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Marrett, Tabak, and Thompson to Speak at COSSA Colloquium

National Science Foundation Acting Director Cora Marrett, National Institutes of Health Deputy Director Lawrence Tabak, and new U.S. Census Bureau Director John Thompson will all speak at this year's COSSA Colloquium on Social and Behavioral Sciences and Public Policy.

In addition, a panel on "Changes Regarding Race in America" will feature current COSSA President **James Jackson**, Director of the Institute for Social Research at the University of Michigan, and former COSSA President and Census Director, **Ken Prewitt**. Prewitt has authored a new book, *What Is Your Race? The Census and Our Flawed Effort to Classify Americans*.

The event will take place on November 4 and 5, 2013 at the Embassy Row Hotel in Washington, DC.

Registration is open. Click [here](#) to register now!

Senate Panel Questions Nominees to OSTP and NOAA

The Senate Commerce, Science, and Transportation Committee held a [hearing](#) on September 19th to question President Obama's nominees to three key science posts: Jo Handelsman for Associate Director for Science at the Office of Science and Technology Policy (OSTP), Robert Simon for Associate Director for Energy and Environment at OSTP, and Kathryn Sullivan to be Under Secretary for Oceans and Atmosphere at the Department of Commerce and Administrator of the National Oceanic and Atmospheric Administration (NOAA).

Handelsman is the Howard Hughes Medical Institute Professor and Frederick Phineas Rose Professor in the Department of Molecular, Cellular and Developmental Biology at Yale University. Simon, currently a consultant to OSTP, was the Senate Energy and Natural Resources Committee's Democratic staff director from 1999 to 2012. Sullivan has been Acting Under Secretary for Oceans and Atmosphere at the Department of Commerce and Acting NOAA Administrator since February. Previously, she was NOAA's Deputy Administrator and Chief Scientist. She was also one of the first six women to join NASA's astronaut corps in 1978 and the first American woman to walk in space.

Both Sen. Bill Nelson (D-FL), the senior Democrat in attendance, and Ranking Member Sen. John Thune (R-SD) ([statement](#)) indicated that all three nominations should proceed smoothly, though, as Nelson remarked, "You never can tell around here." In his [opening statement](#), Simon observed that OSTP is unique in its mandate to work cooperatively with government agencies, the executive office, and Congress as those organizations fulfill their missions, and that OSTP can help them make science and technology "a constructive influence."

In her [opening statement](#), Handelsman described the moment she knew she wanted to be a scientist, the first time she looked into a microscope. She contended that "All students should be able to have their own 'microscope moments.'" She also shared the pain of seeing her mother die from an antibiotic-resistant bacterial infection-the focus of her own scientific research. She called antibiotic resistance "one of the greatest health threats confronting us today, and ... a gap in our federally funded research portfolio."

Sullivan discussed three broad principles she plans to keep in mind as NOAA administrator ([statement](#)). First, understanding the planet is not enough; we need to be able to apply that understanding to solving real problems. Second, operational rigor is key to NOAA to successfully fulfilling its mission. Finally, NOAA will need strong leadership to be effective.

Nelson asked Simon to comment on how OSTP can promote the president's Climate Action Plan and reduce our dependence on foreign oil. Simon argued that energy policy has to work on several levels: it has to ensure adequate affordable supply, make sure we are using energy effectively and efficiently, and balance our objectives for energy and the environment. He also fielded questions from Thune regarding a shortage of mining engineers and forest health.

Nelson questioned Handelsman about translating the results of federally funded research into private-sector applications. Handelsman affirmed the importance of maintaining support for basic research, but acknowledged that programs that focus on translation, like the National Science

Foundation's (NSF) Innovation Corps (I-Corps), have shown promise. She characterized science, technology, engineering, and mathematics (STEM) education in the U.S. as "strong, but faltering." Handelsman also answered questions about food security and prophylactic use of antibiotics in livestock.

Sullivan was questioned about a NOAA hiring freeze, implemented in response to sequestration and continued fiscal uncertainty. She argued the freeze was unfortunate, but necessary. In response, NOAA established a board to review mission-critical positions. However, she acknowledged that continuing to fulfill an increasingly demanding mission with diminishing resources is a "real dilemma." Several senators questioned Sullivan on fishery regulation, sustainability, and innovation. She also took questions about NOAA's research and monitoring infrastructure, ocean acidification, and weather tracking.

Scientific Solutions to Meth Addiction Discussed at House Hearing; Smith and Lipinski Note Role of Social and Behavioral Sciences

On September 18th, the House Committee on Science, Space, and Technology's Research and Technology Subcommittee held a [hearing](#) to explore using science to find solutions to methamphetamine (meth) addiction. In his [opening statement](#), subcommittee Chairman Rep. Larry Bucshon (R-IN) described some of the problems of methamphetamine addiction: lasting health consequences, even after addicts have quit, meth lab explosions, and rise in crime. However, he contended, "science can provide valuable insights into this problem. Basic science agencies like the National Institutes of Health have spent over \$68 million in FY 2013 to understand the neurological basis of meth addiction. NSF also supports fundamental non-medical basic science research, in particular behavioral research behind the psychology of addiction."

