of drug interactions.

The Library is also discussing with several journal editors the possibility of publishing selected excerpts in their journals -- on a continuing basis -- before the complete Bibliography is published sometime next year.

TIP is building several channels through which its information and services can reach the user population. In order to establish TIP as an information and data center of value to the scientific community, it seemed of paramount importance to create a distinct service unit for this Program. This unit would have to perform in-depth literature searches, have the competence of analyzing and evaluating information, and have the capability of transmitting and returning this material in usable format to the original requester. Following a recommendation from the Director, NLM, the TIP negotiated with the Oak Ridge National Laboratory (ORNL) of the Atomic Energy Commission for the establishment of a Toxicology Query Response Center (TIQRC) as part of the ORNL's Environmental Information System. The Oak Ridge National Laboratory was selected for the site of the query response and service center because the

Laboratory already operates some fourteen information analysis centers which work on the principle of using laboratory scientists for information work on an ad hoc, part-time basis. The capabilities of ORNL for this type of activity are impressive. TIQRC will be an arm of the TIP, and will be funded initially with some \$100,000 of FY '71 TIP funds.

Using existing facilities at ORNL, TIQRC will also have access to most of the commercial literature tape services which are now available (e.g. CA Condensates, CBAC, BIOSIS tapes, Nuclear Science Abstracts, Engineering Index). It is expected that requests for services will come to TIQRC either directly through TIP or via TIP from the Reference Section of NLM.

TIP has also established several on-line interactive computer systems for its own operations and is now looking into the possibility of opening these systems to the public. One of these systems consists of a file which was created by placing the entire text of the abstract journal Health Aspects of Pesticides Abstract Bulletin (HAPAB) into an on-line, whole-text searching computer system (Mead Data Central). HAPAB is prepared on contract for the Division of Community Studies and has produced some 5,300 abstracts in the years 1966-1970. TIP also placed into the same computer system the entire text of the Report of the Secretary's Commission on Pesticides and Their Relationship to Environmental Health -- also known as the Mrak Report, after the chairman of the Commission. This report represents probably the most authoritative set of statements on the entire pesticide problem and is a treasure trove of information.

It is quite feasible, through additional terminals, to open up the use of these banks to other Governmental, academic, and industrial organizations. Such a terminal will go into the Division of Community Studies at Atlanta, Georgia, within the next few days.

The originating agency pays only for machining and loading of information. After that, the agency pays only for its own terminal, for the computer time which it uses in searching, and for line charges. The computer costs include charges for storage of the data. All these costs are relatively low; it costs TIP \$95 for a two-hour weekly query session on the Data Central system.

The Federal Water Quality Administration is now actively working to place its water quality abstracts into the Mead Data Central system. If this is done, TIP could search these abstracts for pesticide information, and FWQA could search TIP data and information files for any water pollution references.

In another on-line search system which was built for TIP by the System Development Corporation, some 3,200 authorities in various sub-topics of toxicology were identified and registered by questionnaire. These questionnaires were then machined and loaded into an SDC computer. The system is now operational and its capabilities are being tested. Several other Government agencies have expressed an interest in the on-line interactive features of this roster, because it presents the possibility of assembling a panel of experts quickly or of consulting an expert on an emergency basis.

At Dr. Cummings' suggestion, TIP has selected about fifteen journals from the area of clinical toxicology for augmentation of AIM-TWX.

TIP has also been involved in the production of a number of printed products. Thus, the program collaborated with the National Referral Center of the Library of Congress on the production of a Directory of Information Resources in the United States - General Toxicology. Also, the Program worked with other Library units on the production of the MEDLARS-derived product, Toxicity Bibliography. Following a direct recommendation of the 1966 PSAC Panel, the Program has been working on the production of a Toxicology Vocabulary and is now in the process of letting a contract for the production of such a vocabulary in thesaurus format. The Toxicology Vocabulary will be compatible with Medical Subject Headings (MeSH), the vocabulary for MEDLARS.

TIP is also investigating the possibility of the issuance of a new journal to be called Health Effects of Environmental Pollutants (HEEP).

TIP has been working with BIOSIS, a product related to Biological Abstracts (BA), on the idea of producing a journal which would amalgamate selected information from BA and MEDLARS. As now envisioned, HEEP would offer subscribers a monthly journal containing some 1,000 BA-like abstracts (selected from BA and MEDLARS articles); there would also be a MEDLARS-like tape service which would contain the citations to these abstracts and MeSH indexing terminology.

Preliminary work on a two-phased contract with the publishers of BA is under way, and TIP hopes that a prototype issue of the journal will be available for review by the end of this fiscal year.

Dr. Kissman's presentation was followed by a successful live demonstration of the Mead Data Central whole text searching system, for searching abstracts in the pesticide literature and the entire Mrak Commission Report.

On behalf of the Board, the Chairman thanked Dr. Kissman for a very stimulating discussion and invited him to report to the Board again in the near future.

Speaking for the Board, Dr. Ebert requested that the Director and the staff of NLM cooperate in gaining information about the human reproduction project which Dr. Bergstrom described. Dr. Ebert suggested that the Director report back to the Board how the Library may be able to cooperate in this enterprise.

Respectfully submitted,



Martin M. Cummings, M.D.
Executive Secretary to the
Board of Regents
National Library of Medicine

Attachments

ACTIONS TAKEN BY THE BOARD OF REGENTS IN GENERAL SESSION

March 22-23, 1971

1. After a review of current policies governing the Publications Grant Program, the Board recommended that:
 - a. Publication grants continue to be reviewed on an individual basis;
 - b. NLM staff encourage the submission of publications in the areas of biomedical librarianship and biomedical communications;
 - c. If the amount of funds requested significantly exceeds the funding capability of the program, priority be given to publication grants dealing with medical librarianship and biomedical communications.
2. After Dr. Langley's review of NIH concerns about the normalization and standardization of priority scores, the Board recommended no standardization factor be applied to priority scores. The Board did, however, request that Dr. Langley provide information on the differences between "raw" priority scores and standardized scores at the next Board meeting.
3. The Board concurred with the plan to have Resource Improvement Grants reviewed by the staff, based on criteria approved by the Board and the review committee. The Board concurred in the recommendation of the review committee that the staff not disapprove any applications but, if there were applications which they felt were not approvable, that these should be sent to the committee and the Board for final action.
4. The Board approved policies which would preclude the funding, under Resource Grants, of projects to produce AV materials, or to have the libraries plan and direct continuing education activities for health professionals. The Board noted, however, that this latter action in no way diminished the role of the library in supporting continuing education activities in the health fields.
5. The Board approved, in principle, the revised Regulations (42 CFR Part 59 a, Subpart D) -- grants for special scientific projects, and for research and development (including demonstrations) in medical library science. Necessary wording changes are to be negotiated between NLM staff and the Office of General Counsel.

NATIONAL LIBRARY OF MEDICINE

RESUME OF RECOMMENDATIONS

THE BOARD OF REGENTS AT THEIR MARCH 22-23, 1971 MEETING
CONCURRED WITH THE FOLLOWING RECOMMENDATIONS

RESOURCE GRANTS

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 00795-01 Santa Ana Community Hospital Santa Ana, California	BLR	01	\$ 20,470	Disapproval	
1 G08 LM 00829-01A1 Emma Pendleton Bradley Hospital Riverside, Rhode Island	BLR	01A1 02 03	4,344 4,370 3,105	Disapproval	
1 G08 LM 00849-01 Southern Nevada Memorial Hospital Las Vegas, Nevada	BLR	01	40,325	Disapproval	
1 G08 LM 00850-01A1 St. Joseph's Hospital Reading, Pennsylvania	BLR	01A1 02 03	3,900 4,900 3,900	Disapproval	
1 G08 LM 00891-01A1 The Long Island Jewish Medical Center Jamaica, New York	BLR	01A1 02 03	17,338 14,350 14,350	Disapproval	
1 G08 LM 00893-01A1 St. Luke's Hospital Center New York, New York	BLR	01A1	9,368	9,368	438

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 00902-01 Queen of the Valley Hospital Napa, California	BLR	01	\$ 5,000	Disapproval	
1 G08 LM 00904-01A1 Mary's Help Hospital Daly City, California	BLR	01	3,442	Disapproval	
1 G08 LM 00905-01A1 St. Luke's Methodist Hospital Cedar Rapids, Iowa	BLR	01	6,000	Deferral	
1 G08 LM 00995-01 Southeastern Kentucky Mental Health-Mental Retardation Board, Inc. Corbin, Kentucky	BLR	01	15,000	Disapproval	
1 G08 LM 00996-01 University of Miami Miami, Florida	BLR	01 02	29,834 29,946	29,834 - - -	245
1 G08 LM 01001-01 St. Mary's Junior College Minneapolis, Minnesota	BLR	01	14,895	Disapproval	
1 G08 LM 01003-01 Duke University Durham, North Carolina	BLR	01 02 03	19,193 18,383 10,942		
1 G08 LM 01004-01 Milford Hospital, Inc. Milford, Connecticut	BLR	01 02 03	22,821 9,200 9,310	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01005-01 Camarillo State Hospital Camarillo, California	BLR	01 02 03	\$ 3,000 3,000 3,000	Disapproval	
1 G08 LM 01006-01 Halifax District Hospital Daytona Beach, Florida	BLR	01 02 03	50,585 28,854 30,105	Deferral	
1 G08 LM 01007-01 St. Anthony Hospital Columbus, Ohio	BLR	01 02 03	4,466 3,980 4,240	Disapproval	
1 G08 LM 01008-01 University of Arizona Tucson, Arizona	BLR	01	2,798	2,798	255
1 G08 LM 01019-01 Sacred Heart Hospital Spokane, Washington	BLR	01	13,015	Disapproval	
1 G08 LM 01020-01 Mt. Sinai Hospital Hartford, Connecticut	BLR	01 02 03	23,850 10,400 12,400	Disapproval	
1 G08 LM 01022-01 Louisiana State University Medical Center New Orleans, Louisiana	BLR	01 02 03	63,735 16,712 6,737	Deferral	
1 G08 LM 01023-01 Westchester Academy of of Medicine Library Purchase, New York	BLR	01 02 03	10,900 10,140 10,580	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01024-01 Westchester Academy of Medicine Library Purchase, New York	BLR	01 02 03	\$ 5,000 5,000 5,000	Disapproval	
1 G08 LM 01025-01 Westchester Academy of Medicine Library Purchase, New York	BLR	01 02 03	7,000 1,500 1,500	Disapproval	
1 G08 LM 01026-01 Westchester Academy of of Medicine Library Purchase, New York	BLR	01 02 03	1,500 1,500 1,500	Disapproval	
1 G08 LM 01027-01 The University of New Mexico Albuquerque, New Mexico	BLR	01 02 03	60,000 69,350 74,485	Deferral	
1 G08 LM 01028-01 The University of New Mexico Albuquerque, New Mexico	BLR	01 02 03	10,225 8,288 8,907	Disapproval	
1 G08 LM 01036-01 Baptist Hospital Pensacola, Florida	BLR	01 02	11,788 8,713	Disapproval	
1 G08 LM 01037-01 Berkshire Medical Center Pittsfield, Massachusetts	BLR	01 02 03	10,000 10,050 10,655	Disapproval	
1 G08 LM 01038-01 Berkshire Medical Center Pittsfield, Massachusetts	BLR	01 02 03	2,619 3,700 2,700	2,619 3,700 2,700	282

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01040-01 Wake Forest University Winston-Salem, North Carolina	BLR	01 02	\$ 33,468 46,987	Deferral	
1 G08 LM 01041-01 Indiana University Medical Center Indianapolis, Indiana	BLR	01 02 03	22,400 15,368 15,500	Disapproval	
1 G08 LM 01042-01 Fairview State Hospital Costa Mesa, California	BLR	01 02 03	9,516 10,047 10,547	Disapproval	
1 G08 LM 01043-01 Medical Library of Mecklenburg County, Inc. Charlotte, North Carolina	BLR	01 02 03	15,731 10,826 9,755	Disapproval	
1 G08 LM 01044-01 University of Virginia School of Medicine Charlottesville, Virginia	BLR	01 02 03	28,471 27,853 29,703	Disapproval	
1 G08 LM 01045-01 University of Virginia School of Medicine Charlottesville, Virginia	BLR	01 02 03	2,500 4,000 5,000	2,500 4,000 5,000	250
1 G08 LM 01046-01 University of Virginia School of Medicine Charlottesville, Virginia	BLR	01 02 03	2,500 4,000 5,000	Disapproval	
1 G08 LM 01051-01 Saint Joseph's Hospital Tampa, Florida	BLR	01 02 03	9,099 7,464 7,464	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01061-01 St. Joseph's Hospital Paterson, New Jersey	BLR	01 02 03	\$ 3,903 300 300	Disapproval	
1 G08 LM 01082-01 Topeka State Hospital Topeka, Kansas	BLR	01 02 03	6,479 5,914 5,514	Disapproval	
1 G08 LM 01083-01 Texas A & M University College Station, Texas	BLR	01 02 03	40,000 20,000 10,000	Disapproval	
1 G08 LM 01086-01 Norwalk Hospital Norwalk, Connecticut	BLR	01 02 03	6,150 1,500 1,500	Disapproval	
1 G08 LM 01088-01 Children's Hospital of Los Angeles Los Angeles, California	BLR	01 02 03	24,549 16,000 14,950	Disapproval	
1 G08 LM 01089-01 Muhlenberg Hospital Plainfield, New Jersey	BLR	01 02 03	9,480 6,292 6,922	Disapproval	
1 G08 LM 01092-01 University of Wisconsin Madison, Wisconsin	BLR	01 02	16,700 5,500	Disapproval	
1 G08 LM 01093-01 University of Wisconsin Madison, Wisconsin	BLR	01 02	8,100 8,100	Disapproval	
1 G08 LM 01094-01 University of Wisconsin Madison, Wisconsin	BLR	01 02	16,800 3,575	Deferral	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01095-01 University of Wisconsin Madison, Wisconsin	BLR	01	\$ 3,525	\$ 3,525	350
1 G08 LM 01096-01 University of Wisconsin Madison, Wisconsin	BLR	01	5,520	Disapproval	
1 G08 LM 01097-01 University of Wisconsin Madison, Wisconsin	BLR	01	1,264	Disapproval	
1 G08 LM 01098-01 University of Wisconsin Madison, Wisconsin	BLR	01 02	16,900 16,900	Deferral	
1 G08 LM 01099-01 University of Wisconsin Madison, Wisconsin	BLR	01 02 03	22,150 22,900 4,060	Deferral	
1 G08 LM 01101-01 Columbia Hospital of Richland County Columbia, South Carolina	BLR	01 02 03	14,273 12,908 11,208	Disapproval	
1 G08 LM 01102-01 University of Nebraska Omaha, Nebraska	AD HOC REVIEW	01	45,042	35,236 29,393 32,133	200
1 G08 LM 01103-01 Worcester State Hospital Worcester, Massachusetts	BLR	01 02 03	10,000 3,750 2,250	Disapproval	
1 G08 LM 01105-01 Catherine Laboure' School of Nursing Boston, Massachusetts	BLR	01 02 03	51,000 18,500 14,500	Deferral	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01106-01 State College of Optometry State University of New York New York, New York	BLR	01 02	\$ 30,852 21,410	\$ 21,276 13,310	267
1 G08 LM 01107-01 University of Cincinnati College of Medicine Cincinnati, Ohio	BLR	01 02 03	153,592 61,906 48,069	Deferral	
1 G08 LM 01109-01 University of California School of Optometry Berkeley, California	BLR	01 02 03	1,000 1,100 1,000	Disapproval	
1 G08 LM 01110-01 East Carolina University Greenville, North Carolina	BLR	01 02	90,400 68,600	Deferral	
1 G08 LM 01111-01 Lutheran General Hospital Park Ridge, Illinois	BLR	01 02 03	3,577 2,827 1,227	Disapproval	
1 G08 LM 01112-01 Lutheran General Hospital Park Ridge, Illinois	BLR	01	19,561	Disapproval	
1 G08 LM 01114-01 University of Alabama in Birmingham Birmingham, Alabama	BLR	01 02 03	59,430 59,175 44,925	Deferral	
1 G08 LM 01115-01 Plymouth State Home and Training School Northville, Michigan	BLR	01 02 03	31,577 27,383 26,001	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01116-01 Jacksonville Hospitals Educational Program, Inc. Jacksonville, Florida	BLR	01 02 03	\$ 17,938 14,233 15,091	\$ 16,338 13,233 14,091	314
1 G08 LM 01117-01 Presbyterian Hospital Center Albuquerque, New Mexico	BLR	01 02 03	6,625 3,000 3,000	Disapproval	
1 G08 LM 01135-01 The Research Foundation of SUNY Health Sciences Library East Setauket, New York	BLR	01 02 03	158,161 185,539 177,399	Disapproval	
1 G08 LM 01136-01 Pennsylvania College of Podiatric Medicine Philadelphia, Pennsylvania	BLR	01 02 03	71,100 56,360 63,106	Disapproval	
1 G08 LM 01139-01 Nassau County Department of Health Mineola, New York	BLR	01 02 03	55,072 47,344 51,108	Disapproval	
1 G08 LM 01140-01 Catholic Medical Center of Brooklyn & Queens Jamaica, New York	BLR	01 02 03	109,458 33,200 34,300	Disapproval	
1 G08 LM 01143-01 Mercer University Southern School of Pharmacy Atlanta, Georgia	BLR	01 02	24,460 23,000	Disapproval	
1 G08 LM 01144-01 Massachusetts Institute of Technology Cambridge, Massachusetts	BLR	01 02 03	75,200 79,200 84,200	Deferral	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01150-01 M. J. Lewi College of Podiatry New York, New York	BLR	01 02 03	\$ 21,786 23,811 24,036	Disapproval	
1 G08 LM 01151-01 The Research Foundation of State University SUNY at Buffalo Buffalo, New York	BLR	01	110,033	Disapproval	
1 G08 LM 01152-01 The University of Texas Medical Branch Galveston, Texas	BLR	01 02 03	19,202 18,311 19,346	19,202 18,311 19,346	170
1 G08 LM 01153-01 The Stamford Hospital Stamford, Connecticut	BLR	01 02 03	141,260 29,520 29,520	Disapproval	
1 G08 LM 01155-01 Institute for Psychoanalysis Chicago, Illinois	BLR	01 02 03	40,750 21,950 21,950	Disapproval	
1 G08 LM 01158-01 Maryville College St. Louis, Missouri	BLR	01 02 03	50,396 30,038 30,038	Disapproval	
1 G08 LM 01159-01 Rudolph Matas Medical Library Tulane University New Orleans, Louisiana	BLR	01 02 03	11,805 14,146 15,498	Disapproval	
1 G08 LM 01163-01 University of Texas Southwestern Medical School Dallas, Texas	BLR	01 02 03	20,775 23,365 24,724	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01164-01 St. Joseph's Infirmary Russell Bellman Library Atlanta, Georgia	BLR	01 02 03	\$ 5,000 5,000 5,000	Disapproval	
1 G08 LM 01165-01 University of North Dakota School of Medicine H. E. French Medical Library Grand Forks, North Dakota	BLR	01 02 03	27,040 9,750 10,400	Disapproval	
1 G08 LM 01166-01 University of North Dakota School of Medicine H. E. French Medical Library Grand Forks, North Dakota	BLR	01 02 03	11,450 4,625 5,100	Disapproval	
1 G08 LM 01167-01 University of North Dakota School of Medicine H. E. French Medical Library Grand Forks, North Dakota	BLR	01 02 03	3,600 4,000 6,000	Disapproval	
1 G08 LM 01168-01 Municipal Services Administration of New York City Public Health Library New York, New York	BLR	01 02 03	122,293 77,176 79,708	Disapproval	
1 G08 LM 01171-01 University of Oklahoma Medical Center Oklahoma City, Oklahoma	BLR	01 02 03	\$ 18,840 18,470 19,460	\$ 18,840 18,470 - 0 -	255
1 G08 LM 01172-01 R. E. Thomason General Hospital El Paso, Texas	BLR	01 02 03	89,304 70,272 71,754	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01174-01 University of Southern California Gerontology Center Los Angeles, California	BLR	01 02 03	\$ 62,835 62,965 62,835	Disapproval	
1 G08 LM 01177-01 Ravenwood Hospital Medical Center Chicago, Illinois	BLR	01 02 03	61,950 43,650 30,250	Disapproval	

NATIONAL LIBRARY OF MEDICINE

RESUME OF BOARD OF REGENTS RECOMMENDATIONS

MARCH 22-23, 1971

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	BOARD OF REGENTS		
						Approval	Priority	Other
2 R01 LM 00334-13 Altman, Philip L. Federation of American Societies for Experimental Biology Bethesda, Maryland "Biological Handbooks"	BCM	72	13	\$ 62,500	Deferral			Def.
2 R01 LM 00525-04 Thompson, David A. Stanford University Industrial Engineering Stanford, California "Interactive Computer Graphics in Information Retrieval"	BCM	71	04	150,095	Disapproval			Dis.
			05	159,025				
			06	196,580				
2 R01 LM 00557-04 Schweitzer, Morton D. American Public Health Association, Inc. Epidemiology Section New York, New York "Current Bibliography of Epidemiology: A Publication"	BCM	71	04	25,000	Disapproval			Dis.
			05	20,000				
			06	15,500				
			07	8,000				

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG		BOARD OF REGENTS		Dis.
					Recommendation	Disapproval	Approval	Priority	
2 R01 LM 00567-04 Ryckman, Raymond E. Loma Linda University School of Medicine Loma Linda, California "Review of Triatominae Literature"	BCM	71	04 05	\$ 13,810 11,000		Disapproval			
1 R01 LM 00978-01 La Rocco, August F. Center for Community Health and Medical Care Harvard Medical School Boston, Massachusetts "Foreign Systems of Health Care; Abstract Bibliography"	BCM	71	01 02	35,172 35,675		Disapproval			
2 R01 LM 00486-05 Gilbert, Bentley B. University of Illinois Chicago, Illinois "The British Government and the Nation's Health 1939-58"	HLS	72	05	3,875	\$ 3,875 (100)		3,875		100
1 R01 LM 00977-01 Johnson, Robert E. University of Illinois Graduate College Urbana, Illinois "Life of Sir John Richardson (1787-1865) M.D., F.R.S."	HLS	72	01 02	4,907 3,929	4,907 3,929 (264)		4,907 3,929		264

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS
 Recommendation
 Approval Priority Other

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	Approval	Priority	Other
1 R01 LM 00979-01 Hand, Wayland D. University of California Los Angeles, California "Standard Work on American Folk Medicine"	HLS	71	01 02	\$ 5,242 5,303	\$ 5,242 5,303 (179)	5,242 5,303	179	

1 R01 LM 00980-01 University of California School of Medicine Los Angeles, California "Reformation of American Medical Education, 1870-1930"	HLS	72	01 02	21,102 21,582	Disapproval			Dis.
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1 R01 LM 00981-01 Viseltear, Arthur J. Yale University Health Services Administration New Haven, Connecticut "Historical Studies of Compulsory Health Insurance"	HLS	72	01 02 03	21,967 22,242 22,300	Disapproval			Dis.
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1 R01 LM 00982-01 Sloan, Phillip R. University of Washington School of Medicine Seattle, Washington "Buffon and the Origins of Phylogenetic Classification"	HLS	71	01 02 03	2,070 2,740 13,660	Disapproval			Dis.
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RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	BOARD OF REGENTS	
						Approval	Other
1 R01 LM 00983-01 Risse, Guenter B. University of Minnesota College of Medical Sciences Minneapolis, Minnesota "The History of German Medicine 1805-1825"	HLS	72	01	\$ 16,972	\$ 16,972	16,972	133
			02	17,555	17,555 (133)	17,555	
1 R01 LM 00985-01 Moore, John G. University of Utah College of Medicine Salt Lake City, Utah "Diet and Disease in Prehistoric American Indian Cultures"	HLS	72	01	41,200	Disapproval		Dis.
			02	43,685			
			03	46,502			
1 R01 LM 00966-01 Williams, Stanley C. California Academy of Sciences San Francisco, California "Classification of North American Scorpions"	TMP	71	01	39,340	29,340		Dis.
			02	35,417	25,417		with
			03	32,177	22,177 (194)		Communication

NATIONAL LIBRARY OF MEDICINE

RESUME OF BOARD OF REGENTS RECOMMENDATIONS

MARCH 22 - 23, 1971

TRAINING APPLICATIONS

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	BOARD OF REGENTS Recommendation		
						Approval	Priority	Other
2 TO1 LM 00104-06 Swanson, Don R. University of Chicago Graduate Library School Chicago, Illinois	BLR	72	06	\$110,690	Disapproval			Dis.
			07	114,354				
			08	118,101				
			09	121,936				
			10	125,862				
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2 TO1 LM 00123-05 Rees, Alan M. Case Western Reserve University School of Library Science Cleveland, Ohio	AD HOC	72	05	101,742	101,742	101,742	101,742	180
			06	104,022	104,022	104,022	104,022	
			07	106,941	106,941	106,941	106,941	
			08	110,006	110,006	110,006	110,006	
			09	113,723	113,723	113,723	113,723	
					(180)			
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1 TO1 LM 00145-01 Stearns, Norman S. Postgraduate Medical Institute Boston, Massachusetts	BLR	71	01	82,666	Disapproval			Dis.
			02	88,727				
			03	93,484				

COMPETING RESEARCH AND PUBLICATION GRANTS
 SUMMARY OF COUNCIL RECOMMENDATIONS
 TRADITIONAL PROJECT GRANTS

INSTITUTE OR DIVISION: NATIONAL LIBRARY OF MEDICINE

COUNCIL DATE: MARCH 1971

TYPE OF REQUEST	TOTAL REQUESTED		APPROVED		REDUCED		DISAPPROVAL		DEFERRED	
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT
FY 1971										
NEW	4	81,824	1	5,242	0		3	76,582	0	
RENEWAL	1	13,810	0		0		1	13,810	0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	5	95,634	1	5,242	0		4	90,392	0	
FY 1972										
NEW	5	106,148	2	21,879	0		3	84,269	0	
RENEWAL	4	241,470	1	3,875	0		2	175,095	1	62,500
SUPPLEMENT	0		0		0		0		0	
TOTAL	9	347,618	3	25,754	0		5	259,364	1	62,500
FY 1973										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
FY 1974										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
GRAND TOTAL	14	443,252	4	30,996	0		9	349,756	1	62,500

COMPETING TRAINING GRANTS
SUMMARY OF COUNCIL RECOMMENDATIONS
TRADITIONAL PROJECT GRANTS

INSTITUTE OR DIVISION: NATIONAL LIBRARY OF MEDICINE

COUNCIL DATE: MARCH 1971

TYPE OF REQUEST	TOTAL REQUESTED		APPROVED		REDUCED		DISAPPROVAL		DEFERRED	
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT
FY 1971										
NEW	1	82,666	0		0		1	82,666	0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	1	82,666	0		0		1	82,666	0	
FY 1972										
NEW	0		0		0		0		0	
RENEWAL	2	212,432	1	101,742	0		1	110,690	0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	2	212,432	1	101,742	0		1	110,690	0	
FY 1973										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
FY 1974										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
GRAND TOTAL	3	295,098	1	101,742	0		2	193,356	0	

BOARD OF REGENTS
NATIONAL LIBRARY OF MEDICINE

MINUTES OF EXECUTIVE SESSION

The Board of Regents of the National Library of Medicine convened in executive session at the Library in Bethesda, Maryland, at 1:20 p.m., March 23, 1971.

