



Eunice Kennedy Shriver

NICHD

National Institute of Child Health
& Human Development

NATIONAL ADVISORY CHILD HEALTH
AND HUMAN DEVELOPMENT
COUNCIL

MINUTES OF MEETING

September 11, 2008

**DEPARTMENT OF HEALTH AND HUMAN SERVICES
PUBLIC HEALTH SERVICE
EUNICE KENNEDY SHRIVER NATIONAL INSTITUTE OF CHILD HEALTH AND HUMAN
DEVELOPMENT
NATIONAL ADVISORY CHILD HEALTH AND HUMAN DEVELOPMENT COUNCIL
SUMMARY MINUTES
September 11, 2008¹**

The National Advisory Child Health and Human Development (NACHHD) Council convened its one-hundred-thirty-sixth meeting at 8:10 a.m., Thursday, September 11, 2008, Building 31, Conference

Room 6, National Institutes of Health, Bethesda, Maryland. The meeting was open to the public from 8:10 a.m. to 12:40 p.m. As provided in Sections 552b(c)(4) and 552b(c)(6), Title 5, U.S.C., and Section 10(d) of Public Law 92-463, for the review, discussion, and evaluation of grant applications and related information, the meeting was closed to the public from 1:40 p.m. until 4:30 p.m.

Dr. Duane Alexander, Chair, NACHHD Council, and Director, *Eunice Kennedy Shriver* National Institute of Child Health and Human Development, presided.

Council members present:

Dr. Enriqueta Bond
Dr. Sandra Carson
Dr. Sherin Devaskar
Dr. Jonathan Gitlin
Dr. Judith Hall
Dr. Ralph Kauffman
Dr. Perri Klass
Dr. Ronald Lee
Dr. Vivian Lewis

Dr. Gail Martin
Dr. Sergio Ojeda
Dr. Mark Phillippe
Dr. Margaret Stineman
Dr. Rosemarie Truglio
Dr. Joseph Zanga
Dr. Steven Wolf, NABMRR Liaison
Member

Council members absent:

Dr. Robert Morris Dr. Donald Stein
Ms. Tracey Klein

Ex Officio members present:

Dr. David Heppel, Maternal and Child Health Bureau, Health Resources and Services Administration
Dr. Lynn Cates, Department of Veterans Affairs, Veterans Administration

Ex Officio member absent:

Colonel Martin G. Ottolini, Defense Threat Reduction Agency, Department of Defense

Council Roster (Attachment I)

¹Members absent themselves from the meeting when Council discusses applications from their own institutions or when a conflict of interest might occur. The procedure applies only to individual applications discussed, not to en bloc actions.

Invited speakers:

Dr. Robert Silver, Professor of Obstetrics and Gynecology, Division of Maternal-Fetal Medicine, University of Utah, Salt Lake City.

Dr. Kathleen Caron, Assistant Professor, Department of Cell and Molecular Physiology and Department of Genetics, University of North Carolina at Chapel Hill, Chapel Hill.

Others present were:

Mr. Emil Wigode, March of Dimes

Dr. Mary Ann McCabe, Society for Research in Child Development

Dr. Katherine Wenstrome, Society for Maternal-Fetal Medicine

Dr. Amy Pollick, Association for Psychological Science

Dr. George Jesien, Association of University Centers on Disability

Ms. Lucy Leuchtemburg, George Washington University Biostatistics Center

Ms. Elizabeth Thom, George Washington University Biostatistics Center

Ms. Madeline Rice, George Washington University Biostatistics Center

Ms. Kathy Graham, First Candle

Ms. Julie Croxford, RTI International

Ms. Becky Fowler, American Academy of Pediatrics

Ms. Nevena Minor, American College of Obstetricians and Gynecologists

Ms. Branka Sekis, SSS, Inc.

