

Meeting Minutes
Department of Health and Human Services
National Institutes of Health
National Institute of Diabetes and Digestive and Kidney Diseases
National Diabetes and Digestive and Kidney Diseases Advisory Council

I. CALL TO ORDER

Dr. Griffin Rodgers, Director, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), called to order the 187th meeting of the National Diabetes and Digestive and Kidney Diseases Advisory Council at 8:30 a.m., Wednesday, September 7, 2011, in Building 31, C Wing, 6th Floor, Conference Room 10, National Institutes of Health, Bethesda, Maryland.

A. ATTENDANCE – COUNCIL MEMBERS PRESENT

Dr. Domenico Accili	Ms. Jane Holt
Dr. David Altshuler	Ms. Judy Hunt
Ms. LaVarne Burton	Ms. Robin Nwankwo
Dr. Judy Cho	Dr. Thomas Robinson
Dr. Robert Flanigan	Dr. Anil Rustgi
Dr. James Freston	Dr. John Sedor
Dr. Christopher Glass	Dr. William Steers
Dr. Gregory Gores	

Also Present:

Dr. Griffin Rodgers, Director, NIDDK, and Chairperson, NIDDK Advisory Council
Dr. Gregory Germino, Deputy Director, NIDDK
Dr. Brent Stanfield, Executive Secretary, NIDDK Advisory Council

B. NIDDK STAFF AND GUESTS

Abankwah, Dora – NIDDK	Dayal, Sandeep – NIDDK
Abraham, Kristin – NIDDK	Densmore, Christine – NIDDK
Agodoa, Lawrence – NIDDK	Doherty, Dee – NIDDK
Akolkar, Beena – NIDDK	Donohue, Patrick – NIDDK
Andrews-Shigaki, Shelby – NIDDK	Doo, Edward – NIDDK
Appel, Michael – NIDDK	Duggan, Emily – NIDDK
Arreaza, Guillerno – NIDDK	Eggerman, Thomas – NIDDK
Baptise, Terrell – Dig. Dis. Natl. Coal.	Erhardt, Britt – NIDDK
Barnard, Michele – NIDDK	Evans, Mary – NIDDK
Bishop, Terry – NIDDK	Everhart, James – NIDDK
Bleasdale, John – CSR	Farishian, Richard – NIDDK
Blondel, Olivier – NIDDK	Feld, Carol – The Hill Group
Brown, Sherry – NIDDK	Flessner, Mike – NIDDK
Calvo, Frank – NIDDK	Fonville, Olaf – NIDDK
Carrington, Jill – NIDDK	Fradkin, Judith – NIDDK
Castle, Arthur – NIDDK	Gansheroff, Lisa – NIDDK
Copeland, Randy – NIDDK	Garfield, Sandy – NIDDK
Cowie, Catherine – NIDDK	Goter-Robinson, Carol – NIDDK
Curtis, Leslie – NIDDK	Garte, Seymore – CSR

Germino, Gregory – NIDDK
Giamsarresi, Leo – AUA Found.
Grey, Michael – NIDDK
Gutierrez, Elizabeth – NIDDK
Guo, Xiaodu – NIDDK
Haft, Carol – NIDDK
Hanlon, Mary – NIDDK
Harley, Sheila – Harley Bus. Grp.
Hoff, Eleanor – NIDDK
Hoofnagle, Jay – NIDDK
Horlick, Mary – NIDDK
Hoshizaki, Deborah – NIDDK
Howards, Stuart – NIDDK
Hyde, James – NIDDK
James, Stephen – NIDDK
Jerkins, Ann – NIDDK
Jerkins, Connie – NIDDK
Jones, Teresa – NIDDK
Karp, Robert – NIDDK
Karimbakas, Joanne – NIDDK
Kassilke, Deborah – NIDDK
Ketchum, Christian – NIDDK
Khan, Mushtaq. – CSR
Kim, Sooja – CSR
Kirkali, Ziya – NIDDK
Kochis, Daniel – Amer. Soc. of Neph.
Kranzfelder, Kathy – NIDDK
Kuczmarski, Robert – NIDDK
Kusek, John – NIDDK
Laughlin, Maren – NIDDK
Lescheck, Ellen – NIDDK
Linder, Barbara – NIDDK
Malik, Karl – NIDDK
Manouelian, Denise – NIDDK
Maruvada, Padma – NIDDK
Margolis, Ronald – NIDDK
Mascone, Lisa – NIDDK
Martey, Louis – NIDDK
Martinez, Winnie – NIDDK
McBryde, Kevin – NIDDK
McGeehan, Edward – NIDDK
McKeon, Catherine – NIDDK
McNally, James – NCI
Miller, Megan – NIDDK
Mowery, Penny – NIDDK
Moxey-Mims, Marva – NIDDK
Mullins, Chris – NIDDK
Narva, Andrew – NIDDK
Newman, Eileen – NIDDK

Nguyen, Thuthuy – NIDDK
Nguyen, Van – NIDDK
Nurik, Jody – NIDDK
Owner, Margaret – Lewis-Burke Assoc.
Papier, Wendy – NIDDK
Patel, D. G. – NIDDK
Pawlyk, Aaron – NIDDK
Perry-Jones, Aretina – NIDDK
Pike, Robert – NIDDK
Podskalny, Judith – NIDDK
Polglase, Williams – NIDDK
Pope, Sharon – NIDDK
Rankin, Tracy – NIDDK
Redmond, Randy – NIDDK
Reiter, Amy – NIDDK
Rench, Jerry – RTI Inter.
Rivera, Chantel – CSR
Rodriguez, Michell – SRI Inter.
Rosenberg, Mary Kay – NIDDK
Rushing, Paul – NIDDK
Rys-Sikora, Krystyna – NIDDK
Salomon, Karen – NIDDK
Sahai, Atul – CSR
Sankaran, Lakshmanan – NIDDK
Sato, Sheryl – NIDDK
Savage, Peter – NIDDK
Scanlon, Elizabeth – NIDDK
Serrano, Jose – NIDDK
Sheard, Nancy – CSR
Sheets, Dana – NIDDK
Sherker, Averell – NIDDK
Sheperd, Aliecia – NIDDK
Silva, Corrine – NIDDK
Smith, Philip – NIDDK
Spain, Lisa – NIDDK
Star, Robert – NIDDK
Staten, Myrlene – NIDDK
Tatham, Thomas – NIDDK
Torrance, Rebecca – NIDDK
Tuncer, Diane – NIDDK
Van Raaphorst, Rebekah – NIDDK
Wellner, Robert – NIDDK
Woynarowska, Barbara – NIDDK
Wright, Daniel – NIDDK
Wright, Elizabeth – NIDDK
Xie, Yining – NIDDK
Yanovski, Susan – NIDDK
Yates, Robert – Soc. Sci. Sys.
Zeidner, Rita – NIDDK

C. ANNOUNCEMENTS

Council Membership Changes

Dr. Rodgers recognized the three Council members who are completing their terms and rotating off the Council following the meeting of September 7, 2011.

