Department of Health and Human Services
National Institutes of Health

Advisory Committee to the Director

96th Meeting

June 6, 2008

Contents

EXECUTIVE SUMMARY

The 96th meeting of the Advisory Committee to the Director (ACD) of the National Institutes of Health (NIH) was held on June 6, 2008, on the NIH campus. NIH Deputy Director Raynard Kington, M.D., Ph.D., chaired the meeting; NIH Director Elias Zerhouni, M.D., participated by telephone.

Dr. Kington provided an update on legislative matters. In December, the fiscal year (FY) 2008 Consolidated Appropriations Act was signed into law, providing the NIH with $29,457 million for FY 2008, an increase of $329 million (1.1 percent) over FY 2007. A FY 2008 supplemental bill contains an additional $400 million for the NIH. This was passed by the Senate and awaits deliberation by the House. The President's budget request for FY 2009 features $29,457 million for the NIH, equal to FY 2008. The Appropriations Act includes a mandate that NIH-funded investigators submit to PubMed Central an electronic version of final peer-reviewed manuscripts. The NIH solicited input from the extramural community on implementing and monitoring this policy. The NIH is implementing Title VIII of the FDA Amendments Act, which expands clinical trial registrations within the ClinicalTrials.gov Web site and requires reports of trial results.

On December 21, 2007, President Bush signed into law a bill to rename the National Institute of Child Health and Human Development the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development. On May 8, 2008, Dr. Zerhouni testified before the House Energy and Commerce Subcommittee on Health about the science of stem cell research. The Genetic Information Nondiscrimination Act of 2008 was signed into law May 21, 2008. It will protect Americans from discrimination based on their genetic information when they are seeking employment and health insurance.

The Bayview Research Center in Baltimore will become a home for NIH researchers. Upon the Center's opening, the NIH held a briefing for Maryland Senators Barbara Mikulski and

Benjamin Cardin. On May 19, 2008, the NIH established the Undiagnosed Diseases Program, which will focus on puzzling medical cases referred to the NIH Clinical Center.

Adel Mahmoud, M.D., Ph.D., of Princeton University, described the report of a Blue Ribbon Panel (BRP) that evaluated an initiative to develop an infectious diseases biocontainment laboratory in Boston, to be supported by the National Institute of Allergy and Infectious Diseases and called the National Emerging Infectious Diseases Laboratories. The ACD members discussed the report on the proposed initiative and developed many suggestions.

Lawrence A. Tabak, D.D.S., Ph.D., Director of the National Institute of Dental and Craniofacial Research, reported on progress in the initiative to enhance the NIH's peer-review process for research grant applications. A working group delivered a draft recommendation report to the NIH Director on February 29, 2008, and has been gathering input from the scientific community, the public, and NIH staff.

Michael Gottesman, M.D., Deputy Director for Intramural Research, NIH, reported on the BRP that assessed the National Institute of Mental Health's Intramural Research Program. It considered issues such as innovation, adaptability, effectiveness, balance with other intramural programs, and collaboration with extramural scientists. Dr. Gottesman discussed the panel's recommendations.

Lana Skirboll, Ph.D., Associate Director for Science Policy, NIH, and ACD member Christine Seidman, M.D., reviewed progress in developing policies to protect personal information in the NIH's Genome-Wide Association Studies (GWAS) and Genetic Association Information Network. Dr. Skirboll described procedures for investigators. Dr. Seidman reported on working group discussions to address inadvertent releases of data, precautionary procedures, and a need for additional education of health care providers in the genetics of common and complex disorders.

Beth Furlong, Ph.D., R.N., J.D., reported on activities of the NIH Director's Council of Public Representatives, which welcomed six new members at its April 18, 2008, meeting. The meeting

featured presentations about new NIH intramural research initiatives, the initiative to enhance peer review, outreach by the National Library of Medicine, and GWAS.

Barbara Mittleman, M.D., Office of Science Policy, NIH, reviewed the Public-Private Partnerships Program, which is part of the NIH Roadmap for Medical Research and spans the spectrum of basic, translational, and clinical research efforts. The program facilitates collaboration and promotes synergy and efficiency in work that involves the NIH, the U.S. Food and Drug Administration, industry, and the public.