The Chairman asked for comment on a resolution introduced by three members of the Board, circulated to the members at the opening of the session, identifying in general terms the effect of constraints during the fiscal years 1968-1972, inclusive, on the ability of the Library to meet the demands of the biomedical community and to support the health priority objectives identified by the President in his recent message to the Congress. Minor modifications in order and grammar were incorporated. Thereupon the resolution was adopted unanimously, with the recommendation that the Chairman of the Board transmit the resolution (attached) personally to the Secretary of Health, Education, and Welfare.

Mr. Augenstein reported that Dr. Baker, unable to attend the executive session, had recommended that the Library complete the development of MEDLARS II with its own personnel. While Mr. Augenstein favored such a course of action, he recognized that the requirement of about 25 additional good people skilled in computer technology exceeded the resources available or likely to become available to the NLM in the foreseeable future. The possibility of involving some Federal Contract Research Center such as Rand or Mitre was examined, but it would place the problem of further development of MEDLARS II under the control of an organization other than the Library where the responsibility properly belongs; some improvement in the situation could be anticipated for the short haul, but not for the long run. Mr. Zipf agreed with the desirability of in-house development of MEDLARS II but felt it impractical when faced with the realities of fiscal and manpower constraints.

The debate turned to the next immediate move required by the NLM in furthering MEDLARS II development. A draft letter to the President, Computer Sciences Corporation (CSC) from Director, NLM, was considered (attached). In essence, this accepts the proposal made last week by CSC to provide demonstration of four system components for MEDLARS II by May 1 in lieu of reduced system development to emphasize documentation at a lower level of expenditure. Mr. Zipf had reviewed the NLM correspondence with CSC and found it "generally good," but "holes" could be identified in items that dealt with greater complexities. The draft letter under consideration by the Board will in Mr. Zipf's opinion permit continuing evaluation of the Library's posture vis-a-vis MEDLARS II until May 1. Definition of the essential elements to reproduce MEDLARS I capabilities in MEDLARS II should continue and include production of a document by the NLM staff detailing the capabilities of MEDLARS I in the projected system now being developed by CSC.

Director, NLM, then said that he had asked Systems Development Corporation (SDC) to examine the proposed input for MEDLARS II to see how it could interface with the ELHILL programs for AIM-TWX development. Subsequently he had also asked SDC to examine the technical procedural design proposed by CSC for MEDLARS II. Mr. Zipf then suggested that SDC be asked to provide their best estimate by May 1 based on their examination of CSC's description of the composition and structure of the data base file.

Mr. Augenstein summarized his view of the proposed letter to CSC as forcing a response from the organization which, if favorable, would involve its senior management in the program. The May 1 demonstration will provide a good index of progress or lack thereof by the CSC. Moreover, the reply provided by SDC will furnish additional useful information prior to renegotiation of the contract. It should then be possible to determine the advisability of continuing the CSC contract or relax the objectives to the extent that NLM intramural capability can complete the task, albeit in an extended time frame which would enable the Library to define its objectives better at a slower pace. For the time being, consideration should be given to joining MEDLARS I and AIM-TWX.

Library Operations has already identified all non-essential elements of MEDLARS II which might be stripped out. However, CSC has said that elimination of the requirement for activities on such library functions as acquisition, serial records, cataloging, and the like would reduce the efforts minimally - about 14 man months. Per contra CSC had said in the past that such requirements were among the most complicated in the entire program. Dr. Wagman told of long term efforts at Chicago and at Stanford to build such a system with "very good people" which is not yet completed.

The Chairman agreed that the draft letter should be sent to CSC but asked what would happen if a decision to cancel the contract resulted from the demonstrations on May 1. Dr. Cummings outlined the legalisms and technical details and assumed complete responsibility for the decision and its consequences.

Dr. Michael questioned the state of the art in relation to MEDLARS II objectives. The consensus regarded the objectives as feasible of attainment. The Director, NLM, agreed. He identified these errors from retrospective analysis:

1. The NLM engaged a contractor to write the specifications for the MEDLARS II system, which became the Request for Proposal. It was written almost entirely on functional grounds, a departure at that time from more conventional descriptions.
2. The NLM should have known that the lowest bid was too low. Additional questions elicited the information that the lowest

bidder, CSC, was not the Library's first choice on the basis of cost alone. CSC and IBM were extremely close in technical evaluation.

3. The NLM was unaware that CSC had employed a "second team" staff on the MEDLARS II program and did not insist on upgrading their capabilities for many months when slippages and over-runs appeared.

A major error by both parties was to allow the design concept to include many functions. "Any good software company should be able to build the MEDLARS II system," said Dr. Cummings.

The Chairman expressed the opinion that Dr. Baker's point was that the system now being developed could not be patched up to do the job; a new start would be required. The group assented.

Discussion centered on a fall-back position for the Library should the CSC demonstration fail on May 1. Mr. Augenstein espoused a combination of upgraded MEDLARS 1 (presumably on Honeywell 800), AIM-IX (again, presumably an expanded version) and the on-line capabilities demonstrated earlier in the day by the Library's Specialized Information Services. The last is loaded on a computer owned by Mead Data Central which leases its services only, costs are not necessarily stable, and the system has no production capability of the type required to produce the NLM bibliographic compilations. The Director, NLM, considered reliance on Mead Data Central too risky under the circumstances. He felt the cheapest fall-back position to be a modified MEDLARS I with input via Keymatics directly to magnetic type, an imperative in view of the deteriorating flexowriters which were specially designed to meet the Library requirements, and possible replacement of the Honeywell 800 with a new one at a cost of \$600,000. The disadvantage of that approach is the limited and already saturated vocabulary capability of the Honeywell 800.

Dr. Mider suggested that the Swedish MEDLARS I tapes written for IBM 360 equipment could be available to run on the IBM 370/155 due for delivery at the NLM in July 1971. Those tapes do not include the instructions essential to photocomposition, but perhaps that piece could be added.* Mr. Zipf thought

* Earlier in the open meeting Mr. Simmons had reported successful demonstration of programs written by CSC for photocomposition on LINOTRON and for output on a line printer. However, the programs do not yet work for PHOTON 901. The distinct possibility exists that photocomposition programs so essential to the publication function may be available soon to link with the Swedish MEDLARS tapes because the CSC programs are now being tested on IBM 360/50 at the NLM. This point was not brought out at the meeting, although it was established that programs written for IBM 360 series would also run with little difficulty on IBM 370 equipment.

this possibility should be explored. Though some of the desirable capabilities of the more powerful computer might have to be sacrificed, the IBM 370/155 would permit expanded vocabulary. He indicated that the 370/155 run in an emulator mode would be better than the H800.

The Board then agreed without dissent to the draft letter addressed to the President, CSC. Director, NLM, said he would mail it before the day was out, after first reading its content to the Eastern Representative of the company. He then reaffirmed his intent to restrict expenditures by CSC to a total of \$3.8 million, saying that any additional funds required to complete MEDLARS II would be used to finish the system in-house.

The Chairman felt it essential to build broader computer capability in-house as a long range objective. All agreed. The Chairman complimented the Director, NLM, on his detailed reports of developments with CSC over the years, to which Dr. Cummings responded by thanking the Board, however "inadequately," for their efforts on behalf of the Library both at its stated meetings and during the intervals between meetings.

The Board expressed regret for the resignation of Dr. James Fletcher necessitated by his appointment as Administrator of the National Aeronautics and Space Administration. This led to a brief explanation by the Director, NLM, of the mechanisms by which Board members are appointed.

The Director, NLM, also reported the recruitment of Dr. Barry Beattie to represent NLM interests in the Alaska Communications project.

Adjournment came at 2:37 p.m.

Respectfully Submitted,

/s/ Martin M. Cummings, M.D.

Martin M. Cummings, M.D.
Executive Secretary, Board of Regents
National Library of Medicine

Bethesda, Maryland

RESOLUTION OF THE BOARD OF REGENTS, NATIONAL LIBRARY OF MEDICINE,
ADOPTED UNANIMOUSLY IN EXECUTIVE SESSION,
MARCH 23, 1971.

The Board of Regents of the National Library of Medicine has reviewed the budgetary history of the Library for fiscal years 1968 through 1972. The Board is concerned with the inadequacy of that support in the face of rapidly rising, uncontrollable costs, and more importantly in the light of the current administration's avowed purpose of making excellent health resources more readily available to the American public.

The Board notes that the budget for the National Institutes of Health increased about 50 percent between 1968 and 1972. It is recognized that the addition of the Bureau of Health Manpower Education may have been the major contributing factor to that increase. In our view the failure to provide commensurably adequate resources to the Library during that same period reflects failure of the Department of Health, Education, and Welfare to comprehend the implications of the health priorities established in the President's recent message to the Congress.

The creation of new knowledge and manpower to improve the capabilities of health professionals for preventing disease or treating it more effectively must be communicated to those who need that information, through the organized systems developed by libraries in general and the National Library of Medicine in particular. Moreover, students of the health professions need exactly the same information, although the rapidly evolving changes in curricula indicate a serious need for innovative formats, audio-visual in the main, to supplement more conventional texts. The National Library of Medicine is the world's preeminent organizer and purveyor of biomedical information, the essential ingredient of professional practice and education emanating from a vigorous research effort.

The Board of Regents entreats the Secretary of Health, Education, and Welfare to concern himself with the impact of an array of Federal health programs on the activities of the National Library of Medicine. It is convinced that more effective delivery of health services and economies of scale in health professional education can be realized by greater familiarity with the Library's activities and capabilities.

Particularly, we believe that solutions to the socially compelling problems of degenerative and malignant disease, and of environmental health, involve ingenious access and utilization of knowledge. This combination depends on the scope and depth of accessible literature. The organized record is indeed the basis for use of what has been learned. It seems to us that resources put into research, development and education must be

accompanied by suitably enhanced budgets for information services by the National Library of Medicine. Although better coordination of conveyance of information by operating health agencies is another urgent mission suitable for the Library, we doubt that there is now an adequate transfer of knowledge into useful action in any portion of our Federal health programs. Further, we are convinced that a vigorous, innovative, technically strong information handling capability in the National Library of Medicine and its Lister Hill National Center for Biomedical Communications will inspire our national health care institutions to use the world store of biomedical knowledge.

Without additional support the resources of the National Library of Medicine are unable to cope with the increased demands for information services generated by programs for health care delivery, health education, and health research.

Respectfully submitted,

Chairman, Board of Regents
National Library of Medicine



DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
PUBLIC HEALTH SERVICE
NATIONAL INSTITUTES OF HEALTH
BETHESDA, MARYLAND 20014
March 23, 1971

NATIONAL LIBRARY OF MEDICINE

Mr. William R. Hoover
President
Computer Sciences Corporation
1901 Building - Century City
Los Angeles, California 90067

Dear Mr. Hoover:

On March 21 representatives of the Library met with your project managers to define the four demonstrations (set forth in Schedule A attached) to take place on May 1, 1971. Your Mr. Kazck telephoned Mr. Zipf at the Library on March 22 to inform him that you agree that if you can not satisfactorily perform these demonstrations by May 1 you will absorb whatever costs are pertinent thereto until such time as they can be performed in accordance with Schedule A.

We are prepared to accept this commitment as an indication of your personal appraisal and interest in the successful pursuit of the MEDLARS II program. While these demonstrations represent a very small segment of the overall system, your personal confidence in their accomplishment will in large measure help restore the Board of Regents' confidence in the ability of the CSC to forecast completion dates and budgets with some reliability. The demonstrations will also provide the Board firmer benchmarks on which to base their recommendations on the program.

On March 16 your associates presented to me the attached schedule showing various levels of expenditure during 1971. It is within the framework of the expenditures shown in this schedule that we now authorize you to proceed with the demonstration scheduled for May 1, 1971. This authorization is also predicated upon the aforementioned schedule which shows a system available for acceptance-operational testing by mid-November 1971 at a cost not to exceed \$3,648,284.

It is upon the basis of the foregoing that we are now prepared to rescind our order to "stand down."

On the basis of your conversations with Mr. Zipf, he indicates that you volunteered to spend as much time as is necessary to review the current status of the project with the library staff and its advisers and your

own staff. We believe that such a meeting is imperative and should be scheduled before May 1; the dates of April 14 and 15 appear possible from our standpoint.

It will be appreciated if you will sign a copy of this letter and return it as an indication of your agreement with its contents.

Sincerely yours,

Martin M. Cummings, M.D.
Director

Enclosure

cc: Dr. Nashman

AGENDA

Thirty-Ninth Meeting of the
BOARD OF REGENTS
National Library of Medicine

9:00 a.m., June 14-15, 1971
Board Room
Bethesda, Maryland

- I. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. Robert Ebert
- II. CONSIDERATION OF MINUTES OF LAST MEETING Dr. Robert Ebert
TAB I
(Orange book)
- III. DATES OF FUTURE MEETINGS Dr. Robert Ebert
1971 and 1972 Calendars in all books
Next Meeting - November 22-23, 1971 (M-T)
Subsequent Meeting
March 27-28, 1972 (M-T)
Selection of Meeting Date - June 1972
15-16 19-20 22-23
(T-F) (M-T) (T-F)
- IV. REMARKS BY THE ASSISTANT SECRETARY FOR Dr. Merlin DuVal
HEALTH AND SCIENTIFIC AFFAIRS AND THE Dr. Robert Harston
DIRECTOR, NATIONAL INSTITUTES OF HEALTH
- V. REPORT OF THE DIRECTOR, NLM Dr. Martin Cummings
TAB III
- VI. NATIONAL MEDICAL AUDIOVISUAL CENTER Dr. Charles Bridgman
TAB IV

LUNCH (Open Choice)

(Cafeteria in NLM on A Level, O'Donnell's Restaurant, 8301 Wisconsin Avenue,
Bethesda, Md., Governor's House Restaurant, 8400 Wisconsin Avenue, Bethesda,
Maryland (both within a few blocks walking distance))
- VII. REPORT OF THE ASSOCIATE DIRECTOR Dr. Lee Langley
FOR EXTRAMURAL PROGRAMS (gray book)
- a. Critical Review and Evaluation of Dr. Lee Langley
the NLM Grant Supported Research Dr. Lee Langley
Program TAB I
- b. Report of the Training Directors' Dr. Lee Langley
Meeting Held May 9-10-11, 1971 at Dr. Ann Kaufman
the Belmont House TAB II

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|---|------------------------|---|
| c. Results of the Meeting on Library Automation | TAB III | Dr. Lee Langley
Mr. Arthur Broering |
| d. Policy Issues | TAB IV | Dr. Lee Langley |
| e. DRG Administrative Report | TAB V | |
| VIII. CONSIDERATION OF PENDING APPLICATIONS | | Dr. Lee Langley |
| Confidentiality of Proceedings and Conflict of Interest | | |
| A. RESEARCH AND PUBLICATION GRANTS | TAB VI | |
| B. TRAINING GRANT | TAB VII | |
| C. RESOURCE GRANTS | TAB VIII | |
| IX. REGIONAL MEDICAL LIBRARIES | TAB V
(Orange book) | Dr. Harold Schoolman |
| ADJOURNMENT | | |
| DINNER (DUTCH TREAT) - HOLIDAY INN OF BETHESDA - MONTGOMERY ROOM
8120 Wisconsin Avenue, Bethesda, Maryland | | |
| Cocktails: 6:30 p.m. | | Dinner: 7:30 p.m. |
| <u>AWARD CEREMONY</u> | | |
| (1) Board members completing their terms of office. | | |
| (2) Board award to NLM Staff member for Scholarship and Technical Achievement. | | |
| RECONVENE - 9:00 a.m. - June 15, 1971 | | |
| X. REPORT OF THE ASSOCIATION OF AMERICAN MEDICAL COLLEGES, ROLES FOR THE LISTER HILL CENTER | | Dr. Eugene Stead
Duke University
Dr. William Anlyan |
| XI. LISTER HILL NATIONAL CENTER FOR BIOMEDICAL COMMUNICATIONS REPORT | TAB VI | Mr. Albert Feiner |
| XII. MEDLARS II DEVELOPMENT | TAB VII | Mr. Ralph Simmons
Mr. Alfred Zipf |
| XIII. REVIEW OF FOREIGN MEDLARS CENTERS | TAB VIII | Mr. Bruno Augenstein |

LUNCH - Catered in Board Room

XIV. EXECUTIVE SESSION

ADJOURNMENT

THE BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE 39th MEETING

June 14-15, 1971, Bethesda, Maryland

MEMBERS PRESENT: Dr. William G. Anlyan, Mr. Bruno W. Augenstein, Dr. William O. Baker
Dr. Harve J. Carlson attended the first day of the meeting,
Dr. Robert H. Ebert, Dr. Jack M. Layton, Dr. John P. McGovern,
Dr. Max Michael, Jr., Dr. George W. Teuscher

MEMBERS ABSENT: Dr. L. Quincy Mumford, Dr. Frederick H. Wagman

ALTERNATES: Brig. Gen. Gerrit L. Hekhuis represented Lt. Gen. Towner both days,
Dr. Raymond T. Moore represented Dr. Steinfeld the first day,
Mrs. Martha Phillips represented Dr. Musser both days,
Capt. Edward J. Rupnik represented Vice Admiral Davis both days,
Brig. Gen. Thomas J. Whelan represented Lt. Gen. Jennings both days

GUESTS: Dr. John F. Sherman, Deputy Director, National Institutes of Health,
Dr. Kenneth M. Endicott, Director, Bureau of Health Manpower Education,
Dr. John A.D. Cooper, President, Assoc. of American Medical Colleges,
Dr. Eugene A. Stead, Jr., Professor of Medicine, Duke University,
Mr. Alfred Zipf, Exec. Vice President of the Bank of America, Consultant,
Dr. Fred Cole, President, Council on Library Resources, Inc.,
Mr. John Sherrod, Director, National Agricultural Library,
Dr. Rob S. McCutcheon, Executive Secretary, Toxicology Study Section,
Mrs. Ileen Stewart, Executive Secretary, History of Life Sciences
Study Section and the Biomedical Communications Study Section

STAFF: Dr. Martin M. Cummings, Dr. G. Burroughs Mider, Dr. Jeanne Brand,
Dr. Robert J. Benford, National Library of Medicine, Consultant,
Dr. Charles Bridgman, Mr. Arthur Broering, Mr. Raymond Brown (OCES),
Mrs. Dawn Carlisle, Dr. Ralph Christenson, Mr. Peter Clepper,
Mr. Lawrence Coffin, Miss Mary Corning, Mrs. Doris Doran, Mr. Albert
Feiner, Mr. Joseph Foley, Mrs. Louise Gamage, Mrs. Frances Howard,
Dr. Ann Kaufman, Dr. Leonard Karel, Dr. Henry Kissman, Dr. Lee Langley,
Dr. Joseph Leiter, Mr. Davis McCarn, Mr. Peter Monk, Miss Irene Moore,
Dr. Paulo Pamplona, Mrs. Frances Rigau, Dr. Harold Schoolman,
Mr. Ralph Simmons, Mr. Kent Smith, Mrs. Janet Welsh, Mr. Richard West

MARCH 1971 MINUTES APPROVED, FORTHCOMING MEETINGS SCHEDULED

Minutes of the March 22-23, 1971 meeting were approved, and meeting dates of November 22-23, 1971 and March 27-28, 1972 were reaffirmed. June 15-16 was tentatively selected as the date of the second meeting in 1972.

OPENING REMARKS OF THE CHAIRMAN OF THE BOARD

Dr. Ebert opened the meeting with a welcome to Captain Edward J. Rupnik, M.C., USN, representing Vice Admiral Davis; Mrs. Martha Phillips, Deputy Director for Education Service, Veterans Administration, representing Dr. Marc J. Mussar; and Dr. Fred Cole, President, Council on Library Resources, Inc.

Dr. Cummings introduced new members of the Library Staff:

Mr. Raymond Brown, Deputy Associate Director, Office of Computer and Engineering Services; Dr. Fred W. Clayton, Chief, Toxicology Information Services, SIS; and Mrs. Frances Rigau, Committee Management Assistant who succeeds Mrs. Ann Sabin.

The Chairman welcomed Dr. Raymond Moore, representing the Assistant Secretary for Health and Scientific Affairs, who announced the appointment of Dr. Merlin DuVal to succeed Dr. Roger Egeberg on July 1, 1971. Dr. DuVal plans to be present at the November meeting of the Board.

Dr. Ebert welcomed Dr. John F. Sherman, Deputy Director, NIH.

REMARKS BY DR. JOHN F. SHERMAN, DEPUTY DIRECTOR, NIH

Dr. Sherman commented that Dr. Marston is attending hearings on a bill to establish a National Institute of Gerontology within the NIH. Gastroenterologists, kidney specialists, marine medicine people, and sickle cell anemia proponents are also urging establishment of new institutes within the NIH.

Mr. Steven Kurzman, formerly a member of Senator Javits' staff, has joined the Department as Assistant Secretary for Legislation. Mr. Robert Beatty of Boise-Cascade is the Department's first Assistant Secretary for Public Affairs.

Dr. Sherman briefly discussed pending legislation: 1) Welfare reform and revenue sharing; 2) Higher education and education generally; 3) Health - a. major effort by the administration to do something about increasing effectiveness of delivery of health care through a health maintenance organization; b. manpower - renewal of authorities and the Health Professions Education Assistance Act and the Nursing Assistance Act. The current authorities will be modified rather extensively both qualitatively and quantitatively; c. cancer - a considerable, far-reaching legislative movement; d. comprehensive or national health insurance; e. reorganization to bring the Executive Branch under more reasonable coordination and control.

The proposal would enlarge DHEW despite the Department's already large responsibilities; f. management - now under Dr. Roderick Brady, new Assistant Secretary for Administration.

The Health Professional Education Assistance Act expires on June 30, 1971. New proposals will require some compromise on 1) Student assistance; 2) Construction; 3) Institutional support. The Senate recently held hearings on the Yarborough-Kennedy proposal to establish creation of a separate Cancer Authority and on an Administration bill which would retain the Cancer Authority in the NIH. A third bill - essentially a modification of the first, by Senators Cranston, Nelson and Schweiker, proposes removing all of NIH from DHEW.

The NIH is concerned about creation of a separate authority whose activities would not be coordinated with other substantive programs in biomedical research generally and has expressed its misgivings. The American Heart Association which has now modified its original position, suggests keeping biomedical research components together but elevating the Heart and Lung Institute to a different status within the NIH and broadening the scope of its programs.

NIH budget hearings have been completed in the House and are awaited in the Senate.

Dr. Anlyan said that in the context of Dr. Sherman's presentation, the Board of Regents recognizes only minimal visibility of the need for Library services for the new programs. Planning for discussion of cancer information services has been negligible. Little support is available for free-standing health sciences libraries not part of an educational complex. Dr. Anlyan expressed the view that the Regents should emphasize their views to NIH and DHEW.

Dr. Ebert reiterated that one cannot separate communications and retrieval of information from research activities; unless the two go together money will inevitably be wasted. Dr. Baker then commented that there is still a great deal of uneasiness with respect to the role of the NLM and of information and communications in the cancer mission. DHEW has not identified the major operational needs of a cancer mission of this kind which include communications.

REPORT OF THE DIRECTOR, NLM

The Director offered his congratulations to Dr. Baker and Mr. Zipf on their recent appointment to the President's Commission on Libraries and Information Science and to Dr. Layton on his appointment as Dean of the University of Arizona School of Medicine.

On May 10, 1971 Dr. Marston convened a meeting of an Intercouncil Advisory Group to which a representative of each Institute's Council and a representative of the Board of Regents was invited. Major concerns of the NIH were discussed. The Board has been asked to report back to NIH whether this kind of meeting is desirable.

Dr. Anlyan, the Board's representative, considered the meeting worthwhile as a medium for information exchange among the Advisory Councils and suggested that it might be useful to have one more meeting.

Dr. Cummings announced that on April 19 he had decided with full support of the Board's consultants and the NLM staff, to allow the Computer Sciences Corporation contract to terminate. To deal more efficiently with the completion of MEDLARS II, the Library has established a Directorate Management System organized to handle the contract with the Systems Development Corporation. Mr. Davis McCarn will have the prime management responsibility for completion of AIM-TWX and MEDLARS II. The Library has also identified tasks that it can fulfill in-house in the construction of MEDLARS II. Two are already in progress: Programming for input with keymatic devices and programming for use of the Linotron system of the Government Printing Office. Both efforts are meeting with success. Deadlines for the completion of these two tests are June 30, 1971, for the first program and September 1, 1971, for the second.

