Department of Health and Human Services
National Institutes of Health
National Center for Research Resources

National Advisory Research Resources Council
Meeting Minutes
January 18, 2007

The National Advisory Research Resources Council convened for its 135th session at 8:00 a.m. on Thursday, January 18, 2007, in Conference Room 6, Building 31. Dr. Barbara M. Alving, Acting Director, National Center for Research Resources (NCRR), National Institutes of Health (NIH), presided as Chair. The meeting was open to the public until 1:30 p.m., at which time it was closed to the public for the review, discussion, and evaluation of grant applications as provided in Sections 552b(c)(4) and 552b(c)(6), Title 5, U.S. Code, and Section 10(d) of Public Law 92-463.

Council Members Present

Dr. Robert J. Beall
Dr. Wah Chiu
Dr. Kenneth G. Cornetta
Dr. Catherine C. Fenselau
Dr. Kelly D. Garcia
Dr. Roland F. Hirsch
Liaison Member, DOE
Dr. Joan S. Hunt
Dr. Kevin B. Johnson
Dr. Barbara B. Knowles
Dr. Bettie Sue Masters
Dr. Thomas G. McGuire
Col. (Dr.) Debra M. Niemeyer
Dr. Thomas J. Rosol
Dr. Richard Rudick
Dr. Arthur W. Toga
Dr. M. Roy Wilson
Dr. Tilahun D.Yilma
Ms. Sheila C. Zimmet
Dr. Stuart M. Zola

Council Members Absent

Dr. Cynthia E. Keppel
Dr. Machi F. Dilworth – Liaison Member, NSF

Special Invited Guests for Open Session

Dr. Kent K.C. Lloyd, Associate Dean for Research and Graduate Education and Associate Professor of Anatomy, University of California, Davis
Dr. Muriel T. Davisson, Senior Staff Scientist, The Jackson Laboratory
Dr. Clement J. McDonald, Director, Lister Hill National Center for Biomedical Communications, National Library of Medicine
Dr. Chris G. Chute, Chair, Biomedical Informatics, Mayo Clinic College of Medicine
Dr. Isaac S. Kohane, Chair, Informatics Program, Children's Hospital Boston, and Associate Professor of Pediatrics, Harvard Medical School

Staff of Other NIH Components

Ms. Elaine J. Ayres, NIH/CC/OD
Mr. John J. Bartrum, OD/OFC
Dr. Stefano Bertuzzi, OD/OSPA
Dr. Bill Bunnag, CSR
Dr. Carol Cain, AHRQ
Dr. Richard O. Cannon, NHLBI/DIR/OCD
Dr. Wen G. Chen, NIMH
Dr. Milton Corn, NLM
Dr. Claire E. Gutkin, CSR
Dr. Karin F. Helmers, CSR
Dr. Michael F. Huerta, NIMH
Dr. Jack F. Jones, Jr., CIT
Dr. Malgorzata M. Klosek, CSR
Dr. Teri A. Manolio, NHGRI
Dr. Khalid Masood, CSR
Dr. Elizabeth C. Murphy, NEI
Dr. Carol A. Romano, NIH/CC/OD
Dr. Louise M. Rosenbaum, NIAMS
Dr. Cris T. Sempos, CSR
Dr. Susana A. Serrate-Sztein, NIAMS
Dr. Vonda K. Smith, CSR
Dr. Margaret D. Snyder, OER/OD/NIH
Dr. Meredith D. Temple-O'Connor, NIGMS
Dr. Teresa Zayas-Caban, AHRQ

Others Present

Ms. Meryl Bloomrosen, Associate Vice President for Policy, American Medical Informatics Association, Bethesda, MD
Dr. Donna J. Dean, Senior Science Advisor, Lewis-Burke Associates, LLC, Washington, D.C.
Dr. Howard B. Dickler, Director for Clinical Research, Division of Biomedical and Health Sciences Research, Association of American Medical Colleges, Washington, D.C.
Mr. Stephen J. Heinig, Senior Staff Associate, Division of Biomedical and Health Sciences Research, Association of American Medical Colleges, Washington, D.C.