Julie Wolf-Rodda, Director of Partnership Development, Foundation for the NIH (FNIH), described FNIH public-private partnership activities, which complement NIH priorities and enhance NIH activities. FNIH currently supports more than 50 projects.

Barbara Alving, M.D., Director, National Center for Research Resources, provided an update on the Center, focusing on the development of a national consortium within the Clinical and Translational Science Award (CTSA) program. About 40 CTSA centers now have been established throughout the nation. The CTSA program is large, requiring significant organization and governance. Some centers have been coming together as consortia of interest, usually based on geography. The CTSA program is an opportunity to disseminate standards and best practices for clinical and translational research.

Dr. Kington presented, for the ACD members' consideration, a new list of prescreened bona fide cash awards that NIH employees may receive. The ACD members approved the new list of awards, adding them to the list of previously approved awards.

WELCOME AND NIH DIRECTOR'S REPORT

The 96th meeting of the Advisory Committee to the Director (ACD) of the National Institutes of Health (NIH) was held on June 6, 2008, on the NIH campus in Bethesda, Maryland, and webcast globally. NIH Deputy Director Raynard S. Kington, M.D., Ph.D., welcomed the ACD members, invited speakers, and other participants. He noted that NIH Director Elias A. Zerhouni, M.D., was joining the meeting by phone from Marrakesh, Morocco. Dr. Zerhouni was presenting at the 25th International Congress of Radiology.

Dr. Kington reported that ACD members Ralph I. Horwitz, M.D., Walter Isaacson, Mary-Clare King, Ph.D., Alexander R. Lerner, Alan I. Leshner, Ph.D., and Tadataka Yamada, M.D., were unable to attend the meeting. He reviewed the meeting agenda, which featured reports from Blue Ribbon Panels (BRPs) and ACD Working Groups focused on large issues in the biomedical research community, including development of an infectious diseases biocontainment laboratory in Boston, enhancement of the NIH peer-review process for research grants, and the protection of personal data in genetic studies. Beth Furlong, Ph.D., R.N., J.D., the new liaison to the ACD from the NIH Director' Council of Public Representatives (COPR), was in attendance.

Legislation and the Budget

Dr. Kington provided an update on legislative matters. On December 26, 2007, the fiscal year (FY) 2008 Consolidated Appropriations Act was signed into law, providing the NIH with $29,457 million for FY 2008, an increase of $329 million (1.1 percent) over FY 2007. The bill provided inflationary 1-percent increases in non-competing and competing research project grants (RPGs). A FY 2008 supplemental bill contains an additional $400 million for the NIH. This was passed by the Senate and awaits deliberation by the House. The President's budget request for FY 2009 features $29,457 million for the NIH, equal to FY 2008. On June 4, 2008, the Senate voted to adopt its FY 2009 budget resolution. The House will vote on its resolution within days. At a March 5 House hearing on the NIH budget request, Dr. Zerhouni discussed the lost opportunities that have resulted from the recent and ongoing flat budgets for the NIH. Congress had asked for an assessment of potential losses within the research community.

The Consolidated Appropriations Act of 2008 includes a mandate regarding access, requiring that NIH-funded investigators submit to PubMed Central an electronic version of final peer-reviewed manuscripts when they are accepted for publication. (Manuscripts are to be made public on PubMed within 12 months of the official date of publication.)

Dr. Kington noted that the NIH is implementing Title VIII of the FDA Amendments Act, which expands clinical trial registrations within the ClinicalTrials.gov Web site and requires the inclusion of reports of trial results. The extramural community has provided input on ways to implement and monitor this policy. The NIH will conduct an open meeting in March 2009 and post results by September 30.

On December 21, 2007, President Bush signed into law a bill to rename the National Institute of Child Health and Human Development (NICHD) the *Eunice Kennedy Shriver* National Institute of Child Health and Human Development. A ceremony celebrating the event took place on March 3, 2008, attended by Mrs. Shriver, family members, members of Congress, and Federal officials. The event commemorated the 45th anniversary of the founding of the NICHD—in which Mrs. Shriver played a key role. Drs. Zerhouni and Kington expressed their best wishes for Mrs. Shriver's brother, Senator Edward Kennedy, a great supporter of the NIH, who recently underwent surgery for a brain tumor.