In a [statement](#), Committee Chairman Rep. Lamar Smith (R-TX) echoed those sentiments: "The meth problem is an example of a clear societal need where science can yield potential solutions that will benefit the American public. Progress on this problem, like many other complex medical issues, will require an interdisciplinary approach that will inform the scientific basis of meth addiction and treatment." He added: "The National Science Foundation (NSF) will play an integral role towards a more complete understanding of this problem. Hypothesis-based data-driven social science research can be used to understand behavioral science behind addiction."

Ranking Member Rep. Dan Lipinski (D-IL) agreed that we need to know more about the science behind addiction and effective treatment. He expressed interest in hearing about the "foundational social and behavioral research, as well as the neuroscience research, that underlines much of the more application driven research that is the purview of our witnesses today."

The witnesses were Niki Crawford, First Sergeant, Meth Suppression Section Commander, Indiana State Police ([testimony](#)); Edythe London, Thomas and Katherine Pike Professor of Addiction Studies, Director of the UCLA Laboratory of Molecular Neuroimaging at the David Geffen School of Medicine, University of California, Los Angeles ([testimony](#)); Jane Maxwell, Senior Research Scientist, School of Social Work, University of Texas, Austin ([testimony](#)); and Celeste Napier, Director, Center for Compulsive Behavior and Addiction, Professor of Pharmacology and Psychiatry, Rush University Medical Center, ([testimony](#)).

Crawford discussed recent trends law enforcement has observed in meth production. She explained that most meth production in Indiana is driven by addiction, not by a desire to make money selling drugs. Around 2006, a new means of meth production, called the "shake and bake" or "one-pot" method, began surfacing around the country. This method involves manufacturing meth in a small vessel, like a soda bottle, making production easier for addicts to accomplish in urban areas. This method also resulted in an increase in injuries to producers and law enforcement. Restrictions on purchases of pseudoephedrine (a key ingredient in meth manufacture) only temporarily slowed production, as meth cooks learned to use third party individuals ("smurfs") to buy the pseudoephedrine for them. Crawford laid out the results, positive and negative, of several programs

that have been tried to prevent meth addiction and prosecute those who manufacture it.

London testified on some of the neurological science behind meth addiction. She explained that taking methamphetamine follows a similar neurological process to taking cocaine, but meth is a more effective stimulant, with a longer-lasting high, more potent, more addictive, and more toxic. She demonstrated how advances in brain imaging technology have given scientists the ability to see the effects of methamphetamine use on the brain in greater detail. She called for a multidisciplinary approach to investigating treatments for meth addiction that can address multiple facets of a very complex problem.

Maxwell took an epidemiological approach to understanding the meth epidemic. She explained that meth is a cyclical drug; after bans on its component ingredients, supply drops initially, but it recovers as manufacturers find ways around the restrictions. Maxwell showed that beginning in 2007, an influx of cheap, potent meth from Mexico (called P2P, due to its production in mass quantities via the phenyl-2-propanone method) has led to a drop in price and increase in purity in the meth market in the United States; from July 2007 through June 2012, the price per pure gram of methamphetamine decreased 72 percent, while the purity increased 128 percent.

Napier explained that meth use can cause brain abnormalities years after a person stops using the drug. Furthermore, the relapse rate is high as 70 percent, so treatments designed to prevent relapse are crucial. She discussed promising research into whether existing drugs can be repurposed to assist in treatment for meth addiction. Finally, she emphasized the importance of reaching kids before they try an illegal drug. She argued that the traditional approach to drug education is not effective and that we should build on what neuroscience has taught us about decision-making and the adolescent brain when designing future education programs.

House Oversight Holds Hearing on 2020 Census

The House Oversight and Government Reform Committee's Subcommittee on the Federal Workforce, U.S. Postal Service, and the Census, held a [hearing](#) entitled "Ensuring an Accurate and Affordable 2020 Census" on September 11th. Subcommittee Chairman Rep. Blake Farenthold (R-TX) cited the rising costs of conducting the decennial census, which cost \$14.7 billion for 2010, and, if recent trends hold, could cost \$25 billion for 2020. He listed several proposed ways to make the census more cost-effective, including online response (currently being piloted by the American Community Survey), using smartphone apps to make collection more efficient, and utilizing administrative records from elsewhere in the federal government (although, he noted, this brings up some privacy concerns).

