DEPARTMENT OF HEALTH AND HUMAN SERVICES
NATIONAL INSTITUTES OF HEALTH
NATIONAL LIBRARY OF MEDICINE
MINUTES OF THE BOARD OF REGENTS MEETING
(VIRTUAL MEETING)
May 10, 2022

The 190th meeting of the Board of Regents (BOR) was convened remotely on May 10, 2022, at 10 a.m. The meeting was open to the public from 10 a.m. to 4 p.m., followed by a closed session that lasted until 4:30 p.m. The meeting adjourned at 4:30 p.m.

MEMBERS PRESENT (Appendix A)
Dr. Lourdes Baezconde-Garbanati, University of Southern California
Dr. Suzanne Bakken, Columbia University
Dr. James Cimino, University of Alabama at Birmingham
Dr. Kristi Holmes, Northwestern University
Dr. S. Claiborne Johnston, University of Texas at Austin
Ms. Jennie Lucca, The NIH Children's Inn
Dr. Omolola Ogunyemi, Charles R. Drew University of Medicine and Science
Mr. Neil Rambo, New York University Grossman School of Medicine, Chair (retired)
Dr. Heidi Rehm, Massachusetts General Hospital
Dr. Nancy Smider, Epic Systems Corporation

EX OFFICIO AND ALTERNATE MEMBERS PRESENT
Col. Kent DeZee, United States Army
Dr. Joseph Francis, Veterans Health Administration
VADM Vivek Murthy, Surgeon General, Office of the Surgeon General, U.S. Public Health Service
Dr. Lauren Maggio, Uniformed Services University of the Health Sciences
Dr. Mary Mazanec, Library of Congress
Dr. Brent Miller, National Science Foundation
Dr. Hassan Tetteh, United States Navy
Mr. Paul Wester, National Agricultural Library, U.S. Department of Agriculture

CONSULTANTS PRESENT
Ms. Jane Blumenthal, University of Michigan (retired)

SPEAKERS AND INVITED GUESTS PRESENT
Dr. Nicholas Duran, Arizona State University
Dr. Dean Schillinger, University of California, San Francisco

MEMBERS OF THE PUBLIC PRESENT
Dr. Edward Balas, Friends of the National Library of Medicine
Mr. Glen Campbell, Friends of the National Library of Medicine
Dr. Peter Elkin, University of Buffalo, Friends of the National Library of Medicine
Ms. Loretta Jurnak, Technical Resources International, Inc.
Ms. Kathleen McCormick, Friends of the National Library of Medicine
Dr. Barbara Redman, New York University, Friends of the National Library of Medicine
Ms. Joyce Wanga, Technical Resources International, Inc.