On May 8, 2008, Dr. Zerhouni appeared before the House Energy and Commerce Subcommittee on Health and testified on the science of stem cell research. He emphasized that all types of stem cell research are interrelated intrinsically and are valuable in providing clues about stem cell fate determination. Two Representatives indicated that they will introduce legislation to lift the ban on Federal funding for research on embryonic stem cell lines developed after August 2001 and to propose NIH oversight of ethical issues.

The Genetic Information Nondiscrimination Act of 2008 was signed into law on May 21, 2008. It will protect Americans from discrimination based on their genetic information when they are seeking employment and health insurance. Dr. Kington noted that Francis Collins, M.D., Ph.D.,

who worked tirelessly in support of this legislation, will be leaving his position as Director of the National Human Genome Research Institute in August 2008.

Other NIH News

The Bayview Research Center in Baltimore will become a home for NIH researchers. Upon the Center's opening, the NIH held a briefing for Maryland Senators Barbara Mikulski and Benjamin Cardin.

The NIH is conducting searches for a Director of the Office of Behavioral and Social Sciences Research. Long-time NICHD scientist Christine Bachrach, Ph.D., has been serving as Acting Director since the departure of David Abrams, Ph.D. The NIH also is conducting a search for a Director of the National Institute of Environmental Health Sciences (NIEHS). The NIEHS has been undergoing a process to strengthen its administrative functioning. Samuel Wilson, M.D., has been serving as Acting Director.

On May 19, 2008, the NIH established the Undiagnosed Diseases Program, which will focus on puzzling medical cases referred to the NIH Clinical Center. The program, which will seek to diagnose rare and unusual conditions and perform research, will begin to accept patients in July 2008.

Dr. Kington announced that on April 10, 2008, French President Nicolas Sarkozy presented Dr. Zerhouni with the French National Order of the Legion of Honor, the highest decoration in France.

Discussion

Dr. Kington noted that the Undiagnosed Diseases Program will be housed in the NIH Clinical Center, to which patients will be referred. The program will help serve the Center's purpose of providing care and research that cannot be provided elsewhere. Christine E. Seidman, M.D., encouraged the NIH to ensure that a sufficient breadth of expertise will be available to treat the patients in the program. Patients also will be referred to relevant extramural experts.

John C. Nelson, M.D., proposed that the NIH—in particular, the ACD and COPR—develop a compendium of personal anecdotes detailing lost opportunities as a result of the recent flat NIH budgets. Dr. Kington noted that Lana Skirboll, Ph.D., Associate Director for Science Policy, NIH, has been developing an analysis of past and future opportunities. Dr. Zerhouni emphasized that trade-offs and lost opportunities are not hard to demonstrate. Most important to consider are the vulnerable investigators, high-risk/high-impact research, and clinical trials.

REPORT FROM THE ACD BLUE RIBBON PANEL ON THE NATIONAL EMERGING INFECTIOUS DISEASE LABORATORY AT BOSTON UNIVERSITY MEDICAL CENTER

Adel Mahmoud, M.D., Ph.D., of Princeton University, introduced an interim report of a Blue Ribbon Panel (BRP) that is evaluating an initiative to develop an infectious diseases biocontainment laboratory in Boston, to be supported by the National Institute of Allergy and Infectious Diseases and called the National Emerging Infectious Diseases Laboratories. Dr. Mahmoud, who chairs the BRP, stated that the group is focused on the issues of science and community relations and has convened three public sessions of engagement, including one in Boston. He asked the ACD to consider the Panel's report and to vote on a recommendation to modify the scope of work appropriately to reflect input from the community and others.

ACD member Karen A. Holbrook, Ph.D., who serves on the BRP, reviewed the initiative's progress, beginning with impact reports and a Massachusetts judge's voiding of approval and imposition of a requirement to address shortcomings in the plans—in particular, to address more fully potential worst-case scenarios. The BRP, which is a working group of the ACD, was convened to evaluate the current status and to recommend further steps to address the concerns.

The panel members represent the fields of infectious diseases, public health and epidemiology, risk assessment, environmental justice, risk communication, bioethics, biodefense, biosafety, and infectious disease modeling. They are focusing on the potential scope of additional risk assessments and ways to enhance community relations and communication. The panel has reviewed background materials (e.g., previous studies, epidemiological data) and obtained input from the National Research Council (NRC). It recommended additional studies to address methods and community characteristics.