Ranking Member Rep. Stephen Lynch (D-MA) concurred with Farenthold that the Census should reexamine its approach and cited some of the same methods (online collection of responses, using administrative records). He also suggested that the Census Bureau find a way to capitalize on the U.S. Postal Service's expertise and familiarity with neighborhoods. Lynch also cautioned that the Bureau ensure that greater reliance on technology is met with a strong commitment to security.

The witnesses at the hearing were newly-confirmed Census Bureau Director John Thompson ([testimony](#)), Robert Goldenkoff, Director of Strategic Issues at the Government Accountability Office (GAO), and Carol Cha, Director of Information Technology (IT) at the GAO. Goldenkoff and Cha co-authored a study, [Progress Report on the Census Bureau's Efforts to Contain Enumeration Costs](#), which served as their testimony.

In his opening statement, Thompson emphasized the importance of the Census to our democracy. He predicted that under its current plan, the 2020 Census will be less costly and deliver faster results than the 2010 count. The Bureau is looking into reengineering its field data collection, making better use of previously collected government data, using the Internet as the primary response option, and relying on geographical tools and datasets to reduce or eliminate the need to physically canvas.

Goldenkoff remarked that the Census faces the fundamental challenge of trying to survey a population that is growing larger, more diverse, harder to find, and less willing to participate. He explained that counting each housing unit is no longer financially sustainable. In 1970, it cost \$16 to evaluate each housing unit (in 2010 dollars); in 2010, it costs \$98 per housing unit. Recommendations have been made that the Bureau transform itself into a high-performing organization, reengineer its operations, and strength it's IT management and security. He suggested that the Bureau's current plans to control costs show promise, provided they are effectively implemented.

Cha noted that the Bureau is currently in the research and testing phase for a number of technology options for 2020 (including using the internet for response, allowing enumerators to use their own smartphones via an app, and an enterprise-wide "cloud" system). These collectively represent a "dramatic leap" from 2010, but also a greater level of risk. She noted that IT mismanagement for the 2010 census led to unanticipated increases in last-minute costs.

Farenthold expressed concern over the security and cost effectiveness of creating a cloud system in-house. He also expressed concern for the security of data shared by other government agencies. Thompson responded that all information going into the Census is one-way; no agencies are given access. Rep. Doug Collins (R-GA) also expressed concern that the Census might be investing in technology that will be outdated by 2020 and suggested the Bureau rely on the private sector instead.

Lynch asked about the impact of sequestration on Census operations. Thompson noted that the Bureau has already postponed some of its scheduled research and testing from 2013 to 2014. Goldenkoff noted that cuts can be particularly harmful to the Census because it has scrapped its old approach, making research and testing critical to keeping costs low.

Rep. Carolyn Maloney (D-NY) raised the concern that increased reliance on the Internet for response could lead to undercounting the elderly and other populations with less reliable access. Thompson assured her that the Bureau will use multiple methods of collection to ensure an accurate count of all segments of the population.

Rep. William Lacy Clay (D-MO) suggested that the Bureau count those under incarceration at their last legal address, rather than treating prisons as residences, to avoid skewing the redistricting process. Thompson explained that these decisions have not yet been made, but expressed a willingness to work with stakeholders when deciding this issue.

NSF and NEH Continue Support for Documenting Endangered Languages

On September 19, the National Science Foundation (NSF) and the National Endowment for the Humanities (NEH) announced \$3.7 million in awards as a part of a joint Documenting Endangered Languages (DEL) program. This is the ninth round of this ongoing collaboration to support scientists' efforts to document languages threatened by extinction. The current awards will fund 27 institutional grants, fellowships, doctoral dissertation research improvement awards, and training and workshop projects.

Every three months, a language becomes extinct. As they become obsolete, valuable scientific and cultural information is lost; documenting dying languages allows investigation of linguistic structures and cognitive systems. The 2013 DEL awards support digital documentation of over 38 endangered languages across 19 language families spoken in south, central and northern Asia, Africa, Papua New Guinea, and the Americas.

The collaboration between NEH and NSF funds the creation of analytic dictionaries, reference grammars, and digital archives of endangered languages that include audio and video data. NSF and NEH cite an award to the University of Mainethat will allow Pauleena MacDougall, James Francis,

and Conor Quinn to produce a digital dictionary of the Algonquian language, Penobscot, creating a resource for comparative research in the historical reconstruction of the Algonquian language family.

Several DEL grants will collect invaluable data to develop and test theories about language structure and change and to reconstruct the linguistic histories of large and small communities. Another of this year's grants will support the research of Doris Payne and Alejandra Vidal of the University of Oregon, who will compare the structures of two languages of northern Argentina, Nivacle and Pilagá, to investigate how languages change under intense long-term contact.

In addition, the DEL Fellowship program is an extremely flexible funding source that provides senior or junior researchers the opportunity to conduct new fieldwork or process previously collected data to complete documentary projects. Simeon Floyd will use his NEH DEL fellowship to complete a reference grammar of Cha'palaá, an indigenous language of Chachi people of Ecuador. Very little is known about languages spoken to the west of the Andes and this project will help fill that gap.