Open Session

I. Call to Order: Dr. Barbara M. Alving, Acting Director, NCRR

Dr. Alving welcomed Council members and guests to the 135th meeting of the National Advisory Research Resources Council. She recognized five of the Council's departing members:

- **Dr. Robert J. Beall,** President and Chief Executive Officer, Cystic Fibrosis Foundation
- **Dr. Wah Chiu,** Alvin Romansky Professor of Biochemistry, Department of Biochemistry and Cell Biology, Baylor College of Medicine
- **Dr. Catherine C. Fenselau,** Professor, Department of Chemistry and Biochemistry, University of Maryland, College Park
- **Dr. Joan S. Hunt,** University Distinguished Professor, Department of Anatomy and Cell Biology, University of Kansas Medical Center
- **Dr. Thomas G. McGuire,** Professor, Department of Health Care Policy, Harvard Medical School.

Dr. Alving thanked these five Council members for their service. Later in the proceedings, the departing members were presented with commemorative plaques and given the opportunity to address the Council and guests.

II. Updates on Major NCRR Activities: Dr. Barbara M. Alving

Dr. Alving highlighted some of the major NCRR activities that have taken place since the last Council meeting in September 2006:

Clinical and Translational Science Awards

NIH has made great progress in building a national consortium for clinical and translational science. Twelve Clinical and Translational Science Awards (CTSA)—as well as 52 planning grants—were announced on October 3, 2006. This consortium is the first systematic change in NIH's approach to clinical research in 50 years. Working together, these sites will serve as discovery engines that will improve medical care by applying new scientific advances to real world practice.

The application process for the second round of awards closed on January 17, 2007. Dr. Sheryl Brining, who directs NCRR's Office of Review, has begun organizing the Review Committee for this latest application process which will take place in May 2007.

The CTSA Principal Investigators were brought together for a kick-off meeting at NIH on October 23, 2006. They each had the opportunity to discuss the unique approach and resources they bring to the CTSA consortium.

Several Steering Committees were created to enable the CTSAs to better work together as a national consortium. The Steering Committees are made up of representatives from the CTSA grantee sites and across NIH. The Informatics and Communications Steering Committees have met, and others are planned for the near future.

As part of the consortium effort, a CTSA Web site (ctsaweb.org) will soon be launched. In its first phase, the site will serve as a central public resource for CTSA news, events, and research information. In the near future, the site also will offer tools—through a log-in feature—to facilitate and speed up communications among members of the CTSA consortium.

Additional details on other CTSA activities were provided later in the meeting by Dr. Anthony R. Hayward, Director of NCRR's Division for Clinical Research Resources.

Comparative Medicine Resource Directors Meeting
In November, the University of California, Davis, hosted a meeting of the Comparative Medicine Resource Directors. One of the sessions was entitled "Optimizing Cost Recovery—Toward Achieving Self-Sufficiency." The session reinforced the concept of cost recovery as an important and integral part of the resources funded by the Division of Comparative Medicine. Dr. Alving emphasized that, although the issue is complex, it is a high priority as NCRR faces budgetary restrictions.

RCMI 10th Annual International Symposium on Health Disparities
In December 2006, grantees of the Research Centers in Minority Institutions (RCMI) Program convened at the10th Annual International Symposium on Health Disparities in Puerto Rico. The symposium was entitled "Pathways to Discovery: Multidisciplinary Translational Research." The goal of this symposium was to enhance the research skills and facilitate collaborations among investigators and students from RCMIs through a series of scientific presentations and collaborative training workshops. For example, Dr. James Hildreth, the Director of the Meharry Center for Health Disparities Research in HIV, provided an update on his effort to develop a microbicide to prevent heterosexual transmission of HIV. His research will be highlighted in the winter issue of the *NCRR Reporter*. (See: Exploring the Potential of HIV Microbicides.) Dr. Gary Gibbons, Director for the Cardiovascular Research Institute at Morehouse School of Medicine, led a discussion on how to synergize the RCMI Program with CTSA efforts. Institutional Development Award (IDeA) grantees also participated in this discussion. Such discourse across NCRR programs is extremely important, as NCRR builds upon the strengths of its existing programs and creates connections and opportunities with the new CTSA Consortium.