The panel is recommending agents for study, scenarios to be studied (including worst cases), analyses to be performed, and next steps. Panel members agreed with the NRC review group that the term "worst case" is unhelpful because, although intuitively understood, it is a highly subjective notion. The analyses should address risk of agent release; probability of occurrence; uncertainty in critical parameters; range of published values; available interventions; and comparative risks at urban, suburban, and rural sites. Dr. Mahmoud stated that, pending ACD recommendations and the decision of the NIH Director, additional risk assessment studies will be carried out in late 2008. The BRP will present further results at the December 2008 ACD meeting.

Discussion

Dr. Nelson wondered whether the panel had considered the application of vaccinations. He indicated a downside to the push for high transparency in the planning process—for example, allowing terrorists to know which organisms are to be studied. Yet, Dr. Mahmoud noted, the community must be part of the planning. Amy Patterson, M.D., Director, Office of Biotechnology Activities, Office of Science Policy, NIH, noted that the National Science Advisory Board on Biosecurity has been addressing these issues and has developed an oversight framework and strategy to be considered. Dr. Zerhouni recognized multiple issues that have yet to be worked out on the way to a standard approach for governing such projects.

Dr. Seidman expressed concern for the vulnerable population in the area proposed for the laboratory, and she wondered whether local physicians and other care providers would have the

proper expertise to address medical problems that might result from the agents being handled. Dr. Mahmoud responded that the panel has been considering and will continue to consider such issues. Catherine D. DeAngelis, M.D., suggested obtaining advice from laboratories that already exist, including those that handle agents of the biosafety level-4. David Botstein, Ph.D., urged the panel to consider whether Boston is the best site for the laboratory. Dr. Mahmoud responded that risk assessment for the site of the laboratory will continue to be performed. Thomas J. Kelly, M.D., Ph.D., encouraged the panel to analyze the capacity to detect leaks and to perform surveillance.

The ACD members voted unanimously to accept the BRP's recommendations for agents, scenarios, and methodologies, provided the cited concerns are addressed (more community engagement, assessment of the capacity to detect leaks, and education of local health care workers). Dr. Mahmoud noted that other changes (e.g., agents studied) might occur as the panel continues to engage the local community. Dr. Zerhouni stressed that the BRP's report and recommendations represent a first step in providing decision makers with an evaluation of potential risks.

REPORT ON ENHANCING PEER REVIEW: IMPLEMENTATION PLAN

Lawrence A. Tabak, D.D.S., Ph.D., Director, National Institute of Dental and Craniofacial Research, reported on progress in the initiative to enhance the NIH's peer-review process for research grant applications. The Peer Review Working Group delivered a draft recommendation report to the NIH Director on February 29, 2008, and has been gathering input from the scientific community, the public, and NIH staff.

Dr. Tabak listed the following core priorities that served as bases for revising the peer-review process:

- Engage the best reviewers.
- Improve the quality and transparency of reviews.
- Ensure balanced and fair reviews across scientific fields and career stages.
- Reduce the burden on applicants.

- Develop a permanent process for continuous review of peer review.

Dr. Tabak described trends in the peer-review program through the years and presented a long list of proposed actions for achieving goals within the priorities. The report featured specific actions to achieve the following goals:

- Provide flexibility to accommodate reviewers.
- Recruit additional accomplished reviewers.
- Better acknowledge the efforts of reviewers.
- Make the review experience more rewarding.
- Provide mentoring and training for reviewers.
- Modify the rating system to place more emphasis on potential scientific impact.
- Restructure the summary statement to align with rating criteria.
- Shorten and redesign applications.
- Strengthen support of early-stage investigators and new investigators.
- Expand the Pioneer, EUREKA, and New Innovator awards to encourage risk-taking by applicant-investigators.
- Reduce the need for resubmissions.
- Expand continuous quality control of the review process itself.

An additional goal was to address the unintended consequences related to different models within applicant organizations. The Working Group proposed to require that any applicant state whether he/she has NIH Research Project Grant support in excess of $1 million and justify why additional resources are being requested. Dr. Tabak stated that the next step of the process is to convene a Peer Review Task Force, chaired by the NIH Deputy Director, to develop detailed plans and oversee initial implementation. The Division of Program Coordination, Planning, and Strategic Initiatives will create a new entity to oversee continuous quality review of peer review.