Doctoral research in endangered languages has very limited sources of support other than the DEL Doctoral Dissertation Research Improvement Grants. According to the grant announcement, Randi E. Tucker, a doctoral student at the State University of New York at Buffalo, will conduct an in-depth study of landscape features of Diidxa za (also known as Isthmus Zapotec), spoken in Oaxaca, Mexico. She will explore the relationship of cognition, experience, and the abstract encoding of experience in language by comparing the lexical representation of landscape to the terrain occupied by speakers.

Another dissertation grant recipient, Carolina Aragon, a doctoral student at the University of Hawaii, Manoa, will document Akuntsu, a language spoken by one of the remaining isolated groups of Brazil to investigate the typological and historical relationships between Akuntsu and other languages of the vast Tupian family. This project comes at a critical time as there are fewer than ten remaining speakers of this language.

The program will also support the Institute on Collaborative Language Research, a summer institute that trains linguists and language teachers in documentary methods. Colleen Fitzgerald at the University of Texas at Arlington will direct the Institute.

A complete listing of this year's NEH and NSF DEL awards can be found at the [NSF DEL Awards](#).

Enhancing Reproducibility and Transparency of Research Findings

The various National Institutes of Health (NIH) institutes and centers held their fall round of quarterly advisory council meetings. A number of the councils heard from NIH staff regarding the issue of "enhancing reproducibility and transparency of research findings." Principal Deputy Director Lawrence Tabak who often has the responsibility of addressing "many important but quite problematic complex challenges across all of NIH" spoke at several of the council meetings, including the National Institute on Aging (NIA) and the National Institute for General Medical Sciences (NIGMS), on the topic of data transparency and reproducibility.



Lawrence Tabak

Tabak began by explaining that everybody is responsible for ensuring transparency and reproducibility. Noting that concern has been noted in multiple publications, he remarked that "this is a problem in all areas of research, not just specific types of studies." It has been "observed in both clinical and preclinical research," he noted, emphasizing that the focus at NIH is on reproducibility of preclinical research.



He shared a sampling of the headlines from various publications that have appeared over the last several years. He highlighted a study by Bayer Healthcare that revealed that "almost 2/3 of 67 in-house projects could not replicate data published by others." At a time when stakeholders demand translation of NIH's basic discoveries into tangible treatments that will help all patients, the agency is taking steps to accelerate enhanced translational efforts across the NIH.

Deficient reporting, according to the deputy director, is widespread. He cited an examination of several publications to see if they reported on such basic things as randomization, blinding, or sample size calculation. Publication does not report something that was not done, said Tabak. Out of hundreds of papers, "not a single one reports on sample size calculation," he reiterated. The agency notes that there is information lacking in the reporting. Accordingly, the NIH is coming to the various councils because many council members are editors or members of editorial boards. The NIH hopes that council members will take these issues back to those journals and have a discussion to ensure that they are being addressed.

Tabak also discussed some of the challenges of applying animal studies to humans, which include the methodological quality of animal experiments; biological differences between species and strains; differences in design between animal experiment and clinical trials; insufficient reporting of details of animals, methods, and materials; and publication bias. Publication bias is essential to this issue; if journals persist in publishing only positive results, studies that find negative results never get reported and are unknown to the community. Those showing positive results due to chance alone get published, and those may be used as the basis for a multi-million dollar trial that an institute or center launches. This is a big issue that the NIH needs to come to grips with, Tabak insisted.

The National Institute on Neurological Disease and Stroke (NINDS) and the National Cancer Institute are taking leadership roles to address the issue. Both institutes held workshops in 2012. The NINDS workshop was published in *Nature* in October 2012. Many of NIH's Institute and Center directors are supportive of the need to focus on the issue, Tabak reported. Accordingly, NIH director Francis Collins formed an ad hoc group to redress the issues. The IC directors' input was used to inform plans for trans-NIH and IC-level next steps.

According to Tabak, there are three underlying issues: 1) poor training, 2) poor evaluation, and 3) perverse reward incentives. He noted that, for some disciplines, fundamental basic design has become a lost art. He acknowledged that clinical investigators do this and certain disciplines are very much engaged.

Recommendations to Address Problems of Replication

The agency has come up with five principles for addressing these underlying issues: 1) raise community awareness, 2) enhance formal training, 3) improve the evaluation of applications, 4) protect the integrity of science by adopting a more systematic review process, and 5) increase stability for investigators.

The recommendations include:

Encourage ICs to discuss the issue with Advisory Councils and Board of Scientific Counselors and/or hold workshops to signal attention to the issue of reproducibility (maps to principle #1). Accordingly, all ICs and offices within the NIH Office of the Director (OD) will discuss reproducibility and transparency of research findings with their stakeholder communities to alert them to the issues and solicit feedback by the end of the 2013 calendar year.