The National Technical Information Service of the Department of Commerce has agreed to act as the NLM's agent in the replication, sale, and distribution of MEDLARS tapes at \$30,000 per year. The formal agreement specifies that NLM will approve the use of each set of tapes. Income is to be shared equally with the Department of Commerce; the NLM share will revert to the Treasury. No sales have been made thus far. The sale of MEDLARS tapes has raised the problem of compatibility of policies among various Federal Agencies selling tapes. Mr. William Knox, Department of Commerce has suggested that the various Agencies generating information tapes standardize their pricing and marketing policies.

Sales of interlibrary loan services abroad have led to a decrease of some 66 percent in the number of foreign loans made.

The National Science Foundation has announced the appointment of Mr. Melvin Day, formerly of NASA, to succeed Dr. Burt Adkinson as Chief of its Office of Science Information Services.

The COSATI apparatus, a component of the Federal Council on Science and Technology, will be transferred to the National Science Foundation. Mr. Melvin Day will replace Col. Andrew Aines as Chairman of COSATI.

The Director proposed that distinguished visiting scholars in residence at NLM be formally designated as NLM Scholars in Residence or as Visiting Scholars. The Board approved this suggestion and recommended that the Library develop specific guidelines for implementation of the program.

The Director called the Board's attention to an important report now being circularized through the Federal Agencies entitled "A Study of the Environmental Quality Information Programs in the Federal Government." Dr. Henry Kissman was chairman of the panel which wrote the report. It contains a fine analysis of information analysis systems in a highly specialized field which may be extended more broadly to associated specialized information programs.

The Director concluded his remarks with mention of lengthy visits with and inquiries from several distinguished members of the Executive and Legislative Branches and Secretary Richardson's knowledgeable reference to the NLM at a National Press Club luncheon.

Dr. Mider reported the gist of the NLM hearings before the Subcommittee for Labor-Health, Education and Welfare of the House of Representatives Committee on Appropriations on May 12, 1971.

Dr. Mider then presented a report entitled "National Library of Medicine - National Cancer Institute Relationships" which appears as Appendix I. Dr. William Baker complimented Dr. Mider on his analysis of the literature in this field.

Dr. Ebert welcomed Dr. Luther Terry, former Surgeon General, US Public Health Service. Dr. Terry commented that his attachment to the Library is very long and very deep. The present NLM building was dedicated while he was Surgeon General. The Medical Library Assistance Act had been passed just before he left in May 1965. Also, as Dr. Cummings had earlier indicated, Dr. Terry had served for four years on the Resources Facilities Committee of the Library. His interest in libraries continues; during the time he has been at the University of Pennsylvania the latter's library budget has quadrupled.

COOPERATIVE MEDIA DEVELOPMENT PROGRAMS--EVALUATION AND TEACHING PACKAGES

Pursuant to recommendations of the Board of Regents and directives of the NLM, during the past year the NMAC has initiated an active program of cooperation with national professional medical organizations, to make useful instructional media available to the medical community. This program has two components: Location and peer evaluation of existing instructional media, and the development and production of pilot instructional units. These units are based upon instructional objectives identified by cooperating groups and are designed in modules to permit economical modification as indicated by student tryouts or as material becomes obsolete. Upon completion of the pilot phase, it is hoped that the appropriate professional organization will assume responsibility for production and utilization.

This activity appears to be of such importance to several medical organizations that they have hired full-time professional instructional media program directors. For example, The American Physiological Society has recently hired a physiologist as Head, Education Office, who is presently working with NMAC to identify existing audiovisual materials in physiology, and is actively soliciting support for a six-month planning phase prior to beginning instructional media design and production.

Typical of the projects are those under development by the Association of Deans of Southern Medical Schools, a consortium of 28 medical schools. Several planning sessions have been held and a position paper entitled "A Program for Sharing Independent Learning Resources in the Southern Region" defines the group's commitment. A full-time program director has been appointed who will work with a trio of deans with broad executive authority, and a steering committee of seven coordinators. Individual

instructional packages in modular format will be produced in "trial" form by various members of the consortium. There are perhaps 100 experimental teaching packages identified as in-house productions within the various schools of the consortium which may be finished at NMAC for distribution. A self-study multi-media unit on "The Neurovascular Examination" has been developed at NMAC. This unit is now undergoing student use with revisions to be made based on test results.

Basic materials in ophthalmology for medical students are being developed by two ophthalmologists at the University of Iowa Medical School with limited financial support from the Association of University Professors in Ophthalmology.

For Dental Health Manpower Training (DHMT), Division of Dental Health (DDH), Bureau of Health Manpower Education (BHME), a slide/sound production was developed on the TEAM approach to dentistry. Completed May 1971, DHMT staff have previewed it and are enthusiastic.

The American College of Orthopaedic Surgeons with the aid of partial financing by the Veterans Administration, and input from the Office of Research in Medical Education at the University of Illinois Medical Center, is developing 60 sound/slide units for use in undergraduate teaching. Five units in the series are now at NMAC for production finishing; approximately 23 or more are expected by end of June after peer review by a committee from the American College of Orthopaedic Surgeons. These units will initially be made available to approximately 160 VA Hospitals.

The Association of Anatomy Chairmen Committee on Audiovisual Development, and the Committee on Educational Affairs and Learning Resources of the American Association of Anatomists will meet at the NMAC in June to sharpen the focus on future anatomy projects. An effort to relate the development of anatomy teaching packages to the objectives of the National Board of Medical Examiners is a hopeful outcome. Under the "University-on-Loan" program, a faculty member of the Department of Anatomy, University of Kansas, is now committed to spend his sabbatical leave at the NMAC starting in January 1972. He will work primarily in the area of evaluation of anatomical teaching materials but will be prepared to function in other areas of need as relating to the teaching of anatomy.

Other approved projects include those with the Association of Schools and Colleges of Optometry (pilot units on ocular pharmacology are in production), Universities Associated for Research and Education in Pathology, Inc. (three teaching units), Alpha Omega Alpha Honor Medical Society (three television programs on "Great Man in Medicine"), and the Association of Professors of Gynecology and Obstetrics (provision of multi-media instructional units to 100 medical schools), the latter project in cooperation with the Lister Hill National Center for Biomedical Communications.

Additional projects under development which have not yet reached final proposal stage are with the American College of Surgeons, Harvard Medical

School, Department of Pathology, the University of Pennsylvania, Department of Neurology, the University of Alabama Medical Center, School of Community and Allied Health Resources, and the University of Florida, School of Health Sciences.

A major evaluation activity secures peer group assistance in bringing quality control to the cataloging, acquisition, and distribution programs and to provide a mechanism to inventory and review audiovisual media in conjunction with the Cooperative Media Development Program. The NMAC has been working with surgeons from the Veterans Administration for the evaluation of over 400 surgical film titles, with the American College of Radiology which periodically submits film titled to the NMAC for acquisition, with the Association of American Colleges Medical School Pediatric Department Chairmen, Inc., The American Association for Cancer Education, the American College of Cardiology, the American Academy of Dermatology, and the American Physiological Society.

Dr. Bridgman concluded his report with a demonstration and discussion of several kinds of instructional films, video tapes and 3-dimensional functional models which could comprise a teaching package to cost about \$100,000 each. The Board expressed the view that this kind of program would be an inexpensive way to enhance teaching and learning if used by all medical schools.

EXTRAMURAL PROGRAMS 1/ 2/ 3/

REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS

Dr. Langley announced that Senator Humphrey introduced a joint resolution into the Senate on May 24, requesting the President to proclaim June 1, 1971, as National Medical Library Day. The joint resolution passed the Congress unanimously and President Nixon signed it. The date of June 1 was picked to coincide with the national meeting of the Medical Library Association. Dr. Langley discussed the following subjects:

Critical Review of the Research Grant Program -- At present, the research grants program allocation is \$590,000. The Library has supported 72 projects since the program began; 27 are still in progress. Projects include three broad subject areas: library research, biomedical communications, and history of medicine. The history of medicine program has been active and of good quality. The two other programs, however, have not been as satisfactory.

- 1/ Proceedings of meetings are restricted unless cleared by the Office of the Director, National Institutes of Health. The restriction relates to all material submitted for discussion at the meetings, the agenda for the meetings, and supplemental material, and all other official documents.
- 2/ For the record, it is noted that members absent themselves from the meeting room when the Board has under individual discussion applications (a) from their respective institutions, (b) in which a conflict of interest might occur.
- 3/ The Board of Regents, when considering the Extramural Programs of the NLM, also consists of the National Medical Libraries Assistance Advisory Board, and concurrently discharges the responsibilities of both bodies.

The Board's Subcommittee for Extramural Programs expressed the view that the Library should involve itself in basic processes of information and actively support projects in linguistics. The Subcommittee recommended that the Library organize a conference bringing together knowledgeable persons in linguistics and related fields to discuss their relationship to the general mission of the Library. The cost of the conference was estimated at \$15,000 - \$20,000. The Board concurred.

Conference of the Training Grant Program Directors May 9-11, 1971 --

The Conference provided an opportunity for familiarization with the various training grant programs; an opportunity for defining manpower needs and suggesting programs to meet those needs; and an opportunity for productive interchange of views.

Dr. Teuscher, who represented the Board at the Conference, commended Dr. Langley for stimulating attendees to enter into a thorough discussion of the problem and thought that the conference was a great success.

Dr. Langley presented the Board with two proposals for their consideration:

1. To support only internships in medical librarianship, or
2. To convert the active masters degree programs either to internships or to internships plus Ph.D. programs which would incorporate special training in one or more of the biomedical sciences.

Dr. Cummings said that whether librarians should be trained on a broad base and then specialized, or whether they should be given specialized training from the start, represents a critical point both in terms of philosophy and budget. He suggested that Dr. Langley provide the Board with data showing what has happened to the people who have already received support for training and that the matter be scheduled for Board review at their next meeting.

Results of the Meeting on Library Automation -- The following criteria to be applied to resource grant applications proposing library automation projects were adopted by the Biomedical Library Review Committee on May 4, 1971:

1. Feasibility analysis - literature review and cost benefits
2. System types - conventional or innovative
3. System resource - own computer, some other computer, or computers used in a cooperative enterprise
4. Systems integration - multipurpose use of an automated system
5. Phase-over timing of change from manual to automated system

6. Back-up capabilities in event of machine down time
7. Selective dissemination of information - not advisable for applicant to request funds to engineer such a system
8. Check points - interim progress reports to NLM in addition to the grant-year reports

Policy Issues -- The Board has recommended that applications for resource grants be divided into two groups:

1. Those from health-related libraries, and
2. Those from libraries not primarily health-related

The Subcommittee of the Board was asked to consider a change from existing policy that all applications continue to be reviewed, but awards will be governed by policy assigning top priority to group 1 applicants. Thus, the Library must process and review each application. So many are being received that the Biomedical Review Committee had to meet for more than two days to complete their review. The Library has never funded any applications in group 2.

The Subcommittee agreed with staff. Therefore, whenever possible, the staff would continue to discourage resource grant applications from institutions which are not primarily health-related. If such applications are submitted the applicant is to be informed that his application will not be processed or reviewed until such time as all approved requests from libraries related to health are funded. Those libraries which are not primarily related to health but serve programs which in the judgment of staff, have major health significance would continue to be submitted to the Biomedical Review Committee and to the Board of Regents.

The Board accepted this statement.

Dr. Langley addressed the Board on the use of resource grants in the history of medicine to purchase rare books, to catalog such books, to repair rare books, to microfilm rare books, and to renovate reading rooms for rare book collections.

The Subcommittee recommended the use of resource grant funds for maintenance of collections but not for purchase of rare books, historical items, nor for renovation of facilities. The Board concurred.

The Subcommittee also recommended that, although worthwhile, security systems for protection of collections should not be funded through grants. The Board concurred.

Dr. Langley referred to an application from the John Crerar Library, a Regional Medical Library which applied for a grant to compile a regional

union list of serials. The Subcommittee discussed the request but because of insufficient information came to no decision. Despite the desirability of locator tools, Dr. Cummings informed the Board that philosophically the Library has supported only those union lists which would ultimately lead to the building of a compatible national list. Most of the regional medical libraries that have union lists have developed them under their own sponsorship. The Greater New York Library Center has a union list which NLM supported. It can serve as a national model for union list development. Dr. Cummings expressed the hope that the Board would discourage the Library from using funds for autonomous serial record building. After discussion the Board supported this view.

Consideration of Pending Applications

The Board of Regents, acting concurrently as the National Medical Libraries Assistance Advisory Board, reviewed the following grant applications:

Research and Publication Grants	Reviewed	27	\$667,047
	Approved	7	122,070
	Disapproved	18	437,958
	Deferred	2	107,019
Training Grants	Reviewed	1	59,085
	Approved	1	56,005
	Disapproved	0	
Resource Project Grants	Reviewed	88	\$2,986,988
	Approved	27	554,635
	Disapproved	55	1,954,216
	Deferred	6	309,613

Resume of Board actions on all Extramural Programs are appended to these minutes.

REGIONAL MEDICAL LIBRARIES (RML)

Dr. Schoolman briefly reviewed the Board's recommendations and guidelines for converting RML support from grants to contracts to achieve greater management control and a more uniform coordination in the planning of growth and development.

The Library has now completed contract negotiations with seven libraries with two fundamental objectives: to provide greater management control and better coordination of planning and to partition the funding of RML in what might be called a service component to be funded by contract and research and development components to be funded by grants. Contract funds for the seven contracts came to \$1,333,347 whereas grant funds totaled \$1,360,144. The RML's will fill 275,000 interlibrary loans in FY 1972 compared to 239,000 under the grants in FY 1971.

The Library will develop a definitive statement of program objectives, a description of program structure, and a classification of the obligations and responsibilities of program elements. Such a document should eliminate ambiguity and provide uniform understanding of the nature of the program, especially as it relates to development of an interactive cooperating network as a model for study, growth and development of a nationwide Biomedical Communications Network. The network should have the following characteristics:

1. Rapid and efficient delivery of documents
2. Optimal cost effectiveness
3. Access to all of the nation's relevant information resources
4. National coordination
5. Ability to deal with that group of requests which cannot ordinarily be fulfilled by institutions of prime responsibility
6. Responsiveness to the broad variation in resources and users across the country.

The system design is hierarchial in nature, each higher level facility acting as a backup resource to the echelon below.

On the assumption that every community hospital in this country may be thought of as having an obligation to continuing education, the basic unit is best considered as a relatively independent, free-standing educational organization. This would include, but not be limited to the following:

1. Community hospitals
2. Colleges and Junior Colleges with meaningful health science education and training programs
3. Other health related schools, research organizations or governmental agencies.

A second level would be made up of selected institutions designated as resource libraries, in most instances, libraries of the nation's medical schools.

The third level would comprise the RML's, and the fourth level, the NLM, responsible for network management and control, a backup resource for the regional medical libraries, and RML for the mid-Atlantic states.

Basic policies will be determined by the Board of Regents. The Board would be kept informed by an annual report and review by NLM of the RML Program

(RMLP), and through a permanent subcommittee of the Board to review the practices and operations of the RMLP management.

Network management and control by NLM would be implemented by a senior management group consisting of the Special Assistant for Program Planning and Evaluation, Chairman; Associate Director, Library Operations (LO), and Associate Director, Extramural Programs (EM). The Associate Director, LO would be responsible, through his designee as Project Officer, for the service contracts with RMLs.

The Associate Director, EM, would assign an Associate Project Officer for fiscal control for service contracts. The Associate Director, EM, would supervise and direct the grants aspect of the RMLP according to guidelines established by the Director, NLM. The RMLP grant program would be open to all institutions on the basis of a national competition for funds to support research and development aspects of the network. The Associate Director, EM, would assure coordination of the Resource Grant Program with the implementation of the Regional Medical Library Program.

Dr. Cummings has accepted the offer of the Resources Review Committee to help in reviewing current and potential RML problems. Among problems to be considered are the geographic and institutional appropriateness of existing RMLs, the future of the free-standing medical libraries and institutional cooperation.

After an extended discussion the Board unanimously agreed to the principles stated and the issuance of formal guidelines.

Dr. Cummings said that Dr. Schoolman has done an outstanding job of coordinating the two voices of NLM, intramural and extramural. Before Dr. Schoolman assumed responsibility for this program, the Library had a serious problem arising from a dichotomy of management: one set of guidelines was being announced from the EM with a grant philosophy, and another set was coming from direct operations, which is oriented to production and technology.

AAMC REPORT ON LISTER HILL CENTER FUNCTIONS

As the first item of business on the second day of the meeting, the Chairman welcomed Dr. Eugene Stead of Duke University, Dr. John A.D. Cooper of the Association of American Medical Colleges (AAMC), and Dr. Kenneth M. Endicott, Director, BHME. Dr. Stead presented an overview and summarization of "Educational Technology for Medicine - Roles for the Lister Hill Center - Recommendations for a National Biomedical Communications Network", a report of the Steering Committee, Council of Academic Societies, Association of American Medical Colleges, published in March 1971. Dr. Stead said that, in the opinion of the Steering Committee, the Schools of Medicine working in concert with the Lister Hill Center could produce results greater than could be produced by either acting alone.

Discussion from the beginning centered around creation of a biomedical communications network consisting of a series of peripheral nodes throughout the nation. Communications among these nodes would be coordinated by the Lister Hill Center, which would stimulate and catalyze the development of materials by these centers and put them in a form and framework which would allow them to be used and distributed to the efferent portions of the network. The Committee had difficulty in finding a group of schools which were creating and sharing materials together to show on a small scale what could be accomplished.

Few, if any, schools have ever had a budget which would permit the production of materials other than printed materials for use in teaching programs. Unfortunately, preparation of better teaching materials brings neither recognition nor promotion in academe.

One function of the Lister Hill Center would be to obtain agreement throughout the educational world for production of materials for widespread use after peer review. The Center might sponsor production of standardized curricula in the form of modular blocks which could be adapted and manipulated by individual professionals. The various Associations of Professors could be the avenue through which one might begin to put together cooperative programs, to look for common funding, to have material prepared under supervision of an appropriate committee. One essential in the audiovisual field is an annotated catalog and a record of peer review to show the competencies involved in the preparation and review of material.

The Committee was also faced from the beginning with the problem of how to implement a network that did not exist even in the simplest of terms. Throughout the report the Committee has emphasized the need for educational funds, training funds, facilities present in places where materials are produced, and advice equivalent to the training programs of the NIH in other fields - to train a rather wide variety of people to handle these programs at a career or professional level.

The Committee was unable to find any reason why the network could not be effective with peripheral production, central coordination, central distribution, and effective peripheral utilization. Most of the problems are cultural rather than technological.

Dr. Anlyan agreed with Dr. Stead's point that we must await a new generation of consumers. One probably cannot rely on existing consumers to use the system effectively. Dr. Anlyan emphasized the following parts of the report:

Coordination of all biomedical communications in the health field in the Federal establishment. The Lister Hill Center should train or stimulate others to train manpower equipped to apply new knowledge and techniques in communications technology in the medical schools and other health educational settings. Its programs should also promote application of learning research in the design and evaluation of learning materials.

That the Board of Regents continue to urge the DHEW to provide more support for the educational programs sponsored by NLM. The Lister Hill Center should exercise unceasing concern for the acceptability of its programs. Program development should be concentrated in subjects, schools, and/or disciplines where the benefits of technology are already perceived and where support is actively sought.

Where the medical community has defined core curricula to meet educational objectives, the Lister Hill Center should be responsive to requests for assistance in preparing evaluating, and distributing audiovisual and computer materials to meet their needs.

Within each disciplinary area, it is the clear responsibility of content advisory groups to the Lister Hill Center to suggest priorities on programs and materials to be developed based on demonstrated needs and self-perceived wants. Dr. Anlyan recommends consideration of an alternative mechanism - for the Study Sections of the NIH to consider spending a part of their time addressing themselves to this issue which then might be called to the attention of Associations of Department Chairmen.

Dr. Anlyan believed that the Lister Hill Center should fund initially approximately ten regional medical divisions of computer science programs in medical centers with strong university programs which will develop needed manpower. These programs should also be encouraged to clarify the role of the computer in education and clinical decision-making and to standardize data collection and storage techniques as well as hardware and software so that material could flow between the programs and eventually be concentrated for distribution in the Lister Hill Center.

The Lister Hill Center should also increase its role in manpower training directed primarily to the development of three programs; central staff, educational technologists, and communications technologists.

Appointment by the Board of Regents of NLM of an advisory committee to the Lister Hill Center, whose overall objective should be the development of the educational program of the Lister Hill Center was also proposed.

The NLM ought to develop the interface on the university and academic health center side to get the program moving, funding should be obtained for several models - several mini-networks that can be tested and evaluated, using the discipline-oriented material which could be available to the non mini-network.

Dr. Endicott offered to work with the Regents in such a manner that the Bureau program and that of the NLM will reinforce and strengthen the excellent programs being developed by the Library. Cooperation between the NLM and the BHME was stressed by Dr. Endicott, who referred to funding for the BHME-NMAC program in FY 1972.

Dr. Cooper expressed his appreciation to Dr. Stead for his contributions to the report and said that the blending together of the various parts of the continuum of medical education that is developing, and the increasing interest of the academic medical centers in long-term education planning will facilitate development of the kinds of proposals already discussed. The AAMC regards the study and report as most timely. It will be published in July of this year in the Journal of Medical Education.

Dr. Ebert said that this kind of program will certainly revolutionize present concepts about education. It will require an enormous amount of work at the software level. His one word of caution was against development of too large networks too early.

Dr. Cummings remarked that Dr. Stead's presentation served as a better vehicle to convey what the program and problems are all about than did the report itself. For that reason, Dr. Cummings suggested that perhaps Dr. Stead's comments might be published as an editorial to accompany the report. The publication of the report will serve as a very useful means to generate needed public discussion and debate.

Dr. Cummings fully agreed with those who said that a companion piece to the report is needed to identify clearly the role of the health professional schools. NLM with support of the Board will be prepared to sponsor it.

The need for coordination within DHEW must be emphasized until the point gets recognition. Accordingly, Dr. Baker suggested formalization of efforts such as that between the BHME and the Library to demonstrate that such cooperative efforts benefit both participants and the Department.

Dr. Cummings had asked the senior staff of the Lister Hill Center, the NMAC, and the Library broadly to review the recommendations in the AAMC report to identify those which NLM can implement. The staff identified about one-third achievable by NLM within its present mandate, interest, talents and resources. Those that deal with the functions of NMAC are recommendations that the Library must accept and implement. Some of those are already under way. Those elements of the report that deal with today's communications technology and its applicability to health affairs can be implemented. Those that deal with the creative production and such matters as the input into the network are the recommendations which NLM would find difficulty in implementing. Therefore the Library sought the assistance of the BHME.

The Director concluded his comments with the following statement:

"The NLM may from time to time expand its visions and aspirations beyond the reality of its resources. Having done so, the NLM is not only willing but eager to share the opportunities that come out of studies like this with organizations and institutions in a better position to implement the ideas and recommendations."

In discussions which followed, Mr. Augenstein suggested that the report identify costs for its many excellent recommendations and that priorities be established for progressive steps within fiscal limits. Mr. Augenstein also suggested exploration of cooperative ventures with other organizations such as the BHME. Dr. Baker endorsed Mr. Augenstein's remarks and pointed out that the action content of the report is sufficiently demanding, expensive, and exhausting of talent to warrant a developmental phase.

Dr. Cummings expressed concern about dependence on some other Agency's budget for substantive parts of Library programs. He is interested in the philosophy of cooperation and the integration of program planning and offered the Lister Hill Center staff to provide staff support for such a study.

The Chairman, after more discussion, proposed appointment of a subcommittee of the Board to work with NLM staff to develop priorities for recommendations which could be priced and, further, to explore alternatives such as relationships that might be established with other Federal Agencies through research and development contracts.

LISTER HILL NATIONAL CENTER FOR BIOMEDICAL COMMUNICATIONS

Mr. Feiner briefly reviewed the background and current status of the major projects of the Center, emphasizing the communications satellite experiment with Alaska.

A conference in Seattle, Washington, March 15-16, brought together the Alaskans and personnel from Stanford University, the University of Washington, the University of Wisconsin, NASA, and DHEW. The overall outline of the experiment was coordinated with all interested parties. The approach to a two level voice network will be developed from the Alaskan Native Medical Center to the 5 Field Service Units of the Alaskan Native Medical Service and then from these service units to 20 selected locations.

The development of new capabilities, beyond voice, are now to be tested first by the universities and the Lister Hill Center in the "lower 48." Such tests will investigate the use of physiologic data, facsimile, slow-scan TV, and computer data. Engineering feasibility will be demonstrated followed by controlled medical evaluation. After these tests have been completed, the new capabilities will be tried in Alaska. Technical/medical tests of new capabilities will be done in a priority order established by the Alaskans.

The Library has recruited a young physician, Dr. Brian Beattie, who will be assigned to the Lister Hill Center and stationed in Alaska. He will be responsible for managing the medical side of the experiment, providing liaison with the various public and private medical groups involved, and overseeing the evaluation of the project. Installation of satellite terminals will begin in July and should be completed before October 1971.

The Biomedical Project has been expanded at the request of the Secretary, DHEW, to include a limited experiment in education under the auspices of the Office of Education. Remote equipments, speaker/microphone, will be added to schools in 21 locations so that the terminal can be used from the home of the village medical aide to the village school. These remotes can then be used to allow teacher - teacher conferences and provide broadcasts in general education subjects and community health instruction to the students.