Discussion

Dr. Tabak noted that the editorial review board model continues to be considered. The ACD members discussed issues surrounding first reviews and subsequent events (e.g., success rates, types of investigators, institute differences). There was general agreement that this aspect of the system should not be changed precipitously but, instead, should evolve within boundaries. Dr. Zerhouni noted that recent attempts to model optimal numbers of new investigators seemed to indicate a need to fund more early-stage investigators—as distinct from young investigators. Academic and research centers must promote younger investigators as principal investigators (PIs) and, in general, promote earlier independence for investigators.

Keith R. Yamamoto, Ph.D., suggested that changing to a briefer rating scale might have the effect of creating a surplus of 1 and 2 scores, thereby shifting decision making from study sections to councils. The use of mentoring programs might lead to false expectations among applicants—although this might be avoided by using good instructions. Transformative research should be defined better. One aspect of it could be the degree of potential impact. Nancy E. Adler, Ph.D., emphasized the importance of the feedback loop in the application process. The proper use of feedback, noted Jeremy Berg, Ph.D., Director, National Institute of General Medical Sciences, can increase fairness. Dr. Zerhouni noted that the current process handles well the strongest scientists and weakest scientists. Investigators in the middle regions have a need for greater clarity, feedback, and fairness.

REPORT FROM THE ACD BLUE RIBBON PANEL ON THE NATIONAL INSTITUTE OF MENTAL HEALTH INTRAMURAL RESEARCH PROGRAM

Michael Gottesman, M.D., Deputy Director for Intramural Research, NIH, reported on the BRP that assessed the National Institute of Mental Health's (NIMH's) Intramural Research Program. It considered the following: 1) how the program could become more innovative and adaptable, 2) how its research could become more effective, 3) how its balance with other intramural programs could be optimized, and 4) how its collaborations with extramural scientists could be strengthened. The panel also considered the desired characteristics of a scientific director.

The panel noted laudable changes since the prior (1997) BRP review—changes that have supported vital contributions to mental health research. In response to the 1997 review, the program has enhanced brain imaging and nuclear medicine research, recruited both experienced and junior researchers, and launched an initiative on autism. The panel's report included the following recommendations:

- Appoint as a scientific director a world-class scientist and administrator.
- Foster innovation by recruiting junior scientists with innovative ideas.
- Provide support for investigators moving from intramural to extramural research.
- Link basic and clinical neurosciences, encouraging investigator independence.
- Increase the fluidity of intramural funding.
- Let research needs of the NIMH strategic plan drive future recruiting.

Discussion

In response to questioning, Dr. Gottesman noted that financial support for intramural researchers is generous. A number of large, unproductive intramural laboratories that existed in the past were closed. Dr. Botstein, a member of the recent panel, noted that the panel members discussed at great length the types of research that require an intramural program, with its large supporting infrastructure. Dr. Gottesman noted that the NIH Intramural Research Program has boasted a large number of Nobel Prize–winning investigators, although that influence has declined as the program has been reduced in size. Dr. Nelson proposed featuring a session on the general BRP process at a future ACD meeting.

The ACD members voted unanimously to approve the report on the NIMH Intramural Research Program.

REPORT OF THE ACD WORKING GROUP ON PARTICIPANT AND DATA PROTECTION FOR THE GENETIC ASSOCIATION INFORMATION NETWORK AND GENOME-WIDE ASSOCIATION STUDIES

Drs. Skirboll and Seidman, reviewed progress in developing policies to protect personal information in the NIH's Genome-Wide Association Studies (GWAS) and Genetic Association Information Network (GAIN).

Dr. Skirboll reviewed the NIH GWAS policy, which previously was presented to the ACD:

- The goal of the NIH GWAS policy is to advance GWAS to identify common genetic factors that influence health and disease.
- The NIH GWAS policy promotes the sharing of GWAS data via a NIH central repository (Database of Genotype and Phenotype [dbGaP]).
- The NIH GWAS policy outlines data submission and access procedures as well as principles for protection of research participants, scientific publication, and intellectual property.