Integrate modules and/or courses on experimental design into existing required training

courses and award terms and conditions (maps to principle #2). The Office of Intramural Research (OIR) will create and pilot a new module on research integrity as it related sot experimental biases and study design to ethics training course required for NIH intramural fellows. Once the module is tested, the NIH Office of Extramural Research (OER) will make it available on the web and encourage adoption (or equivalent) by extramural training programs for fellows and trainees.

Consider options for an evaluation process of the "scientific premise" of a grant application (maps to principle #3). Select institutes and centers will perform pilot evaluation of scientific premise of grant applications.

Collaborate further with scientific journals and the scientific community on efforts to improve rigor. (Maps to principle #4). NIH will continue outreach to journals to partner with them to determine value of recently adopted reporting guidelines. The agency will evaluate the PubMed Commons Community Response Effort, which is a pilot program testing options for scientists to post online comments on original research articles.

Adapt NIH bio-sketch to allow investigators to place their work into a functional context (maps to principle #5). Select institutes and centers will perform pilot evaluations of changes to bio-sketch to include elements that aid in framing the PIs work and describing the applicants' contribution to the publications cited. Select ICs will also pilot additional experiments to reduce "perverse incentives." Efforts by NCI o reduce "perverse incentives" will be evaluated. (NCI recently developed an Outstanding Investigator Award to address perverse incentives by providing substantial, longer-term support for experienced investigators.

Tabak also noted there were additional suggestions that the agency may consider:

Use of guidelines and/or checklists to systematically evaluate grant applications - (select ICs will pilot the use of a checklist;

Advisability and approach to supporting replication/reproducibility studies or centers - select ICs will pilot additional use of supporting replication studies; evaluate ongoing efforts by NINDS which has conducted pilot replication studies; evaluate ongoing efforts by the National Institute on Aging which is currently supporting the Interventions Testing Program where preclinical studies are conducted with multi-site duplication, rigorous methodology and statistical analysis.

He also informed council members that pilot implementation initiatives are being considered and the discussions with ICs directors have underscored important issues to consider as the pilots are designed, implemented and evaluated, including: one size does not fit all, effects on experienced versus early-career researchers; costs of housing and managing additional data; potential of added burden to the review process; and the difficulty of publishing negative results. The pilots will provide information and data and how these issues might affect larger-scale implementation, Tabak concluded.

Jon R. Lorsch Presides Over 153rd Meeting of National Advisory General Medical Sciences Council

New National Institute of General Medical Sciences (NIGMS) director Jon R. Lorsch presided over his first meeting of the Institute's National Advisory General Medical Sciences Council on September 19th. He joined NIGMS in August. Lorsch comes to the National Institutes of Health (NIH) from the Department of Biophysical Chemistry, Johns Hopkins University School of Medicine. NIGMS Deputy Director Judith Greenberg has been acting director for the institute for the last two years.



Lorsch has a Ph.D. in biochemistry from Harvard University and was a

postdoctoral fellow in biochemistry at Stanford University. His research, which NIGMS has funded since 2000, focuses on translation initiation in eukaryotes. He has a long-standing interest in education, workforce development and diversity. During his tenure at Johns Hopkins, he worked to reform the curricula for graduate and medical education, spearheaded the development of the Center for Innovation in Graduate Biomedical Education. He also launched a program offering summer research experiences to local high school students, many from groups that are underrepresented in the biomedical and behavioral sciences. In addition, he also served as an advisor to numerous undergraduate and graduate students and postdoctoral fellows. During his tenure at Johns Hopkins, he worked to reform the curricula for graduate and medical education, spearheaded the development of the Center for Innovation in Graduate Biomedical Education, and launched a program offering summer research experiences to local high school students, many from groups that are underrepresented in the biomedical and behavioral sciences. In addition, he advised dozens of undergraduate and graduate students and postdoctoral fellows. While at NIGMS he will continue to do research and will have his lab at the *Eunice Kennedy Shriver* National Institute for Child Health and Human Development.

NIH Big Data to Knowledge (BD2K)

Lorsch provided an overview of the NIH's efforts to "tackle [the] Big Data" problem through an [initiative](#) called the NIH Big Data to Knowledge (BD2K). The search is on for the newly created Associate Director for Data Science (ADDS) position which is currently being filled by Eric Green, director of the National Human Genome Research Institute.