MEDLARS II DEVELOPMENTS

Mr. Simmons summarized developments leading to termination of the Library's contract with Computer Sciences Corporation:

The MEDLARS II development project was reviewed at the March meeting of the Board of Regents. At that time, it was estimated that the INITIAL phase of the system probably would not be operational until June 1972, and that it would require between \$800,000 and \$1 million beyond the \$3,197,000 committed under the existing contract with the Computer Sciences Corporation. In addition to the schedule delays and increasing costs for the project, serious doubts were raised as to the acceptability of the system design at any cost or delivery date. The following questions were proposed as those requiring resolution.

Will the system, as designed, ever operate effectively for NLM? If so, when and for what cost? If not, what are the alternatives? The work during the latter part of March and April was directed toward the resolution of these questions. The consultants serving the Board, in conjunction with members of the Library staff, engaged in a detailed analysis of the MEDLARS II system. A review was also conducted of the on-line, interactive system known as AIM-TWX which was developed concurrently with the MEDLARS II project by the System Development Corporation. These reviews resulted in the following recommendations to the Director by Mr. Zipf and Mr. Augenstein:

1. The AIM-TWX interactive system should be expanded through an extension of the contract with the System Development Corporation.
2. The contract for the MEDLARS II development by the Computer Sciences Corporation should be allowed to expire and not be renewed or renegotiated.
3. A new fixed price contract should be negotiated with SDC to develop a computer based system (in a batch processing mode) for MEDLARS II to complement and be interactive with AIM-TWX.

The Director, NLM, as a result of the reviews and recommendations, notified CSC by letter and telegram on April 19 that he had decided not to extend the CSC contract for MEDLARS II. He requested that CSC utilize remaining funds in the contract to complete as much documentation as possible and identify that which was of most importance to the Library. CSC has since removed all of its personnel from the Library, and phased the staff of 49 down to 10.

A review is underway of the CSC documentation to determine those parts of the MEDLARS II work that may be of some use in the redirected effort, and plans are being developed to implement AIM-TWX on the NLM computer.

The Library has received from CSC (1) overall functional system specification, (2) detailed procedural design, (3) project control document, (4) detailed schedule of sub-events, (5) training plan, (6) data conversion capability specifications, and (7) miscellaneous working papers. CSC is to deliver the following by June 18, 1971:

1. Matrix of program status
2. Purpose and operation of each program
3. Summary overview for COSMIS, LPS and APS
4. Description for each module
5. Program specifications for 269 programs, and
6. Test cases that were used for unit and integrated testing.

The Library will shortly obtain software programs from Sweden to implement demand searches on the Library's IBM 360-50.

Mr. McCarn briefed the Board on the role of the System Development Corporation with respect to current AIM-TWX activities and their extension. In May SDC submitted a proposal on how the Library could build a reduced MEDLARS II. After a comprehensive review of this proposal, the Library suggested a number of alterations. These were made by SDC and agreement was reached on a letter contract. The letter contract does not have the status of a definitive contract but commits the Library to funding part of the development effort through a detailed system design but not to full implementation; it does obligate funds to complete the project should that appear desirable to NLM. The proposal covered (1) an extension of the present AIM-TWX service, (2) development of ELHILL II to make ELHILL III, and (3) creation of maintenance publication capabilities necessary for replacement of MEDLARS I.

Through a well defined procedure and management mechanism the Library will maintain control over hardware and software development throughout the course of the contract with SDC. A configuration control board will review all proposed changes.

The Chairman called on Mr. Zipf, who said that he was impressed with the knowledge, capability, and understanding of the SDC team and that extension of AIM-TWX is the wisest and the most efficient course of action. Mr. Zipf praised the Director for his courage in cancelling the CSC contract. Dr. Baker agreed and hoped that the competency of NLM's internal expertise will be enhanced. He said that the Library deserves appreciation of the

Board and others for its response to the unfortunate experience with CSC. He concluded that by maintaining a constant commitment to quality of its own staff, the Library will build an internal competency and skill which will carry forward to other programs.

REVIEW OF FOREIGN MEDLARS CENTERS

Between April 29 and May 12, Mr. Augenstein and Dr. Leiter visited the five European MEDLARS centers to brief them on the most recent developments relating to MEDLARS II and AIM-TWX. Mr. Augenstein and Dr. Leiter visited in London, Nottingham, Stockholm, Paris, Cologne and Geneva.

Without exception, representatives of the European centers expressed admiration for Dr. Cummings' courage and judgment when they learned the circumstances of the terminated CSC contract. All of the centers are interested in the SDC effort and should be involved at a very early stage. Such involvement will be beneficial to all concerned. Perhaps the NLM could sponsor a workshop reviewing this effort this fall. Mr. Augenstein's overall impression was that the people in European centers are enthusiastic, ingenious and innovative and are doing a very creditable job. The spirit and talent of NLM was reflected in the centers and is a credit to Dr. Cummings and his staff.

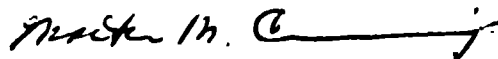
ANNUAL REGENTS' AWARD FOR SCHOLARSHIP AND TECHNICAL ACHIEVEMENT

Dr. Ebert announced that the second annual Regents' award for scholarship and technical achievement is being presented to Mr. Stanley Jablonski for his published work "Illustrated Dictionary of Eponymic Syndromes and Diseases and Their Synonyms." This is the work of an outstanding lexicographer. The volume represents both scholarship and a massive amount of hard work. The British Medical Journal said: "This dictionary is an astonishing work of scholarship for one man to have undertaken".

In his concluding remarks as Chairman of the Board, Dr. Ebert said how much he had enjoyed working with the Board and the staff. He said, too, that the morale of the Library seems unusually high.

At this point the Board of Regents acknowledged with signal gratitude the contributions made to the Board and to the National Library of Medicine by Dr. Robert Ebert, Mr. Bruno Augenstein and Dr. Frederick Wagman, and extended the thanks of the Board to them for their services during their tenure.

Respectfully submitted,



Martin M. Cummings, M.D.
Executive Secretary to the
Board of Regents
National Library of Medicine

Attachments

ACTIONS TAKEN BY THE BOARD OF REGENTS IN GENERAL SESSION
June 14-15, 1971

1. Formal designation of Visiting Scholars was agreed to in the Executive Session. The program is described in Appendix II.
2. The Board passed a resolution defining the relationship of the National Library of Medicine to the new Cancer Conquest Program. (See Appendix III)
3. The Board concurred with present Library practice of restricted distribution of audiovisual materials primarily but not exclusively to the support of health professionals.
4. The Board expressed the view that the Library should involve itself in basic processes of information such as linguistics, actively support projects in this area, and organize a conference for discussion of the relationship of linguistics to the Library's general mission.
5. The Board agreed, where possible, that the staff continue to discourage resource grant applications from institutions not primarily health-related. If such applications are submitted, the applicant is to be informed that his application will not be processed or reviewed until such time as all approved requests from libraries related to health are funded. Those libraries which are not primarily related to health but serve programs which, in the judgment of staff, have major health significance would continue to be submitted to the Biomedical Review Committee and to the Board of Regents.
6. The Board recommended the use of resource grant funds for maintenance of collections but not for purchase of rare books or historical items and not for renovation of facilities.
7. The Board accepted the recommendation that, although worthwhile, security systems for protecting collections should not be funded through grants.
8. The Board passed a resolution discouraging the Library from using funds for autonomous serial-record building. (See resolution Appendix IV)
9. The Board authorized implementation of the principles enunciated by the Library for construction of an interactive cooperating network as a model for study, growth, and development of a nationwide Biomedical Communications Network and endorsed issuance of guidelines.

10. The Regents award for Scholarship and Technical Achievement was presented to Mr. Stanley Jablonski for his published work Illustrated Dictionary of Eponymic Syndromes and Diseases and Their Synonyms.
11. The Board of Regents acknowledged with signal gratitude the contributions made to the Board and to the National Library of Medicine by Dr. Robert Ebert, Mr. Bruno Augenstein, and Dr. Frederick Wagman and extended the thanks of the Board to them for their services during their tenure on the Board.

NATIONAL LIBRARY OF MEDICINE - NATIONAL CANCER INSTITUTE
RELATIONSHIPS

The National Library of Medicine has offered its services to the National Cancer Institute on several occasions antedating the current debate on the Institute's future. Several members of the Library staff are former members of the NCI; two of us held major management positions. Therefore communications between the Library and the Institute are easy, perhaps too easy, because we know each other so well.

The Institute as an organization has never availed itself of MEDLARS capabilities despite Dr. Leiter's attempts to introduce them to this modern system. Individual members of the NCI have used MEDLARS effectively and recognize that the quality of a demand search is greatly improved by discussion of the topic with a trained MEDLARS analyst. One group in the Institute has been exposed to AIM-TWX, but we would not expect its comparatively small data base to satisfy the needs of this largest of the NIH research institutes.

The National Cancer Institute has published since 1940 its own monthly Journal containing original articles largely on laboratory research but including a substantial amount of demography and epidemiology. Contributions are refereed by a sophisticated editorial board of NCI staff. The Journal's coverage is global, accurately reflecting the swings of the popularity pendulum in cancer research, currently virology and immunology. Supplements to the Journal appear at irregular intervals dealing with some newly emerging facet of cancer research, or reporting a meeting to resolve controversial topics important to the field. The most recent of the supplement series deal with Cell Cultures for Virus Vaccine Production and Human Tumor Cell Kinetics.

The Institute has also published Cancer Chemotherapy Reports since 1959. Originally this irregular periodical, controlled by its own Editorial Committee, carried a notation that publication of material in its pages did not fulfill the need for publication of definitive expositions. That stipulation has been dropped. CCR was and still is intended to facilitate communication in the field of cancer chemotherapy. Thus it accepts screening data, preliminary reports, interim reports and the like, including abstracts of papers presented at meetings. It too publishes supplements, usually records of meetings important to the chemotherapy of cancer. The scientific content of Cancer Chemotherapy Reports may appear to be somewhat less precise than that of the Journal of the National Cancer Institute, but both are included in Index Medicus.

The Institute also publishes two abstract periodicals, Cancer Chemotherapy Abstracts and Carcinogenesis Abstracts. Each is produced by contract, and neither is highly regarded by the staff of the Institute though both are popular with cancer interests outside of Bethesda. Cancer Chemotherapy Abstracts is woefully behind. The November-December 1968 issues appeared this spring. They contained 1,862 items of which 141 (7.5%) were from 69 periodicals not covered by Index Medicus. The yield from those journals was less than five, and more frequently one article, except for the Journal of the Japanese Society for Cancer

Therapy which yielded 38, and Annales Casa Salud Valdecilla that contributed six articles. In other words, MEDLARS could have identified 92.5% of the articles to be abstracted by a monthly printout of the relevant titles. Of the articles from journals not included in Index Medicus I was able to find several authors who had written essentially the same paper for publication in an Index Medicus periodical, but did not quantify this factor.

Mr. Mills, of Specialized Information Services (SIS), performed a similar analysis of Carcinogenesis Abstracts for November-December 1970. It contained 558 abstracts. Thirteen publications accounted for about 40% of the abstracts; the balance came from 190 serials. Of the 13 high-yield sources, four were from publications not included in Index Medicus:

<u>Chemical-Biological Interaction</u>	10
<u>Recent Results in Cancer Research</u>	19
<u>Thyroid Neoplasia</u>	8
<u>Annual Reports, Argonne National Laboratories</u>	6

The first two of these are periodicals, but Recent Advances is a secondary publication. Thyroid Neoplasia is a book, and presumably the Annual Reports of the Argonne National Laboratories summarizes findings published in extenso in conventional journals, most of which would probably be included in Index Medicus.

Failure of the National Cancer Institute to avail themselves of MEDLARS capabilities may reflect in part the attitude of a former member of the National Advisory Cancer Council who testified before a Senate Committee on S-34 that MEDLARS was too slow in retrieving citations and insufficiently comprehensive in its coverage, particularly of clinical articles. This same gentleman is a compiler and editor of the Year Book of Cancer. The 1970 edition contains 313 footnotes that are bibliographic references. Actually the number of articles cited is larger because a single designation may cite more than one reference. Of the 313, only 13 (4%) cite articles not included in Index Medicus, and of those, two cite European doctoral dissertations, and only three cite serials published in the United States. The editors comment on the majority of the articles that are abstracted in the Year Book of Cancer, but commented on only five of the 13 articles obtained from non-Index Medicus periodicals.

The Director, NCI, wants better information services and told the Inter-Institute Council at its meeting on May 10 that some fraction of the \$100 million expected to swell its budget in fy 72 would be diverted to that purpose with the help of the National Library of Medicine. Conversations were initiated between the NLM and NCI on May 24, the new capabilities developed by SIS were described, and the NLM offered to provide existing services to the Institute on the same basis as to others and to develop such new services as the NCI might require.

Dr. Kissman had already offered to provide a special type of SDI service by screening citations emanating from monthly printouts from MEDLARS, Chemical

Abstracts, Biological Abstracts, Engineering Index, etc., based on profiles of interest by NCI staff and sending forward only the most relevant citations. The interests of NCI scientists span the entire spectrum of the biomedical sciences as well as clinical medicine. Therefore it would seem preferable to merge data bases and search them routinely for the proposed SDI service. Software for the use of such pooled data bases has been created by the University of Georgia among others. While MEDLARS has not been officially included in these "pools," experiments at the University of Georgia with a pilot MEDLARS tape have indicated, in Dr. Kissman's opinion, that such an inclusion would present no special problems. The Georgia software has already been acquired by Oak Ridge National Laboratories, and SIS could presumably utilize this capability through its contractor-operated Toxicology Information Query Response Center at ORNL. SIS personnel would assist NCI scientists in developing "interest profiles" and assure their currency through frequent interaction with the participants. I regard this experiment as highly desirable and one that the NLM should undertake in any case, providing adequate resources can be obtained.

We also offered the services of ORNL in preparing state of the art reviews on subjects of their choice at no cost to the NCI, at least for the time being.

Dr. Carl G. Baker told of the desire of a prominent senator that NCI set up a computerized data bank that would serve global interests in cancer research. He believes, and I agree, that the scientific base on which the study of cancer depends is too small and too soft to merit such a costly venture at this time. However, Dr. Baker did express an interest in two efforts:

1. Acquiring information more rapidly and more readily than conventional publication permits, and
2. A management information system.

The NIH has had experience in circulating unpublished documents and abandoned the effort when some proportion of the abstracts, summaries, preliminary reports or what have you proved to be the end of the road. Moreover, some scientific entrepreneurs used this device as a means of establishing a rather tenuous priority. The system was never intended to supplant conventional publication. It was started and stopped at the request of the scientific community. Any large scientific research organization is aware of the enthusiasm engendered by an unanticipated result which can lead one down a series of primrose paths if published prematurely. The idea of a "Journal of Irreproducible Results" has made most administrators wary of information that has not passed the several screens by which the scientific community assays the validity of its works. Nevertheless, it would be entirely possible to link up the major cancer research centers in the United States, and perhaps abroad, in some network to facilitate communications, but the NCI was told explicitly that the NLM cannot evaluate the validity of scientific documents, nor should it attempt to do so.

The concept of a management information system was not explored other than to express the Library's desire to be helpful in assisting the Institute in furthering its goals.

The NCI was invited to visit the Library to talk with the people in its various branches about their current capabilities and to learn in more detail what the Institute wants and needs. The first of a series of meetings is scheduled for June 18 and will be devoted to a demonstration of AIM-TWX and discussion of its projected expanded data base.

It seems reasonable to me that the on-line system that now contains 6,000 abstracts from the Health Aspects of Pesticides Abstract Bulletin will attract the interest of the cancer people. It has an appealing versatility. For example, the abstracts already being produced by the NCI could be entered into the system at modest cost and retrieved on-line or printed off-line on many different axes through free text searching. Also, the excellent data generated by the New York State (exclusive of New York City) and Connecticut Cancer Registries could be computerized to monitor the changing scene in clinical oncology. A paper in the New England Journal of Medicine for April 22 describes a series of young women in Boston suffering from adenocarcinoma of the vagina. The mothers of all but one had received diethylstilbestrol therapy during pregnancy. Would it not be highly desirable to compare the experience of women in New York and Connecticut with the same lesion?

I would not have you believe that the information activities of the National Cancer Institute are hopelessly or uniformly bogged down in a horse and buggy technology. A large part of the data required for their effective cancer chemotherapy program is computerized to the extent that, in one sense, the computer actually selects the candidate chemical compounds to be developed as new drugs. The Institute has conducted surveys of the total experience with malignant neoplasms at intervals of ten years in several large American cities. The approach was retrospective, the cost enormous, but the information important. Conversion to a prospective automated approach has reduced the time needed to complete the study by 50 percent without materially increasing the cost. NCI personnel are already acquainted with TIP's computerized Roster of Toxicologists, which they used with considerable success earlier this year. They identified persons previously unknown to them who possessed skills and information important to cancer research. Undoubtedly NCI will want to help in keeping the file current. It now contains data on some 3,200 experts.

In any case, the Library will help the NCI to develop modern information services. We would hope to have something more definitive to report at the fall meeting of the Board.

G. Burroughs Mider, M.D.
Deputy Director, NLM

June 1971

APPENDIX II

SCHOLARS IN RESIDENCE (VISITING SCHOLARS) PROGRAM

The National Library of Medicine will establish a Scholars in Residence (Visiting Scholars) Program to encourage and to recognize scholarly research requiring use of the Library's collection. Candidates for appointment should make a major commitment to their chosen projects to the extent that the research constitutes essentially a full-time activity for a period of at least six months during which a substantial proportion of their time will be spent within the Library. They should hold no other current active position unless on sabbatical or other extended leave.

Candidates should submit a brief application to the Director, NLM, in the form of a letter outlining their proposed program or project, which would be expected to have an historical component or to treat a subject in broad, long-range perspective. A curriculum vitae should accompany the letter to demonstrate a record of accomplishment evidenced by academic or other appointments and publications.

The NLM will provide appropriate office space as available, occasional assistance in typing manuscripts (although not regular secretarial services), photocopying, and the usual reference and reader assistance such as a faculty member might expect from his own university library.

The Scholar would be expected to use the above title on published papers and other appropriate occasions during his appointment and to provide acknowledgment to NLM for the use of its facilities.

Appointment of Scholars in Residence would be made by the Board of Regents upon recommendation of the Director.

APPENDIX III

The Board affirms the assessment of the Deputy Director concerning the role of information technology and bibliography in the national conquest of cancer. Particularly, the present fragmented and uncoordinated effort in dealing with the literature on cancer research is felt to be a marked defect in our fight against neoplasia.

The Board of Regents asserts its conviction that the program for the control of cancer will depend on unprecedented generation and correlation of information in the biomedical, and also physical, sciences and technologies.

In the forthcoming implementation of the Act to conquer cancer, the Board recommends that the NLM be designated by the President specifically as the agent for assembly of knowledge, its organization and dissemination, on behalf of all components of the National Cancer Program.

APPENDIX IV

The Board favors, as part of a national network for document delivery, simple locator tools based on a principle of vertical referral compatible with a national serials data base which will provide easy access to the holdings of major resource libraries and NLM. The Board does not favor for this purpose the funding of multiple incompatible union lists containing detailed information on the serial holdings for limited geographic areas.

June 15, 1971

BOARD OF REGENTS
NATIONAL LIBRARY OF MEDICINE

MINUTES OF EXECUTIVE SESSION

The Board of Regents of the National Library of Medicine met in executive session at 1:45 p.m., June 15, 1971.

REPORT OF NOMINATING COMMITTEE

Dr. Layton reported for the Nominating Committee, which recommended Dr. William G. Anlyan to succeed Dr. Robert H. Ebert as Chairman of the Board. The recommendation was affirmed unanimously, and Dr. Anlyan assumed the chair.

RESOLUTIONS

A program to encourage scholars to use the Library's collection and to recognize their contributions by naming them as Scholars in Residence, or perhaps Visiting Scholars, was discussed in the context of a discussion draft circulated to the group. Need for such a program has been voiced by several distinguished physicians and scientists who have made extensive use of the Library in widening the experience of the biomedical community and society in general by their scholarly studies which cast important events in broad perspective. The recommendation, adopted unanimously by the Board, appears as Attachment A.

Dr. Baker introduced a resolution defining the relationship of the National Library of Medicine to the emerging "National Cancer Program," which was also adopted by unanimous vote of the Board:

"The Board affirms the assessment of the Deputy Director concerning the role of information technology and bibliography in the national conquest of cancer. Particularly, the present fragmented and uncoordinated effort in dealing with the literature on cancer research is felt to be a marked defect in our fight against neoplasia.

"The Board of Regents asserts its conviction that the program for the control of cancer will depend on unprecedented generation and correlation of information in the biomedical, and also physical, sciences and technologies.

"In the forthcoming implementation of the Act to conquer cancer, the Board recommends that the NLM be designated by the President specifically as the agent for assembly of information, its organization and dissemination, on behalf of all components of the National Cancer Program."

The Board then adopted, without dissent, the following policy statement for guidance of the Director, NLM:

"The Board favors, as part of a national network for document delivery, simple locator tools based on a principle of vertical referral compatible with a national serials data base which will provide easy access to the holdings of major resource libraries and NLM. The Board does not favor for this purpose the funding of multiple incompatible union lists containing detailed information on the serial holdings for limited geographic areas."

WHO HUMAN REPRODUCTION DOCUMENTATION CENTER

The Deputy Director, NLM, summarized for the Board the "Report of a Feasibility Study" for an "Expanded Programme of Research, Development and Research Training in Human Reproduction" submitted to the World Health Organization in May 1971. Professor Sune Bergstrom had provided a copy to the Library and had solicited evaluation of the cost estimate by the Board. This refers particularly to Appendix E, "WHO International Documentation Centre on the Biomedical Aspects of Human Reproduction," which Professor Bergstrom had described to the Board of Regents in some detail on March 22. Dr. Mider pointed out that Appendix E contained little more substantive information than that already available to the Board, other than the cost estimates.

The initial year of operation is projected at \$300,000, the second year at \$360,000, with ultimate cost of \$388,000 during the fourth and fifth years of operation. All costs for personnel services (including systems and program consultants) constitute about 55 percent of the budget throughout the five-year period. No costs are included for acquisition of documents, probably because the philosophy of shared resources that dominates the plan permits one to assume that those required are already in the possession of participating organizations. The first-year projection is based on the cost of 5,000 retrospective searches annually and distribution of 1,500 monthly searches to be produced at the Karolinska Institutet which has extensive experience in this type of activity. Dr. Mider believed that such a documentation program would cost somewhat more in the United States, whereupon Mr. Augenstein stated that his recent trip to examine foreign MEDLARS centers had indicated that the costs to Sweden were about one-half of the cost for the same operation in this country.

The Board then agreed that the costs seemed realistic and asked the Director, NLM, to transmit to Professor Bergstrom a letter encouraging him to proceed with the documentation plan.

MEETING WITH SECRETARY, DHEW

Dr. Ebert reported on his meeting with the Secretary, DHEW, on April 30, 1971, which was also attended by the Assistant Secretary, Comptroller, DHEW. The Secretary was well informed on the affairs of the NLM and sympathetic to

its need for more adequate resources in keeping with the resolution passed by the Board in March. Dr. Ebert felt the meeting, which lasted for an hour and a half, quite useful and probably productive. The question of holding a similar meeting with the Director, NIH, was considered and abandoned after the Director, NLM, had detailed tangible evidence of support for the Library's programs by Dr. Marston.

AAMC REPORT

Mr. Augenstein returned to the morning's discussion of Educational Technology for Medicine; Roles for the Lister Hill Center, the report produced by the Steering Committee, Council of Academic Societies, Association of American Medical Colleges. He proposed that those recommendations in the report that were clearly within the scope of the Library's programs and present or projected capabilities should be priced, and priorities assigned for their implementation. His thoughts coincided with report recommendation 8.3. Discussion led to the conclusion that a committee including members of the Board of Regents¹ and other external advisers should be formed specifically for those purposes receiving staff support from the Lister Hill National Center for Biomedical Communications. It was specifically suggested that Drs. Robert H. Ebert and Eugene A. Stead, Jr. serve in the group, which should hold its first meeting in September.

The next phase of the examination of educational technology for medicine was agreed to require a report identifying the responsibilities and role of academic institutions in developing the program. However, no attempt was made to assign this function (it is not included under terms of the existing contract with AAMC).

NLM RELATIONS WITH BHME

Director, NLM, addressed the proposal made by Dr. Baker that the NLM or perhaps the Lister Hill group be formally designated as the research and development arm of the Bureau of Health Manpower Education, asking that he consider the matter further before responding. The Board assented.

OTHER BUSINESS

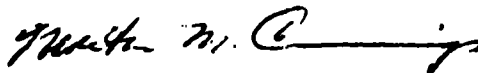
Before ceding the chair to his successor, Dr. Ebert expressed his appreciation for the support afforded him by his colleagues during his tenure as Chairman and regarded his experience as a Regent as most gratifying. His sentiments were echoed by Mr. Augenstein. Both gentlemen expressed interest in continuing their association with the NLM.

¹ Details of the Board membership were not discussed, but two existing committees of the Board are concerned with NMAC and LHCNCBC respectively. It might be desirable to select members of those committees to serve on the group referred to here.

It was agreed that the March 1972 meeting of the Board of Regents should be held at the National Medical Audiovisual Center in Atlanta, Georgia.

The meeting adjourned at 2:45 p.m.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Martin M. Cummings".

Martin M. Cummings, M.D.
Executive Secretary, Board of Regents
National Library of Medicine

Bethesda, Maryland

ATTACHMENT A

SCHOLARS IN RESIDENCE (VISITING SCHOLARS) PROGRAM

The National Library of Medicine will establish a Scholars in Residence (Visiting Scholars) Program to encourage and to recognize scholarly research requiring use of the Library's collection. Candidates for appointment should make a major commitment to their chosen projects to the extent that the research constitutes essentially a full-time activity for a period of at least six months during which a substantial proportion of their time will be spent within the Library. They should hold no other current active position unless on sabbatical or other extended leave.