Investigators performing GWAS with NIH funding are expected to submit their data to dbGaP after they are stripped of identifiers and coded. Secondary investigators requesting data must describe how the data will be used. NIH Data Access Committees (DAC) oversee this controlled access, reviewing requests and providing monitoring of annual reports of data users. Dr. Skirboll presented a chart of the GWAS oversight structure and a list of studies submitted to dbGaP as of May 2008. Most submissions offer individual-level data. A few offer only summary measures and analysis because of informed consent restrictions in the original studies. So far, 410 investigators have logged into at least one data set, 124 investigators have downloaded data, and the program has approved 408 projects.

Dr. Skirboll reported that two inadvertent data releases occurred because of software problems. She noted that they were not deliberate efforts to obtain unauthorized access to data and that both recipient investigators ceased any use of the data until they were granted access to the data sets following DAC review and approval. The National Center for Biotechnology Information conducted an extensive review to ensure that the problems had been resolved and added more

automated checks to prevent future problems. The ACD Working Group on Participant and Data Protection for GAIN/GWAS was briefed on the data releases, and they concluded that NIH's response was adequate and appropriate.

Dr. Skirboll described efforts to respond to three recommendations that the ACD had accepted for implementation by GWAS/GAIN:

- The NIH Office of Legislative Policy and Analysis is developing a proposal for an Exemption #3 statute to enhance legal safeguards to protect the privacy of genotype and phenotype data.
- The Participant and Data Management Steering Committee is developing a strategy for providing information on GWAS to participants, and the Trans-NIH Communications Group on Genetics and Common Disease is developing information on genetics and common disease more broadly for the public.
- A mechanism for responding promptly to public inquiries has been established using the GWAS Web portal.

Dr. Seidman reported that the ACD Working Group on Participant and Data Protection held conference calls in January and April 2008. At the January meeting, the working group discussed the inadvertent releases of data, the NIH response to the releases, and precautionary procedures that were instituted to prevent future incidents. The group suggested developing language to describe the gradations of risk involved in various types of data releases. During the calls, the working group was updated on the activities of the GWAS oversight groups and the NIH's response to the ACD GWAS recommendations. In the course of the discussions, the working group identified a need for additional education of health care providers about the genetics of common and complex disorders, sensitivity of GWAS data, and privacy issues. Finally, the group discussed the complexity and importance of issues related to the return of research results to participants and established a small subgroup to delve into these issues more deeply. In an in-person meeting next October, the working group will discuss policy implementation issues for institutional review boards (IRBs), group harms, and the return of research results to participants.

Discussion

Dr. Botstein wondered who at the recipient investigator's institution is allowed to see data sets that are approved for release. Dr. Seidman responded that the relevant co-investigators at an institution must be identified in the application for access. Dr. Botstein questioned whether extensive security and human-subject training requirements for data access are necessary because the data are de-identified. Also, there is no easy way to be fully rigorous in restricting data availability at the data recipient's institution. Dr. Skirboll explained that the NIH is proceeding very cautiously because of the sensitive and personal nature of genomic data and the possibility that de-identified genomic data may become identifiable in the future. Dr. Botstein emphasized the importance of ensuring that procedures do not become overly burdensome for investigators. Dr. Seidman pointed out that the ACD working group recognizes the importance of making sure that the burdens for access to the data are not excessive relative to the risk and that standard operating procedures and educational tools are being developed to promote more uniformity across the DACs and to facilitate the process for requesting access to the data.

NIH DIRECTOR'S COUNCIL OF PUBLIC REPRESENTATIVES (COPR) LIAISON REPORT

Beth Furlong, Ph.D., R.N., J.D., reported on activities of the COPR, which welcomed six new members (conditional appointees) at its April 18 meeting: Micah L. Berman, J.D.; Lora M. Church; Representative Eileen Naughton, J.D.; Carlos A.O. Pavão, M.P.A.; John W. Walsh; and James S. Wong, Ph.D. The April COPR meeting featured presentations about new NIH intramural research initiatives, the initiative to enhance peer review, outreach by the National Library of Medicine (NLM), and the GWAS. Marjorie Mau, M.D., COPR member, reported on the publication of an article about the COPR and public participation in health research in the *Hawai'i Medical Journal*. Work groups on the role of the public in research and communications presented updates on their work. The Communications Work Group presented a panel of experts and reviewed recommendations for a communications roadmap, featuring integrated, unified strategies for advancing the work of the NIH. The Communications Work Group made a recommendation to Dr. Zerhouni to give priority to a national public awareness campaign and aggressive use of new media.