FEDERAL EMPLOYEES/CONTRACTORS PRESENT
Dr. Patricia Flatley Brennan, Director, NLM
Mr. Jerry Sheehan, Deputy Director, Policy & External Affairs, NLM
Ms. Anne Altemus, Office of Communication and Public Liaison, NLM
Dr. Stacey Arnold, National Center for Biotechnology Information, NLM
Mr. Alexander Astashyn, National Center for Biotechnology Information, NLM
Ms. Dianne Babski, Division of Library Operations, NLM
Dr. Dennis Benson, National Center for Biotechnology Information, NLM
Ms. Annice Bergeris, National Center for Biotechnology Information, NLM
Dr. Olivier Bodenreider, Lister Hill National Center for Biomedical Communications, NLM
Mr. Todd Danielson, Office of the Director, NLM
Ms. Amanda Davis, National Center for Biotechnology Information, NLM
Dr. Nachiket Dharker, National Center for Biotechnology Information, NLM
Ms. Mitzi Diley, Office of the Director, NLM
Dr. Heather Dobbins, National Center for Biotechnology Information, NLM
Mr. Ivor D'Souza, Office of Computer and Communications Systems, NLM
Dr. Anna Fine, National Center for Biotechnology Information, NLM
Dr. Valerie Florance, Office of the Director, NLM
Ms. Kathryn Funk, National Center for Biotechnology Information, NLM
Mr. Slava Gorelenkov, National Center for Biotechnology Information, NLM
Ms. Wendy Harman, National Center for Biotechnology Information, NLM
Dr. Lyn Hardy, Division of Extramural Programs, NLM
Dr. Zoe Huang, Division of Extramural Programs, NLM
Dr. Michael Huerta, Office of Strategic Initiatives, NLM
Ms. Christine Ireland, Division of Extramural Programs, NLM
Dr. Xiaofang Jiang, National Center for Biotechnology Information, NLM
Ms. Catherine Kihara, National Center for Biotechnology Information, NLM
Dr. David Landsman, National Center for Biotechnology Information, NLM
Ms. Lisa Lang, Division of Library Operations, NLM
Dr. Zhiyong Lu, National Center for Biotechnology Information, NLM
Ms. Wei Ma, Office of Computer and Communication Systems, NLM
Dr. Clement McDonald, Office of the Director, NLM
Ms. Margaret McGhee, Division of Library Operations, NLM
Dr. Terence Murphy, National Center for Biotechnology Information, NLM
Ms. Hibah Nazir, National Center for Biotechnology Information, NLM
Ms. Jody Nurik, Office of Communications and Public Liaison, NLM
Ms. Queenmoore Okeke, Lister Hill National Center for Biomedical Communications, NLM
Dr. Ivan Ovcharenko, National Center for Biotechnology Information, NLM
Dr. Richard Palmer, Division of Extramural Programs, NLM
Ms. Amie Park, Division of Extramural Programs, NLM
Mr. Troy Pfister, Office of the Director, NLM
Dr. Lauren Porter, National Center for Biotechnology Information, NLM
Dr. Kim Pruitt, National Center for Biotechnology Information, NLM
Dr. Jeffrey Reznick, Division of Library Operations, NLM
Ms. Angela Ryder, National Institute of Allergy and Infectious Diseases, NIH
Ms. Leigh Samsel, Office of Strategic Initiatives, NLM
Ms. Mary Sanders, National Center for Biotechnology Information, NLM
Dr. Stephen Sherry, National Center for Biotechnology Information, NLM

Dr. Valerie Schneider, National Center for Biotechnology Information, NLM
Mr. Colin Small, National Center for Biotechnology Information, NLM
Dr. Meryl Sufian, Division of Extramural Programs, NLM
Ms. Robin Taylor, Division of Library Operations, NLM
Ms. Samantha Tempchin, Division of Extramural Programs, NLM
Ms. Kimberly Thomas, Office of Strategic Initiatives, NLM
Dr. Tony Tse, National Center for Biotechnology Information, NLM
Ms. Diane Tuncer, Office of Communications and Public Liaison, NLM
Dr. Eric Tvedte, National Center for Biotechnology Information, NLM
Dr. Yanli Wang, Division of Extramural Programs, NLM
Dr. Jane Ye, Division of Extramural Programs, NLM
Dr. Maryam Zaringhalam, Office of Strategic Initiatives, NLM
Dr. Teresa Zayas Cabán, Office of the Director, NLM

I.   CALL TO ORDER AND INTRODUCTORY REMARKS
Mr. Neil Rambo, Chair, BOR

Mr. Rambo called the meeting to order and welcomed attendees to the meeting. The meeting was broadcast to the public via streaming video at https://videocast.nih.gov.

II.   REPORT FROM THE OFFICE OF THE SURGEON GENERAL
VADM Vivek Murthy, Surgeon General, Office of the Surgeon General, U.S. Public Health Service

VADM Murthy thanked NLM staff for their work during the pandemic, most notably, in communicating scientific knowledge to the public. He noted his personal reasons for returning to government service and highlighted his concern for the nation's declining mental health and well-being across the age spectrum.

VADM Murthy provided updates on current and upcoming initiatives and advisories focused on five major health issues: (1) growing proliferation of health misinformation, (2) ongoing youth mental health crisis, (3) well-being and burnout in the health care community, (4) workplace well-being, and (5) social isolation and loneliness.

Regarding the ongoing Health Misinformation Initiative, a Request for Information (RFI) was issued following the release of the Public Health Advisory and the Community Tool Kit in November 2021. The RFI invited technology companies, health care workers, and others to share data on the impact of health misinformation on different populations. The RFI closed on May 2, 2022, with multiple submissions from different organizations and stakeholders.

In December 2021, the Office of the Surgeon General (OSG) released an Advisory on Protecting Youth Mental Health to address the ongoing youth mental health crisis and its exacerbation due to COVID-19 with a focus on three critical areas: (1) expanding access to care, (2) investing in prevention programs, and (3) addressing the cultural stigma and shame surrounding the condition of mental health. Future activities include collaborating with stakeholders over the coming months to help build a youth-led movement to address mental health challenges.