According to NIH: "the term 'Big Data' is meant to capture the opportunities and challenges facing all biomedical researchers in accessing, managing, analyzing, and integrating datasets of diverse data types [e.g., imaging, phenotypic, molecular (including various '-omics'), exposure, health, behavioral, and the many other types of biological and biomedical and behavioral data] that are increasingly larger, more diverse, and more complex, and that exceed the abilities of currently used approaches to manage and analyze effectively. Big Data emanate from three sources: (1) a small number of groups that produce very large amounts of data, usually as part of projects specifically funded to produce important resources for use by the entire research community; (2) individual investigators who produce large datasets, often empowered by the use of readily available new technologies; and (3) an even greater number of sources that each produce small datasets (e.g. research data or clinical data in electronic health records) whose value can be amplified by aggregating or integrating them with other data.

The initiative, Lorsch explained, has four programmatic areas: Facilitating broad use of biomedical big data; Developing and disseminating analysis methods and software for biomedical big data; Enhancing training for biomedical big data; establishing centers of excellence for biomedical big data. The initial seven-year funding plan (2013 - 2020), will begin in FY 2014. The funding will ramp up to slightly over \$100 million by FY 2017. The early funding for the program will be provided by the Common Fund with increasing contribution by the institutes and centers over time with complete budgetary adoption by the institutes and centers by FY 2020.

Sequestration



Lorsch, as did other institute directors at their council meetings, discussed NIH's and his institute's budget along with an analysis of the impact of sequestration on NIGMS funding. Sequestration, he informed the council, has resulted in a \$51.5 million reduction in funds for competing research project grants: 144 fewer grants funded, which includes 87 new grants and 57 renewals. Eighteen of the non-funded grants were from new investigators. It also includes an \$8.7 million reduction in funding for training, 186 training slots.

He emphasized that "regardless of the budget, our job is to ensure that the taxpayers' money is invested in fundamental biomedical research in the most efficient and effective way possible."

NICHD Begins to Implement Vision

At the 151st meeting of the National Advisory Child Health and Human Development (NACHHD) Council of the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), Catherine Spong, director, NICHD's Division of Extramural Research, and Alan Guttmacher, NICHD director, provided an update of the implementation of the NICHD Vision plan.

Spong began by emphasizing that all areas supported by NICHD are important. She described the Institute's framework for moving forward. She reviewed the themes that came out of the visioning process: developmental biology, developmental origins of health and disease, pregnancy and pregnancy outcomes, reproduction, behavior and cognition, population dynamics, and conduct of science.

Spong described what she termed "NICHD strategic areas" as areas critical to NICHD. These areas have public health importance, scientific opportunity, and critical for NICHD to undertake ("if NICHD doesn't, no one will"). She emphasized that these areas do not cover the institute's entire mission and cannot cover the entire Vision. She stressed that areas not selected does not mean that they are not important to NICHD. The areas not selected are vitally important to NICHD, she added, noting that many have significant investment and that the investment will continue, many are self-sustaining, and many do not require emphasis now. The plan, she explained, is to implement the framework in pieces.

NICHD did a survey for staff input where nearly 200 topics were proposed by the staff. Thirteen out of the 200 were identified after online voting by NICHD staff: predictors of health-related decline, non-hormonal contraceptives, mechanisms of preterm birth, interventions for autism, ten factors "health disadvantage", microbiome on child development, optimal interventions first 1000 days, intrauterine assessment placenta/fetus, social/behavioral dimensions of contraception, microbial content of human milk, inadequate milk production, and long term implications of assisted reproductive technologies (ART). Each branch evaluated the 13 topics, Spong reported, based on the likelihood of success, timeframe to completion, degree of difficulty. They also examined mechanisms for implementation and identified potential partners and collaborators.

The created a vision-o-gram with the goals to identify several topics to move forward. They wanted at least one topic that is not difficult, with a short timeframe for completion, and high likelihood of success. If possible, they also desired that one topic not require set aside money. They also wanted one topic that was potentially longer term and high-risk, but with anticipation of high pay off. Finally, they felt it would be ideal to select "NICHD-centric" areas, defined as those scientific areas NICHD must move forward. According to Spong, looking across the vision, three areas emerged with public health impact, scientific opportunity and require NICHD leadership: intrauterine assessment of placental and fetal function, contraception, and long-term implication(s) of ART.

The mechanisms the institute intends to use to move these areas forward include launching new branches, [Pediatric Trauma and Critical Illness](#) (PTCI) and [Gynecologic Health and Disease Branch](#) (GHDB), with portfolio development and support. They intend to increase awareness by NICHD staff and the scientific community. They also intend to encourage PIs to work in these areas. In FY 2014 and 2015, the institute goal is to support applications in NICHD strategic areas beyond the payline. Spong pointed out that the funding for the strategic areas is relative small and depending on the budget will likely equal to one request for applications. She underscored that 75 percent of NICHD's budget is spent on investigator-initiated projects, emphasizing that this will not change.