Science Education Partnership Award Public Outreach Team
As part of an ongoing effort to maximize the effectiveness of its resources and programs, NCRR recently created a Science Education Partnership Award (SEPA) Public Outreach Team. SEPA links scientists with museums and other organizations so that they can provide a better understanding of life sciences to K-12 students and teachers, as well as to the public. The goal of the Public Outreach Team is to further extend outreach to the public through connections with other programs funded throughout NCRR. Specifically, the team will explore ways to expand interactions between the SEPA, National Primate Research Centers, Biomedical Technology (BT) Resource Centers, and the CTSA, IDeA, and RCMI Programs.

Biomedical Technology Resource Centers Programmatic Review
Later this year, NCRR will convene an external advisory panel to conduct a programmatic review of the BT Resource Centers. The effort will be led by Dr. Michael Marron, Director of NCRR's Division of Biomedical Technology.

III. Working Group on Diversity in Top Leadership: Dr. Barbara M. Alving

Dr. Alving also discussed the need for diversity both in the research workforce and in top leadership. Success at NIH depends not only on recruiting a broad and diverse group of people to the field of biomedical research, but also on ensuring that they are provided with opportunities to advance in their fields of research. To assist these efforts, NCRR will create an ongoing committee of Council members and external individuals that will examine issues of diversity through a data-driven approach. Drs. Thomas Rosol, Stuart Zola, Joan Hunt, Debra Niemeyer, Catherine Fenselau, Kelly Garcia, Tilahun Yilma, and Barbara Knowles volunteered to serve on this committee.

IV. Budget Update: Dr. Barbara M. Alving

On December 9, 2006, the President signed into law P.L. 109-383, the third Continuing Resolution for FY 2007. The law provides funding for agencies, including NIH, without enacted appropriations. NIH's FY 2007 Continuing Resolution level is $28.5 billion, essentially the same level as FY 2006. The NCRR FY 2007 Continuing Resolution level is $1.099 billion and includes an increased investment in the CTSA Program. Funding for other clinical research programs was reduced.

Dr. Alving introduced Mr. John Bartrum, the NIH Associate Director for Budget. Mr. Bartrum was named to his current position on October 15, 2006. He has primary responsibility for NIH-wide budget policy, planning, analysis, formulation, and presentation. At the meeting, Mr. Bartrum verified the FY 2007 budget information presented by Dr. Alving and confirmed that the President's budget request for FY 2008 is scheduled to be released on Monday, February 5, 2007. He further indicated that NIH would post the budget information to its Web site as soon as the information is officially released.

V. Consideration of Minutes: Dr. Barbara M. Alving

The minutes of the Council meeting held on September 21, 2006, were approved as written.

VI. Future Meeting Dates: Dr. Barbara M. Alving

The next Council meeting will be held on Tuesday, May 22, 2007. The final Council meeting date for the year is Tuesday, September 11, 2007.

VII. Legislative Update: Dr. Barbara M. Alving

Legislative Update

Dr. Alving briefed the Council on the NIH Reform Act of 2006, which was unanimously passed by Congress on December 8, 2006. This bill marks the first time that NIH has been reauthorized as a whole since 1993. Sponsored by Representative Joe Barton of Texas, the bill affirms the importance of NIH and its vital role in advancing biomedical research to improve the health of the nation.

The bill became law on Monday, January 15, 2007, when the President signed it, and NIH is now working on the process for its implementation.