- *David Altshuler:* As a member of the Diabetes, Endocrinology and Metabolic Diseases (DEM) Subcouncil, Dr. Altshuler has been a particularly valuable advisor at a time when genetics and genomics have moved to the forefront of research on the common and costly diseases within the NIDDK mission. His extensive expertise in these areas derives from his application of knowledge gained from the Human Genome Project, and from his leadership roles with respect to the Single Nucleotide Polymorphism (SNP) Consortium, the HapMap Project, and now, the 1,000 Genomes Project, which is cataloging human genetic variation. Dr. Alschuler is also a distinguished physician and endocrinologist who has brought a broad biomedical perspective to Council discussions. His insights have helped the NIDDK to address technical bioinformatics issues and develop policies on data sharing, as the Institute confronts the challenges of increasingly vast and complex research data sets. In addition to his technical expertise, Dr. Altshuler is exceedingly pragmatic and a true problem-solver. Moving scientific discoveries forward into biomedical applications is Dr. Altshuler's passion, and he has helped the NIDDK maintain that focus in challenging times.
- *Dr. Nancy Andrews:* As a member of the Kidney, Urologic and Hematologic Diseases (KUH) Subcouncil, Dr. Andrews has readily offered her invaluable expertise and experience related to hematologic diseases and has been a tireless advocate for creating more training opportunities for new Principal Investigators. She has always been available and eager to offer thoughtful input on research questions and priorities based on her distinguished career as a researcher and on her high-ranking positions in academia. While on the Council, Dr. Andrews has helped the Institute consider ways to deal with difficult circumstances, such as the issue of escalating costs at a time when the NIH and the NIDDK face steady-state budgets or decelerating budgets. A long-standing NIDDK grantee, Dr. Andrews and colleagues identified key transport pathways involved in maintaining iron homeostasis and elucidated the pathophysiology of hemochromatosis and the anemia of chronic disease. She has contributed to the NIDDK hematology program and its strategic planning efforts by sharing her keen sense of future research opportunities and trends.
- *Dr. James Freston:* As a member of the Digestive Diseases and Nutrition (DDN) Subcouncil, Dr. Freston has contributed many insightful comments to Council deliberations. His advice has consistently been fully supportive of the research community. Dr. Freston has brought to bear on Council discussions his perspective as a leader in academic medicine. He is a former Chief of Gastroenterology at the University of Utah and Chairman of Medicine at the University of Connecticut. He

was also a President of the American Gastroenterological Association (AGA) and a recipient of that organization's most prestigious award, the Friedenwald Medal. Dr. Freston was chairman of the AGA's Foundation for Digestive Health and Nutrition (FDHN), which is dedicated to raising financial support for research training in digestive diseases. His scientific expertise and accomplishments bridge the research fields of hepatology, gastroenterology and nutrition. Dr. Freston's career has been marked by academic and research excellence, by his willingness to serve organizations devoted to improving the public health, and by his commitment to advancing scientific discovery and the research training programs that underpin that process.

On behalf of the NIDDK and the NIH, Dr. Rodgers commended and thanked all three Council members for their time, service, and outstanding advice. Their dedication to promoting human health has been keenly demonstrated by the time and effort that they have committed to the deliberations of the NIDDK's National Advisory Council.

Awards

Dr. Rodgers congratulated Council member Dr. Jerry Palmer, the recipient of the American Diabetes Association's 2011 Outstanding Physician Clinician in Diabetes Award. This Award is presented to an individual who has made outstanding efforts in diabetes care and is recognized as a highly regarded clinician and educator with more than 10 years of distinguished service.

Retirements

Dr. Rodgers announced that Dr. Ira Levin, the NIDDK's Scientific Director, retired at the end of July 2011. For almost 48 years, Dr. Levin worked at the NIH developing and applying new and innovative spectroscopic methods to solve a wide range of problems. A recipient of the prestigious Pittsburgh Spectroscopic Award, Dr. Levin is a prolific contributor to the scientific literature, and among the most cited researchers in his field. In addition to his extremely impressive scientific record, he is a highly talented manager and administrator. He has been Chief of the NIDDK's Laboratory of Chemical Physics since 1987. He served as Deputy Director of the Intramural Research Program from 1994 to 2009, at which time he was appointed to the position of Scientific Director. He has forged strong relationships within the NIDDK Intramural Research Program and is known for his ability to distribute resources fairly. This leadership ability earned the trust, respect, and admiration of his colleagues. Dr. Rodgers expressed great appreciation for Dr. Levin's outstanding service, and said that he will personally miss his guidance and insights, his love for science, and his support for the people behind the science. Dr. Rodgers announced that Dr. James Balow, the NIDDK's Clinical Director, will serve as Acting Scientific Director while the search for a new Scientific Director is under way.

II. CONSIDERATION OF SUMMARY MINUTES OF THE 186th COUNCIL MEETING

Dr. Rodgers

Following a motion that was made and seconded, the Council accepted, by voice vote, the Summary Minutes of the 186th Council Meeting.

IV. FUTURE COUNCIL DATES

Dr. Rodgers

Dr. Rodgers asked the Council members to turn to their folders and review future Council dates.

2012

February 15-16 (Wednesday and Thursday)

May 16-17 (Wednesday and Thursday)

September 12-13 (Wednesday and Thursday)

2013

February 13-14 (Wednesday and Thursday)

May 15-16 (Wednesday and Thursday)

September 26-27 (Thursday and Friday)*

* *Note divergence from Wednesday/Thursday schedule*

As in the past, the expectation is that most meetings will be on a single day, Wednesday. However, Council members were asked to also reserve the following day as well, to ensure flexibility should a situation arise where a two-day meeting is required. Dr. Rodgers called the Council's attention to the September 2013 Council meeting. The days for that meeting are Thursday-Friday, instead of the usual Wednesday-Thursday schedule.