Alvin Roth Receives Golden Goose Award

The late Senator William Proxmire (D-WI) attracted many press stories during his long career by presenting Golden Fleece Awards to federally-funded research projects he deemed silly and unworthy of federal support. Although many of these projects would lead to significant scientific

breakthroughs, the Proxmire criticism continues to this day with challenges to individual grants Congress deems a waste of federal dollars.

To counter this charge, Rep. Jim Cooper (D-TN) devised a counter-award, called the Golden Goose, to "demonstrate the human and economic benefits of federally funded research by highlighting examples of seemingly obscure or unusual studies that have led to major breakthroughs and have had a significant impact on society."

On September 19th, this year's awards were presented at a ceremony on Capitol Hill. Among the 2013 winners was Stanford economist and COSSA Congressional briefing speaker Alvin Roth. Roth shared the Golden Goose Award winner with Lloyd Shapley and the late David Gale. Roth and Shapley also shared the 2012 Nobel Prize in Economics.

The Stanford economist was honored for his research applying Shapely and Gale's theoretical mathematical algorithms about marriage stability and moneyless markets to school choice programs for urban school systems, the program that matches new medical school graduates with their first hospital residencies, and the national kidney exchange that matches compatible patients and donors from around the country.



Alvin Roth

According to the Golden Goose committee, in 1962, supported in part by the U.S. Office of Naval Research, Gale and Shapley developed the Gale-Shapley deferred choice algorithm, which provided a means by which a large group of men and women could be matched to maximize marriage stability-- they could be paired in such a way as to ensure that no man and woman matched with other mates could both find each other preferable to their own mate.

While this might have seemed frivolous at the time since it was very theoretical, the algorithm actually led to a number of practical market applications by Roth. His applications included school choice systems for New York, Boston, and other cities and the National Resident Matching Program, which pairs new doctors with hospitals nationwide.

Roth, with funding from the National Science Foundation, then built on another algorithm developed in part by Gale and Shapley, to develop a kidney exchange system that today is responsible for matching thousands of kidney recipients with unrelated kidney donors who otherwise might not have been able to receive kidneys compatible with their immune systems. (For more on Roth's work see [Update, April 15, 2013](#)).

A video on the Shapely-Gale and Roth work is available here:

<http://www.goldengooseaward.org/wp-content/uploads/2013/09/Two-New-Golden-Goose-Awards-Announced-9-12-13.pdf>.

AAU Issues Statement of Support for the Social and Behavioral Sciences

In the midst of continuing questions about federal funding for the social and behavioral sciences, on September 17, the Executive Committee of the Association of American Universities (AAU) issued a statement of support for these sciences.

The AAU is composed of 60 American and two Canadian research universities organized to develop and implement effective national and institutional policies supporting research and scholarship, graduate and professional education, undergraduate education, and public service in research universities.

In the statement, the AAU references a number of actions taken by the Congress in recent years. These include: a provision in the Consolidated and Further Continuing Appropriations Act of 2013 (P.L. 113-6) that puts new conditions on the funding of political science studies by the National

Science Foundation (NSF), a provision proposed in a House subcommittee but not included in P.L. 113-6 that would have barred economic health research by the National Institutes of Health (NIH), and recent communications from Members of Congress which have questioned the value of social science research grants awarded by the NSF and other federal research agencies.

The AAU Executive Committee asserts that: "Even in the context of federal budget constraints, we believe that actions by Congress to defund or stigmatize entire disciplines of research would severely cripple, in principle and practice, the federal government's historically productive commitment to the funding of basic research across all disciplines." It goes on to say that: "The social and behavioral sciences...have been funded by NSF, NIH, the Department of Defense, and other federal agencies to directly support their missions by advancing fundamental new understanding of business and the economy, of human development and behavior, of groups and organizations, of other nations and cultures, and of our democracy and how it can be strengthened." This research, the statement notes, "has been important to addressing the nation's most pressing challenges in areas such as national security, education, commerce, health, energy, crime and public safety, and transportation."

Furthermore, the "insights and innovations from the social and behavioral sciences are no less valuable than discoveries in the physical and life sciences." The AAU also makes the argument that "interdisciplinary research engaging the social and behavioral sciences is producing new knowledge and understanding that would not have emerged from research within single disciplines." Focusing on examples, such as touch screen tablets and mobile phones, the AAU indicates that these innovations often "rely upon knowledge and discoveries from the physical and life sciences combined with insights from the social and behavioral sciences."

Finally, the statement affirms that "the extraordinary success of federal research agencies such as NSF and NIH over the decades has been a result, in significant measure, of Congress providing strong funding of fundamental research across all disciplines based on proven merit-review processes and refraining from a political process of picking winners and losers among grants or disciplines."

The full statement is available at www.aau.edu.