OSG will issue a health care worker well-being advisory, recognizing the profound levels burnout experienced by this community resulting primarily from the COVID-19 pandemic. The Surgeon

General noted this initiative as a national priority, as the quality and access to care in this country is tied to health care worker health. Objectives include making mental health care services more available to health care workers, reducing the administrative burden on health care providers, and addressing the contributing culture of training programs and the health care profession itself.

With the belief that the workplace can contribute to the overall wellness of society and be an engine for mental health and wellbeing, OSG will develop and release a blueprint for workplaces. This will provide critical steps for employers to support their workforce.

OSG will also issue an initiative on connection and community, focusing on loneliness and isolation across the age spectrum as well as providing an agenda to build stronger communities.

BOR members discussed health misinformation, specifically how technology can be used to help limit the spread of misinformation and educate the public to improve digital health literacy. Members also discussed how diversity, equity and the feeling of belonging can be fostered in communities. Members also highlighted opportunities to empower the public to adapt to future health challenges and evolving health guidance.

III.   FEBRUARY 2022 MINUTES AND FUTURE MEETINGS
Mr. Neil Rambo, Chair, BOR

Mr. Rambo noted the dates of future BOR meetings, including the addition of the spring 2024 meeting on May 14-15, 2024. There were no objections or conflicts noted.

Motion: The BOR approved the motion to accept the May 14-15, 2024, meeting dates.

Motion: The BOR approved the motion to accept the minutes of the February 8, 2022, meeting.

It is anticipated that the September 13-14, 2022, BOR meeting will be conducted in person in accordance with NIH guidelines.

IV.   REPORT FROM THE NLM DIRECTOR
Dr. Patricia Flatley Brennan, Director, NLM

Dr. Brennan welcomed attendees and thanked members for their continued contribution to the work of NLM. She recognized outgoing BOR members including Neil Rambo, Suzanne Bakken, and S. Claiborne Johnston.

Dr. Brennan recalled the three pillars of NLM's Strategic Plan. She highlighted progress made in pursuit of the second pillar, enhancement of data dissemination and engagement, including a video highlighting outreach through the Network of the National Library of Medicine (NNLM).

In describing other recent accomplishments, Dr. Brennan highlighted development of a long-term vision and plan for the Division of Library Operations for 2036, efforts to promote public accountability through the NLM Collections Policy and the release of a root cause analysis of events arising from removal of a deposited SARS-CoV-2 sequence from the Sequence Read Archive. She also described efforts to accelerate access to literature and clinical data, including release of a new global standard for clinical genomics and research--Matched Annotation from the

National Center for Biotechnology Information and EMBL-EBI (MANE)—and implementation of fully automated indexing of MEDLINE literature.

Dr. Brennan highlighted NLM's recent advances in science, including image analysis and statistical analysis research in the Lister Hill National Center for Biomedical Communications; 49 publications (to-date) by NLM intramural investigators; and 10 new extramural awards for research, scholarly works, NNLM partnership with the NIH All of Us program and a Library Ambassador Program.

She noted that the Advanced Research Projects Agency for Health (ARPA-H), an agency supporting transformative high-risk, high-reward research, has been assigned to NIH. ARPA-H research efforts will be complementary to NIH programs and efforts.

Regarding NLM's budget for FY22, Dr. Brennan noted that NLM was appropriated $479 million. It is anticipated that this amount will be met or exceeded in FY23. The financial challenges for NLM in FY23 will include multiyear building plans, partnerships, and research facilities.

Dr. Brennan offered a moment of silence to honor the memory of Alexey Iskhakov, an NCBI staff member who dedicated his career in science to NLM and society at large. Personnel changes were noted, including the recent retirement of Patricia Touhy (Head, Exhibition Program) and the appointment of Tina Shrader (Head, Cataloging and Metadata Management Section) in the Division of Library Operations.

Dr. Richard Palmer provided updates to the BOR about NLM's research training grants, focusing on the T15 university-based biomedical informatics and data science training program. NLM is issuing new five-year awards, beginning in July 2022. The program will support 170 fellows across 18 institutions, including three institutions that are new to the program. Program awards will total $11.5 million in FY22.