Discussion

Dr. Nelson, who is the ACD liaison to the COPR, applauded its efforts and suggested that ACD members consider attending a COPR meeting. Dr. Kington recognized the COPR's role as ambassador for the NIH. Dr. Yamamoto stressed the idea of making the NIH the gold standard for objective health information. A focused marketing strategy should be used to bring citizens to the NIH Web site, and the site should be more useful. The NLM's Web site, MedlinePlus, has sought to become a single point of access for consumer health information. Dr. Botstein proposed creating links from Wikipedia entries to the NIH. There is a need, perhaps, to develop a single name and source of NIH consumer health information.

PUBLIC-PRIVATE PARTNERSHIPS AND THE FOUNDATION FOR THE NIH

Barbara Mittleman, M.D., Office of Science Policy, NIH, reviewed the Public-Private Partnerships (PPPs) Program, which is part of the NIH Roadmap for Medical Research and is located within the NIH Office of Science Policy. PPPs span the spectrum of NIH's basic, translational, and clinical research efforts; facilitates collaboration; and promotes synergy and efficiency within the NIH, the U.S. Food and Drug Administration, industry, and the public. The PPP Program provides policy development and analysis, communications, and coordination of development and implementation of PPPs, which are always mission-driven and can advance the NIH's goal of creating wide public dissemination and translation of NIH-supported discoveries. The Osteoarthritis Initiative, the Alzheimer's Disease Neuroimaging Initiative, GAIN, and the Biomarker Consortium are examples of current NIH PPPs.

Julie Wolf-Rodda, Director of Partnership Development, the Foundation for the NIH (FNIH), described partnership activities supported by the FNIH, the only entity within the NIH authorized to raise private funds to support research. It develops innovative PPPs that complement NIH priorities and enhance NIH activities. It currently supports more than 50 projects and has raised more than $410 million since 1996. An independent watchdog organization recently rated the FNIH among the best of 593 health-category charities. The program works by developing

partnerships that build on existing NIH programs featuring public-private collaboration, enabling the private partners to expand the number of funded grants. In some cases, private funds given to the FNIH are given as gifts to the NIH to increase available NIH funding. In other cases, the funding operates in parallel. In yet other cases, the NIH operates in an advisory capacity. The FNIH's largest education and training program is the Clinical Research Training Program, which has significant funding from Pfizer. Ms. Wolf-Rodda outlined the process by which partnerships are formed within the FNIH, and she listed current major PPPs. She emphasized that the FNIH always considers the priorities of the NIH as the point of reference for its own initiatives.

Discussion

Dr. Seidman wondered whether efforts of the FNIH featuring outside funding might be interpreted by policy makers as activities made possible by NIH funding. Perhaps we should emphasize to Congress that, for example, GAIN would not be possible without outside support. Dr. Skirboll stressed that the partnership idea should be understood as another model within which the NIH can move toward its goals. Dr. Botstein stated that the NIH has a history of proceeding slowly in areas not supported by R01 grants. PPP activities offer the capability of advancing higher-risk undertakings more rapidly.

NCRR DIRECTOR'S UPDATE: FORMING A MATRIX OF OPPORTUNITIES ACROSS THE NATION

Barbara Alving, M.D., MACP, Director, National Center for Research Resources (NCRR), provided an update on the Center, focusing on the development of national consortia through the Clinical and Translational Science Award (CTSA) program. The NCRR focuses on non-categorical work, supporting preclinical research, biomedical technologies (imaging, informatics), primate research centers, general clinical research centers, and more. The NCRR began to support the CTSA program in 2006. This program, which continues to expand, seeks to improve efficiency and remove barriers by which laboratory discoveries can be translated into clinical studies and into potentially new treatments and strategies to reduce the burden of disease and improve human health. Specific goals to achieve this end include the following:

- Improve clinical research management.
- Assemble interdisciplinary teams to extend basic research to the preclinical and clinical domains.
- Train future generations of clinical and translational scientists.
- Forge partnerships with private and public health care organizations.