V. ANNOUNCEMENTS

Dr. Stanfield

Confidentiality

Dr. Stanfield reminded the Council members that material furnished for review purposes and discussion during the closed portion of the meeting is considered confidential. The content of discussions taking place during the closed session may be disclosed only by the staff and only under appropriate circumstances. Any communication from investigators to Council members regarding actions on an application must be referred to the Institute. Any attempts by Council members to handle questions from applicants

could create difficult or embarrassing situations for the members, the Institute, and/or the investigators.

Conflict of Interest

Dr. Stanfield also reminded Council members that advisors and consultants serving as members of public advisory committees, such as the NIDDK's National Advisory Council, may not participate in situations in which any violation of conflict of interest laws and regulations may occur. Responsible NIDDK staff shall assist Council members to help ensure that each member does not participate in, and is not present during review of applications or projects in which, to the member's knowledge, any of the following has a financial interest: the member, or his or her spouse, minor child, partner (including close professional associates), or an organization with which the member is connected.

To ensure that a member does not participate in the discussion of, nor vote on, an application in which he/she is in conflict, a written certification is required. A statement is provided for the signature of a member and this statement becomes part of the meeting file. Dr. Stanfield directed the Council members to a statement in their folders regarding conflict of interest in their review of applications. Dr. Stanfield requested that each Council member read the statement carefully, sign it, and return it to the NIDDK before leaving the Council meeting.

Dr. Stanfield noted that when Council reviews applications in groups without discussion, that is "en bloc," all Council members may be present and may participate. The vote of an individual member in such instances does not apply to applications for which the member might be in conflict.

Dr. Stanfield pointed out the following with respect to multi-campus institutions of higher education: An employee may participate in any particular matter affecting one campus of a multi-campus institution of higher education, if the employee's financial interest is solely employment in a position at a separate campus of the same multi-campus institution, and the employee has no multi-campus responsibilities.

VI. REPORT FROM THE NIDDK DIRECTOR Dr. Rodgers

Dr. Rodgers updated the Council with respect to budget issues.

FY 2011

On April 15, 2011, the President signed into law the final agreement for the government's FY 2011 appropriations. For the NIH, the law provided \$30.925 billion, which included \$1.792 billion for the NIDDK. For the NIH, this was a reduction of about one percent from last year's budget, and for the NIDDK, a reduction of about 0.9 percent--or

approximately \$16 million. The final enacted appropriation was almost four percent less than the amount the President requested.

The NIDDK and other NIH Institutes and Centers have responded to the final FY 2011 budget with detailed funding policies. The NIDDK policy is on the Institute's website. (<http://www2.nidDK.nih.gov/Funding/Grants/NIDDKFY2011FundingPolicy.htm>)

- For non-competing (continuation) grants, most R and U mechanism awards have been and will continue to be issued one percent below the FY 2010 award level--consistent with the NIH Fiscal Policy for Grant Awards for FY 2011. In general, non-competing fellowship/training awards, research career development awards, and SBIR/STTR awards have been and will continue to be issued at the levels committed for FY 2011.
- For competing awards, the NIDDK established a nominal 15th percentile "payline" for new R01 grant applications (Type 1 grants) and for renewal or competing continuation R01 grant applications (Type 2 grants). However, New Investigator applications will have a 17th percentile payline. All grant awards for FY 2011 will continue to be subject to programmatic adjustments from the NIDDK Advisory Council's approved levels. Many applications submitted in FY 2011 will not be eligible for funding consideration until FY 2012.

FY 2012

After a long summer of debt-ceiling negotiations, the Congress is continuing work on appropriations for FY 2012. The budget proposal the President submitted to the Congress in February 2011 requested \$31.987 billion for the NIH and \$1.838 billion for the NIDDK.

The Senate Committee with jurisdiction over the NIH budget held its appropriations hearing for the Agency on May 11, 2011. Dr. Rodgers noted that he and three other Institute Directors accompanied the NIH Director, Dr. Francis Collins, to the hearing. The NIH had the opportunity to inform the Senate Committee about major advances in research and to receive bipartisan comments of support. The corresponding House Committee has not held a hearing on the NIH budget. Given that the start of FY 2012 is October 1, 2011, it appears that a large omnibus spending bill may have to be assembled to enact FY 2012 funding for several agencies, including the NIH. This type of omnibus bill has been enacted many times in the past.

FY 2013

The NIH cannot discuss the formulation of the FY 2013 President's Budget prior to its official release, which is expected in early February 2012. An important element that will affect the FY 2013 appropriations is the work of the Joint Select Committee on Deficit Reduction (<http://www.deficitreduction.gov/public/>). As part of the debt-ceiling

agreement, this Committee is charged with developing a bipartisan recommendation on how to reduce the deficit through targeted savings and other means. By November 23, 2011, the Committee is expected to agree on a legislative recommendation for achieving the goal of at least \$1.5 trillion in deficit reduction over 10 years. The House and Senate would then need to hold an up-or-down vote on the proposed legislation by December 23, 2011. Failure to reach a legislative agreement would automatically trigger an across-the-board reduction of as much as \$1.2 trillion in Federal spending. It is estimated that such a reduction could translate into a five-to-ten percent reduction in NIH funding.

VI. NIH DEPUTY DIRECTOR UPDATE: NIH Diversity Programs Dr. Lawrence Tabak, Deputy Director, NIH

Dr. Tabak was appointed by the NIH Director, Dr. Francis Collins, as the Principal Deputy Director of the NIH in August 2010, following his service in an acting capacity in 2009. His prior position was as Director of the National Institute of Dental and Craniofacial Research, a position he assumed in 2000. Dr. Tabak came to NIH from the School of Medicine and Dentistry at the University of Rochester, where he had been the Senior Associate Dean for Research, Director of the Center for Oral Biology, Professor of Dentistry, and Professor of Biochemistry and Biophysics. At the NIH, Dr. Tabak continues to maintain an active research laboratory, which is administratively supported within the NIDDK's Intramural Research Program. His major research focus is the biosynthesis and function of mucin-glycoproteins, which help protect the delicate inner soft tissues of the body. Dr. Tabak is Member of the Institute of Medicine and a Fellow of the American Association for the Advancement of Science.