One of the key provisions in the legislation is the establishment of a Division of Program Coordination, Planning, and Strategic Initiative within the Office of the Director. This office will oversee the NIH Common Fund, which will be used to support trans-NIH research. A formula for growth of the Common Fund is not specified, but the amount reserved as a percentage of the total appropriation in any fiscal year may not be less than the percentage from the preceding fiscal year. The first year that the Common Fund reaches the five percent mark, the NIH Director will be required, in consultation with the Council of Councils, to submit recommendations to Congress for changes regarding amounts of the Common Fund. The funds currently being used for the NIH Roadmap for Medical Research are expected to become the Common Fund. A newly established Council of Councils will provide advice on research proposals that would be funded by the Common Fund. This Council of Councils will consist of 27 members and include members from the Institute and Center Advisory Councils, the Council of Public Representatives, and others nominated by the NIH Office of the Director.

The legislation also establishes a Scientific Management Review Board to conduct periodic reviews of NIH's organizational authorities. These reviews must take place at least every seven years, and any organizational changes recommended by the Board must begin within 100 days. The NIH Director can object to these recommendations by submitting a report to Congress. This legislation reaffirms the authority of the Secretary of Health and Human Services to reorganize Institutes/Centers. The legislation also authorizes the NIH Director and Institute/Center Directors to reorganize as long as a public process is included. In addition, the legislation eliminates most of the previous separate reporting requirements of NIH and replaces them with one extensive biennial report to Congress.

To develop a plan for implementing the provisions of this legislation, NIH is creating an Ad Hoc Working Group chaired by Raynard Kington, NIH's Deputy Director. The Working Group's membership includes some of the IC Directors and senior NIH leaders in areas such as legislation, policy, management, communications, extramural and intramural activities, budget, and general counsel. The group's charge is to complete a careful, detailed analysis of the legislation and propose plans for its implementation that will aid NIH in serving the public and the scientific community more effectively.

Of specific importance to NCRR, the legislation enhances the CTSAs by requiring the establishment of a mechanism to preserve independent funding and infrastructure for pediatric clinical research centers. NCRR is currently discussing potential revisions to the CTSA funding opportunity announcement to address this provision.

The legislation also authorizes—but does not appropriate (i.e., provide funds)—a funding increase for NIH for each of the next three years as follows: $30.3 billion for FY 2007, $32.8 billion for FY 2008, and such sums as necessary for FY 2009.

VIII. Knockout Mouse Project (KOMP): Dr. Franziska B. Grieder, Director, Comparative Medicine, NCRR; Dr. Kent K.C. Lloyd, Associate Dean for Research and Graduate Education and Associate Professor of Anatomy, University of California, Davis; Dr. Muriel T. Davisson, Senior Staff Scientist, The Jackson Laboratory

Dr. Grieder provided a brief introduction of Dr. Lloyd's and Dr. Davisson's research prior to their presentations.

A Mouse for Every Gene…the Knockout Mouse Program Mutagenesis Project

Dr. Lloyd recalled that in the fall of 2003, NIH convened an international workshop at the Banbury Conference Center in New York titled the "Mouse Genome-Wide Targeted Mutagenesis." During this conference, participants discussed the possibility of creating a library of mouse embryonic stem (ES) cells mutated for every gene that had not already been "knocked out."

The conference was the genesis for the Knockout Mouse Project (KOMP), a trans-NIH initiative aiming to generate a comprehensive public resource that comprises mouse ES cells containing a null mutation in every gene in the mouse genome. The NIH KOMP aims to 1) complete a mutagenized library of the mouse genome by collecting and creating thousands of new clones of gene-specific mutant ES cells; 2) develop and validate new ES cells on the C57BL/6J genetic background; 3) establish and operate a dedicated distribution repository; and 4) establish a Data Coordination Center.