Ms. Michelle Rodrigues, SRI International

Ms. Karen Studwell, American Psychological Association

Ms. MaryJo Hoeksema, Population Association of American

Members of Staff, NICHD

Members of Staff, NIH

Members of Staff, CSR

I. INTRODUCTORY REMARKS

Dr. Alexander welcomed Council members, guests, invited speakers, and staff and announced that the meeting would be open to the public on Thursday morning, September 11, and would be closed to the public in the afternoon for the consideration of grant applications.

He introduced newly appointed Department of Veterans Affairs (VA) *ex officio* member Dr. Lynn Cates. Dr. Cates is the Assistant Chief Research and Development Officer and Director,

Program for Research Integrity Development and Education (PRIDE). Her speciality is pediatric infectious diseases and childhood immunization. Dr. Cates' VA responsibilities include education, training, guidance, and policy development on human subject protection for the VA facilities that perform human research; ensuring that human research protection becomes accredited; and developing and implementing a VA central IRB. Dr. Cates also holds the position of Adjunct Associate Professor of Pediatrics, Rainbow Babies and Children's Hospital, Case Western Reserve University, Cleveland, Ohio.

Review of Confidentiality and Conflict of Interest

Dr. Alexander reminded Council members that material furnished for review and discussion during the closed portion of the meeting is considered privileged information. Advisors and consultants serving as members of a public health advisory committee may not participate in situations in which any violation of conflict of interest laws and regulations might occur. Responsible staff shall ensure that a Council member does not perform duties or render advice which might have a direct and predictable effect on the interests of an organization or institution in which he/she has a financial interest. In particular, Council members should not participate in the evaluation of grant applications for federal support which will affect the interests of such organizations or institutions. At the end of the closed session of the meeting, all members were required to certify that they had not been involved in any conflict of interest situations during the review of grant applications.

Council Minutes - June 12, 2008, Meeting

The minutes were approved as written.

Future Meeting Dates

The following future meeting dates were agreed to:

January 22, 2009 (Thursday)
 June 11, 2009 (Thursday)
 September 21, 2009 (Monday)
 January 28, 2010 (Thursday)
 June 3, 2010 (Thursday)
 September 20, 2010 (Monday)

II. NICHD DIRECTOR'S REPORT AND DISCUSSION

The Report of the Director, NICHD, (electronically posted on the Council Members Website prior to the meeting) is appended (Attachment II). Dr. Alexander provided a brief overview of personnel changes at NICHD and NIH. He shared with Council a legislative update since the last meeting.

III. DEVELOPMENTAL BIOLOGY, GENETICS AND TERATOLOGY BRANCH TWO YEAR UPDATE

Dr. A. Tyl Hewitt, Chief, Developmental Biology, Genetics and Teratology (DBGT) Branch, Center for Developmental Biology and Perinatal Medicine, described the Branch's progress since the last report two years ago and presented the Branch's plan for future activities. His presentation consisted of the following four topics:

Branch's Mission

Dr. Hewitt stated that the DBGT Branch's mission is to support basic research and training in developmental biology. A major emphasis area is to elucidate the causes of birth defects which includes primary immunodeficiency. This is essentially achieved by understanding the processes underlying normal development and by determining how these processes go awry resulting in birth defects. The mission is supported by program areas in Developmental Genetics and Genomics, Early Embryonic Development, Developmental Neurobiology, Organogenesis, Factors in Teratogenesis, and Developmental Immunology. It is noteworthy that within these portfolios the Branch supports many of the leaders in the field of development, including Nobel Laureates, Lasker Awardees, many Howard Hughes Investigators, and 17 (37 percent) of the Institute's MERIT Awardees.

Brief review of the major recommendations made by an expert panel in 2006

The panel addressed three basic questions:

- *What are the most important public health issues that need to be addressed?*

The panel indicated that the most important public health issue for the Branch relates to birth defects with the infrastructural needs and scientific opportunities of our constituents being fairly closely intertwined.