Candidates should submit a brief application to the Director, NLM, in the form of a letter outlining their proposed program or project, which would be expected to have an historical component or to treat a subject in broad, long-range perspective. A curriculum vitae should accompany the letter to demonstrate a record of accomplishment evidenced by academic or other appointments and publications.

The NLM will provide appropriate office space as available, occasional assistance in typing manuscripts (although not regular secretarial services), photocopying, and the usual reference and reader assistance such as a faculty member might expect from his own university library.

The Scholar would be expected to use the above title on published papers and other appropriate occasions during his appointment and to provide acknowledgment to NLM for the use of its facilities.

Appointment of Scholars in Residence would be made by the Board of Regents upon recommendation of the Director.

NATIONAL LIBRARY OF MEDICINE

RESUME OF RECOMMENDATIONS

THE BOARD OF REGENTS AT THEIR JUNE 14-15, 1971 MEETING
CONCURRED WITH THE FOLLOWING RECOMMENDATIONS

RESOURCE GRANTS

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 00905-01A1 St. Luke's Methodist Hospital Cedar Rapids, Iowa	BLR	01A1	\$ 6,000	\$ 6,000	379
1 G08 LM 01003-01 Duke University Durham, North Carolina	BLR	01 02 03	19,193 18,343 10,942	6,180 5,500 5,500	255
1 G08 LM 01006-01 Halifax District Hospital Daytona Beach, Florida	BLR	01 02 03	50,585 28,854 30,105	45,585 28,854 30,105	305
1 G08 LM 01022-01 Louisiana State University Medical Center New Orleans, Louisiana	BLR	01 02 03	54,379 25,583 15,678	Disapproval	
1 G08 LM 01027-01 The University of New Mexico School of Medicine Albuquerque, New Mexico	BLR	01 02 03	60,000 45,310 40,000	40,000 35,000 25,000	308
1 G08 LM 01040-01 Bowman Gray School of Medicine Wake Forest University Winston-Salem, North Carolina	BLR	01 02	33,468 46,987	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01091-01A1 Defiance Hospital, Inc. Defiance, Ohio	BLR	01 02 03	\$ 6,515 6,764 7,025	Disapproval	
1 G08 LM 01094-01 University of Wisconsin Madison, Wisconsin	BLR	01 02	16,800 3,575	Disapproval	
1 G08 LM 01098-01 University of Wisconsin Madison, Wisconsin	BLR	01 02	25,130 24,680	25,130 24,680	258
1 G08 LM 01099-01 University of Wisconsin Madison, Wisconsin	BLR	01 02 03	22,150 22,900 4,060	6,150 6,900 - - -	304
1 G08 LM 01102-01 University of Nebraska Omaha, Nebraska	BLR	01 02 03	45,042 40,448 44,525	35,236 29,393 32,133	200
1 G08 LM 01105-01 Catherine Laboure' School of Nursing Boston, Massachusetts	BLR	01 02 03	51,000 18,500 14,500	15,000 15,000 14,500	305
1 G08 LM 01107-01 Univ. of Cincinnati Coll. of Medicine Cincinnati, Ohio	BLR	01 02 03	153,592 61,906 48,069	Disapproval	
1 G08 LM 01108-01 Ohio College of Podiatric Medicine Cleveland, Ohio	BLR	01	9,130	Disapproval	
1 G08 LM 01114-01 University of Alabama Birmingham, Alabama	BLR	01 02 03	59,430 59,175 44,925	Disapproval	
1 G08 LM 01144-01 Massachusetts Institute of Technology Cambridge, Massachusetts	BLR	01 02 03	75,200 79,200 84,200	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01154-01A1 Saint Luke's Hospital Bethlehem, Pennsylvania	BLR	01	\$31,266	Disapproval	
1 G08 LM 01185-01 Dixon State School Dixon, Illinois	BLR	01	5,184	\$ 5,184	383
1 G08 LM 01208-01 Atascadero State Hospital Atascadero, California	BLR	01 02 03	10,029 10,368 10,714	Disapproval	
1 G08 LM 01209-01 Central Wisconsin Colony and Training School Madison, Wisconsin	BLR	01 02	15,541 12,862	Disapproval	
1 G08 LM 01210-01 Traverse City State Hospital Traverse City, Michigan	BLR	01 02 03	3,500 3,500 3,500	Disapproval	
1 G08 LM 01211-01 Washington University School of Medicine St. Louis, Missouri	BLR	01 02 03	15,957 2,540 1,993	\$13,000	290
1 G08 LM 01212-01 State University of New York Downstate Medical Center Library Brooklyn, New York	BLR	01	18,404	18,404	333
1 G08 LM 01213-01 State University of New York Downstate Medical Center Library Brooklyn, New York	BLR	01 02 03	63,510 60,415 62,836	Disapproval	
1 G08 LM 01214-01 Trenton State College Trenton, New Jersey	BLR	01 02 03	7,300 11,800 14,800	5,500 5,500 5,500	359

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01215-01 University of Colorado Medical Center Denver, Colorado	BLR	01 02	\$43,541 36,163	\$43,541 36,163	200
1 G08 LM 01216-01 Mercy Medical Center Dubuque, Iowa	BLR	01 02 03	93,431 2,750 2,750	Disapproval	
1 G08 LM 01217-01 Pacific State Hospital Pomona, California	BLR	01 02 03	16,844 14,095 15,060	Disapproval	
1 G08 LM 01218-01 Moraine Valley Community College Palos Hills, Illinois	BLR	01 02	185,527 168,090	Disapproval	
1 G08 LM 01219-01 Mercer University Macon, Georgia	BLR	01 02 03	31,500 32,500 32,500	Disapproval	
1 G08 LM 01221-01 Edward J. Meyer Memorial Hospital Buffalo, New York	BLR	01 02 03	20,053 11,553 11,553	Disapproval	
1 G08 LM 01228-01 The University of Rochester Rochester, New York	BLR	01	24,321	24,321	385
1 G08 LM 01240-01 Thomas Jefferson University Philadelphia, Pennsylvania	BLR	01 02 03	12,392 2,500 2,500	Disapproval	
1 G08 LM 01250-01 Tuskegee Institute Tuskegee, Alabama	BLR	01 02 03	57,930 31,430 31,430	Disapproval	
1 G08 LM 01251-01 The Fairfax Hospital Falls Church, Virginia	BLR	01	8,000	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01252-01 Mount Sinai Hosp. Medical Center Chicago, Illinois	BLR	01 02 03	\$ 9,350 4,250 2,500	Disapproval	
1 G08 LM 01253-01 Danvers State Hospital Hathorne, Massachusetts	BLR	01 02 03	20,953 15,663 15,663	Disapproval	
1 G08 LM 01254-01 Winnebago State Hospital Winnebago, Wisconsin	BLR	01 02 03	5,087 5,923 6,943	Disapproval	
1 G08 LM 01255-01 Massachusetts College of Optometry Boston, Massachusetts	BLR	01	1,420	1,420	321
1 G08 LM 01256-01 University of Utah Salt Lake City, Utah	BLR	01 02 03	23,407 23,878 26,348	Disapproval	
1 G08 LM 01257-01 Regents of the Univ. of the State of New York Albany, New York	BLR	01	5,900	3,000	305
1 G08 LM 01258-01 University of Vermont Burlington, Vermont	BLR	01 02 03	47,550 51,355 48,271	Deferral	
1 G08 LM 01259-01 Albany Medical Coll. of Union Univ. Albany, New York	BLR	01 02 03	1,258 1,158 1,158	Disapproval	
1 G08 LM 01261-01 The Pennsylvania State University University Park, Pennsylvania	BLR	01 02 03	52,882 55,806 58,676	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01262-01 The University of Texas Medical School at San Antonio San Antonio, Texas	AD HOC	01 02 03	\$21,364 20,480 21,160	\$21,364 20,480 21,160	280
1 G08 LM 01263-01 Regents of the Univ. of California Los Angeles, California	BLR	01 02 03	44,905 61,348 59,211	37,638 48,563 52,814	270
1 G08 LM 01265-01 Medical Univ. of South Carolina Charleston, South Carolina	BLR	01 02 03	22,865 23,802 24,822	17,222 18,000 18,852	275
1 G08 LM 01266-01 Pacific University Forest Grove, Oregon	BLR	01 02 03	61,622 51,100 44,550	Disapproval	
1 G08 LM 01267-01 Newington Children's Hospital Newington, Connecticut	BLR	01 02 03	8,000 6,300 4,800	Disapproval	
1 G08 LM 01269-01 University of Massachusetts Amherst, Massachusetts	BLR	01	15,386	Disapproval	
1 G08 LM 01270-01 The Brooklyn-Cumberland Medical Center Brooklyn, New York	BLR	01 02 03	27,286 9,030 9,030	Disapproval	
1 G08 LM 01271-01 The Regents of the Univ. of California Univ. of California, San Diego La Jolla, California	AD HOC	01 02 03	31,505 41,214 43,665	Disapproval	
1 G08 LM 01272-01 St. Francis Hospital La Crosse, Wisconsin	BLR	01 02 03	71,875 11,292 9,292	Administrative Deferral	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01273-01 Mercy Hospital Bay City, Michigan	BLR	01 02 03	\$14,230 10,550 11,600	Disapproval	
1 G08 LM 01324-01 North Shore Hospital Manhasset, New York	BLR	01 02	16,450 12,570	Disapproval	
1 G08 LM 01325-01 The University of Texas Houston, Texas	BLR	01 02 03	14,100 20,000 22,400	Disapproval	
1 G08 LM 01326-01 Dartmouth College Hanover, New Hampshire	BLR	01 02 03	30,433 33,483 30,361	Deferral	
1 G08 LM 01327-01 Loma Linda University Loma Linda, California	BLR	01 02 03	133,045 71,000 71,000	Disapproval	
1 G08 LM 01328-01 Lovelace Foundation for Medical Education and Research Albuquerque, New Mexico	BLR	01 02	28,350 29,500	\$28,350 29,500	355
1 G08 LM 01329-01 University of Arkansas Medical Center Little Rock, Arkansas	BLR	01 02	33,666 33,483	33,666 33,483	245
1 G08 LM 01330-01 The Suffolk Academy of Medicine Hauptauge, New York	BLR	01 02 03	34,045 28,358 33,484	Disapproval	
1 G08 LM 01331-01 University of Minnesota Minneapolis, Minnesota	BLR	01 02 03	29,785 39,667 27,270	29,785 39,667 27,270	250

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01332-01 Michigan State University East Lansing, Michigan	BLR	01 02 03	\$44,661 46,798 50,060	\$32,193 36,178 39,540	277
1 G08 LM 01334-01 Community Hospital of Springfield and Clark County Springfield, Ohio	BLR	01 02 03	43,050 15,400 13,900	Disapproval	
1 G08 LM 01336-01 University of Minnesota St. Paul, Minnesota	BLR	01 02 03	1,455 250 250	Disapproval	
1 G08 LM 01337-01 New York Academy of Medicine New York, New York	BLR	01 02 03	30,405 36,060 40,788	Disapproval	
1 G08 LM 01338-01 New York Academy of Medicine New York, New York	BLR	01 02 03	27,966 33,332 35,370	Disapproval	
1 G08 LM 01339-01 Northeast Louisiana University Monroe, Louisiana	BLR	01 02 03	200,000 185,200 140,100	Disapproval	
1 G08 LM 01341-01 University of Oregon Medical School Portland, Oregon	BLR	01	1,769	Disapproval	
1 G08 LM 01342-01 University of Oregon Medical School Portland, Oregon	BLR	01 02 03	10,501 4,080 4,080	Disapproval	
1 G08 LM 01343-01 University of Oregon Medical School Portland, Oregon	BLR	01 02	24,950 19,145	24,950 19,145	285

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01344-01 University of Oregon Medical School Portland, Oregon	BLR	01	\$ 4,176	\$ 4,176	225
1 G08 LM 01345-01 University of Oregon Medical School Portland, Oregon	BLR	01	1,235	Disapproval	
1 G08 LM 01346-01 University of Oregon Medical School Portland, Oregon	BLR	01	2,375	Disapproval	
1 G08 LM 01347-01 University of Oregon Medical School Portland, Oregon	BLR	01	7,465	Disapproval	
1 G08 LM 01348-01 University of Oregon Medical School Portland, Oregon	BLR	01 02 03	10,264 7,864 8,450	Disapproval	
1 G08 LM 01353-01 Worcester Foundation for Experimental Biology, Inc. Shrewsbury, Massachusetts	BLR	01	15,740	15,740	275
1 G08 LM 01358-01 Northwestern University Medical School Chicago, Illinois	BLR	01 02 03	44,157 44,103 46,842	Deferral	
1 G08 LM 01362-01 University of Vermont Burlington, Vermont	BLR	01 02 03	25,198 31,861 20,961	Deferral	
1 G08 LM 01365-01 Worcester Foundation for Experimental Biology, Inc. Shrewsbury, Massachusetts	BLR	01 02 03	51,570 46,950 47,750	13,000 8,000 6,000	280

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01368-01 Thomas Jefferson University Philadelphia, Pennsylvania	BLR	01 02 03	20,700 18,700 19,435	Disapproval	
1 G08 LM 01374-01 Dartmouth College Hanover, New Hampshire	BLR	01 02	\$ 8,285 25,680	Disapproval	

THE BOARD OF REGENTS AT THEIR JUNE 14-15, 1971 MEETING
DID NOT CONCUR WITH THE FOLLOWING RECOMMENDATIONS

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>	<u>Board Recommendation</u>
1 G08 LM 01110-01 East Carolina University Greenville, North Carolina	BLR	01 02	\$90,400 68,600	\$63,900 50,800	295	Deferral
1 G08 LM 01260-01 Albany Medical College of Union University Albany, New York	BLR	01	8,000 5,500 3,000	8,000 5,500 3,000	410	Disapproval
1 G08 LM 01264-01 University of Connecticut Health Center Hartford, Connecticut	BLR	01 02 03	74,519 77,314 38,411	49,678 51,542 38,411	350	Disapproval
1 G08 LM 01323-01 University of Texas (SW) Medical School at Dallas Dallas, Texas	BLR	01	24,000 22,500 22,500	24,000 22,500 22,500	356	Disapproval
1 G08 LM 01333-01 The New England Institute Ridgefield, Connecticut	BLR	01 02 03	14,336 5,500 5,500	11,495 - - -	359	Disapproval

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>	<u>Board Recommendation</u>
1 G08 LM 01340-01 The John Crerar Library Chicago, Illinois	MLR	01 02	\$41,248 41,055	\$38,284 40,459	239	Disapproval

COMPETING TRAINING GRANTS
SUMMARY OF COUNCIL RECOMMENDATIONS
TRADITIONAL PROJECT GRANTS

COUNCIL DATE: JUNE 1971

INSTITUTE OR DIVISION: NATIONAL LIBRARY OF MEDICINE

TYPE OF REQUEST	TOTAL REQUESTED		APPROVED		REDUCED		DISAPPROVED		DEFERRED	
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT
FY 1972										
NEW	0		0		0		0		0	
RENEWAL	1	59,085	1	56,085	1	3,000	0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	1	59,085	1	56,085	1	3,000	0		0	
FY 1973										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
FY 1974										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
GRAND TOTAL	1	59,085	1	56,085	1	3,000	0		0	

NATIONAL LIBRARY OF MEDICINE

RESUME OF BOARD OF REGENTS RECOMMENDATIONS

JUNE 14-15, 1971

TRAINING APPLICATIONS

<u>Application No., Investigator and Institution</u>	<u>Initial Review Group</u>	<u>FY</u>	<u>Year</u>	<u>Requested</u>	<u>IRG Recommendation</u>	<u>BOARD OF REGENTS</u>		
						<u>Approval</u>	<u>Priority</u>	<u>Other</u>
2 T01 LM 00102-06 Martin, Jess A. University of Tennessee Medical Units Memphis, Tennessee	BLR	72	06	\$59,085	\$56,085	\$56,085	217	
			07	59,585	56,585	56,585		
			08	60,385	57,385	57,385		
			09	61,600	- - -	- - -		
			10	62,100	(217)			

COMPETING RESEARCH AND PUBLICATION GRANTS
SUMMARY OF COUNCIL RECOMMENDATIONS
TRADITIONAL PROJECT GRANTS

COUNCIL DATE: JUNE 1971

INSTITUTE OR DIVISION: NATIONAL LIBRARY OF MEDICINE

TYPE OF REQUEST	TOTAL REQUESTED		APPROVED		REDUCED		DISAPPROVAL		DEFERRED	
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT
FY 1972										
NEW	23	545,221	6	116,824	0		16	348,958	1	79,439
RENEWAL	3	95,326	1	5,246	0		1	62,500	1	27,580
SUPPLEMENT	1	26,500	0		0		1	26,500	0	
TOTAL	27	667,047	7	122,070	0		18	437,958	2	107,019
FY 1973										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
FY 1974										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
GRAND TOTAL	27	667,047*	7	122,070*	0		18	437,958*	2	107,019

*Includes 3 Grants with LM as Second Reviewer - Requesting \$46,828.
1 was Approved for \$33,200 and 2 were Disapproved.

NATIONAL LIBRARY OF MEDICINE

RESUME OF BOARD OF REGENTS RECOMMENDATIONS

June 14-15, 1971

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	BOARD OF REGENTS		
						Approval	Priority	Other
2 R01 LM 00334-13 Altman, Philip L. Federation of American Societies for Experimental Biology Bethesda, Maryland "Biological Handbooks"	BCM	72	13	\$ 62,500	\$ 62,500 (269)			Dis.
2 R01 LM 00522-04 Selye, Hans Universite de Montreal Montreal, Quebec, Canada "Compilation of 'Analytico- Synthetic' Monographs"	BCM	71	04 05	27,580 28,420	Deferral			Def.
3 R01 LM 00674-01S1 Freyman, Moyer W. University of North Carolina Chapel Hill, North Carolina "International Community Medicine"	BCM		01S1	26,500	Disapproval			Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

Application No., Investigator and Institution Initial Review Group FY Year Requested IRG Recommendation Disapproval Priority Other

1 R01 LM 01180-01
 Lessel, Erwin F.
 American Type Culture Collection
 Rockville, Maryland
 "Development of the Intern. J. System. Bacteriol."

1 R01 LM 01182-01
 Sarty, Merrill E.
 Individual
 Los Angeles, California
"Dictionary of Neuropsychology,"
 manuscript preparation"

1 R01 LM 01183-01
 Rohrbaugh, Lewis H.
 Boston University
 Boston, Massachusetts
 "Publication of Lowell Institute
 Lecture Series"

1 R01 LM AM 01184-01
 Cheng, Tien-Hsi
 Pennsylvania State University
 College of Science
 University Park, Pennsylvania
 "Critical Review of Insulin Research
 in Mainland China"

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS
Recommendation
Approval Priority Other

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	Deferral	Def.
1 RO1 LM MH 01199-01 Kenney, Brigitte L. Drexel University Philadelphia, Pennsylvania "Psychiatric Videotypes as Teaching Tools"	BCM	72	01 02	\$ 79,439 83,736	\$	Deferral	Def.
1 RO1 LM 01200-01 Emerson, Phillip L. Cleveland State University College of Arts and Sciences Cleveland, Ohio "A Small Semiautomated Index- Free Information System"	BCM	72	01	14,245	Disapproval		Dis.
1 RO1 LM 01201-01 Ladman, Aaron J. University of New Mexico School of Medicine Albuquerque, New Mexico "Cumulative Index Preparation for Anatomical Record"	BCM	72	01 02	17,838 5,810	Disapproval		Dis.
1 RO1 LM 01202-01 Lancaster, F. Wilfrid University of Illinois Urbana, Illinois "The Adoption of Medical Information Innovations"	BCM	72	01	11,480	Disapproval		Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	Approval	Priority	Other
1 R01 LM 01205-01 Grigg, E. R. N. Individual Oak Park, Illinois "The Critical History of American Radiology"	BCM	72	01	\$ 49,300	Disapproval			Dis.
1 R01 LM HS 1352-01 Paisley, William J. Stanford University Stanford, California "Biomedical Communication and Remote Health Providers"	BCM	72	01 02	72,273 75,189	Disapproval			Dis.
1 R01 HS 06059-01 Dual LM Freeman, Joseph T. Gerontological Society, Inc. Archives and History Washington, D. C. "A Bio-Bibliography of Gerontology to 1900"	BCM	72	01 02	8,382 1,925	Disapproval			Dis.
1 R01 LM 01194-01 Pings, Vern M. Wayne State University University Libraries Detroit, Michigan "Hospital Health Science Library Services"	BLR	72	01 02 03	25,979 26,863 27,389	Disapproval			Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS
Recommendation
Approval Priority Other

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	Approval	Priority	Other
1 R01 LM 01203-01 Stearns, Norman S. Postgraduate Medical Institute Boston, Massachusetts "Evaluation of a Program to Train Health Information Assistants"	BLR	71	01 02	\$ 27,857 27,884	\$ 27,857 27,884 (208)	\$27,857 27,884	208	
1 R01 LM 01204-01 Korotkin, Arthur L. American Institutes for Research Silver Spring, Maryland "Use and Nonuse of Hospital Medical Libraries"	BLR	72	01 02 03	35,325 38,055 38,609	Disapproval			Dis.
1 R01 LM 01207-01 Hendricks, Donald D. University of Texas (Southwestern) Dallas, Texas "Centralized Processing for Medical Libraries"	BLR	71	01	27,368	27,368 (250)	27,368	250	
1 R01 GM LM 18799-01 Gorry, G. Anthony Sloan School of Management Massachusetts Institute of Technology Cambridge, Massachusetts "Computer-Aided Medical Decision Making"	COM	72	01	33,200	33,200 (167)	33,200	167	

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS
Recommendation
Approval Priority Other

Application No., Investigator and Institution Initial Review Group FY Year Requested IRG Recommendation Approval Priority Other

1 RO1 LM 00780-01A1
Beck, Ann F.
University of Hartford
College of Arts & Sciences
West Hartford, Connecticut
"German and British Colonial
Medical Administration in Tanganyika"

HLS 72 01A1 \$ 6,125 \$ 6,125 139
(139)

1 RO1 LM HD 00963-01A1
Hirshfield, Daniel S.
Brandeis University
Waltham, Massachusetts
"The Social History of the
Elderly in 20th Century America"

HLS 72 01A1 22,578 Disapproval Dis.
02 22,228
03 21,078

1 RO1 LM 01181-01
Plesset, Isabel R.
Rockefeller University
New York, New York
"Biographical Study of
Hideyo Noguchi"

HLS 72 01 7,150 Disapproval Dis.
02 5,050

1 RO1 LM 01195-01
Jadon, Samira Y.
University of California
Los Angeles, California
"That Which Brings Joy and
Happiness to the Soul"

HLS 71 01 14,125 Disapproval Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	Approval	Priority	Other
1 R01 LM MH 01196-01 Kramer, John C. University of California College of Medicine Irvine, California "History of Opiate Dependence"	HLS	72	01	\$ 26,962	Disapproval			Dis.
			02	27,212				
			03	28,315				
1 R01 LM 01197-01 Brown, James B. San Fernando Valley State College Foundation School of Letters & Science Northridge, California "British Opium Policy in India, 1780-1947"	HLS	72	01	16,174	16,174 (122)	\$16,174	122	
1 R13 LM 01198-01 Lurie, Edward Pennsylvania State University College of Medicine University Park, Pennsylvania "History of American Science and Medicine"	HLS	72	01	4,494	Disapproval			Dis.
2 R01 ES 00608-02 Dual LM Chichester, Clinton O. University of Rhode Island College of Resource Development Kingston, Rhode Island "Essays in Toxicology"	TOX	72	02	5,246	5,246	5,246	115	
			03	5,246	5,246 (115)	5,246		

AGENDA

Fortieth Meeting of the
BOARD OF REGENTS
National Library of Medicine

9:00 a.m. November 22-23, 1971
Board Room
Bethesda, Maryland

- I. CALL TO ORDER AND INTRODUCTORY REMARKS Dr. William G. Anlyan
- II. CONSIDERATION OF MINUTES OF LAST MEETING Dr. William G. Anlyan
TAB I
(Orange book)
- II. DATES OF FUTURE MEETINGS Dr. William G. Anlyan
1971 and 1972 Calendars in all books
Next Meeting - March 27-28, 1972 (M-T) in Atlanta, Ga.
Subsequent Meeting
June 15-16, 1972 (T-F)
Selection of Meeting Date - November 1972
16-17 20-21 27-28
(T-F) (M-T) (M-T) Thanksgiving - November 23, 1972

American College of Preventive Medicine, November 15-16, Atlantic City
American Medical Association (Clinical), November 26-29, Cincinnati
- IV. REMARKS BY THE ASSISTANT SECRETARY FOR Dr. Merlin K. DuVal
HEALTH AND SCIENTIFIC AFFAIRS
- V. REMARKS BY THE DIRECTOR, NIH Dr. Robert Q. Marston
- VI. REPORT OF THE DIRECTOR, NLM Dr. Martin M. Cummings
TAB III
- VII. 135TH ANNIVERSARY OF THE NATIONAL Dr. G.B. Mider
LIBRARY OF MEDICINE
- VIII. REPORT ON THE SATELLITE COMMUNICATIONS Mr. Alfred Zipf
PROJECT IN ALASKA TAB IV
- X. REPORT ON HEALTH ASPECTS OF THE STUDY Mr. Albert Feiner
PERFORMED BY DHEW FOR THE PRESIDENT'S
DOMESTIC COUNCIL TAB V
(DEMONSTRATION OF MODEL SATELLITE)

THE BOARD OF REGENTS
of the
NATIONAL LIBRARY OF MEDICINE

MINUTES OF THE 40th MEETING

November 22-23, 1971, Bethesda, Maryland

MEMBERS PRESENT: Dr. William G. Anlyan, Dr. William O. Baker, Dr. Harve J. Carlson,
Dr. Susan Y. Crawford, Vice Admiral George M. Davis, Mrs. Bernice M.
Hetzner, Dr. Jack Layton, Dr. Stanley Marshall, Dr. Angelo May,
Dr. John P. McGovern, Dr. Max Michael, Jr., Dr. Marc J. Musser,
Dr. George Teuscher

MEMBERS ABSENT: Dr. Quincy Mumford, Dr. J. L. Steinfeld

ALTERNATES: Brig. Gen. Gerrit L. Hekhuis represented Lt. Gen. Towner both days.
Capt. Edward J. Rupnik represented Vice Admiral Davis the second day,
Brig. Gen. Thomas J. Whelan represented Lt. Gen. Jennings both days.