Dr. Valerie Florance provided an update on NLM's Intramural Research Program (IRP). She highlighted two new investigators, Dr. Michael Chiang and Dr. Jeremy Weiss, both of whom were part of NLM's training programs earlier in their careers. With these additions, the IRP will include a total of 16 principal investigators. The recently launched NLM Diversity Data Science Interns (DDSI) Program recruited and matched five interns with NLM investigators.

Dr. Teresa Zayas Cabán provided legislative and policy updates focused on FY22 appropriations, genomic data sharing, and pandemic response. HR 2471, the Consolidated Appropriations Act, will fund NLM operations through FY22. The President's Budget Request for FY23 has been released, along with NLM's Congressional Budget Justification. She noted that the Prepare for and Respond to Existing Viruses, Emerging New Threats, and Pandemics (PREVENT Pandemics) Act, to bolster public health response and preparedness in the wake of COVID-19, has been amended to include the ARPA-H Act. In addition, the Right Drug Dose Now Act, introduced in February 2022, includes new mandates for the Secretary of HHS, working through several components of NIH including NLM, to foster public awareness of adverse drug events and pharmacogenetic testing.

Dr. Brennan highlighted the upcoming Lindberg-King Lecture and Symposium in September 2022. Dr. Isaac Kohane will be the featured speaker and discuss the purveyance of authoritative medical knowledge to the patient. Registration details will be announced in the future.

BOR members discussed implications of the ARPA-H program as it relates to NLM. Members discussed ways to attract new institutions to NLM's T15 program. Dr. Brennan noted that the new NIH Research Education Program (R25) is also available to all institutions to help build the pipeline of biomedical informatics and data science doctoral candidates through engagement efforts at the undergraduate and masters levels. Members also discussed possible modifications to the five-year cycle for the renewal of training grants, including promoting growth in priority research areas through K-12 initiatives, as well as retraining and new-skills training for investigators to expand their research activities. Members discussed the potential for partnership with research foundations and industry stakeholders to foster the continued engagement of trainees in artificial intelligence (AI) with government bodies.

V.   BOR WORKING GROUP EVALUATION REPORT
Mr. Neil Rambo, Chair, BOR

Mr. Rambo provided background on the creation of the BOR Working Group Evaluation Report following the September 2021 BOR meeting. He presented the successes and challenges of the working groups, noting that successes typically arose when the group was asked to advice or discuss specific, concrete issues. BOR members discussed recommendations, including clarifying the purpose of the working groups, ensuring sessions have clear objectives, and considering changes to working group membership based on preference, expertise, and working group needs.

BOR members discussed the challenges of setting up new working groups, retiring existing groups, and orienting new BOR members to the working group structure. It was recommended that the potential of working group remote meetings be reevaluated in the future considering the challenges of virtual meetings.

VI.   WORKING GROUP BREAKOUTS

BOR members divided into four breakout groups. Representatives from the groups summarized the discussions later in the meeting.

VII.   BOR WORKING GROUP REPORTS AND DISCUSSION

Strategic Planning

Dr. James Cimino reported for the Strategic Planning Working Group. NLM staff presented on the NIH-wide Diversity, Equity, Inclusion, and Accessibility (DEIA) Strategic Plan and its implementation as a key direction for the NLM Strategic Plan. NLM's existing work advancing DEIA for the NLM Strategic Plan includes support of the NIH-wide UNITE Initiative through the examination of NLM products and services to promote equity. Work is ongoing to diversify the NLM workforce, expand equitable access to health information, and address the diverse needs of different populations. Working Group members discussed prioritizing this work and increasing diversity at NLM and within the biomedical research workforce at large. They noted that NLM can play a key role in defining the ethics of AI and generating guidance for future research. They suggested NLM examine available resources for potential use in outreach to the younger population to foster greater interest in medical informatics.

BOR members discussed the possible approaches to advancing DEIA within NLM's IRP, including both the recruitment of diverse faculty and investigators and the identification of high-priority research targets to attract diverse candidates. Collaboration with other NLM initiatives, such as ClinVar and LitVar, were suggested, as was work to identify current gaps in NLM's research portfolio related to DEIA. It was noted that new research under the IRP should support the overarching vision of NLM to advance the collection, management, and dissemination of health data.