- *What areas of the Branch's portfolio require less emphasis?*

In response to the panel's recommendation, a total of 21 projects (\$5.5 M) relating to Reproductive Immunology and Neonatal Infection were moved to the Pregnancy and Perinatology Branch – about 6 percent of the DBGT Branch's holdings.

- *What are the most important scientific opportunities that the Branch should pursue?*

The panel's recommendations include: maintaining current emphasis areas, particularly with regard to investigator-initiated projects and continued emphasis on animal models; nurturing the Branch's Birth Defects Working Group; creating training opportunities in emerging research areas; and creating opportunities for undergraduate research experience.

Summary of the Branch's effort in pursuing the most important scientific opportunities recommended by the expert panel

- *Emphasizing investigator-initiated projects:*

The Branch is continuing its emphasis on investigator-initiated projects in order to gain a broad perspective on the function of developmental pathways.

- *Emphasizing animal models:*

Model organism resources are improved by participating in "Knockout Mouse Project" (KOMP) and "Neuromouse" and by issuing or participating in the following PARs: Genetic and Genomic Analyses of *Xenopus* [PARs for R01 (a reissue), and R03, R21 to be announced], Genetic Screens to Enhance Zebrafish Research (PAR-08-138: R01), and Enhancing Zebrafish Research with Research Tools and Techniques (PAR-08-139: R01).

The development and maintenance of model organism databases such as GDX (Mouse Gene Expression Database); GEISHA (Chick Gene Expression Database); Xenbase (*Xenopus* Biology and Genomic Resources); SpBase (Sea Urchin Genome Database); and, ZFIN (zebrafish database, co-fund with NHGRI) are supported.

Organism stock centers including ZIRC (Zebrafish International Resource Center at University of Oregon, co-fund with NCRR), and *Drosophila* Stock Center (an NSF contract; participating Institutes include NICHD, NCRR, and NIGMS) are supported.

- *Nurturing the Branch's Birth Defects Working Group:*

The Birth Defects Working Group was developed as an important research priority in 2000 with the aim of taking advantage of advances in genomics and development and exploiting conservation of genes and

developmental processes in an effort to elucidate the cellular, molecular and genetic causes of birth defects. It established a two-way flow of information between basic and clinical investigators. It was

initially funded through two RFAs: one for P01s (requiring basic and clinical/translational projects), and the other for R01s in the area of genetic epidemiology. These RFAs funded 6 P01s and 11 R01s.

Dr. Hewitt pointed out that in these austere times, the Branch has used the following two strategies to nurture the Birth Defects Working Group. Two PAs entitled “Developmental Mechanisms of Human Structural Birth Defects” (P01s: PA-07-419) and “Genetic Susceptibility and Variability of Human Structural Birth Defects” (R01s: PA-08-011) were issued to solicit new projects. In addition, new participants were invited from among relevant investigator-initiated projects. The Birth Defects Working Group meets annually to discuss progress, exchange ideas, share resources and solutions to problems and to foster new collaborations. There are currently 17 research groups participating in the Working Group supported by two P01s, twelve R01s, one R37 and two K08s.

- *Creating training opportunities in emerging research areas:*

Systems Biology is one of the panel-recommended emerging research areas. Training in this area has been promoted by issuing a PAR for training grants (T32) entitled ‘Systems Biology of Development’ (PAR-08-054). The first applications in response to this announcement will be reviewed this fall.

Creating opportunities for undergraduate research experience

Enhancing developmental biology research at predominantly undergraduate institutions was successfully achieved by issuing an RFA that used the AREA grant mechanism (R15). Additional rationale for using this unique mechanism was the recognition that investigators from small institutions are more likely to come up with new, low maintenance animal models. The Branch was pleased by the positive response to the RFA, which was going to receive its second level of review at the closed session of the Council meeting.