The first of these main goals is composed of several distinct efforts:

- *Repatriation* - obtaining 300 existing mouse lines held only by individual investigators and placing them in the public domain.

- *Acquisition* - acquiring 360 mutant lines created by two private companies, Lexicon and Deltagen, and also placing them in the public domain.

- *Production* - producing cryopreserved embryos, 8,000 to 13,500 DNA constructs, 8,000 to 8,500 mutant ES cell clones, and 500 mutant mice.

The scientific community will have continuous input into which genes will be targeted by the KOMP. By 2011, nearly the entire transcribable genome will have been "knocked out" in individual mouse lines and made accessible on-demand to the scientific community and commercial interests. This effort will save time and dollars down the road by ensuring that mice are available for researchers quickly and at relatively low costs. The net impact of the KOMP will enhance the rapidity and efficiency with which researchers will be able to translate the underlying genetic causes of disease to human health.

Sharing the KOMP Resources

Dr. Davisson briefly presented the history of mouse resources support. The first mouse repository at The Jackson Laboratory was funded by the National Science Foundation in 1959. In 1978, NCRR (then known as the Division of Research Resources) funded the laboratory's mutant mouse repository. And in 1999, the Mutant Mouse Regional Resource Centers were funded by NCRR to expand resource capacity. Seven years later, NIH funded the repatriation and acquisition of mutant lines with the goal of making them available to the research community. The Centers have been funded to produce targeted mutation ES cell lines and mouse strains that—together with efforts in Europe and Asia—will provide a knockout of every mouse gene.

The KOMP will nearly double the number of mutant mouse strains and ES cell lines that are publicly available and will require NIH support. Because it would be financially impossible to keep all the mouse strains in the living state, cryopreservation is used as a colony management tool. Cryopreservation allows for archiving and distribution of mouse strains from frozen embryos and sperm and is critical to making the rapidly increasing number of mouse resources available to investigators around the world. Recent advances at The Jackson Laboratory have made feasible the cryopreservation of sperm from any strain, including the C57BL/6J strain. Storing frozen sperm has the added advantage of allowing larger numbers of same-age mice to be recovered by in vitro fertilization for single experiments.

NIH also has recently awarded a five-year cooperative agreement totaling $2.5 million to The Jackson Laboratory to set up a Data Coordination Center for the KOMP. The center will collect information that will allow the research community to track the scheduling and progress of knockout production. It also will serve as a central information resource for all publicly available knockout mutants and will integrate – along with other databases that contain mouse DNA sequences – additional information on mouse genetics, as well as, information on the physical and biochemical characteristics of the knockout mice. In September 2006, NCRR and 12 other NIH Institutes issued a Request for Applications (RFA)

to create a KOMP Repository. The repository will distribute ES cells, embryos, and/or live mice to eligible scientists. It also will provide services to distribute live mice from archived ES cell lines or other cryopreserved materials.

IX. Update on the CTSA Program: Dr. Anthony R. Hayward, Director, Division for Clinical Research Resources, NCRR

Dr. Hayward provided an update on the first Clinical and Translational Science Awards (CTSAs), which were announced on October 3, 2006. In all, a total of 12 academic health centers have been funded. In addition, 52 planning grants were awarded to help institutions in preparing to apply for CTSAs in the future. It is expected that approximately 60 institutions will receive awards by 2012. All of these institutions will be linked to energize clinical and translational science nationwide. In 2006, the CTSAs subsumed 16 of the General Clinical Research Centers (GCRCs) as well as a variety of grants (three Roadmap-T32 grants, four NCRR-K12 grants, three Roadmap- K12 grants, and nine K30 grants).

Priorities for the 2006 awardees include holding meetings for all Steering Committees of the CTSA consortium, implementing evaluation plans, agreeing on achievable short-term goals, and deploying Web-based communications systems. Meetings of the PIs and two Steering Committees have taken place thus far. The CTSA Administrators Meeting, as well as a second PI Meeting, are expected to take place in early 2007. A Web site for the CTSAs (ctsaweb.org) also has been launched.