Research Frontiers

Dr. S. Claiborne Johnston reported for the Research Frontiers Working Group. Four NLM intramural investigators presented their current research in areas focused on the microbiome, non-coding genomic sequencing to predict disease, protein sequencing to predict protein structures, and AI natural language processing to phenotype rare diseases. Members were excited and encouraged by the ongoing research, especially with its accessibility and potential benefits to other investigators. The group discussed the utility of the Working Group to hear about all current NLM intramural research. It was agreed that it may be valuable for investigators to present on their current work to provide more context to members, rather than review of short descriptions. However, feasibility, including the time commitment for Working Group members would need to be assessed.

Public Services

Dr. Lourdes Baezconde-Garbanati reported for the Public Services Working Group. The Working Group discussed updates to the ClinicalTrials.gov Modernization Effort. Currently in the implementation stage, the group discussed recent beta releases introducing new features to the ClinicalTrials.gov website and Protocol Registration and Results System (PRS). The Working Group met in April 2022 and participated in a usability exercise to assess different options for displaying the ClinicalTrials.gov disclaimer on the beta site. The highest rated option was to display the disclaimer as a one-time pop-up that the user must acknowledge. Working Group members discussed further the disclaimer's effectiveness for users of ClinicalTrials.gov, including to ensure that users understand that NLM is a repository of information provided by outside parties. Members discussed guidance regarding use of plain language, specifically the development of a plain language checklist. BOR members discussed current ClinicalTrials.gov features that are especially beneficial to users, noting the improved functionality with recent beta releases and added features for lay users. Users must depend on responsible parties to keep records up to date. It was also noted that the relevant NIH offices and stakeholders have been kept up to date on the current progress of the modernization effort.

Collections

Dr. Kristi Holmes reported for the Collections Working Group. The Working Group discussed updates from the Comparative Genomics Resource (CGR) Working Group, the disclaimer language for NLM's History of Medicine YouTube content, and the ongoing consideration of the inclusion of data sets in NLM Collections.

The CGR Working Group met in April 2022 to discuss feedback from member interviews focusing on how best to engage with stakeholders about CGR. CGR Working Group members indicated their willingness to be ambassadors for CGR in their individual stakeholder groups.

CGR Steering Committee updates, key metrics to monitor for a successful initiative outcome, and various CGR user types and considerations were also discussed.

The Collections Working Group also discussed the disclaimer for NLM's History of Medicine YouTube content. Based on the disclaimer already used for images within the NLM Collections, a disclaimer message will be adapted to note that views expressed do not necessarily express the views of the NLM, NIH, or the Federal Government. Working Group members discussed how content is presented and the role of the NLM in producing appropriate content warnings; content validity and cultural context were also considered.

Regarding the ongoing discussion of the consideration of data sets as part of the NLM Collections, the group discussed stewardship and collection practices of this information, how different government policies may impact this effort, and how this content will be presented to users. It was agreed that current collections guidelines are not sufficient to meet future NLM requirements; NLM must think of collections in a different context, especially with content that will change over time. Scientific integrity and ethical context in relation to data sets, along with indigenous data context and ownership was also discussed.

VIII. NIH PREPRINT PILOT UPDATE AND NEXT STEPS
Ms. Kathryn Funk, NCBI/NLM

Ms. Kathryn Funk presented an overview of the NIH Preprint Pilot, emphasizing the ongoing role NLM plays in enabling access to NIH funded research. The pilot was launched in June 2020 with a focus on expanding access to NIH-funded COVID-19 preprints by making them discoverable in PubMed Central (PMC) with a citation in PubMed. Phase I included efforts to identify technical and operational capabilities needed for preprint curation, expand the accessibility and discoverability of NIH-funded research, and study impacts on public trust in NLM literature resources. As of April 2022, NLM had collected more than 3,000 preprints. Ms. Funk presented an analysis of the preprint collection along various dimensions, including selected licensing options, discoverability of preprint records via PubMed and PMC, links to published journal articles, and average time from preprint to publication.

To gather user feedback, NLM's Office of Engagement and Training convened focus groups consisting of research librarians, health care journalists, researchers, and clinicians. NLM also conducted an online survey of preprint users in Fall 2021. These efforts demonstrated considerable variation in users' familiarity with preprints and peer review, highlighted the importance to users of discovering and accessing preprints, and signaled that inclusion of preprints increased trust in NLM's literature resources. Ms. Funk indicated interest in expanding the pilot to the broader scope of preprints resulting from NIH-funded research and highlighted resources NLM has developed to educate and train user groups.