Future Activities/New Scientific Opportunities

Dr. Hewitt presented three areas the Branch planned on pursuing over the next few years. These include: “Systems Biology” to study development by examining the various interactions among the genome and proteome and their complex assortment of genetic regulatory networks and signaling pathways; “Modifier Genes” that influence penetrance of the phenotype for a specific genotype; “Quantitative Aspects of Development” to study how gene dosage may be involved in the expression of non-syndromic birth defects (a PA is being developed in this area). Dr. Hewitt stressed the importance of publicizing what NICHD has to offer the community in the area of developmental biology research. He concluded his talk by presenting the cover of a pamphlet jointly developed by the DBGT and Reproductive Sciences (RS) Branches. It features an original artwork by Dr. Lorette Javois, a DBGT Branch Program Director, and describes the areas of developmental biology research supported by the

DBGT and RS Branches along with contact information. When published, the pamphlet will be for dissemination at appropriate national and international meetings.

Council member Dr. Jonathan Gitlin applauded the DBGT Branch's effort in advancing research in the field of developmental biology by specifically promoting investigator-initiated projects and stimulating research in small undergraduate institutions using the AREA mechanism. Council member Dr. Gail Martin commented that the kind of research supported by Dr. Hewitt's group has enormous impact not only in the area of birth defects, but also in other areas, such as stem cell research.

IV. DIVISION OF INTRAMURAL RESEARCH OVERVIEW (Annual Review)

Dr. Owen Rennert, Scientific Director, Division of Intramural Research (DIR), recounted advances of the NICHD Intramural Program, from its inception in the 1960s until the current day. Among the landmark contributions he cited were:

- First proof of the maternal inheritance of mitochondrial DNA
- Development of the hormonal assay leading to the home pregnancy test
- The identification of the major histocompatibility genes, which facilitated organ transplantation
- Development of Conjugate vaccines for Haemophilus influenzae Type b, typhoid, shigella, and pertussis

Among the more recent advances by DIR scientists was the development of Photoactivation Localization Microscopy, a technique which allows researchers to determine the arrangement of cellular proteins. Diffusion Tensor Imaging, also developed by Intramural scientists, provides detailed images of the brain's neural networks, as well as other fibrous tissues. Dr. Rennert also cited the DIR discovery that LIM protein is a factor critical to the division of hematopoietic stem cells.

V. REPORT OF THE SUBCOMMITTEE ON PLANNING AND POLICY

Dr. Sandra Carson, Acting Chair, Subcommittee on Planning and Policy, presented an overview of the topics discussed at the September 5, 2008, teleconference meeting. She reported that the major portion of the meeting was discussion of the DIR Board of Scientific Counselors' site-visits of five intramural programs. In general, the site-visitors reported that programs were good to outstanding. In light of continuing budget restraints, Dr. Owen Rennert adjudicated program resources to increase support for investigators that the site-visit team deemed outstanding, with lesser support for a few with less high marks. What seemed most clear to the Subcommittee was the exceptional quality of Dr. Rennert's leadership. The Subcommittee was very disappointed that one of the site-visit groups delayed its report

to Dr. Rennert. The Subcommittee will review that report at its September, 2009 meeting. In other business, the Subcommittee recommended that the January, 2009 Council meeting include a presentation on the Loan Repayment Program, including a breakdown by discipline (e.g., pediatrics, obstetrics/gynecology) and by basic and clinical science. Dr. Alexander provided budget and legislative reports to the subcommittee.

VI. PREGNANCY AND PERINATOLOGY BRANCH REPORT

Dr. Catherine Spong, Chief, Pregnancy and Perinatology Branch, Center for Developmental Biology and Perinatal Medicine, presented a succinct overview of the Branch's activities over the last four years. The Branch mission is to improve the health of mothers and children with a focus on healthy pregnancy, labor and delivery, and the outcome of children. Investigator initiated research highlights as well as highlights from research networks funded through cooperative agreements were presented with emphasis on basic, translational, and clinical research. Multiple studies have had major impacts on clinical care and outcome for mothers and children and have resulted in changes in clinical practice.