GUESTS: Dr. Merlin K. DuVal, Asst. Sec'y. for Health and Scientific Affairs, DHEW
Dr. John Sherman, Deputy Director, National Institutes of Health
Mr. Bruno Augenstein, Vice President for Research, Rand Corp., Consultant
Dr. Robert H. Ebert, Dean, Harvard Medical School, Consultant
Mr. Alfred Zipf, Executive Vice President of the Bank of America, Consultant
Dr. Kenneth M. Endicott, Director, Bureau of Health Manpower Education
MME. J. Zeraffa, Chef du Centre de Documentation de l'INSERM, France
(National Institute of Health and Medical Research)
Dr. Rolf Fritz, President, DIMDI MEDLARS Center, Germany (German
Institute for Medical Documentation and Information)
Mr. John Sherrod, Director, National Agricultural Library
Dr. Fred Cole, President, Council on Library Resources, Inc.
Mrs. Ileen Stewart, Division of Research Grants, National Institutes
of Health
Mr. Robert Mehnert, National Institute of Mental Health

OFF: Dr. Martin M. Cummings, Dr. G. Burroughs Mider, Dr. Robert J. Benford,
Dr. Jeanne Brand, Dr. Charles Bridgman, Mr. Arthur Broering,
Mr. William Caldwell, Mrs. Dawn Carlisle, Dr. Ralph Christenson,
Mr. Peter Clepper, Mr. Lawrence Coffin, Miss Mary Corning, Dr. Roger
Dahlen, Mrs. Doris Daran, Mr. Albert Feiner, Mr. Joseph Foley,
Mrs. Louise Gamage, Dr. Raquel Halegua, Mrs. Frances Howard,
Dr. Henry Kissman, Dr. Lee Langley, Dr. Joseph Leiter, Mrs. Erika Love,
Mr. Davis McCarn, Miss Irene Moore, Dr. Paulo Pamplona, Mrs. Frances
Rigau, Dr. Harold Schoolman, Mr. Ralph Simmons, Mr. Kent Smith,
Mrs. Janet Welsh, Mr. Richard West

Minutes of Meeting
Board of Regents
November 22-23, 1971

INTRODUCTION OF NEW BOARD MEMBERS

Dr. Anlyan opened the meeting by introducing and welcoming four newly appointed Regents. Mrs. Bernice Hetzner, Dr. Susan Crawford, and Dr. Angelo May replace Dr. Ebert, Dr. Wagman, and Mr. Augenstein, respectively. Dr. J. Stanley Marshall will complete the unexpired term of Dr. Fletcher.

Dr. Cummings introduced two new members of the Library Staff: Mrs. Erika Love, Deputy Associate Director for Library Operations, and Dr. Roger W. Dahlen, Chief, Research, Training and Publications Division, Extramural Programs. Dr. Cummings also introduced Mr. Robert Mehnert, currently with the National Institute of Mental Health, who will soon join the NLM staff as Special Assistant to the Director for Communications Media.

JUNE 1971 MINUTES AMENDED AND APPROVED, FORTHCOMING MEETINGS SCHEDULED

Dr. Cummings brought to the Board's attention an error in the minutes of the June meeting. Under Tab 1, page 7, paragraph 3, line 3, the figure cited should read \$10,000, not \$100,000. With this correction the minutes of the June 14-15 meeting were approved.

March 27-28, 1972, were reaffirmed as the dates of the next meeting, to be held in Atlanta, Georgia; June 26-27 and November 20-21 were selected for the other two meetings in 1972.

REMARKS BY THE ASSISTANT SECRETARY FOR HEALTH AND SCIENTIFIC AFFAIRS

Dr. DuVal stated his keen interest in the Library's mission and its programs. He expressed appreciation for the Board's recommendation that a more focalized health communications effort be established, possibly as a Bureau. That suggestion is under advisement at the NIH and in the Department.

In response to a question posed by Dr. Anlyan regarding the renewal of the Medical Library Assistance Act, Dr. DuVal stated that he felt renewal should be for a three-to-five year period, and he sees no need for a one-year extension simply to put the effective date in phase with health manpower education legislation.

Dr. Anlyan questioned the impact of the intensified cancer effort upon the amount and type of information required, and NLM's ability to provide it. The Assistant Secretary suggested that the Board make the Administration aware of the Library's concern; Dr. Cummings stated that the National Cancer Institute (NCI) has been invited to express its anticipated needs. Dr. Mider added that NCI has stated its interest in the possibility of an international data bank, and has already begun to explore existing information sources. Dr. Mider stated further that NCI understands that they are welcome to share in any of NLM's current information services, but that they must support any additional ones they want.

Dr. DuVal endorsed the expansion and growth of the Lister Hill Center, but cautioned that this must be approached in such a manner as not to duplicate or usurp the resources and functions of NLM.

Dr. Michael asked for a clarification of the term "area health education center," and asked whether a hospital is such a center. Dr. DuVal cited the Carnegie Commission Report and various legislative reports as using the phrase, and said it is presently unclear whether the centers are manpower- or service-oriented. Dr. Endicott stated that the goals of the area health education center concept were to improve the quality and scope of services offered in areas remote from medical schools, and to provide increased educational opportunities in those areas. To this end, a network of institutions is generally involved - - one or more educational institutions, and one or more community, military, or Veterans Administration hospitals.

REMARKS BY DR. JOHN SHERMAN, DEPUTY DIRECTOR, NIH

The 1973 NIH budget is completed, and will be presented in Congress in January.

The Health Professional Education Assistance Act, which expired on June 30, 1971, has been renewed. Budgetary aspects of the new Act are yet to be resolved by the Congress; this, coupled with some differences between the new and old legislation, has delayed NIH's drafting of new regulations for publication.

The new legislation clearly enunciates, for the first time, the government's role in supporting medical education. "First dollar," base support will be provided by capitation grants, instead of the present "last dollar" supplementation through programs primarily funded for other purposes. With respect to funding medical school construction, however, loan provisions in the new legislation are in conflict with the "matching grants" program launched by the Federal government several years ago. This situation must be resolved, although a combined loan and "matching grant" mechanism is being used this fiscal year.

The House and Senate have passed different versions of a cancer attack program. The principal issue to be resolved is whether the director of this program will report directly to the President, or through regular NIH/HEW channels. In the meantime, National Cancer Institute planning for implementation of the program is continuing with good progress.

Dr. Sherman briefly reviewed a number of issues of particular concern to NIH: 1) Allocation of national resources, especially in relation to the pressures for applied as opposed to basic medical research, the disparity of emphasis on and resources devoted to various efforts, and the restrictions that may be placed upon the duration and amount of support to be given to new programs such as the conquest of cancer. 2) The threat to the peer review system of biomedical research evaluation, especially motivated by political considerations. 3) The dilemma arising from a need to reduce both the number and average grade of employees, and at the same time attempting to correct deficiencies in employment and promotion opportunities for minorities and women. 4) Recent allegations in the public press charging the Division of Biologics Standards with dereliction of responsibility by failing to assure safety and efficacy of vaccines. Subsequent investigation into the charges showed that consumer protection had not been jeopardized. The allegations were unsubstantiated. Dr. Sherman expressed concern at this type of public challenge to the scientific integrity of the NIH. 5) The challenge to NIH's basic concept of attempting to create, to the extent possible within the Federal framework, an atmosphere conducive to attracting and keeping highly qualified scientists. The sensational, publicized aspects of a recent case of alleged abuse to this tenet by an institute director obscures the more basic issue of the need for top program officials to remain at the forefront of their scientific disciplines.

REPORT OF THE DIRECTOR, NLM

The Director presented the Library's FY 1971 Annual Report to the Board, and pointed out that its more elegant appearance was in tribute to the 135th anniversary of NLM and its 10th year of occupancy in the present building. Dr. Cummings credited Dr. Robert Benford, the Library's consulting editor, for his excellent work in upgrading this report as well as other NLM publications.

The FY 1972 budget authorization reflects a two million-dollar increase in appropriation over last year, but the Department has reserved the increases for the present.

The authorized personnel ceiling for 1972 set at 469 reflects a favored position for NLM, under the current personnel cut-back program, despite earlier authorization for new positions in the budget. The Director reiterated Dr. Sherman's concern over the difficulty in reducing total staff and average grade while affording greater opportunities for minority members and women. This dilemma is made more pronounced by a position of passive resistance on the part of some lower grade employees, resulting in a loss of

productivity. The NLM supports the goals of the Upward Mobility College, but the lottery mechanism for selecting participants complicates the personnel situation. Dr. Cummings felt that supervisors should have some involvement in the scheduling, if not the selection, of participants in the program.

The Director cited two specific examples of the ways in which the Bureau of Health Manpower Education (BHME), and NLM, are seeking ways to reinforce each other's missions. 1) The Library's National Medical Audiovisual Center, through formal agreement, is supplying content materials to health professional schools supported by BHME. 2) The Lister Hill National Center for Biomedical Communications, and the Extramural Program have responded to a BHME request for assistance in developing training programs and demonstration materials for computer science utilization in academic settings.

The Library has received approval for upgrading its computer configuration; an IBM 370/155 is scheduled for delivery in December 1971.

The Director expressed his surprise to find that many individual educational institutions were slow to realize the implications of the impending outcome of the copyright infringement case levied against the Federal government by Williams and Wilkins. Whereas medical libraries have long perceived those implications, the institutions themselves have only recently come to realize the impact the decision will have on their own educational processes. The panel of judges is expected to act in the near future, possibly by the end of this calendar year. Regardless of the outcome, the case will probably be appealed to the Supreme Court.

NLM senior staff has been working with officials of the Medical Library Association (MLA) to establish new mechanisms for communication between NLM and the individual medical libraries around the country. Arising from these efforts were the following constructive recommendations: 1) The NLM News should be sent to each member of the MLA. 2) NLM is invited to write periodic guest editorials for the Bulletin of the Medical Library Association. 3) Semi-annual program reports should be submitted, by both NLM and MLA, to a liaison committee established between the two groups. In addition, the Director of NLM will submit an annual program report to the Board of Directors of the MLA.

The Medical Library Assistance Act (MLAA), though non-controversial and generally held to be helpful, may be in for some problems when it comes up for renewal next July. NIH has requested a five-year renewal, rather than an annual one, but there may be a move under way to put the MLAA in phase with BHME legislation by renewing it for only one year. In addition, even a one-year renewal will most likely be preceded by the traditional yet costly request for detailed justification of the MLAA.

The Director presented status reports on these foreign developments:

1) The Regional Medical Library for South America, which is co-sponsored by the Library and the Pan American Health Organization, is making good progress. 2) With the exception of the slowly-developing MEDLARS Center in Japan, all foreign MEDLARS Centers are performing very well. 3) There has recently been a flurry of interest in Chinese medicine. In response to an opportunity to offer suggestions for the President's consideration in preparation for his forthcoming trip to China, the Library has recommended the exchange of information and of library personnel, and the restoration of exchange of publications. 4) In October, at a UNESCO-sponsored meeting in Paris on UNISIST (a world science information system), Dr. Cummings participated in the review of a report which outlined the proposed system. Consideration of the many issues and proposals contained in the report, which was the result of a five-year joint study effort by UNESCO and the International Council of Scientific Unions, was made more difficult by an apparent lack of understanding of information systems on the part of a large bloc of lesser-developed nations. The final recommendations of the conference called for the establishment of a UNISIST secretariat in UNESCO to manage the development of the system, the creation of a large steering committee to develop the overall plan, formation of a technical advisory committee, and the scheduling of an intergovernmental conference in 1972 at which the final plan will be presented. The future of this effort is uncertain, due largely to limited funds and the extremely complex political relationships involved.

Dr. Cummings concluded his report with a re-statement of one of the Library's primary functions -- the provision of information to the practicing health professional. The Director cited the development of MEDLINE as being the most recent effort in this regard.

MEDLARS II/MEDLINE STATUS REPORT

Mr. McCarn briefly reviewed the progress of the MEDLARS II effort, from the initiation of a Letter Contract with System Development Corporation on June 9, 1971, to the present. The contractor is currently working on a System Design Overview document which is expected to define in some detail the characteristics of the system to be delivered; this document will be submitted on February 3, 1972. As for the prospects for scheduling and implementation of the effort through July 1973, Mr. McCarn expressed "cautious optimism" due, in part, to the success of the contractor in the implementation of MEDLINE, which began operation on NLM's computer on October 18, 1971. Before MEDLINE becomes fully operational over the next few months, activities will center around the generation of the complete data base to run on the new computer, and linkages with the Western Union and TYMSHARE communication networks. MEDLINE training courses, of which two have been completed, will continue. One of the primary considerations in the operation of MEDLINE is the number of users which may use the system simultaneously. As this number increases to its anticipated optimal maximum of 40 to 45, the average cost per search is between \$5 and \$10. These figures are quite impressive when compared to approximately \$85 per search for MEDLARS searches. And yet, MEDLINE can reasonably be expected to perform over 200,000 searches per year, ten times the number now processed by MEDLARS.

Board members were invited to a MEDLINE demonstration.

135th ANNIVERSARY OF THE NATIONAL LIBRARY OF MEDICINE

On the occasion of the Library's 135th anniversary, Dr. Mider presented a series of slides tracing some of the history of the Library at its Independence Avenue location, circa 1890, to the late 1950's when the acute need for new quarters became so evident. Dr. Mider concluded his delightful history with a photograph of "the smallest book in the Library," which book he wryly pointed out cannot now be identified or found.*

REPORT ON THE SATELLITE COMMUNICATIONS PROJECT IN ALASKA

Mr. Zipf reported that the Alaska trip taken by the Director and himself during August removed all doubts as to the value of this project. He was particularly impressed with the utter lack of reliable communications media in the remote portions of Alaska, and with the tremendous efforts of health professionals there to cope with the situation. Those with whom he and Dr. Cummings came in contact were extremely enthusiastic over the Library's communications project and its potential for improving the health care of Alaska's citizens. Dr. Whelan cited his own first-hand experience with the deficiency of training, communications, and transportation facilities in Alaska and other remote areas. Dr. Cummings suggested that Alaska may be an appropriate testing ground for male members of the physician-assistants training programs, especially in view of the hardships to which nurses are exposed there. Dr. Ebert endorsed this possibility, but expressed concern over leaving semi-qualified people in remote areas without adequate technical and professional support.

REPORT ON HEALTH ASPECTS OF THE STUDY PERFORMED BY DHEW FOR THE PRESIDENT'S DOMESTIC COUNCIL

Mr. Feiner cited the Administration's interest in the application of communications technology to the problem of health education. Arising from a NASA-sponsored study at the request of the President were the following communications initiatives, as proposed by the DHEW participants who represented the health communities: 1) Easily accessible information should be available to all individuals, telling what health services are available in the local area. 2) Health messages, via closed-circuit cable television, might be transmitted to waiting rooms and out-patient clinics. 3) Real-time access to computer-stored medical records -- an application of HSMHA's

* Dr. Mider's post-script: Eureka! The book in questions is: Meibom, Johann Heinrich, De flagrorum usu in re veneria. Londini, 1665 (i.e. Parisiis, 1757). The misprinted date on the title page caused the difficulty.

Regional Medical Information System and an extension of MEDLINE -- should be considered as a means of coping with the shortage of manpower. 4) The feasibility of "neighborhood health care stations" should be explored, in which communications technology could be utilized in the creation of centralized coordinating centers for total, one-stop health services. 5) The further use of satellite communications should be exploited for the sharing of resources and information among health professionals in rural or remote areas. As an example of the potential of this type of communication, Mr. Feiner played a portion of a recorded conversation between a physician in Anchorage and a health aide in Artic Village who was seeking advice for the treatment of a puncture-wound victim.

Mr. Feiner concluded his remarks with a description of the next generation of satellites (ATS-F) which will replace the type currently used in the Alaska experiment, and outlined a possible future study-project in the Southwest in which such a new satellite might be used.

DISCUSSION OF PRIORITY REVIEW COMMITTEE MEETING TO CONSIDER AAMC REPORT

Dr. Schoolman reported the results of a meeting held on September 8-9, 1971, by a committee to review the AAMC report and identify those elements which should be recommended to the Board for immediate implementation. The Committee identified both long-range and short-range goals, and endorsed Dr. John Cooper's request for a companion report outlining the role of academic health centers in the implementation of the Report. (NLM has met with AAMC, and a companion report is forthcoming.)

Four specific recommendations were made by the Review Committee:

1. The Board of Regents should initiate and maintain a continuing interest in the development of manpower for computer applications in medicine. The Regents are urged to assert a leadership role in this area, and to seek support both in and outside government.
2. The Committee advocates the organization of a biomedical communications network fundamentally conceived as providing the mechanism by means of which inter-institution cooperation and sharing of resources will be used to meet some of the needs of medical education and medical practice.
3. The Committee advocates the development of multi-media free-standing information modules designed to permit manipulation by individual faculty members in their presentation of a floor curriculum for the health sciences.
4. The National Library of Medicine should accept the national responsibility for indexing and cataloging appropriate health science learning

resource information material not published in journals and monographs. This indexing and cataloging should be limited to selected materials such as audiovisuals, multimedia presentations, and computer-aided instructions which meet published criteria.

Dr. Schoolman said these four were amalgamations which embodied the substance of 39 of the Report's total of 52 recommendations, and that they were intended to be responsive, respectively, to the goals of: the production of appropriate manpower; the development of a distribution system which would make the sharing of resources economically and technically feasible; the development of educational aids; and the development of catalogs and indices to provide ready access to non-journal, non-monographic information. Dr. Cummings added that he considered some of the AAMC's 52 recommendations to be inappropriate for NLM action, and to belong rightly within the purview of the academic health centers.

The first of these recommendations is responsive to the long-range goal of overcoming two stumbling blocks -- a shortage of personnel trained in both medicine and computer technology, and the absence of dedicated education funding for this purpose. The Committee suggested two general programs for NLM and BHME support: a joint M.D.-Ph.D. program (with the Ph.D. in computer science and communications technology), and a one or two year post-doctoral computer/communications fellowship for academic health scientists. During discussion, Dr. Ebert expressed concern over the proposed M.D.-Ph.D. program being built around a technology, and questioned the specific goal of such a program. Dr. May stated that pursuit of the M.D. degree was a full-time effort, and asked if the double-degree program was intended to shorten the amount of time ordinarily required for the two degrees. Dr. Schoolman responded to Dr. Ebert's and Dr. May's questions by pointing out that one of the goals of this long-range program would be to prepare the physician, via a concurrent and possibly shorter period of education in the two disciplines, for a markedly different role in the future. Dr. Aulyan echoed this view, and envisions the M.D.-Ph.D. as being an innovator who would develop and test new techniques for subsequent use by practitioners. Dr. Cummings remarked that one clear intent of the program would be to teach teachers of new technology.

The second recommendation calls for the development of a clearinghouse for information on all aspects of technology in medicine, and for a center for the coordination of Federal programs involving application of biomedical communications and educational technology in the health sciences. The Review Committee suggested that NLM should assume the role of coordinator in these efforts and thereby establish "authority by doing."

The Review Committee's third recommendation identifies the need for the creation and dissemination of responsive, multi-media information modules. In addition, it was recognized that mechanisms would have to be established to assure technical and content quality, to decide on the mix of productions

created and supported, and to determine priorities for immediate implementation. To achieve these goals, the Review Committee advocated the participation of disciplinary societies in the creation of individual program elements, the appointment of discipline-oriented committees to review proposals and assign priorities, and the development of an extensive stepwise procedure for the review and evaluation of materials prior to and following their integration into modules. Although Dr. McGovern agreed with the modular concept for teaching well-defined areas of singular knowledge and "how to" skills, he did not believe this approach would lend itself to instruction in complex, multi-faceted clinical entities in which outdated facts or diverse points of view and interpretation come into play. Dr. Cummings responded that it was precisely in such multi-faceted areas that the flexibility of modular packages might be used to good advantage, in that individual pieces may be easily replaced. Dr. Schoolman made it clear that the Review Committee's recommendation was for the creation of a single pilot of this nature so that the relative merits and shortcomings might be assessed.

The fourth recommendation of the Review Committee addresses the need for bibliographies of "non-print" materials, i.e., those not included in catalogs and indices of journal and monographic items. Identification and screening of existing and new material, and definition of output requirements, were recommended as requiring action. The criteria for initial and subsequent selection of materials to be cited in bibliographies should assure currency, technical and subject excellence, and availability at reasonable cost. Dr. Cummings stated that the range of "non-print" materials encompassed by this recommendation was a broad one, and would include such things as computer programs and software packages.

Responsibility for each aspect of the proposed programs has been assigned to the appropriate components of NLM. Functional groups will simply enlarge their areas of responsibility in order to accommodate the four recommendations, and no new organizations need be created. Funding for part of the computer effort will be supported by BHME, and although funds are not available yet, both Dr. Endicott and the Director have advised the Office of Management and Budget of their interest in this cooperative effort. NLM staff is proceeding with program planning on the assumption that budgetary approval is forthcoming.

The Board then moved to accept the four recommendations of the Review Committee.

DISSEMINATION OF MEDICAL INFORMATION AND THE ROLE OF THE NLM IN ISRAEL

Dr. Prywes paid homage to the NLM staff for their efforts during the past five years in helping the Israel Journal of Medical Sciences to become an agency for a national health research communications program. He reviewed the many difficulties encountered in fusing two existing publications of questionable value into one responsive journal of international interest. With the emergence of the Journal, however, Dr. Prywes felt that Israel had something to offer in the way of helping to further NLM's programs for

the dissemination of medical information. In a collaborative effort, Dr. Prywes and the Journal began to promote, screen, and produce medical information, and provided personnel to index material for Index Medicus. Subsequently, the Department of Medical Education of the Hadassah Medical School, and NLM's National Medical Audiovisual Center, jointly embarked upon a three-year health sciences communications and audiovisual demonstration project.

Dr. Prywes cited the many projects, publications, and other mutual benefits arising from this cooperative effort as being demonstrative of the true lack of international boundaries in the pursuit of improved techniques of information handling.

REVIEW OF P. L. 480 PROGRAMS IN ISRAEL, POLAND AND YUGOSLAVIA

Dr. Langley referred the Board to the reports of Drs. Ebert and Michael, under Tab VII, for the details of their visit to these countries in August 1971. Dr. Langley noted that it was now recognized that this is a viable and worthwhile program not requiring further evaluation in the near future. However, the additional benefit of sending Board members on such trips is to indicate to participating foreign scientists the esteem in which the program is held, to facilitate scientific interchange with potential applicants, and to stimulate interest in the program.

Dr. Langley described the concept of the bloc grant, whereby NLM has, in essence, a representative abroad who assists by providing advice to grant applicants, submits proposals to peer groups and to NLM for review, and then re-allocates funds to grant recipients within the country.

Dr. Max Michael, reporting on his visits, observed that in each of the three participating countries he had spoken with a considerable number of scientists--in general persons of distinction and scientific ability. Dr. Michael enumerated his impressions of the P.L. 480 programs:

- 1) They contribute financial support to a significant number of scientists, making possible the preparation of valuable publications.
- 2) They have aided the economies of the participating countries.
- 3) They have stimulated scientific thought.
- 4) They have made possible the publication of excellent journals, such as the Israel Journal of Medical Sciences.
- 5) They have had a catalytic effect in bringing scientists together for a common purpose.
- 6) They have improved the American image abroad.

Dr. Michael emphasized that frequent foreign staff travel is essential to the operation of such a program.

Dr. Robert Ebert said he concluded after his trip that the program has a very important role in providing for an interchange of ideas and knowledge in the biomedical sciences. He believes the program is to the great credit of the Library, both scientifically and for our relationships with the nations concerned. The NLM P. L. 480 program also has played

an important role for the participating countries. Because scientists participating in the program respect U. S. science and medicine, they spare no efforts to produce the best kind of product they are capable of. The bloc grant mechanism has provided a means of expediting and coordinating the program, and is especially effective in getting scientists together around a project. Israel, where the bloc grant had already proven to be highly successful, was the prototype of the program developing now in Poland and Yugoslavia.

Dr. Ebert expressed some concern over the impact of terminating P. L. 480 programs in participant countries when funds expire. Over the several years during which funds are available the scientific pattern is affected to a significant degree, and the NLM should carefully consider how to terminate these viable programs. Dr. Ebert considers them to be extremely important for cementing international relations, and for the interchange of knowledge.

It was noted that the U. S. and Israeli governments are currently negotiating arrangements (the Harmon plan) to continue support for Public Law 480 programs in Israel. Regardless of the outcome of this proposal, the major NLM P. L. 480 project in Israel (I.J.M.S.) is financed through the end of FY 1974.

Dr. Langley urged that NLM repeat previous attempts to establish P. L. 480 programs in India, and advocated a mission to that country by some of the Regents. Dr. Cummings described earlier efforts by NLM, and by the Rockefeller and Ford Foundations, which proved unsuccessful and frustrating; even though the scientific community in India is receptive, the Indian government has made it clear in the past that they wish to use the P. L. 480 funds for other programs with higher priority.