BOR members discussed potential reasons why preprints may not result in formal publications and the role of preprints in supporting the forthcoming NIH Data Management and Sharing Policy. They encouraged NLM to publish the results of the first phase of the Preprint Pilot to disseminate the findings and lessons learned and inform future expansion.

IX. PRECISION COMMUNICATION: PHYSICIANS' LINGUISTIC ADAPTATION TO PATIENTS' HEALTH LITERACY
Dr. Dean Schillinger, University of California, San Francisco and

Dr. Nicholas Duran, Arizona State University

Dr. Schillinger presented an overview of "Expanding the Construct of Precision Medicine to Include Precision Communication," a subset of the NLM-funded Employing Computational Linguistics to Improve Patient-Provider Secure Email (ECLIPPSE) research project. Researchers applied computational linguistic methods to determine if and when precision communication strategies are being used by physicians, and whether doing so has salutary effects on communication with patients. Dr. Schillinger noted the importance of health communication in optimizing care quality and safety, highlighting the lack of large-scale quantitative research in patient health literacy (HL) and the lack of prior focus on the role of physicians' linguistic complexity (LC) for communication outcomes.

Dr. Schillinger reviewed the aims of the interdisciplinary ECLIPPSE Project. ECLIPPSE aims to employ natural language processing and machine learning to assess secure message (SM) content as a novel means to measure patient HL and physician LC in reliable and valid ways. Second, retrospective analyses examined whether efforts by physicians to adapt their communication strategies to better match patient's HL result in better outcomes. Third, an automated HL-based prototype was created to determine whether providing LC feedback to providers helps them better tailor their communication strategies based on patients' needs. Dr. Schillinger presented results of this first aim, showing how their work analyzing more than 400,000 secure messages generated novel measures of HL and LC, with high content validity and high predictive validity with respect to diabetes outcomes.

Using these novel measures and a subset of the larger ECLIPPSE SM dataset, Dr. Nicholas Duran reviewed analyses of the relationship between LC-HL concordance and patient understanding among more than 4,000 unique physician-patient pairs (Aim 2). First, LC-HL concordant communication was found to be less common for low-HL patients compared with high-HL patients. Second, low-HL patients experiencing discordant communication with physicians significantly lower rates of comprehension compared with low-HL patients experiencing concordant communication. Third, after characterizing physicians' communication strategies across their patients, Dr. Duran and team found that some physicians tend toward a "universal tailoring," strategy, whereby they preferentially apply lower LC in communication with low-HL patients and apply greater LC for high-HL patients. Among all the communication strategies identified, only "universal tailoring," was associated with better patient understanding--a finding that was true for both high- and low-HL patients. Finally, he noted that, for patients with low HL, being cared for by a doctor who demonstrates concordant dyadic communication and who has more of a universal tailoring style, disparities in communication were eliminated.

Dr. Schillinger noted short-term implications of the ECLIPPSE research project, including the potential to implement automated HL measures across a health system to identify patients who would benefit the most from more precise communication strategies and to provide tailored feedback to clinicians to improve their communication. Longer-term implications include the proof of concept that advanced computational methods can be applied to meaningfully establish, define, and study precision communication to advance human health. By better understanding the elements or attributes of effective communication, scalable, semi-automated communication interventions that employ AI could also be designed and implemented. Dr. Schillinger noted the potential role of NLM in leading the agenda on precision communication research.

BOR members noted the importance of better understanding the roles of culturally bound beliefs and attitudes in communication and comprehension. Dr. Schillinger highlighted the importance of gathering all applicable information from patients and the overall goal of defining the features of an effective communicator. The expansion of quantitative linguistic research to multiple languages, as well as the potential supplementation of infographics in physician-patient communications was also discussed.

X. REPORT FROM THE NOMINATING COMMITTEE FOR NEXT BOR CHAIR
Dr. Brent Miller

Dr. Miller announced the nominating committee's decision to nominate Dr. Heidi Rehm to be the next Board of Regents Chair. He indicated that Dr. Rehm accepted the nomination.

Motion: The BOR approved the motion to appoint Dr. Rehm as the next Chair of the Board.