Dr. Kathleen Caron, Assistant Professor, Department of Genetics, University of North Carolina at Chapel Hill, summarized research findings implicating adrenomedullin (AM), a secreted peptide from maternal and fetal tissues, as required for establishing and maintaining normal pregnancy. Adrenomedullin normally increases with the physiology state of pregnancy. In pregnancies where AM does not increase, there are often associated problems such as growth restriction and preeclampsia. Adrenomedullin is necessary for lymphangiogenesis. The work performed in Dr. Caron's lab shows that removal of adrenomedullin results in decreased and abnormal vessel branching. Further, the heterozygous mouse has subfertile reproductive capacity. The AM +/- animals have difficulties with implantation, placental abnormalities, fetal growth restriction, and small litter size. Fetal adrenomedullin is required for branching morphogenesis of fetal vessels and remodeling of maternal spiral vessels. This work has provided a basis for exploration of normal embryonic development, fetal growth abnormalities, preeclampsia, as well as lymphatic vascular biology.

Dr. Robert Silver, Professor, Division of Maternal-Fetal Medicine, University of Utah, Salt Lake City, presented on behalf of the NICHD Stillbirth Collaborative Research Network (SCRN). Dr. Silver gave an overview of stillbirth which is one of the most common adverse pregnancy outcomes occurring 1/160 pregnancies and equivalent in magnitude to infant deaths. This is an understudied area of research and 50 percent of stillbirths have no known cause of death. In response, NICHD issued a Research Funding Announcement with formation of the SCRN in 2003. The SCRN is conducting a landmark cohort and nested case-control study in 59 hospitals to answer the following overarching hypotheses: (1) use of prospectively implemented, standardized, postmortem and placental examination protocols will improve diagnosis of fetal or placental conditions that cause or contribute to stillbirth;

(2) use of standardized surveillance in a geographic area will show that the stillbirth rates are different from those reported to vital statistics; and (3) maternal biologic and environmental risk factors in combination with genetic predisposition increase the risk for stillbirth. The subcommittees that have been assembled to test various hypotheses in postmortem and placental examination, surveillance and epidemiology, genetics, maternal disease mechanisms, and immunology / infectious disease were

explained to the Council. Recruitment into SCRIN was completed on August 31, 2008. Basic demographic information on the enrolled population was shown as part of the presentation. The data analyses for this important study are underway. It is anticipated that new information on stillbirth will be available as a result of this network's efforts to advance the understanding of stillbirth.

Council members commented on the activities of the Branch. Dr. Judith Hall remarked on the depth and breadth of the research within the Branch. She commented that the Branch report is impressive, readable, and should be made available to the public. There are several areas where there has been a major impact on clinical care that benefits the American public. She described five areas of potential opportunity for the Branch: (1) international research; (2) continued advancement of the field in the face of flat funding; (3) need for improvement for funding for women and minorities as well as representation of these groups on review panels; (4) need for studies in pregnant women with disabilities and handicaps; and (5) training mission.

She noted that the Branch output is remarkable and staff should be congratulated on their success fostering collaboration in the academic community. The networks are very impressive in this Branch and should be sustained. Moving into the areas of fetal origin of adult disease and trans-generational effects is laudatory.

Dr. Sandra Carson commented that many of her observations were in agreement with Dr. Hall. Dr. Carson stated that the Branch is a model for the NIH roadmap of translational science. She highlighted major accomplishments including the Sudden Infant Death Syndrome (SIDS) work that led to the Back to Sleep campaign and reduction in the rate of SIDS. She noted that the networks accept important challenges of questioning existing practice and are equipped to study contentious issues, the Beneficial Effects of Antenatal Magnesium (BEAM) study as an example. Encouragement of evidence-based practice was given. Dr. Carson also reiterated the need for training, particular for obstetricians since none of the currently funded T32 programs target obstetricians. Preeclampsia and initiation of labor are areas for needed study. She commended the Branch for working across many NIH Institutes (numerous examples of co-funding from other institutes), and across federal agencies (citing as an example, the FDA for the Infant Feeding Study II).