Dr. Tabak began his presentation by noting the importance of diversity to the success of the NIH biomedical research enterprise, which depends upon attracting and retaining bright, scientifically talented individuals in research. Thus, for over 30 years, the NIH has supported a number of programs aimed at achieving a more diverse biomedical research workforce. These programs tended to have two forms: (1) institutional programs, such as those at minority-serving and Hispanic-serving institutions, and (2) individual programs targeting those from under-represented groups, including racial and ethnic minorities, and persons with disabilities or disadvantaged backgrounds.

Dr. Tabak presented data showing that, even with these NIH programs, the Agency has not made adequate progress in realizing diversity within its funded scientific workforce. Using pie-charts, Dr. Tabak contrasted recent diversity data from three sources: (1) the U.S. Census Bureau Report, (2) the Full-Time U.S. Medical School Faculty Roster maintained by the Association of American Medical Colleges, and (3) NIH data on Principal Investigators on Research Project Grants. He noted that the percentage representation of "Hispanics/Latinos" and "Blacks or African Americans" in the NIH grant data was substantially lower than in the census data. The percentage representation of these groups in NIH grant data was also somewhat lower than in the medical faculty data. Dr. Tabak noted that the medical school faculty data help to put the NIH grant data

in context because medical schools account for roughly 55 percent of NIH grants. Their data can therefore be considered a reasonable surrogate for the available pool of individuals who could apply for NIH grants.

As part of the NIH's ongoing proactive efforts to examine and improve the diversity of the scientific workforce, the agency has commissioned several recent studies. For example, one on-line publication examined the pipeline of investigators [Ginther *et al.*, Diversity in Academic Biomedicine: An Evaluation of Education and Career Outcomes with Implications for Policy. *Social Science Research Network*. 2009. <http://ssrn.com/abstract=1677993>]. Another published study examined sex differences in NIH funding [Pohlhaus JR., *et al.*, Sex Differences in Application, Success, and Funding Rates for NIH Extramural Programs, *Acad. Med.* 2011. 86:759-767]. Based on the latter study, there appear to be no significant differences between men and women with respect to their first grant applications. However, the study showed the existence of a small, persistent, and, as yet, unexplainable difference between men and women with respect to competitive renewals--for which both application and funding rates were generally higher for men than for women.

Study of “Race, Ethnicity, and NIH Research Awards”

Dr. Tabak focused the remainder of his presentation on a third NIH-commissioned study, which examined the probability that racial and ethnic minorities will secure “new” (Type 1) NIH R01 grant funding [Ginther DK., *et al.*, Race, Ethnicity, and NIH Research Awards. *Science* 2011. 333(6045): 1015-1019. Published online August 18, 2011. <http://www.sciencemag.org/hottopics/race-nihfunding/>]. Two of the authors of the study are Dr. Raynard Kington, former NIH Deputy Director, and Dr. Walter Schaffer, NIH Senior Scientific Advisor for Extramural Research. Using statistical methods, the authors analyzed data from the NIH grant application file, in which applicants self-identify their race and ethnicity, and from NIH award records. These data were supplemented with information about the applicants from databases including the NIH Doctoral Record File, the Association of American Medical Colleges Faculty Roster, and the Department of Education's Integrated Postsecondary Education Data System. The authors used data from these various sources as proxy variables considered to be indicative of observable characteristics with respect to the applicants' research accomplishments (*e.g.*, research experience, grants experience, research impact, and research area) and their institutional/NIH resources.

The analysis sample involved over 80,000 new (Type 1) R01 grant applications submitted from 2000 to 2006 by over 40,000 Ph.D. applicants, many of whom submitted multiple applications. Revised submissions received within 2 years of an original application were folded into this analysis. The investigators observed funding results through 2008. The analysis sample was limited to Ph.D.s because it would be difficult to do a statistical analysis on the small number of under-represented minority investigators who earned an M.D. degree within this data set. Dr. Tabak noted that the R01 grant is the

focus of the study because it is the most prevalent NIH grant award mechanism and is considered to be the “gold standard” by which many research institutions measure the success of faculty.

Study Findings

The main study finding is that Black and Asian applicants are significantly less likely to receive a Type 1 R01 award than other applicants. Even after the study investigators controlled for the educational background, country of origin, training, previous research awards, publication record, and employer characteristics of the applicants, they found that Black applicants remain 10 percentage points less likely than White applicants to receive Type 1 R01 grant funding. The authors emphasized that more research is clearly needed to understand the reasons for the differences in probability of award. They suggested that one possibility may be a cumulative advantage whereby “small differences in access to research resources and mentoring during training or at the beginning of a career may accumulate to become much larger between-group differences.” Several other important findings emerged from the study:

- *NIH Funding Rank of Applicant’s Institution.* Dr. Tabak noted that a very important finding of the study is that award probabilities were correlated with the NIH Funding Rank of applicants’ institutions. Applicants from research institutions that received high levels of NIH funding had a higher award probability than those from institutions that received lower levels of NIH funding. However, within groups of funding-ranked institutions, Black applicants had the lowest award probability relative to other applicants. It is noteworthy that Black applicants lagged behind their colleagues in the top-30 NIH-funded institutions, which would be expected to provide excellent resources and support. Only research citations and prior review committee experience appeared to reduce these disparities for Black applicants.
- *U.S. Citizenship:* Asians who were U.S. citizens had a stronger probability of funding relative to Asian non-citizens. It has been theorized, but not substantiated with evidence, that this disparity may reflect differences in written language skills.
- *Priority Scores:* Applications with equally strong priority scores were likely to be funded. Also, once a priority score was assigned and that information was conveyed to the relevant Institutes and Centers, there was absolutely no difference by race or ethnicity in terms of the applications that were funded.
- *Participation in NIH-Supported Training or Research Career Development Programs:* Participation in such programs was found to have a positive effect on NIH award rates. However, this advantage appeared to help White applicants more than Black and Asian applicants for reasons that are not yet understood.

- *Revision of Applications:* Black and Hispanic applicants were less likely to submit a revised application. This is an important point because it is becoming increasingly difficult to receive a Type 1 R01 grant award the first time an application is submitted, and resubmission can definitely improve an applicant's funding chances.