XI. CONCEPT CLEARANCE FOR REISSUING NLM RESEARCH GRANTS IN BIOMEDICAL INFORMATICS AND DATA SCIENCE
Dr. Jane Ye, Extramural Programs, NLM

Dr. Ye presented for reissue the R01 Clinical Trial Optional Funding Opportunity Announcement (FOA) supporting research and development in biomedical informatics and data science. Through the FOA, NLM has over the past several years supported a high number of research projects in clinical informatics, bioinformatics, data/information science, and consumer health informatics. Established in 2013, this opportunity serves as the primary FOA for investigator-initiated R01 projects at NLM. Applications are channeled directly to NLM and reviewed by the NLM Biomedical Informatics, Library and Data Sciences (BILDS) Review Committee, which has expertise in the noted research areas.

The novel, significant, and high-impact research supported by the FOA has resulted in numerous scholarly publications and tools/resources for use by the research community. Researchers supported through this FOA have been recognized by the Presidential Early Career Award for Scientists and Engineers (PECASE) program for vital research on the global impact of climate change on infectious disease and single cell technologies allowing for the examination of human cancer heterogeneity.

NLM proposes to continue this R01 grant program. The reissued FOA would support future research efforts to develop methodologies fostering data-driven discovery in biomedical and health sciences, as well as data science approaches to validate proposed models. The renewed FOA would be published in September 2022 with NIH standard application due dates.

Motion: The BOR approved the motion to reissue the R01 Clinical Trial Optional FOA.

XII. ANNOUNCEMENT OF NLM DIRECTORS' AND FRANK B. ROGERS AWARDS
Dr. Patricia Flatley Brennan, Director, NLM

Dr. Brennan presented the Frank P. Rogers Award, recognizing the work of two NIH employees who have made fundamental, significant contributions to the NLM's operational programs and services:

- Mr. Alexander Astashyn, Staff Scientist in the Information Engineering Branch of NCBI, was recognized for conceiving and developing a new method to identify contaminant sequences in GenBank genome submissions with unparalleled sensitivity and performance.
- Ms. Robin Taylor, Technical Information Specialist with the MEDLARS Management Section (MMS) of the Bibliographic Services Division in the Division of Library Operations, was recognized for managing and improving the NIH Common Data Elements Repository (CDE-R).

The NLM Director's Honors Award recognizes the work of NIH employees who have contributed outstanding achievements to NLM. This award was presented to the three following individuals:

- Mr. Troy Pfister, Program Specialist in the NLM Office of the Director, for his exceptional contributions and teamwork in establishing the structure and operations of the new Scientific Director's Office for the Intramural Research Program.
- Ms. Diane Tuncer, Supervisory Writer/Editor in NLM's Office of Communication and Public Liaison within the Office of the Director, recognized for her exceptional contributions in public affairs and leading the NLM Public Media Affairs Team, especially during the time of increased media requests due to the coronavirus pandemic.
- Dr. Maryam Zaringhalam, Data Science and Open Science Officer in the Office of Strategic Initiatives within the Office of the Director, recognized for her exemplary leadership in the crucial advancement of diversity, equity, inclusion, and accessibility across NLM, NIH, and beyond.

XIII. CLOSED PORTION

The closed portion of the meeting took place from 4 p.m. to 4:30 p.m. on May 10, 2022. The Board of Regents provided en bloc approval for 195 grant applications in the amount of $155,845,959.

XIV. ADJOURNMENT

Mr. Rambo adjourned the BOR meeting at 4:30 p.m. on May 10, 2022.

Actions Taken by the Board of Regents:
- Approval of the February 8, 2022, BOR meeting minutes
- Approval of the May 14-15, 2024, meeting date
- Election of the next BOR Chair: Dr. Heidi Rehm
- Approval of the Concept Clearance for Reissuing NLM Research Grants in Biomedical Informatics and Data Science
- En Bloc Approval of Grants

Appendix A. Roster — Board of Regents

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

Digitally signed by Patricia F. Brennan -S
Date: 2022.06.14 11:08:35 -04'00'

Digitally signed by Neil H Rambo
Date: 2022.06.15 10:51:16 -07'00'

Patricia Flatley Brennan, RN, PhD
Director, National Library of Medicine

Neil Rambo, MLS
Chair, NLM Board of Regents