During 2006 through 2007, 24 academic health centers throughout the United States received a CTSA; 14 more were awarded in 2008. The NCRR anticipates funding 60 academic health centers through the CTSA program by 2012, for a total cost of $500 million annually. The CTSAs bring together awardees to perform clinical and translational research, with each site engaging in local partnerships that feature academic institutions, industry, community organizations, and government agencies. Dr. Alving provided examples of the variety of activities at some of the sites. One key component is informatics. Creating an interoperable informatics platform is a challenge. Another challenge is to improve IRB functions for safety and access.

The CTSA program is large, requiring significant organization and governance. Some centers have been meeting and working together regionally as informal consortia. For example, four centers on the West Coast have created a West Coast Alliance. Other CTSAs are working with minority institutions as well as with those in states that receive Institutional Development Awards. In general, the CTSA program is an opportunity to disseminate standards and best practices for clinical and translational research. It encourages interdisciplinary teams of investigators and features partnering among diverse institutions.

Discussion

Drs. Alving and Kington noted that the CTSA program includes a focus on pediatrics to ensure that investigators and institutions devoted to research and patient care for children have the opportunity to engage fully in all aspects of the CTSA initiative. Barbara L. Wolfe, Ph.D., cautioned that the CTSA program should not reinvent clinical training programs that already exist. Also, training must be substantial, as opposed to offering many types of rather superficial

courses that do not impart in-depth knowledge. Dr. Seidman expressed concern about the large size of the program and proposed an evaluation to gauge success. Dr. Alving concurred with the need for evaluation and explained that each CTSA institution has an evaluation component. Furthermore, the NCRR is evaluating, through funding professional contractors who are external to the Center, how well the CTSA program is fulfilling the mission to serve as a consortium and to work toward the goals established in the CTSA Request for Applications.

REVIEW OF OUTSIDE AWARDS FOR ACD APPROVAL

Dr. Kington presented, for the ACD members' consideration, a new list of prescreened bona fide cash awards that NIH employees may receive. The awards were screened by the NIH legal staff and by ACD members Dr. Wolfe and Karen Holbrook, Ph.D. The ACD members approved the list with a unanimous vote. The awards will be added to the list of awards previously approved.

ADJOURNMENT

Dr. Kington thanked the ACD members, invited speakers, and guests and adjourned the meeting.

SUMMARY AND CONCLUSIONS

The Advisory Committee to the Director (ACD) of the National Institutes of Health convened on June 6, 2008, in Bethesda, Maryland, to receive updates on the NIH budgetary process; to review Blue Ribbon Panel reports on the National Institute of Mental Health's Intramural Research Program and an initiative to create a biocontainment laboratory in Boston; to learn of progress in the initiatives to improve the NIH peer-review process and participant and data protection within the Genetic Association Information Network and Genome-Wide Association Studies; and to hear from the National Center for Research Resources about the Clinical and Translational Science Award program. NIH representatives reported on programs to employ public-private partnerships and the Foundation for the NIH. The ACD members received a report from the NIH Director's Council of Public Representatives and accepted a new list of bona fide awards that NIH employees may receive.

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

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Raynard S. Kington, M.D., Ph.D.
Executive Director, Advisory Committee to the Director
Deputy Director, NIH

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Elias A. Zerhouni, M.D.
Chairman, Advisory Committee to the Director
Director, NIH

ABBREVIATIONS AND ACRONYMS

ACD	Advisory Committee to the Director
BRP	Blue Ribbon Panel
COPR	NIH Director's Council of Public Representatives
CTSA	Clinical and Translational Science Award
DAC	Data Access Committee
dbGaP	Database of Genotype and Phenotype
FDA	U.S. Food and Drug Administration
FNIH	Foundation for NIH
FY	Fiscal year
GAIN	Genetic Association Information Network
GWAS	Genome-Wide Association Studies
IRB	Institutional review board
NCRR	National Center for Research Resources
NICHD	Eunice Kennedy Shriver National Institute of Child Health and Human Development
NIEHS	National Institute of Environmental Health Sciences
NIH	National Institutes of Health
NIMH	National Institute of Mental Health
NLM	National Library of Medicine
NRC	National Research Council
PI	Principal investigator
PPP	public-private partnership

R01	An NIH large research project grant program