Plan of Action

Dr. Tabak noted that he and the NIH Director, Dr. Francis Collins, provided a perspective and plan of action that was published in *Science* along with the findings by Ginther and colleagues ["Weaving a Richer Tapestry in Biomedical Science." *Science* 2011. 333(6045): 940-941]. Their article underscores that the NIH takes the study findings very seriously and is determined to institute vigorous actions to identify the causes of differential award probability, and effective interventions. The NIH is also engaged in communications and outreach in this regard with all stakeholders and welcomes their comments. Dr. Tabak described some of the actions the NIH is pursuing or planning.

- Because review experience correlates with funding success, the NIH has recently established an "Early Career Reviewer" program to increase the exposure of investigators from diverse institutions to the review process and to increase the diversity of review panels. (<http://cms.csr.nih.gov/reviewerresources/ECR.htm>) This program will invite excellent investigators who have not yet received an R01 grant, and thus have not been eligible to participate in review, to join review groups as *ad hoc* members. The goal is to give them a better understanding of the review process and also to benefit from their comments.
- Experiments on the review process will seek to determine if bias exists, and if so, to illuminate its possible sources and test intervention strategies. The NIH will explore ways to test a reviewer's ability to discern an applicant's race, and approaches to strengthen the de-identification of applications. Even though applications do not currently specify the race/ethnicity of applicants, it is possible that reviewers can infer that information from the applicant's prior training and experience. Therefore, discussions are under way about the possible creation of a two-tier review process in which the scientific merit of the proposal is considered independently of biographical information.
- The NIH will explore different types and timing of training programs against bias, using well-validated programs such as "Project Implicit." This training experience involves some on-line tests that an individual can take anonymously to assess his or her own unintended bias. (<https://implicit.harvard.edu/implicit/>)
- With respect to other review issues, the NIH is conducting an analysis to determine whether the proportion of under-represented minority reviewers on a peer review panel affects the outcome for under-represented minority applicants.

- There have already been some preliminary studies to assess whether or not the applicant's field of science could account for differential success rates. It was found that African American applicants disproportionately apply for grants in the behavioral and social science fields, particularly related to health disparities research. They are also heavily represented in clinical research, and virtually absent in basic science research. Nevertheless, using the study sections that did the reviews as surrogates for fields of science, no real differences were found on this parameter; therefore, differentials in funding success do not appear to be due to the field of science in which the applications are made.

- Working with academic institutions, the NIH will try to encourage creation of pre-application mentoring programs for junior faculty. In addition, the NIH is supporting several extramural grants designed to study different interventions that should strengthen the research pipeline in a manner that will help improve scientific workforce diversity.

- The NIH Director has formed two senior-level groups to recommend actions to help the Agency achieve its diversity goals. The NIH Diversity Task Force, which is part of the NIH Director's Steering Committee, is a group of internal NIH leaders. The Advisory Committee to the Director's Working Group on Diversity in the Biomedical Research Workforce provides external perspectives and advice (<http://acd.od.nih.gov/DBR.asp>). Dr. Tabak leads the latter group along with Dr. Reed Tuckson, Executive Vice President of Medical Affairs at United Health Group, and Dr. John Ruffin, Director of the National Institute on Minority Health and Health Disparities.

Council Questions and Discussion

Have other grant-awarding government agencies performed these types of studies? Is NIH an anomaly among such agencies in the Federal government with respect to the findings by Ginther and colleagues? Dr. Tabak said that, based on discussions with colleagues in the Federal government, it does not appear that other agencies have performed the type of analysis reported by Ginther and colleagues. The National Science Foundation (NSF) annually publishes data related to the race and ethnicity of all its awardees, and there is a differential in award data by race and ethnicity that is less pronounced than that found at NIH. However, comparisons between the NSF and NIH data are difficult for many reasons; for example, the NSF includes data on all their various grant mechanisms, whereas the study by Ginther and colleagues focused only on Type 1 R01 grants.

Are there ways to encourage more mentorship at the medical schools? Dr. Tabak responded that this approach would appear to be a logical line of intervention. There may be unevenness among institutions with respect to mentoring efforts, especially given the

economic challenges facing academic health centers. Where institutions are interested, the NIH would hope to partner with them by offering some facilitatory models, enhancements, workshops, or best practices. However, the differential in award probability in terms of race and ethnicity exists even at the top 30 institutional recipients of NIH funds, where resources of this type should be available. Therefore, perhaps such resources: (1) are lacking, (2) are present but are not being used, or (3) are present but are not working effectively. It is important to get to the bottom of this issue.

Given that the type and timing of intervention might be crucial, would it be advisable to start intervening early, even at the high school level, rather than at such a late point as medical school? Would the Clinical and Translational Science Award program be a means of reaching out earlier to racial and ethnic minorities? Dr. Tabak agreed that knowing how, where, and when to intervene is critically important. The NIH has tended to focus primarily on the pre-doctoral level and beyond. However, the NIH may need to re-think that strategy and revitalize partnerships with other agencies to emphasize the stimulation of K-through-12 science education. The differentials seen for racial and ethnic minorities with respect to their probability of obtaining Type 1 R01 grants may have roots in early points in the educational process. Dr. Tabak also commented on some anecdotal accounts from Council members about the success of specific programs at the college and high school levels. He noted that--while such examples are encouraging--the larger picture of NIH-wide funding must remain in sight. The complexity of the problem and the importance of the pipeline become clear when one realizes that--even if every African American and Hispanic Ph.D. in the biomedical research sciences received an R01 grant tomorrow--they would still be under-represented with respect to NIH awards. Moreover, the diversity that currently exists in the U.S. scientific workforce largely derives from the enormous influx of investigators from foreign countries. As countries develop their economies, those investigators may seek research opportunities elsewhere, and the NIH scientific workforce could become even less diverse than it is now. Dr. Tabak also noted that there are so-called "leakages" in the pipeline. For example--among under-represented groups, particularly Blacks or African Americans--there is a scarcity of individuals who go through medical school and then pursue academic-based research careers. Instead, many make a professional decision to enter community practice. While this is a commendable career path, it reduces the numbers of racial and ethnic minorities in the pipeline who can apply for and obtain NIH research support.

The study by Ginther and colleagues employed a regression model whose results suggested that service on study sections, publication record and similar characteristics seemed to favor a likelihood of success, but not ensure it. Are efforts under way to look at the data in quintiles or quartiles--to explore the differences that exist within such groupings with respect to factors between successful and unsuccessful applicants? Dr. Tabak responded that the study data are available on-line in de-identified form. It is his understanding that re-analyses are being performed of the principal components of the study in the manner suggested. It may be possible to gain some additional understandings from this approach; however, the more that analyses focus on the individual level, the

less generalizable they will be. Perhaps an informative case study could focus on the top 30 institutions that receive NIH funding to see what factors are linked to success and lack of success in that environment, which one would expect to be highly supportive.