In response to several questions about P. L. 480 programs in general, Dr. Cummings traced their history, the methods of allocating funds to the various U. S. agencies, and the criteria for selecting countries to participate. Dr. Cummings noted that substantial support for staff negotiations had been given by the U. S. embassies in Poland and Israel.

The Director reminded the Board that P. L. 480 is not an AID program, and that a quid pro quo return is expected. The Director also stated his belief that the level of funding should be commensurate with a country's scientific capability. He cited India, Pakistan, Tunisia, as cases in point.

REPORT OF THE ASSOCIATE DIRECTOR FOR EXTRAMURAL PROGRAMS 1/ 2/ 3/

Dr. Langley reviewed the Board's earlier discussion and actions relating to the Extramural Programs Training Grant Programs. He summarized the results of an analysis by Kronick and Rees of the manpower needs in medical libraries, who concluded that the field of medical librarianship is experiencing a crisis of quality and recommended strong programs for continuing education. The NLM sponsored Belmont Conference, in May 1971, supported this recommendation and further recommended that medical librarians need a better understanding of the vocabulary of medicine, that there should be more training in information science, and that Ph.D. Programs be supported for the training of health scientists in library science.

Dr. Langley presented an analysis of the known outcomes of the traditional master's degree program in medical library science and the internship program supported by the NLM. Some 55 to 65% of the individuals trained under the master's program have remained in the field of biomedical librarianship, whereas 80% of the individuals trained under the internship program are associated with biomedical libraries. The master's program supported by the NLM does not differ significantly from that offered in some 50 or 60 schools of library science throughout the country; in only two of the programs is there strong emphasis on biomedical content.

The recommendations endorsed by the Subcommittee of the Board, based on the consideration of these data, are that the NLM should (1) emphasize some type of Ph.D. program with a strong managerial component; (2) develop programs for continuing education; (3) continue to expand the intern or similar programs and (4) phase out the current master's degree programs. The Board concurred unanimously in the recommendations.

Dr. Langley requested renewal of staff authority to make adjustments in time or amounts of grant awards. The guidelines originally adopted in 1964 were amended in 1968 and have been reaffirmed annually. The Board again reaffirmed the guidelines.

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- 1/ Proceedings of meetings are restricted unless cleared by the Office of the Director, National Institutes of Health. The restriction relates to all material submitted for discussion at the meetings, the agenda for the meetings, and supplemental material, and all other official documents.
 - 2/ For the record, it is noted that members absent themselves from the meeting room when the Board has under individual discussion applications (a) from their respective institutions, (b) in which a conflict of interest might occur.
 - 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.

Information concerning recurring bibliographies published with EP support was submitted. The Administrative Report of the Division of Research Grants included a study, "Normalization of Study Section Priority Scores". The question of normalizing priority scores had come up at two previous Board meetings. Dr. Langley felt that it would be interesting to convert the raw priority scores for NLM awards to the normalized priority scores for current applications. The variation in range was so slight that normalization produced no significant information and will not be used. The Board accepted this statement.

CONSIDERATION OF PENDING APPLICATIONS

The Board considered a proposal in the NLM Special Foreign Currency Program submitted by Dr. Moshe Prywes of the Hebrew University, Hadassah Medical School, Application Number 06-502-1 Amendment #3 for 3 years support in a total amount of IL 1,500,000 (\$350,143 equivalent) to continue and expand a health sciences audiovisual demonstration program initiated with NLM support in July 1968. This application had been recommended for approval by an Ad Hoc Review Committee. At least two aspects of the program were noted as offering advantages to the United States--unique audiovisual productions which could be utilized in the country and the role the project could play in serving as a microcosm for development of a national audiovisual system which could assist in the development of a much larger system in the United States. The Board unanimously recommended approval of the project subject to the deletion of \$53,500 (Equivalent) in production costs which they believed should be provided locally. The Board also agreed that the project should not be funded unless funds were available to continue it for at least 2 of the 3 years requested as recommended by the Subcommittee.

In accordance with the procedures recommended by the FAST Task Force the Board reviewed only the grant applications which carried a split vote action, required a policy decision, or requested a yearly amount of over \$50,000. The Board considered five applications which had received split votes from the Study Sections. The Board concurred with the majority for disapproval of three applications. It reversed the actions of the Study Sections on two applications.

The Board concurred with the Subcommittee's recommendation to approve the first Special Scientific Project application received for Board review in sometime. It further moved to change the priority score to a funding level.

The Board then considered the training grant applications. The Board concurred with the Subcommittee's recommendations. In view of the earlier action to phase-out the Master's degree training program supported by the Extramural Programs, the Board voted disapproval of the approved application from Drexel University, School of Library Science, which proposed a Master of Science Biomedical Information Specialist training program. The Board concurred with all other Subcommittee recommendations on applications which are shown in Appendix I.

The Board also concurred with the interim actions taken by staff with regard to research, publications and training programs which in each case negotiated a decreased amount for payment.

Policy Issues -- The Board considered the medical library resource grant policy on support document delivery. Two recommendations were approved:

1. Resource Grant funds shall not be used to defray any of the expenses involved in free document delivery services.
2. This policy shall be effective December 1, 1971 but shall not be retroactively applied to projects already funded.

The Board discussed policy guidelines for support to new health science school libraries. The Chairman, Dr. Anlyan, absented himself from the room during this discussion and that which followed on the question of support to East Carolina University. The Board concurred with the Subcommittee recommendation that staff prepare guidelines for the use of the applicants which define the relevant factors that would justify the level of support requested. The Board requested that these guidelines be brought to the next meeting.

The Board considered a request for policy on the support of certain non-recurring equipment costs. The Board approved the recommendation that resource grant funds shall not be used for the purchase, lease or rental of terminal equipment related to Medline or other on-line bibliographic searching projects.

The Board considered five Resource Grant Applications. The Board concurred with the majority of the Committee and Subcommittee in its recommendations for three of the five; the Board disapproved two applications which had been approved by the majority of the Committee.

Dr. Langley observed that the present low approval rate for the resource grant program is due to three factors: 1) This is a new program, 2) There is a lack of sophistication on the part of the applicants, and 3) The Committee has had to work out its guidelines for review of these applications. He anticipates that the program will be receiving better, fewer, and more fundable applications in the future.

Dr. Langley was commended for the excellence of his presentation and for the work his staff had contributed to the presentation.

Respectfully submitted,



Martin M. Cummings, M.D.
Executive Secretary to the
Board of Regents
National Library of Medicine

ACTIONS TAKEN BY THE BOARD OF REGENTS IN GENERAL SESSION

November 22-23, 1977

1. The Board accepted the four recommendations of the AAMC Report Review Committee. The recommendations were:
 - a. The Board of Regents should initiate and maintain a continuing interest in the development of manpower for computer applications in medicine. The Regents are urged to assert a leadership role in this area, and to seek support both in and outside government.
 - b. The Committee advocates the organization of a biomedical communications network fundamentally conceived as providing the mechanism by means of which inter-institution cooperation and sharing of resources will be used to meet some of the needs of medical education and medical practice.
 - c. The Committee advocates the development of multi-media free-standing information modules designed to permit manipulation by individual faculty members in their presentation of a floor curriculum for the health sciences.
 - d. The National Library of Medicine should accept the national responsibility for indexing and cataloging appropriate health science learning resource information material not published in journals and monographs. This indexing and cataloging should be limited to selected materials such as audiovisuals, multimedia presentations, and computer-aided instructions which meet published criteria.
2. The Board concurred with its Subcommittee's recommendations relating to the Training Grant Programs. The recommendations were that the NLM should:
 - a. emphasize some type of Ph.D. program with a strong managerial component;
 - b. develop programs for continuing education;
 - c. continue to expand the intern or similar programs; and
 - d. phase out the current master's degree programs.
3. The guidelines for staff authority to make adjustments in time or amounts of grant awards were again reaffirmed by the Board.
4. The Board accepted the finding that normalization of priority scores produced no significant information, since the variation in range between raw and normalized priority scores was so slight.

5. The Board recommended approval of a proposal from the Hebrew University, Hadassah Medical School, to continue and expand a health sciences audiovisual demonstration program initiated with NIM support in 1968. Recommendation for approval was made subject to the deletion of \$53,500 in production costs. The Board also agreed that the project should not be funded unless funds were available to continue it for at least two of the three years requested.

6. The Board considered the medical library resource grant policy on support document delivery. Two recommendations were approved:

a. Resource Grant funds shall not be used to defray any of the expenses involved in free document delivery services.

b. This policy shall be effective December 1, 1971 but shall not be retroactively applied to projects already funded.

7. The Board approved the recommendation that resource grant funds shall not be used for the purchase, lease or rental of terminal equipment related to MEDLINE or other on-line bibliographic searching projects.

NATIONAL LIBRARY OF MEDICINE

RESUME OF RECOMMENDATIONS

THE BOARD OF REGENTS AT THEIR NOVEMBER 22-23, 1971 MEETING
 CONCURRED WITH THE FOLLOWING RECOMMENDATIONS

RESOURCE GRANTS

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01258-01 University of Vermont Burlington, Vermont	BLR	01 02 03	\$ 47,550 51,355 48,271	\$ 23,775 * 25,678 * 24,135 *	311
1 G08 LM 01264-01A1 University of Connecticut Health Center Hartford, Connecticut	BLR	01A1 02 03	74,519 77,314 38,411	Disapproval	
1 G08 LM 01272-01A1 St. Francis Hospital La Crosse, Wisconsin	BLR	01A1	64,389	Disapproval	
1 G08 LM 01326-01 Dartmouth College Hanover, New Hampshire	BLR	01 02 03	30,433 33,483 30,361	28,240 * 30,466 * 26,740 *	364
1 G08 LM 01358-01 Northwestern University Medical School Chicago, Illinois	BLR	01 02 03	44,157 44,103 46,842	Disapproval	
1 G08 LM 01362-01 University of Vermont Burlington, Vermont	BLR	01 02 03	25,198 31,861 20,961	12,600 * 15,930 * 10,480 *	314

*Subject to negotiation.

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01366-01 Harlem Hospital Center New York, New York	BLR	01 02 03	\$ 54,480 41,480 31,840	\$ 33,840 41,480 *	339
1 G08 LM 01357-01 Lynchburg Training School Lynchburg, Virginia	BLR	01	1,684	1,684	268
1 G08 LM 01377-01 Yale University New Haven, Connecticut	BLR	01 02 03	14,000 6,625 6,625	Deferral	
1 G08 LM 01380-01 Utica State Hospital Utica, New York	BLR	01 02 03	56,543 42,175 44,675	Disapproval	
1 G08 LM 01407-01 John F. Kennedy Institute Baltimore, Maryland	BLR	01 02	36,000 11,400	Disapproval	
1 G08 LM 01408-01 Los Angeles Medical Center Los Angeles, California	BLR	01 02 03	30,740 12,000 7,260	Disapproval	
1 G08 LM 01412-01 University of South Florida Tampa, Florida	AD HOC	01 02 03	181,646 154,312 94,175	50,000 50,000 50,000	160
1 G08 LM 01413-01 Indiana University Foundation Bloomington, Indiana	BLR	01	10,500	Disapproval	
1 G08 LM 01456-01 College of Osteopathic Medicine & Surgery Des Moines, Iowa	BLR	01 02	23,531 13,681	Disapproval	

*Subject to negotiation.

<u>Institution</u>	<u>Review Group</u>	<u>Year</u>	<u>Requested</u>	<u>Recommendation</u>	<u>Priority</u>
1 G08 LM 01457-01 Boston University Boston, Massachusetts	BLR	01 02	\$ 45,170 19,421	Disapproval	
1 G08 LM 01458-01 University of Washington Seattle, Washington	BLR	01 02 03	10,616 11,060 11,615	Disapproval	
1 G08 LM 01459-01 University of Washington Seattle, Washington	BLR	01 02 03	10,328 6,355 6,615	Deferral	
1 G08 LM 01460-01 Philadelphia General Hospital Philadelphia, Pennsylvania	BLR	01	17,700	Disapproval	
1 G08 LM 01461-01 Philadelphia General Hospital Philadelphia, Pennsylvania	BLR	01 02 03	21,029 19,929 19,929	Disapproval	
1 G08 LM 01462-01 Church Home and Hospital Baltimore, Maryland	BLR	01 02 03	1,126 2,881 1,094	Disapproval	
1 G08 LM 01463-01 Hoagland Medical Library Brooklyn, New York	BLR	01 02	54,215 46,307	\$ 48,285 96,680	250
1 G08 LM 01464-01 Alexander Graham Bell Association for the Deaf, Inc. Washington, D. C.	BLR	01 02 03	63,350 67,365 79,485	Disapproval	
1 G08 LM 01465-01 Boston University Boston, Massachusetts	BLR	01 02	47,026 44,070	Disapproval	
1 G08 LM 01466-01 University of Alabama Birmingham, Alabama	AD HOC	01 02 03	62,025 61,452 55,450	Disapproval	

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01467-01 Mercy Catholic Medical Center Darby, Pennsylvania	BLR	01 02	\$ 14,660 3,915	\$ 14,660 3,915	230
1 G08 LM 01468-01 Albany Medical College of Union University Albany, New York	BLR	01	4,083	4,083	214
1 G08 LM 01469-01 University of Illinois Chicago, Illinois	BLR	01 02 03	55,125 60,200 65,400	Deferral	
1 G08 LM 01470-01 University of Illinois Chicago, Illinois	BLR	01 02 03	56,125 60,800 65,400	Deferral	
1 G08 LM 01471-01 College of Physicians of Philadelphia Philadelphia, Pennsylvania	BLR	01 02	27,103 26,311	25,968 * 26,276 *	243
1 G08 LM 01472-01 Wayne State University Detroit, Michigan	BLR	01 02 03	49,380 51,680 46,280	30,245 32,020 * 32,555 *	237
1 G08 LM 01473-01 Mercy Hospital of New Orleans New Orleans, Louisiana	BLR	01	109,965	Disapproval	
1 G08 LM 01474-01 College of Veterinary Medicine University of Georgia Athens, Georgia	BLR	01 02 03	18,025 18,887 19,450	18,025 18,887 19,450	298

*Subject to negotiation.

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01475-01 Albert Einstein College of Medicine Bronx, New York	BLR	01 02 03	\$ 22,650 23,800 24,950	Disapproval	
1 G08 LM 01476-01 Research Hospital and Medical Center Kansas City, Missouri	BLR	01	14,000	Disapproval	
1 G08 LM 01477-01 Rochester Methodist Hospital Rochester, Minnesota	BLR	01 02 03	60,785 10,075 4,825	\$ 60,785 * 10,075 * 4,825 *	377
1 G08 LM 01478-01 Yale University New Haven, Connecticut	AD HOC	01 02 03	14,700 14,700 14,700	Disapproval	
1 G08 LM 01479-01 Yale University New Haven, Connecticut	AD HOC	01 02 03	34,758 63,500 81,606	38,201 52,017 47,366	230
1 G08 LM 01483-01 Maimonides Medical Center Brooklyn, New York	BLR	01 02	44,068 28,498	Disapproval	
1 G08 LM 01484-01 Medical Center Research & Development Office of the University of Oklahoma Fdn., Inc. Oklahoma City, Oklahoma	BLR	01 02 03	188,548 182,232 122,374	Disapproval	
1 G08 LM 01485-01 University of Alabama Birmingham, Alabama	AD HOC	01 02	45,420 44,080	Deferral	

*Subject to negotiation.

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>
1 G08 LM 01502-01 Planned Parenthood Federation of America, Inc. New York, New York	BLR	01 02 03	\$ 56,670 67,930 80,625	Disapproval	
1 G08 LM 01504-01 Mount Sinai Hospital of Greater Miami Miami Beach, Florida	BLR	01	4,815	Disapproval	
1 G08 LM 01505-01 Mount Sinai Hospital of Greater Miami Miami Beach, Florida	BLR	01 02 03	34,294 19,460 18,383	Disapproval with Advice	
1 G08 LM 01507-01 University of Minnesota Minneapolis, Minnesota	AD HOC	01 02 03	76,269 152,533 132,927	Disapproval	
1 G08 LM 01512-01 Duke University Durham, North Carolina	BLR	01 02	10,268 9,128	\$ 10,268 9,128	255
1 G08 LM 01513-01 Massachusetts Institute of Technology Cambridge, Massachusetts	BLR	01 02 03	59,860 62,360 64,860	Disapproval	
1 G08 LM 01514-01 College of Medicine and Dentistry of New Jersey Newark, New Jersey	BLR	01 02	20,040 28,242	Disapproval	
1 G08 LM 01515-01 College of Medicine and Dentistry of New Jersey Newark, New Jersey	BLR	01 02 03	39,060 29,060 29,060	Disapproval	

THE BOARD OF REGENTS AT THEIR NOVEMBER 22-23, 1971 MEETING
 DID NOT CONCUR WITH THE FOLLOWING RECOMMENDATIONS

<u>Application Number & Institution</u>	<u>Initial Review Group</u>	<u>Year</u>	<u>Amount Requested</u>	<u>IRG Recommendation</u>	<u>Priority</u>	<u>Board Recommendation</u>
1 G08 LM 01103-01A1 Worcester State Hospital Worcester, Massachusetts	BLR	01A1 02 03	\$ 7,500 1,750 1,750	\$ 5,000 - - -	432	Disapproval
1 G08 LM 01110-01 East Carolina University Greenville, North Carolina	BLR	01 02	90,400 68,600	30,000 30,000	384	Disapproval
1 G08 LM 01418-01 Iowa State Medical Library Historical Building Des Moines, Iowa	BLR	01 02 03	3,000 3,600 4,200	3,000 - - -	282	Disapproval

NATIONAL LIBRARY OF MEDICINE

RESUME OF BOARD OF REGENTS RECOMMENDATIONS

NOVEMBER 22-23, 1971

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	BOARD OF REGENTS		
						Approval	Priority	Other
1 R01 LM HE 01400-01 (Publ) Tierney, James M. Battelle Memorial Institute Columbus Laboratories Department of Mechanical and Engineering Section Columbus, Ohio "A Directory of Hyperbaric-Medicine Facilities"	AFY	72	01 02	\$ 14,890 22,905	Disapproval			Dis.
2 R01 LM 00003-13 (Publ) Martna, Maret H. The Arctic Institute of North America Washington, D. C "Abstracting Medical Literature for Arctic Bibliography"	BCM	72	13 14 15 16 17	21,330 22,185 23,455 24,425 25,485	\$ 21,330 22,185 23,455 (239)	\$ 21,330 22,185	239	
2 R01 LM 00072-06 (Publ) Halstead, Bruce W. World Life Research Institute Colton, California "Monograph on Poisonous Plants of the World"	BCM	72	06 07 08 09	87,403 91,346 95,526 93,657	Disapproval			Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS

IRG

Recommendation

Approval Priority Other

Initial

Review Group

Year

Requested

Recommendation

Dis.

Application No., Investigator
and Institution

2 R01 LM 00522-04
Selye, Hans
Universite de Montreal
Faculty of Medicine
Montreal, Quebec, Canada
"Compilation of 'Analytico-Synthetic'
Monographs"

72 04 \$ 27,580
05 28,420

Disapproval

Dis.

2 R01 LM 00567-04A1 (Pub1)
Ryckman, Raymond E.
Loma Linda University
School of Medicine
Loma Linda, California
"Review of Triatominae Literature"

72 04A1 18,980
05 30,000

Deferral

Def.

2 R01 LM 00568-02
Helpem, Milton
Milton Helpem Library
School of Medicine
New York, New York
"International Microform Journal
of Legal Medicine"

72 02 9,800
03 9,800
04 9,800

Disapproval

Dis.

2 R01 LM 00577-04
Koen, Frank M.
University of Michigan
Ann Arbor, Michigan
"Language and Language Behavior
Abstracts, 5-Year Index"

72 04 30,947

Disapproval

Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	Approval	Priority	Other
2 R01 LM 00632-04 Weed, Robert I. University of Rochester School of Medicine & Dentistry Rochester, New York "A Programmed Course in Blood Morphology-An Evaluation"	BCM	72	04 05 06	\$ 26,840 32,820 28,331 (320)	\$ 26,340 32,820 28,331 (320)			Dis.
2 R01 LM 00635-04 Corson, Samuel A. The Ohio State University Research Foundation College of Medicine Columbus, Ohio "Psychophysiology and Psychosomatic Medicine in the USSR"	BCM	72	04 05 06 07 08	30,030 29,534 30,950 32,433 33,985	Disapproval			Dis.
2 R01 LM 00636-04 Aitz, John A. University of Nebraska College of Medicine Lincoln, Nebraska "Neurological Manifestations of General Disease"	BCM	72	04 05 06	8,800 9,310 9,910	Disapproval			Dis.
2 R01 LM 00673-04 Ham, Thomas H. Case Western Reserve University School of Medicine Cleveland, Ohio "Development and Evaluation of Instructional Materials"	BCM	72	04 05 06	30,913 33,529 36,101 (242)	30,913 33,529 36,101 (242)	30,913 33,529 36,101	242	

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	Approval	Priority	Other
3 RO1 LM 00695-01S1 (Publ) Kerker, Ann E. Purdue Research Foundation School of Veterinary Science and Medicine Lafayette, Indiana "Veterinary Medicine: Clinical and Research Literature"	BCM	72	01S1	\$ 9,991	\$ 9,991 (263)	\$ 9,991	263	
1 RO1 LM 01388-01 (Publ) Van de Castle, Robert L. University of Virginia School of Medicine Charlottesville, Virginia "Preparation of Indexed Annotated Dream Bibliography"	BCM	72	01	14,476	Disapproval			Dis. with Advic
1 RO1 LM 01389-01 (Publ) Anastos, George University of Maryland Graduate School College Park, Maryland "Revision of Stiles' and Hassall's Cestoda"	BCM	72	01 02 03	55,908 57,795 61,173	55,908 57,795 61,173 (267)	55,908 57,795 61,173	267	
1 RO1 LM 01390-01 (Publ) Mellecker, John B. Foundation for Interdisciplinary Biocharacterization of Populations, Inc. New York, New York "Biocharacterist Reviews"	BCM	72	01 02	24,000 28,450	Disapproval			Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS

Application No., Investigator and Institution Initial Review Group FY Year Requested Recommendation Approval Priority Other

1 R01 LM 01391-01 Jason, Hilliard Michigan State University College of Human Medicine East Lansing, Michigan "Medical Education Indexing and Retrieval System"	ECM	72	01	\$ 39,490	Deferral			Withdrawn
			02	44,450				
			03	55,190				
			04	58,200				
			05	60,960				

1 R01 LM 01392-01 Comstock, Eric G. Baylor College of Medicine Houston, Texas "Peer Review of the Literature on Treatment of Acute Intoxication"	BCM	72	01	49,213	Disapproval			Dis.
			02	48,337				
			03	51,171				

1 R01 LM 01393-01 (Publ) Flynn, Robert J. Iowa State University Ames, Iowa "Book on Parasites of Laboratory Animals"	BCM	72	01	20,000	Disapproval			Dis.
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1 R01 LM 01395-01 Kuehl, Philip G. University of Maryland College of Business and Public Administration College Park, Maryland "The Practicing Physicians as an Information Processor"	BCM	72	01	14,630	Disapproval			Dis.
			02	9,130				

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG		Dis.
					Recommendation	Approval	
1 R01 LM 01422-01 Levy, Joseph V. Presbyterian Hospital of Pacific Medical Center San Francisco, California "Multi-User Computerized Library Drug Reference System"	BCM	72	01 02 03	\$ 42,644 44,391 46,225	Disapproval	Recommendation	Other
1 R01 LM 01424-01 Rush, James E. The Ohio State University College of Engineering Columbus, Ohio "An Operational Automatic Abstracting System"	BCM	72	01 02 03	37,926 48,474 33,652	\$ 37,126 48,474 32,852 (286)	286	
1 R01 LM 01425-01 Cheng, Tien-Hsi The Pennsylvania State University College of Science University Park, Pennsylvania "Chinese Medicinal Materials and Medical Practices"	BCM	73	01 02 03	52,800 54,135 125,843	26,400 27,067 (396)		Dis.
1 R01 LM 01426-01 Goffman, William Case Western Reserve University Cleveland, Ohio "A Quality Filtering Information System"	BCM	72	01 02 03	23,200 24,381 25,438	23,200 24,381 25,438 (269)	269	

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	BOARD OF REGENTS	
						Approval	Recommendation Priority
1 R01 LM 01427-01 Lazarow, Arnold University of Minnesota Medical School Minneapolis, Minnesota "Computer Based Interface for Information Services"	BCM	72	01	\$ 77,508	Disapproval		Dis.
			02	82,500			
			03	86,685			
			04	81,850			
			05	86,275			
1 R01 LM 01432-01 Geddes, Leslie A. Baylor College of Medicine Houston, Texas "The Transcribed Broadcast Demonstration"	BCM	72	01	55,308	Disapproval		Dis.
			02	51,093			
			03	50,994			
1 R01 LM 01433-01 Margolin, Joseph B. The George Washington University Washington, D. C. "A Bibliography: Implications of Organ Transplantation"	BCM	72	01	31,163	Disapproval	\$ 31,163	295
2 R01 HD 02586-06A1 Simonson, Ernst Mount Sinai Hospital Minneapolis, Minnesota "Physiology and Pathology of Fatigue (Monograph)"	BCM	72	06A1	14,420	Disapproval		Dis.
			07	14,428			
			08	15,446			

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS
Recommendation
Approval Priority Other

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	Approval	Priority	Other
1 R01 LM 01394-01 Eburne, Charles P. International Development Center Washington, D. C. "Cooperative Library Cost Analysis and Reporting Experiment"	BLR	72	01 02	\$ 48,000 24,200	Disapproval			Dis.
1 R01 LM 01397-01 Moreland, Sara L. The John Crerar Library Chicago, Illinois "Study of a Medical Union Catalog System"	BLR	72	01 02	37,616 43,729	\$ 18,000 21,000 (240)	\$ 18,000 21,000		240
1 R13 LM 01399-01 Goffman, William Case Western Reserve University Cleveland, Ohio "Conference on Library and Communications Research"	BLR	72	01	16,802	Disapproval			Dis.
1 R01 LM 01428-01 Hunter, George H. University of Vermont College of Medicine "Problem-Oriented Patient Record Information Service"	BLR	72	01 02 03	59,906 42,517 46,624	Disapproval			Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	BOARD OF REGENTS		
						Approval	Priority	Other
1 R01 LM 01396-01 Howard, R. Palmer University of Oklahoma Medical Center School of Medicine Oklahoma City, Oklahoma "History of Health in Indian and Oklahoma Territories"	HLS	72	01 02 03	\$ 9,740 9,865 9,990	\$ 9,740 9,865 9,990 (237)	\$ 9,740 9,865 9,990	237	
1 R01 LM 01429-01 Weiner, Dora B. Manhattanville College Purchase, New York "The Delivery of Health Care and the French Revolution"	HLS	72	01 02 03	20,760 21,870 22,980	10,935 10,935 10,935 (100)	10,935 10,935 10,935	100	
1 R01 LM 01430-01 Brigante, Robert F. University of California San Francisco, California "History of California Dentistry"	HLS	73	01	2,500	Disapproval			Dis.
1 R01 LM HD 01431-01 Doll, Eugene E. The University of Tennessee College of Education Knoxville, Tennessee "Historical Review of Mental Retardation in the United States"	HLS	73	01	25,659	Disapproval			Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

BOARD OF REGENTS
Recommendation

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	Recommendation	Approval	Priority	Other
1 R01 MH 21039-01 Duel LM Grupp, Stanley E. Illinois State University College of Arts & Sciences Normal, Illinois "The Nalline Test and Narcotic Control"	NAD	72	01 02	\$ 10,241 3,851	Disapproval			Dis.
1 R01 CA 13207-01 Duel LM Carter, John R. Universities Associated for Research and Education in Pathology, Inc. Bethesda, Maryland "International Reference Center on Urogenital Tumors"	PTHB	72	01 02 03 04 05	45,334 43,890 47,091 45,646 48,202	Disapproval			Dis.
1 R01 LM 01423-01 Kessler, Myer M. Massachusetts Institute of Technology Computer Division Cambridge, Massachusetts "Bibliographic Coupling in the Biomedical Literature"	SSS	72	01 02	33,140 41,040	Disapproval			Dis.
1 R01 LM 01506-01 Haskin, Marvin E. Hahnemann Medical College & Hospital Systems Engineering Division Philadelphia, Pennsylvania "Hahnemann-St. Agnes Communication Link"	SSS	72	01	85,294	Disapproval			Dis.