In FY 2007, the CTSAs are permitted to have a foreign component for NIH-funded clinical research. A total of 35 letters of intent have been received for this round and applications are due on January 17, 2007. Reviews will take place in May, and up to eight awards are expected in September 2007. In FY 2008, the CTSAs will be in compliance with the pediatric requirement of the NIH Reform Act and will differ from the previous awards in that they will allow for multiple PIs. Applications are due on October 24, 2007, and up to eight awards are expected in June 2008.

X. Clinical Research Informatics: Dr. Clement J. McDonald, Director, Lister Hill National Center for Biomedical Communications, National Library of Medicine; Dr. Chris G. Chute, Chair, Biomedical Informatics, Mayo Clinic College of Medicine; Dr. Isaac S. Kohane, Chair, Informatics Program, Children's Hospital Boston, and Associate Professor of Pediatrics, Harvard Medical School

Medical Informatics and Electronic Medical Records

Dr. McDonald spoke on the potential of using clinical repositories for research. Clinical repositories capture and organize various kinds of electronic clinical data from many sources such as radiology reports and images, laboratory data, vital

signs, pharmacy records, endoscopies, and electrocardiograms. Potentially, if medical care institutions had such repositories researchers could use them to find potential cases for studies; review candidates for study eligibility; create longitudinal studies by tracking outcomes or developing cost-benefit studies; supplement data collection in traditional clinical trials; and undertake post-marketing of drug toxicities. Currently, other sources of data from outside of the routine clinical processes include tumor registries; ACC cardiology databases; and Medicaid/Medicare data on procedures, diagnoses, and drug use. If coupled with the data in institutional repositories, these external data sources could greatly increase their research value. Combining institutional repositories across a community also could create a valuable population database. This database could provide opportunities for conducting epidemiologic research and discovering new drug toxicities.

Several examples of large and multi-institutional repositories already exist. The Indianapolis Network for Patient Care links more than 125 data sources from public health departments, payors, and all of the city's hospitals, and it contains more than a billion discrete results. The Cancer Research Network is a collaboration of 12 large HMOs involved in cancer research and includes data on radiology, drugs, and laboratory tests. Community-based repositories also exist in Memphis, northwest and central Indiana, as well as in international locations such as Utrecht in the Netherlands, North Jutland in Denmark, and Ontario and British Columbia in Canada. These repositories are widely used for research.

Some recommendations to improve the melding of clinical repositories include connecting the clinical trial and institutional systems; making effective de-identification tools publicly available; developing national catalogs for variables and questionnaires; and developing standard methods and procedures for including Medicare and Medicaid data.

Multidisciplinary Science, Data Integration, and Large-Scale Inferencing: The Role of Informatics Standards

Dr. Chute spoke about the role of informatics standards. In 1906, the Mayo Clinic began collecting highly structured patient records on paper. Since then, there has been a tremendous transformation in medicine. The genomic era is changing medicine by increasing the bond between genomic biology and clinical medicine. As biomedicine concepts become more complex and intertwined, research synergies will depend upon results and data that are interoperable and based on established standards. But terminology standards are not sufficient; structure and content must also be accommodated, because words, concepts, findings, and interventions all have context. This creates the need for explicit, shared context.

Currently, several ontologies are being developed, including SNOMED CT, LOINC, HL7 RIM, and caBIG DSR/CDEs. But just about every terminology has its own format, set of tools, and update mechanisms. The differences make it

difficult to use these resources to their full potential. To bridge this gap, the Mayo Clinic developed the Lexical Grid (LexGrid) model as a way to bridge different terminologies and ontologies.