Are there any data to help explain pipeline retention issues, that is, the reasons that racial and ethnic minorities who have progressed in the pipeline often decide at a late point to forsake a research career? Dr. Tabak said that there are more anecdotal reports on this subject than hard data. In his conversations with the National Medical Association, Dr. Tabak has heard that the desire to give back to one's community is a very powerful factor. There is also a general uneasiness about the whole academic pathway with respect to its fairness, as well as concerns about the accumulation of debt. Dr. Tabak has heard that another factor in some of the less research-intense and more teaching-focused institutions is the assignment of expanded teaching responsibilities to individuals who have been unsuccessful in applying for a grant. A heavier teaching load can make it difficult to devote time to further grant submissions. Dr. Tabak also offered his own view that individuals who do not succeed on their first grant applications may not be receiving the kind of encouragement they need from mentors and colleagues to reapply. All of these factors need to be more fully examined.

How significant is the gender differential with respect to grant success? Aside from the issue of balancing work and non-work demands, what might be the causes for this differential? Dr. Tabak said that the greater success of male applicants relative to female applicants on competitive renewals is a small but statistically significant difference. Apart from issues of work-life balance, there is speculation, but no data, that female applicants may not receive the same support as their male counterparts from male chairs, male deans, or male faculty members. Dr. Tabak noted that the diversity of applicants for the NIH Pioneer Award expanded greatly when the NIH broadened the nomination process, for example, by permitting self-nominations. This is another area in which further analysis is needed.

Do the two senior-level groups the NIH has established plan to survey various components of the research community--researchers, faculty, mentors--to learn about their decision-making processes? Institutions with very strong mentors tend to produce very competitive researchers. Dr. Tabak indicated that the importance of mentorship is a recurring theme in the research community. While he does not want to speak in advance of the deliberations by the two senior-level groups, he thinks it is likely that the NIH will undertake surveys or analyses of the type mentioned.

The NIDDK has a summer program to introduce high school students to research, and the Institute has also established a network of minority investigators. The NIDDK is surveying participants to see how they have fared on research applications. Dr. Tabak said that positive impacts from these types of programs can provide a rationale for their expansion beyond the initiating Institute. However, it is still imperative to understand the data on NIH as a whole and take steps to address the broad issues identified.

Dr. Rodgers extended his appreciation to Dr. Tabak for addressing the Council members and for responding to their questions on this important subject.

VII. NIH PERSPECTIVES AND OPPORTUNITIES IN BEHAVIORAL AND SOCIAL SCIENCES RESEARCH

Dr. Robert M. Kaplan, Director, Office of Behavioral and Social Sciences Research (OBSSR), and Associate Director for Behavioral and Social Sciences, NIH

A little over a year ago, Dr. Kaplan was appointed by the NIH Director, Dr. Francis Collins, to lead the NIH Office of Behavioral and Social Sciences Research (OBSSR). Before joining the NIH, Dr. Kaplan was a Professor in the Department of Health Services, School of Public Health and the Department of Medicine at the David Geffen School of Medicine, University of California, Los Angeles (UCLA). He also served as a Principal Investigator at the UCLA-RAND-CDC Prevention Research Center, and as the Director of the UCLA's RAND Health Services Research Training Program. Dr. Kaplan holds a Ph.D. in psychology from the University of California, Riverside. He has received many honors, including membership in the Institute of Medicine. His research interests include behavioral medicine, health services research, health outcome measurements, and multivariate data analysis.

As a backdrop, Dr. Kaplan noted that behavioral and social sciences research includes: (1) basic research on behavioral and social mechanisms that affect health at the individual and population levels, and bio-behavioral-social interrelationships, and (2) translational research on the conversion of basic knowledge into practice that improves health at the individual and population levels. In terms of FY 2010 expenditures, the NIH invested about \$3.5 billion on this type of research--exclusive of funds under the American Recovery and Reinvestment Act (ARRA). An additional \$600 million was expended in ARRA funds.

The Office of Behavioral and Social Sciences Research (OBSSR) is organizationally located within the Division of Program Coordination, Planning, and Strategic Initiatives in the Office of the NIH Director, along with three other substantive offices that address disease prevention, research on women's health, and AIDS research.

In addition to stimulating behavioral and social sciences research across the NIH, the OBSSR has other functions. It serves as the NIH lead, focal point, and information resource for this research field both within and outside the NIH, including with the media and the Congress. Collaboration is a key part of the OBSSR mission because the Office funds research through the NIH Institutes and Centers--not directly. The Office also develops and implements a trans-NIH plan to increase the scope and support of behavioral and social sciences research, and it develops initiatives designed to foster such research.

Dr. Kaplan said that one of the objectives of the OBSSR is to gain a better understanding of the disease risk factors underscored by the Oxford Health Alliance in its “Three for Fifty” campaign. The Alliance states that three risk factors--tobacco use, poor diet, and lack of physical exercise--contribute to four diseases that account for about 50 percent of premature deaths in the world: heart disease, type 2 diabetes, lung disease, and some cancers. (<http://www.3Four50.com>)

To foster the translation of discoveries from basic science into human studies, which is often called Stage 1 translation, the OBSSR stimulates investments to understand basic mechanisms of behavior, learning, perception and other functions. To this end, the Office has established a new mechanism--the Basic Behavioral and Social Science Opportunity Network or OppNet--to which the NIH components, including the NIDDK, contribute funding support. (<http://oppnet.nih.gov>)

In FY 2010, the investment in the OppNet was about \$12 million--about \$10 million in ARRA funds and \$2 million in AIDS funds. From FY 2011-2014, support for the OppNet will be a fixed percentage of the base appropriation of each Institute and Center. Total funding is expected to rise from \$10 million in FY 2011, to \$20 million annually from FY 2012 through FY 2014.

In the remainder of his presentation, Dr. Kaplan provided some examples of several ways that the OBSSR's efforts relate to Dr. Collins' vision of opportunities for NIH research, *i.e.*, harnessing high-throughput technologies, furthering translational medicine, benefiting health care reform, focusing more on global health, and reinvigorating and empowering the biomedical research community.