Other Council members provided remarks. Dr. Sherin Devaskar emphasized the contribution of workshops that the Branch has conducted. She also emphasized the impact training grants had on the career path of young scientists. Further, neonatal follow-up has given a large body of information to the field of perinatology. Dr. Mark Phillippe emphasized the importance of the Branch as the major funder of obstetrics research and that more resources should be devoted to pregnancy research as optimal pregnancy outcome will decrease longer term sequelae such as cerebral palsy, neurodevelopment delay and long term adverse outcomes.

Several Council members commented on the quality of writing in the report. Dr. Spong gave credit to the members of the Branch and to Ms. Christina Stile, Public Information and Communication Branch, NICHD, for their efforts in making the document "a great read". Dr. Spong concurred that the Branch has a relative paucity of international grants and efforts can be made to improve the international portfolio in perinatal research; however she, and later Dr. Alexander noted that the Global Network has international grants in maternal and child health in overlapping areas of expertise. Dr. Spong also noted that training is a concern across all of NIH, and is a particular concern in perinatal research.

Efforts will continue to be made to encourage and facilitate training. Dr. Spong thanked the members of the Branch, Drs. Caron and Silver, the Council participants in the expert review, the Council primary reviewers of the report and all of the Council members for their insight.

VII. NATIONAL CHILDREN'S STUDY UPDATE

Dr. Peter Scheidt, Program Director, National Children's Study (NCS) provided a comprehensive overview concerning the NCS, which will assess the effects of environmental and genetic factors on the health and development of 100,000 children from before birth to age 21 in the United States. He also described recent developments concerning the study, including a review of the study's methodology by the National Academy of Sciences, and the plan to award contracts for Wave II study locations and centers.

In response to a question about sampling for metals exposure in mining communities in the mountain west, he responded that the NCS was designed to evaluate a national representative sample of children. A study evaluating single childhood environmental exposures could be conducted more economically and efficiently outside the NCS. A Council member asked why the children in the study didn't have clinical follow-ups between age 12 months and 3 years. Dr. Scheidt replied that the limiting factor was cost, as available funding didn't allow for an additional clinical visit. Dr. Scheidt responded to a comment about continuing the study after the children in the study sample passed age 21. When designing the study, Dr. Scheidt said, the study framers met the statutory requirement to follow the children past their 21st birthday. The assumption, however, is that the research community will see the importance of following the children into early adulthood, and the study will be extended. A Council member asked whether the study would be required to seek additional permission if it was decided to undertake additional genetic analyses of the study sample, beyond what was currently in the study protocol. Dr. Scheidt responded that the study would obtain permission for extensive genetic testing beyond what was in the original protocol. He added that participants will have the option of declining to participate in genetic testing, and some in pilot studies have done so. In response to another question, Dr. Scheidt said the study would take extensive medical histories of children and their family members. Another inquiry addressed whether the study would seek to determine if there were any health risks for children conceived through assisted reproductive technologies (ART). Dr. Scheidt answered that there would be some follow-up, but for certain effects—such as possible neurological sequelae—the study

sample likely would not be of sufficient size. An estimated 2000 children in the study will have been conceived by ART. An adjunct to the main study would be needed to allow for the necessary oversampling in this area, he said.

VIII. CONCEPT CLEARANCE REVIEW AND DISCUSSION

The following three concepts were discussed and unanimously endorsed by the Council.

- Limited Competition: Phase II Exploratory Community-Based Participatory Research

The proposed PAR implements the research plans developed during Phase I of the Academic/Community Partnership Conference Series that was launched by RFA-HD-06-019 in 2006 and continued with the re-issue of PAR-08-106 in 2008. The PAR will solicit Exploratory/Developmental grants (R21) from previous recipients of Academic/Community Partnership awards. This PAR is intended to solicit exploratory/developmental, community-based participatory research (CBPR) project applications that implement the proposed research plans and partnership goals developed through the Division of Special Populations supported academic/community partnerships initiative. The objective of this initiative is to get evidence-based information and interventions into use in communities in acceptable and clear ways.