LexGrid provides support for a distributed network of lexical resources such as terminologies and ontologies via standards-based tools, storage formats, and access/update mechanisms. LexBig, for example, provides externalization and support of LexGrid-based terminology software developed for NIH's caBIG initiative. Similarly, LexBio provides support for the National Center for Biomedical Ontology (NCBO). NCBO supports biomedical researchers by providing them with on-line tools and a Web portal to access, review, and integrate disparate ontological resources in all aspects of biomedical investigation and clinical practice.

Automated Personal Health Records

Dr. Kohane explained that a lifelong medical record does not yet exist. Today, patients are highly mobile, yet they cannot transfer their electronic personal health information across institutions. To address this challenge, Dr. Kohane and his colleagues created the Personal Internetworked Notary and Guardian (PING) project nearly 10 years ago. Through this system, patients are able to enter and retrieve their personal health information through a secure and encrypted Web site. When using PING, patients can decide who can see what parts of their record and when. The system has been successfully shared across health care systems in two states.

PING places the individual, rather than a health institution, at the center of data exchange. Systems of this kind could allow individuals to provide investigators with information on their records for the development of research studies. These systems also could allow for the recruitment of patients into studies without a conflict of interest from recruiting physicians. In exchange, researchers could inform certain patients about advances in a specific disease or health area in which they are interested.

Dr. Kohane believes that, for these systems to work successfully at a large scale, three things are needed: legislation to protect patients and researchers; selectable disclosure so that patients can choose what to disclose; and information altruism, that is, a group of people willing to share information.

XI. NCRR Population Tracking Effort: Dr. Shelia A. McClure, Program Officer, Division of Research Infrastructure, NCRR

Dr. McClure presented the NCRR Report on Population Tracking. She explained that NIH policy requires that women and members of minority groups and subpopulations be included in all NIH-funded clinical research. The policy was created as a result of the NIH Revitalization Act of 1993. NIH monitors the inclusion of women and minorities in clinical research through biennial tracking reports submitted by the Advisory Council of each NIH Institute and Center. These reports are then included in the overall NIH Director's biennial report.

In FY 2005, a total of 235 protocols were reported by NCRR. Protocols with no enrollment data—or those that had not yet submitted data—totaled 16.2 percent. The remaining protocols (83.8 percent) reported enrollment data. In all, a total of 24,824 individuals were enrolled in clinical studies. Of these, 56.7 percent were women and 84.0 percent were minorities. Dr. McClure presented further detailed statistics on enrollment. Upon conclusion of her presentation, the Advisory Council certified NCRR's compliance with the inclusion policy.

Closed Session

This portion of the Council meeting was closed to the public in accordance with the determination that it was concerned with matters exempt from mandatory disclosure under Sections 552b(c)(4) and 552b(c)(6), Title 5, U.S. Code and Section 10(d) of the Federal Advisory Committee Act, as amended (5 U.S.C. Appendix 2).

Council members discussed procedures and policies regarding voting and confidentiality of application materials, Committee discussions, and recommendations. Members absented themselves from the meeting during discussion of and voting on applications from their own institutions, or other applications in which there was a potential conflict of interest, real or apparent.

XII. Application Review

The Council reviewed 301 applications (with total direct costs of $164,999,213). The Council concurred with the review of all applications.

Adjournment

The Council adjourned at 3:30 p.m. on January 18, 2007.

Certification

We hereby certify that, to the best of our knowledge, the foregoing minutes and supplements are accurate and complete.

Barbara M. Alving 3/31/07

Dr. Barbara M. Alving
Chair, National Advisory Research Resources Council
and
Acting Director, National Center for Research Resources, NIH

Date

Louise Ramm 3/31/07

Dr. Louise E. Ramm
Executive Secretary, National Advisory Research Resources Council
and
Deputy Director, National Center for Research Resources, NIH

Date

These minutes will be formally considered by the Council at its next meeting; corrections or notations will be incorporated into the minutes of that meeting.

Attachment:
Council Roster

NOTE: Open Session materials are available from the Executive Secretary or the Committee Management Office, NCRR.