Harnessing High-Throughput Technologies

As an example of the OBSSR's activities in this area, Dr. Kaplan described how his Office is contributing to the NIH “Genes, Environment, and Health Initiative.” The Office is spearheading advances in the measurement of environmental exposures, which can include medicines, alcohol, poverty, pollution, and a wide range of other types of exposures. Collectively, these exposures, from the prenatal period throughout the lifespan, have been termed the “exposome” by some researchers, including Dr. Kevin Patrick of the University of California, San Diego. Dr. Patrick suggests that it might be useful to think of an individual's exposome and genome as two “bar codes,” which, together, lead to whether disease occurs or health is promoted.

Dr. Kaplan pointed out that a person's genome remains relatively stable throughout life and can be characterized by cells and blood. However, a person's exposome changes over time and its complexity is difficult to characterize in measurable ways. It has been noted by Dr. Christopher Paul Wild, Director, International Agency for Research on Cancer, World Health Organization, that this imbalance in the measurement precision for the

genome vs. the exposome is compromising the ability to derive full public health benefits from investments in mapping the human genome.

To help address this imbalance, the OBSSR is partnering with Qualcomm in San Diego to harness for behavioral and social sciences research the technology provided by the more than five billion cell phones in the world, the 14.2 million iPads sold in 2010, and the hundreds of thousands of applications developed for these devices.

The advent of these and other new technologies may give researchers accurate methods for assessments of dietary intake and physical activity, which historically were captured through unreliable self-reports. For example, an iPhone can take a photo of a plate of food and an application will estimate its protein, carbohydrate and fat content, as well as its calories. In a similar way, relatively low-cost devices can be attached to a person's ankle and wrist to measure physical activity and communicate data to the person's cell phone, where the information is sent directly to a designated Internet location. Remarkably, satellite technology can merge GPS and activity data to monitor physical activity in communities. Those data can be used to improve the design of parks and sidewalks to maximize physical activity.

Dr. Kaplan described the way that a miniaturized, wireless, implantable biosensor could be operated by a Personal Digital Assistant (PDA) to monitor metabolism continuously for a month. This technology could solve the problem of measuring indicators of metabolic abnormalities such as glucose, lactate O₂, and CO₂. Another example is a specially-developed lens fitted to a cell phone to create an inexpensive microscope that could be used in low-resource settings to transmit an image to a computer for analysis. The OBSSR has been working with the National Library of Medicine on a little camera lens that attaches to an iPhone, does magnification in the field, and communicates with a laptop computer to send information back to a lab or pathologist who can read it. This equipment, which has been tested for use in obtaining counts of CD4 cells in the field, is remarkably accurate.

Dr. Kaplan pointed out that these technologies vary in their accuracy. However, engineering is an iterative process, and devices with strong potential will undoubtedly improve over time. One challenge is the need to incorporate more systematic testing and evaluation during these developmental efforts--in a manner similar to the development of pharmaceuticals through rigorous clinical trials. The rapidity with which these technologies change makes evaluation difficult--a problem that also exists with some medical technologies. Another challenge is to find ways for the appropriate management and use of the vast amounts of data that these new technologies can generate. To help address these issues, the OBSSR has been focusing on the interfaces among behavioral, medical, and engineering sciences by sponsoring workshops, training initiatives, and other efforts for cross-fertilization and problem-solving. The Office sponsored a Systems Science Institute, and an mHealth Training Institute with Qualcomm. A series of future workshops is planned to bring engineers and scientists together to explore ways to digest,

harmonize, and visualize very large amounts of data. The OBSSR is also working with experts in other scientific fields and organizations that have experience in this regard, including the Defense Department, the Central Intelligence Agency, and the Department of Homeland Security. Dr. Kaplan has also brought these types of data issues forward to the Committee on Science of the National Council on Science and Technology. The OBSSR is leading an effort with the National Science Foundation to push forward the agenda for data analysis techniques of the future. Clearly, the new measurement technologies in the behavioral and social sciences will likely lead to new challenges and approaches for designing studies, developing methods of data infusion and synthesis, training health analysts, handling the privacy and security of health-related information, and harmonizing medical records.

Furthering Translational Medicine and Benefiting Health Care Reform

Dr. Kaplan gave an example of the OBSSR's activities that are related to the movement of discoveries from the clinical research arena to patients and communities, which is often called Stage 2 translation. He noted that the Secretary of Health and Human Services is very interested in disease prevention and in improvements in the delivery of health care. With respect to the latter, Dr. Kaplan pointed out the remarkable variability across states in their ability to deliver quality care at different costs. For example, Iowa has very high-quality, low-cost care, whereas California has relatively low-quality, expensive care. There are also very interesting differences within California. For example, even though Los Angeles and San Diego counties are very similar demographically, an analysis of Part B Medicare claim data on reimbursements for hospital services shows that the least expensive area in Los Angeles county is more expensive than the most expensive area in San Diego county. The difference between the Los Angeles costs minus the San Diego costs is close to \$3,000 per Medicare recipient. Dr. Kaplan said that this differential can be considerable over time given that the average person entering Medicare has a life expectancy of about 18.6 years and there are 1.3 million Medicare recipients in Los Angeles county. He said that this type of data analysis underscores the need to understand how the results of research advances are being translated to patients and communities in terms of the way health care decisions are made and resources are allocated.

Focusing on Global Health

With respect to global health, the OBSSR is very interested in differences in life expectancy. Dr. Kaplan noted that, in 1960, the U.S. was about 12th in the world in terms of life expectancy; now, the U.S. ranks about 46th. While life expectancy in the U.S. continues to increase, the rate of increase is slower than in other countries, particularly for women. Making comparisons to Japan and Norway, Dr. Kaplan underscored that the U.S. is not sharing in the increases in life expectancy to the same extent as other Westernized and developed countries.

The OBSSR has just begun a study, working through the Institute of Medicine, to identify factors underlying life expectancy trends. The two variables that seem to be most significant are: (1) obesity, and (2) tobacco use among women. Even though tobacco use in women has declined, the effects are just now being seen on women who smoked for many years or decades in the past.

Dr. Kaplan also noted the disproportionate burden of disease in different places in the world. He displayed graphics from a website, which lets the user view a map of the world under different assumptions, rather than just in terms of land mass.

(<http://www.worldmapper.org>) For example, the user can see what the size of the continents would be if the main variable were HIV prevalence. Africa would be predominant because of its disproportionate burden of this disease. If the variable were diabetes, one could see that the burden of this disease is more considerable in India and Asia than generally thought. One can also use this website to observe the disproportionate distribution of first-author scientific publications by continent.