- Fertility Preservation Research: Advancing Beyond Technology

The purpose of the proposed RFA is to promote research aimed at: 1) characterizing the risk and mechanism(s) of gonadal damage secondary to chemotherapy, radiation therapy, or occupational or environmental hazards, 2) elucidating more reliable biomarkers of reproductive capacity, and 3) examining the social, legal, and ethical ramifications of fertility preservation technologies. The ultimate objective of this initiative is to promote research that has the potential to improve reproductive capacity, and thus, quality of life for children and reproductive-age adults who are or may become infertile.

- Research Partnerships to Promote Diversity in Reproductive Science

The purpose of the proposed RFA is to develop equal partnerships between faculty at minority-serving institutions and faculty members at academic institutions with established reproductive science research programs. In addition, it is anticipated that these newly developed partnerships will recruit, train, and mentor a cadre of diverse individuals under-represented in research relevant to the mission of the Reproductive Sciences Branch. The ultimate objective of this initiative is to promote research in reproductive science and medicine at minority-serving institutions and to provide research opportunities for undergraduates under-represented in the biomedical sciences to train at partnering institutions, with the intent of stimulating their interests in a career conducting research in reproduction.

IX. RETIRING MEMBERS' COMMENTS

Dr. Alexander presented retiring members of the NACHHD Council certificates of appreciation for serving on the Council and invited each member to provide remarks.

Dr. Judith Hall, Professor Emeritus, University of British Columbia, British Columbia's Children's Hospital, Vancouver, Canada, stated that she gained much knowledge from the broad scope of scientific topics discussed at the meetings. She applauded staff in their commitment to promoting and funding the best science with limited research dollars. She stressed the importance of public awareness in the research that is supported by the Institute

Dr. Ralph Kauffman, Pediatric Pharmacologist (retired), Kansas City, Missouri, stated he enjoyed his interactions with staff and other Council members and that he has learned much about the broad science the Institute supports. He stated that children suffer disproportionately across scientific fields and stressed the importance of establishing pediatric pharmacotherapy as a priority. He noted the need to assure that applications be reviewed in Study Sections with pediatric pharmacology expertise and the need to expand the field.

Dr. Sergio Ojeda, Division Head, Division of Neuroscience, Oregon National Primate Research Center, Beaverton, Oregon, stated that his membership tenure was an enjoyable and intellectually rewarding experience. He expressed his appreciation for the opportunity to interact with both the Council membership and NICHD staff.

Retiring Council member Dr. Donald Stein was not in attendance.

The retiring members all commented on Drs. Alexander's and Maddox's strong leadership, professionalism, and commitment to the research community.

X. REVIEW OF APPLICATIONS

A total of 1340 applications were initially assigned to the Institute. Applications that were transferred out, withdrawn, noncompetitive, unscored, or were not recommended for further consideration by the initial review groups were not considered by the Council. Council reviewed 509 applications requesting \$208,534,254 in total costs. Council favorably recommended 509 new, renewal, and supplemental research and training grant applications with requested total costs of \$208,534,254.

XI. ADJOURNMENT

There being no further business, the meeting was adjourned at 4:30 p.m. on Thursday, September 11, 2008. The next meeting is scheduled for January 22, 2009.

Attachments: Council Roster (Attachment I)
Report of the Director (Attachment II)

I hereby certify that, to the best of my knowledge, the foregoing minutes and attachments are accurate and complete.²

Duane Alexander, M.D.
Chair, National Advisory Child Health
and Human Development Council
Director, *Eunice Kennedy Shriver* National Institute
of Child Health and Human Development

Date

Mary Plummer
Committee Management Officer, NICHD

²These minutes will be formally considered by the Council at its next meeting, and any corrections or notations will be incorporated in the minutes of that meeting.