RESEARCH & PUBLICATION GRANT APPLICATIONS - BY STUDY SECTION

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	BOARD OF REGENTS	
					IRG Recommendation	Approval Priority Other
2 R01 AI 03793-12 Dual LM Audy, J. Ralph University of California School of Medicine San Francisco, California "Checklist of World Trombiculids Including Vectors"	TMP	72	12	\$ 42,063	\$ 22,063	27S
			13	42,063	(278)	

NATIONAL LIBRARY OF MEDICINE

RESUME OF BOARD OF REGENTS RECOMMENDATIONS

NOVEMBER 22-23, 1971

TRAINING GRANT APPLICATIONS

Application No., Investigator and Institution	Initial- Review Group	FY	Year	Requested	IRG Recommendation	BOARD OF REGENTS		
						Disapproval	Approval	Other
1 T01 LM 00146-01 Wilson, Leonard G. University of Minnesota Institute of the Health Sciences Minneapolis, Minnesota "Training in the History of Biology and Medicine"	BLR	72	01	\$ 10,390	Disapproval			Dis.
			02	20,380				
			03	21,900				
			04	12,800				
1 T01 LM 00147-01 Slamecka, Vladimir Georgia Institute of Technology General College Atlanta, Georgia "Graduate Program in Biomedical Information Science"	AD HOC	72	01	72,235	\$ 384,004	\$ 37,382	180	
			02	82,563	for 5	71,672		
			03	100,486	years	83,912		
			04	113,460	(180)	96,421		
			05	115,260		98,342		
1 T01 LM 00148-01 Garrison, Guy Drexel University Philadelphia, Pennsylvania "Biomedical Information Specialist Training Program"	BLR	72	01	92,641	70,000			Dis.
			02	136,093	70,000			
			03	138,024	70,000			
			04	94,780	70,000			
					(285)			

TRAINING GRANT APPLICATIONS

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	BOARD OF REGENTS		
					IRG Recommendation	Approval	Recommendation Priority Other
1 T01 LM 00149-01	BLR	72	01	\$ 31,612	\$ 31,612		225
Stead, Eugene A., Jr.			02	45,884	45,884		
Duke University Medical Center			03	64,710	64,710		
School of Medicine			04	66,160	- -		
Durham, North Carolina			05	68,050	- -		
"M.D.-Ph.D. Program in Biomedical Communications"					(225)		

NATIONAL LIBRARY OF MEDICINE

RESUME OF BOARD OF REGENTS RECOMMENDATIONS

NOVEMBER 22-23, 1971

SPECIAL SCIENTIFIC PROJECT APPLICATION

Application No., Investigator and Institution	Initial Review Group	FY	Year	Requested	IRG Recommendation	BOARD OF REGENTS		
						Approval	Priority	Other
1 F13 LM 26,410-01 Field, John University of California School of Medicine Los Angeles, California "The Development of Medical Education in the United States"	AD HOC	72	01	\$ 31,871	\$ 31,871	100		
			02	33,239	33,239			
					(360)			

COMPETING TRAINING GRANTS
SUMMARY OF COUNCIL RECOMMENDATIONS
TRADITIONAL PROJECT GRANTS

COUNCIL DATE: NOV 1971

INSTITUTE OR DIVISION: NATIONAL LIBRARY OF MEDICINE

TYPE OF REQUEST	TOTAL REQUESTED		APPROVED		REDUCED		DISAPPROVED		DEFERRED	
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT
FY 1972										
NEW	4	206,878	2	68,994	1	34,853	2	103,031	0	0
RENEWAL	0	0	0	0	0	0	0	0	0	0
SUPPLEMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	4	206,878	2	68,994	1	34,853	2	103,031	0	0
FY 1973										
NEW	0	0	0	0	0	0	0	0	0	0
RENEWAL	0	0	0	0	0	0	0	0	0	0
SUPPLEMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
FY 1974										
NEW	0	0	0	0	0	0	0	0	0	0
RENEWAL	0	0	0	0	0	0	0	0	0	0
SUPPLEMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
FY 1975										
NEW	0	0	0	0	0	0	0	0	0	0
RENEWAL	0	0	0	0	0	0	0	0	0	0
SUPPLEMENT	0	0	0	0	0	0	0	0	0	0
TOTAL	0	0	0	0	0	0	0	0	0	0
GRAND TOTAL	4	206,878	2	68,994	1	34,853	2	103,031	0	0

COMPETING RESEARCH AND PUBLICATION GRANTS
SUMMARY OF COUNCIL RECOMMENDATIONS
TRADITIONAL PROJECT GRANTS

COUNCIL DATE: NOV. 1971

INSTITUTE OR DIVISION: NATIONAL LIBRARY OF MEDICINE

TYPE OF REQUEST	TOTAL REQUESTED		APPROVED		REDUCED		DISAPPROVAL		DEFERRED	
	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT	NO.	AMOUNT
FY 1972										
NEW	23	827,699	7	186,072	4	30,241	16	611,386	0	
RENEWAL	12	349,106	3	74,306	1	20,000	8	235,820	1	18,980
SUPPLEMENT	1	9,991	1	9,991	0		0		0	
TOTAL	36	1,186,796	11	270,369	5	50,241	24	847,206	1	18,980
FY 1973										
NEW	3	80,959	0		0		3	80,959	0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	3	80,959	0		0		3	80,959	0	
FY 1974										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
FY 1975										
NEW	0		0		0		0		0	
RENEWAL	0		0		0		0		0	
SUPPLEMENT	0		0		0		0		0	
TOTAL	0		0		0		0		0	
GRAND TOTAL	39	1,267,755*	11	270,369*	5	50,241	27	928,165*	1	18,980

* Includes 4 Grants with LM as Second Reviewer - Requesting \$92,058.
3 were disapproved for \$69,995 and 1 was approved for \$22,063.

BOARD OF REGENTS
NATIONAL LIBRARY OF MEDICINE
MINUTES OF EXECUTIVE SESSION

The Board of Regents of the National Library of Medicine met in executive session at the Library in Bethesda, Maryland, at 1:05 p.m., November 23, 1971.

The Chairman described the interim action by the executive committee delineated in his letter to Dr. Merlin K. DuVal, Assistant Secretary for Health and Scientific Affairs, DHEW, of September 21, 1971 (Appendix A). Briefly stated, the objective was to seek increased support for development of the Library's programs by reorganizing the NLM into a broader bureau structure and renaming it the Bureau of Health Communications, with such divisions as NIM, NMAC, LHNCBC, and Extramural Programs. This movement was impelled by two considerations:

1. Confusion in the biomedical community over the relative relationships of the NLM, NMAC, and LHNCBC, and
2. The current constrictive effect of the term "medicine" as opposed to the more generic designation, "health."

Although he had received no reply from Dr. DuVal, Dr. Anlyan understood that the Director, NIH, had made a strong case for preservation of the status quo at this time while recognizing the merit of the proposal which had been raised by members of the Congress at appropriation hearings. The Chairman of the Board sought no action from the members.

The Director, NLM, agreed with the position of the Director, NIH, and added that the concept originated with the Report of the Special Subcommittee of the Committee on Interstate and Foreign Commerce, House of Representatives, chaired by Mr. Rogers (Florida) which investigated DHEW in 1966.*

The Chairman appointed the following new members to subcommittees of the Board:

Mrs. Hetzner to Extramural Programs,

Dr. Crawford and Dr. May to the Lister Hill National
Center for Biomedical Communications, and

Dr. Marshall to National Medical Audiovisual Center

(The complete list of subcommittee membership for fy 72 appears in Appendix B.)

* Special Subcommittee on Investigation of the DHEW, House Report No. 2266, 89th Congress, 2nd Session, Washington, D.C., Government Printing Office, 1966. pp. 156-157

The Director, NLM, then presented to the Board the curricula vitarum and bibliographies of the following candidates for appointment as Visiting Scholars at the National Library of Medicine:

Harry Filmore Dowling, A.B., M.D., D.Sc.

Fred Lowe Soper, A.B., M.S., M.P.H., Dr. P.H.

The Board of Regents agreed unanimously to the appointment of these distinguished, scholarly physicians.

Dr. Michael proposed that the Director, NLM, be encouraged to continue to consult with members of the Board of Regents whose terms of office had expired as their broad experience and manifestly sincere and intense interest in the future of the Library provide an unusually rich source of expertise. He recalled the significant contributions of Dr. Ebert and Messrs. Augenstein and Zipf to deliberations during the current meeting. The suggestion was enthusiastically endorsed by the entire membership, whereupon Dr. Layton moved that the Director, NLM, be encouraged to consult with members of the Board of Regents whose terms of office had expired. The motion, being duly seconded, was passed unanimously.

General Whelan expressed concern for the impact of expanding Federal health activities on the services required from the Library. In his view, the informational needs of these programs, and particularly the cancer conquest effort, should capitalize on the capabilities of the NLM rather than to duplicate functions under other auspices. Members of the Board recapitulated the recommendation made to the Secretary of Health, Education, and Welfare - in broad general terms during March 1971, and the more specific recommendation relating to the National Cancer Program the following June - to which no response had been received. The following resolution was adopted unanimously:

WHEREAS, the Board of Regents of the National Library of Medicine on March 23, 1971, expressed its concern to the Secretary of Health, Education, and Welfare "for the impact of an array of Federal health programs on the activities of the National Library of Medicine," and

WHEREAS, the Board on June 15, 1971, adopted unanimously an additional resolution which recommended a specific relationship of the National Library of Medicine to the emerging "National Cancer Program" in view of the "present fragmented and uncoordinated effort in dealing with the literature on cancer research," and concluded:

"In the forthcoming implementation of the Act to conquer cancer, the Board recommends that the NLM be designated by the President specifically as the agent for assembly of information, its organization and dissemination, on behalf of all components of the National Cancer Program," and

WHEREAS, these prior actions of the Board have evoked no response, therefore

BE IT RESOLVED that the Board of Regents reaffirm to the Secretary of Health, Education, and Welfare its deep concern for the impact on the National Library of Medicine of the anticipated increase in the breadth and scope of its mission occasioned by the increase in informational material needed in support of the Administration's conquest of cancer effort, which will require appropriate authorization for increased personnel and fiscal resources.

Members of the Board inquired about the current relationships of the NLM to other elements of the DHEW. Dr. Cummings described the nature of the weekly meetings with Director, NIH, and his staff in which he participated, and the meetings of the Bureau-Institute-Division Directors when the Deputy Director represented the NLM. He viewed the relations as cordial and increasingly supportive. He recounted in general terms the substance of the hearings on the budget for fy 73 before the Office of Management and Budget at which both the Director, NIH, and the Assistant Secretary (Comptroller), DHEW, strongly endorsed the NLM budget request.

Dr. Cummings also spoke of improved relations with Regional Medical Programs and described as rather ineffective the intradepartmental committee in parallel with the Committee on Scientific and Technical Communications, Federal Council for Science and Technology. He recounted the visit of Representative Michel, ranking minority member of the Library's Appropriations Subcommittee, to the NLM on November 18. Mr. Michel was obviously interested in and impressed with the various activities that were demonstrated.

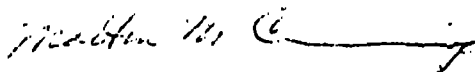
Dr. Baker and Mr. Zipf expressed satisfaction with the quality of voice communications transmitted between Bethesda and Alaska via the ATS-1 satellite. These gentlemen, both members of the President's Commission on Libraries and Information Science, informed the Board of the early activities of that body and expressed the hope that the technological innovations introduced by the NLM would serve as prototypes for broader involvement of other parties.

Dr. May, on behalf of the new Regents, expressed interest in the activities depicted at this meeting and gratitude for the cordial reception they had received from their colleagues and the NLM staff.

The dates of June 26 and 27, 1972, were agreed upon to resolve the conflict with the meeting of the Medical Library Association scheduled for June 11-15.

The meeting adjourned at 1:55 p.m.

Respectfully submitted,



Martin M. Cummings, M.D.
Executive Secretary, Board of Regents
National Library of Medicine

Bethesda, Maryland

DUKE UNIVERSITY MEDICAL CENTER

Durham, North Carolina 27710

Vice President for Health Affairs

September 21, 1971

Dr. Merlin K. DuVal
Assistant Secretary for Health
and Scientific Affairs
Room 5077, HEWN
Washington, D. C. 20201

Dear Monte:

As the Chairman of the Board of Regents of the National Library of Medicine, I am writing about a problem of particular concern to the Board; namely the coordination of effective biomedical communications activities supported by DHEW. This issue has been called to the attention of your predecessors but no effective action has been taken to improve the situation.

Congressman Paul Rogers' Special Subcommittee on Investigation of DHEW was keenly aware of the problems in biomedical communications when it issued Part E of its October 1966 report on the Investigation of HEW (see attachment #1).

This report was issued upon the heels of landmark legislation passed by the Congress in 1965, the Medical Library Assistance Act. This legislation expanded the horizons of the traditional Library through support for, among other things, a national system of regional and branch medical libraries; development and expansion of medical library resources and technology; construction of medical libraries and training of medical librarians.

As a direct result of a recommendation in the Rogers' Committee Report in January 1967, the Medical Audiovisual Branch of the Communicable Disease Center in Atlanta was renamed the National Medical Audiovisual Center and transferred to the National Library of Medicine. This Center now administers a national program to improve the quality and the use of biomedical audiovisual materials in schools of the health professions and throughout the biomedical community. However, the remaining recommendations of the Rogers Subcommittee have yet to be implemented.

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On August 3, 1968, the President signed Joint Resolution 193 establishing the Lister Hill National Center for Biomedical Communications. The following month the Secretary of DHEW established the Center within the NLM and directed the new organization to:

1. Design, develop, implement and technically manage a Biomedical Communications Network;
2. Develop networks and information systems to improve health education, medical research and the delivery of health services;
3. Apply technology to the improvement of biomedical communications; and
4. Serve as the focal point in the Department for development and coordination of biomedical communications, systems and network projects.

The Board of Regents of the National Library of Medicine has on numerous occasions reviewed thoroughly the objectives of the various programs of the NLM and believes that they remain vitally important to American medicine. On the other hand, the Board is concerned that despite various resolutions passed by the Board and appeals to the OS, DHEW, the LINCBC has neither the authority nor the resources to perform their functions that are so vital to improving health education, medical research, and the delivery of health services.

In November of 1968 the Assistant Secretary for Health and Scientific Affairs directed that the Center collect information on DHEW sponsored projects involving communication and information science technologies. This Biomedical Communications Inventory issued in July 1969 (see attachment #2) revealed that there were some 29 different health organizations in DHEW spending at that time approximately 75 million dollars on some 711 different identifiable biomedical communications projects. Only 1.6 million dollars was administered by the LINCBC.

It is still the Board's strong conviction that the Lister Hill Center for Biomedical Communications could best fulfill its mission, and that the ultimate delivery of health services and the improvement of health education can best be enhanced by assigning the appropriate DHEW functions and resources to NLM so that it can truly be the focal point in the Department for development of a biomedical communications network.

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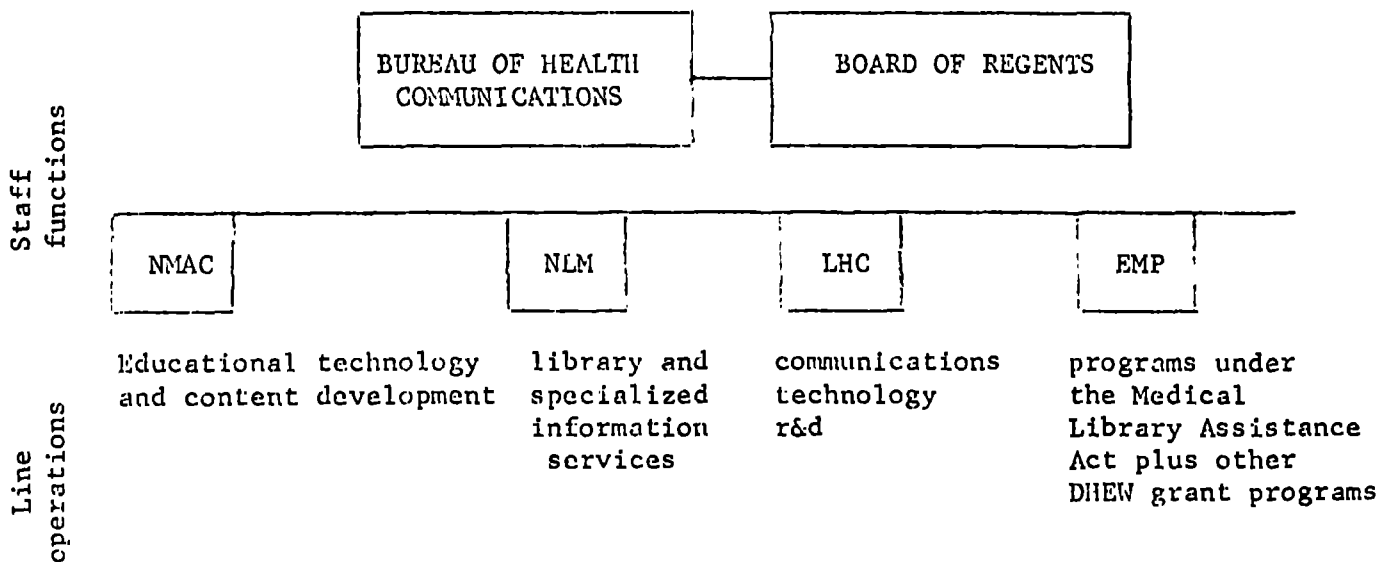
I am sure you are aware that this direction has been reinforced with the issuance recently of a study conducted by the Association of American Medical Colleges entitled, "Educational Technology for Medicine: Roles for the Lister Hill Center" (see attachment #3). The recommendations emanating from this report would certainly, if adopted, broaden the functions of the Center.

We are well aware that any action to shift functions within the Department would imply some restructuring or organizational adjustments. It has occurred to me that perhaps the name "National Library of Medicine" should be changed to more appropriately reflect the expanded role the Library has in biomedical communications.

Another means of implementing the Board of Regents' recommendations that there be better coordination of biomedical communications is to adopt a reorganization plan similar to alternative #2 contained in the previously mentioned report of Congressman Paul Rogers' Special Subcommittee on Investigation of DHEW. The creation of a Bureau of Health Communications like the Bureau of Health Manpower Education would achieve this purpose. This would not require a change in name for NLM nor would it require Congressional approval. I believe that this kind of reorganization can be implemented by the Secretary, DHEW.

I would suggest that the Bureau could operate equally well within NIH or within some other organizational locus.

The Bureau of Health Communications might well be organized as follows:



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The Executive Committee of the Board of Regents is in agreement that the NLM should develop in concert with your office a plan for reorganization to accomplish these vital coordinating functions.

We strongly urge your favorable consideration of such action and look forward to receiving your suggestions and advice. We hope you will concur that the time has come to seriously examine the organizational structure of an important health service activity and agree that a coordinated and coherent program for biomedical communications is necessary. I will be happy to discuss this matter with you in greater detail at your convenience.

Sincerely yours,

William G. Anlyan, M.D.
Chairman, Board of Regents

WGA:jp

Attachments

cc: Dr. Martin M. Cummings
Dr. George Teuscher
Dr. Max Michael
Dr. Robert Q. Marston

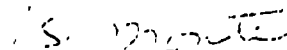
William G. Anlyan, M.D.
Vice President for Health Affairs
Duke University Medical Center
Durham, North Carolina 27706

Dear Bill:

As I promised in my letter of October 4, 1971, your proposal concerning the possibility of establishing a Bureau of Health Communications has been reviewed and discussed at some length. Bob Marston's recommendation is that now is not the time for such a change, and I concur. Over the past several months, during the development of the FY 1973 budget, we have seen increased interest in the Library's programs by officials within the Department as well as those on the President's staff and in the Office of Management and Budget. The Library's request for an increase of \$4 million has been sustained through all levels of review. Bob suggests, and I agree here too, that a Bureau such as you propose or some similar organization will evolve over time as the innovative programs of the Library and of the Lister Hill Center take concrete, universally accepted form and as those programs continue to contribute significantly to the improvement of health care in the United States. In the meantime, you have my assurance that we will continue to support the Library's efforts; I think we can point to some success in the recent past.

I don't believe you have seen it so I am enclosing a copy of Bob's memo on this subject for your information. Thank you for sharing these ideas with me. As you know, I find the field of health communication a challenging opportunity.

Sincerely yours,



Marlin K. DuVal, M.D.
Assistant Secretary for Health
and Scientific Affairs

Enclosure

Director, NLM

Board of Regents
Subcommittee for Extramural Programs

		<u>Telephone</u>
Dr. George W. Teuscher - Chairman Dean, Dental School Northwestern University 311 East Chicago Avenue Chicago, Illinois 60611	(72)	312-649-8333
Dr. Max Michael, Jr. Executive Director Jacksonville Hospitals Educational Program Duvall Medical Center 2000 Jefferson Street Jacksonville, Florida 32206	(72)	904-356-5533
Dr. Jack M. Layton Professor and Head Department of Pathology University of Arizona College of Medicine Tucson, Arizona 85721	(73)	602-884-3341
Dr. John P. McGovern Professor and Chairman Department of the History of Medicine University of Texas Graduate School of Biomedical Sciences 6655 Travis Street Houston, Texas 77025	(74)	713-528-5591
Mrs. Bernice M. Hetzner Librarian University of Nebraska Omaha, Nebraska 68105	(75)	402-541-4006
Surgeon General, United States Army		

11/15/71

Board of Regents
Subcommittee for
Lister Hill National Center for Biomedical Communications

Established: 3/27/70 at the Executive Session of the Board of Regents

		<u>Telephone</u>
Dr. Max Michael, Jr. - Chairman Executive Director Jacksonville Hospitals Educational Program Duvall Medical Center 2000 Jefferson Street Jacksonville, Florida 32206	(72)	904-356-5533
Dr. William G. Anlyan Vice President for Health Affairs Duke University Durham, North Carolina 27706	(72)	919-684-3438
Dr. William O. Baker Vice President in Charge of Research Bell Telephone Laboratories Murray Hill, New Jersey 07971	(73)	201-582-3423
Dr. Angelo M. May 450 Sutter Street San Francisco, California 94108	(75)	415-781-3151
Dr. Susan N. Crawford Director Archives-Library Department Management Services Division American Medical Association Chicago, Illinois 60610	(75)	312-527-1500 x 763
Surgeon General, United States Air Force		

Board of Regents
Subcommittee for
National Medical Audiovisual Center

Dr. William G. Anlyan - Chairman Vice President for Health Affairs Duke University Durham, North Carolina 27706	(72)	919-684-3438
Dr. Jack M. Layton Professor and Head Department of Pathology University of Arizona College of Medicine Tucson, Arizona 85721	(73)	602-884-3341
Dr. George W. Teuscher Dean, Dental School Northwestern University 311 East Chicago Avenue Chicago, Illinois 60611	(72)	312-649-8333
Dr. J. Stanley Marshall President Florida State University Tallahassee, Florida 32306	(74)	904-599-2525

Surgeon General, United States Navy