The OBSSR is seeking insights into the diabetes epidemic by studying behavioral and social risk factors for diabetes not only in the U.S., but also internationally. For example, the OBSSR founded the Collaborative Obesity Modeling Network (COMnet) with the Robert Wood Johnson Foundation.

<http://www.hsph.harvard.edu/research/prc/projects/collaborative-obesity-modeling-network-comnet/index.html>.

Through COMnet, the OBSSR has looked at the relative risk of obesity in terms of education, sex, and country. The relative risk of obesity, which is a serious risk factor for type 2 diabetes, is strikingly high for low-educated women in countries such as Korea and Spain. The NIDDK has been active in this Network, and supported a study recently published in *The Lancet*, which rolled out some of the early work in obesity being done through COMnet [Wang YC, *et al.* Health and economic burden of the projected obesity trends in the U.S.A. and U.K. *The Lancet* 2011. 378(9793): 815-825]. Using a simulation model, the authors projected the probable health and economic consequences in the next two decades from a continued rise in obesity in two aging populations: the U.S.A. and the U.K. They projected 65 million more obese adults in the U.S. and 11 million more obese adults in the U.K. by 2030, consequently accruing an additional 6-8.5 million cases of diabetes, as well as significant increases in cases of heart disease and stroke, and additional cases of cancer. By 2030, the combined medical costs associated with treatment costs are estimated to increase by \$48-66 billion a year in the U.S. and 1.9-2 billion pounds sterling a year in the U.K. There is also enormous loss in productivity, not only in absenteeism, but also in “presenteeism,” that is, when people who go to work are not fully functional because of illness or disability.

Council Questions and Discussion

Jim Gemmell of Microsoft is a co-author of the book, Total Recall, which describes the exploration of electronic systems to store vast amounts of personal data, including

health-related data, and make it accessible. Aside from storage and confidentiality issues, the enormity of data that can now be collected requires new indexing approaches. Is this the direction in which the behavioral and social sciences are going with respect to conducting research on environmental risk factors? Dr. Kaplan responded that, when there is too much data to digest, other techniques, such as sampling methods are possible. For example, astronomers have continuous feeds of light coming from different planets and they use analytic techniques such as algorithms to detect patterns of information from complex arrays of data. The OBSSR plans to hold a joint workshop with the National Science Foundation to encourage cross-fertilization of ideas among health scientists, engineers, and computational scientists in the hope of guiding future directions.

It took about 10 years for a complete mapping of the human genome, and it is likely to take a similar amount of time to gain a comparable understanding of behavioral and social risk factors. As this research moves forward, will the OBSSR address the fundamental need for randomization and for the independence of variables when testing new approaches so that correlations are not mistaken for cause-and-effect relationships? Dr. Kaplan replied that the OBSSR is discussing this issue and would like to find rigorous approaches to testing that may include randomization, or some form of quasi-randomization, or some other very careful methodologies. Some studies of devices that track a person's adherence to a regimen can be designed as randomized trials. However, for some other types of studies, it may be possible to use techniques developed in economics and other sciences that do not involve randomized clinical trials, but rather the analysis of large databases, such as the medical records maintained by the pharmaceutical formularies of health care provider organizations. The OBSSR is working to further better harmonization of data elements in electronic medical records in order to facilitate the study of patterns and pattern variations in extremely large databases.

Where there is an established causal relationship, such as that between lack of physical activity and obesity, can feedback be given to individuals to encourage them to change their behavior? For example, could changes in insurance premiums be used to provide incentives for individuals to adopt behaviors beneficial to health? Dr. Kaplan replied that there are a number of studies using devices to manage chronic disease, such as the "pill phone," which sends a "reminder" message to individuals who have complex medical regimens to follow. This type of intervention can even be linked to a sort of canister that holds a person's medication and unlocks automatically at specified times to measure out the appropriate dosage, thus creating a treatment record.

Is there any plan to capitalize on data showing differences in diabetes prevalence trends around the world in an effort to identify causal factors? Dr. Kaplan said that he is not certain whether there are studies being undertaken along those lines.

Dr. Rodgers thanked Dr. Kaplan for his informative presentation and his responses to the Council's questions.

VIII. SCIENTIFIC PRESENTATION

“Genomic Variation and the Inherited Basis of Type 2 Diabetes”

Dr. David Altshuler

Dr. Altshuler is an endocrinologist and human geneticist, and a founding member of the Broad Institute, where he currently serves as Director of the Program in Medical and Population Genetics, as well as Deputy Director and Chief Academic Officer. He is also a Professor of Genetics and Medicine at Harvard Medical School, and in the Department of Molecular Biology at the Center for Human Genetic Research, as well as the Diabetes Unit at Massachusetts General Hospital. Dr. Altshuler is one of the world's leading scientists in the study of human genetic variation and its application to disease. His work has contributed to the understanding of gene variants that influence the risk of common conditions, including type 2 diabetes, blood cholesterol, prostate cancer, systemic lupus erythematosus, and rheumatoid arthritis. Dr. Altshuler earned his Ph.D. in 1993 from Harvard University, and his M.D. in 1994 from Harvard Medical School. He completed his internship, residency and clinical fellowship training at the Massachusetts General Hospital.

IX. CONSIDERATION OF REVIEW OF GRANT APPLICATIONS

A total of 1902 grant applications, requesting support of \$542,915,898 were reviewed for consideration at the September 7, 2011 meeting. Funding for these applications was recommended at the Scientific Review Group recommended level. Prior to the Advisory Council meeting, an additional 1280 applications requesting \$321,711,980 received second-level review through expedited concurrence. All of the expedited concurrence applications were recommended for funding at the Scientific Review Group recommended level. The expedited concurrence actions were reported to the full Advisory Council at the September 7, 2011 meeting.

X. ADJOURNMENT
Dr. Rodgers

Dr. Rodgers thanked the Council members and presenters for their attendance and valuable discussion. There being no other business, the 187th meeting of the NIDDK Advisory Council was adjourned at 4:30 p.m., September 7, 2011.

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



Griffin P. Rodgers, M.D., M.A.C.P.
Director, National Institute of Diabetes and Digestive and Kidney Diseases, and
Chairman, National Diabetes and Digestive and Kidney Diseases Advisory Council