IOM and NAS Release Workshop Summary on Incarceration and Health

As part of a larger study of the Causes and Consequences of High Rates of Incarceration (see [Update, July 8, 2013](#)), the National Academy of Sciences' Committee on Law and Justice, chaired by Jeremy Travis, President of John Jay College of Criminal Justice, and the Institute of Medicine's Board on Health of Select Populations, chaired by Dan Glazer of Duke University Medical Center, have released a report, *Health and Incarceration: A Workshop Summary*. The workshop was held in December 2012.

The report examines the effects of incarceration itself on health; the particular vulnerabilities of people who are incarcerated; the quality and accessibility of healthcare before, during, and following incarceration; and the consequences for both the individuals and the public health in their communities when they are released. One increasingly prominent set of issues concerns capitalizing on opportunities to improve care and screening for a population with a high burden of diseases.

A background paper for the workshop, "Incarceration and Health," by Josiah Rich, Dora Dumont, and Scott Allen, argues that the failure of the U.S. healthcare system to adequately treat mental illness and addiction contributed to the escalation of the incarceration rate. The emptying of mental health facilities, led to the shift of many of these people into the prison system, the paper claims. In addition, substance abuse, a chronic health problem also became a criminal justice problem. In both of these cases, Rich et. al, argue treatment systems for those incarcerated were inadequate.

Finally, jails, rather than prisons, provide unique challenges and opportunities for health. The stays

are often too short to provide much screening or treatment; however, the very large numbers of people passing through jails with a tremendous burden of disease provide opportunities to have a significant public health impact.

The report provides a brief overview of prisoner health, including the impact of incarceration on health. It then considers healthcare, including the legal basis for its provision, some aspects of its availability during incarceration, and the dilemmas experienced by many healthcare practitioners as they seek to provide quality care within correctional facilities. It also considers a variety of proposals and models for improving the health and healthcare of vulnerable populations affected by incarceration, with particular attention to workforce issues and the importance of the continuity of care.

The workshop participants spent considerable time discussing the Affordable Care Act's perceived potential to significantly improve inmates' access to healthcare, support changes in the workforce, reach inmates' families and communities, and possibly lead to a shift in inmates' right to care.

The workshop report is available for free download at: http://www.nap.edu/catalog.php?record_id=18372.

NSF Seeking Nominations for Waterman Award

The National Science Foundation (NSF) is pleased to accept nominations for the 2014 Alan T. Waterman Award. Each year, the Foundation bestows the Waterman Award in recognition of the talent, creativity, and influence of a singular young researcher. Established in 1975 to commemorate the Foundation's first Director, the Waterman Award is NSF's highest honor for promising, early-career, researchers.

Nominees are accepted from all sources, from any field of science and engineering that NSF supports. The award recipient will receive a medal and an invitation to the formal awards ceremony in Washington, DC. In addition, the recipient will receive a grant of \$1 million over a five-year period for scientific research or advanced study in any field of science or engineering supported by the National Science Foundation, at any institution of the recipient's choice. We are especially interested in nominations for women, members of underrepresented minority groups, and persons with disabilities.

Candidates must be U.S. citizens or permanent residents. They must be 35 years of age or younger, or not more than seven years beyond the receipt of their Ph.D. degree, by December 31 of the year in which they are nominated.

Candidates should have demonstrated exceptional individual achievements in scientific or engineering research of sufficient quality, originality, innovation, and significant impact on the field to place them at the forefront of their peers.

Complete nomination packages, consisting of nominations and four letters of reference, are due by October 25, 2013. The nominations and letters must be received through the FastLane system. To submit a nomination, please visit <https://www.fastlane.nsf.gov/honawards/>.

For questions or further information contact the Program Manager for the Alan T. Waterman Award at waterman@nsf.gov or 703-292-8040.

Applications Wanted for NCHS/AcademyHealth Health Policy Fellowship

AcademyHealth is seeking applications for its Health Policy Fellowship, which brings two visiting scholars to the National Center for Health Statistics (NCHS) for a 13-month period to work collaboratively with NCHS staff on a wide range of projects. Fellows will conduct new and innovative analyses as well as participate in developmental and health policy activities related to

the design and content of future NCHS surveys.

Applicants may be at any stage in their career, from doctoral students (students must have completed course work and be at the dissertation phase of their program) to senior investigators, and must demonstrate training and/or experience in health services research and its methodology, especially quantitative data analysis, reflecting disciplines such as public health, public administration, health care administration, sociology, health economics, health statistics, anthropology, and behavioral sciences, or the health professions (e.g., medicine, nursing, dentistry, pharmacology, etc.). Proposals should demonstrate knowledge of the NCHS data systems selected for study and their appropriateness for the proposed investigation.

All applicants are strongly encouraged to complete the online [Statement of Interest](#) form prior to applying. Once the form has been submitted, AcademyHealth and NCHS staff will follow up to provide both guidance on the proposal and assistance on the application process.

More information about the Health Policy Fellowship is available at www.academyhealth.org/nchs.

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Address all inquiries to COSSA at newsletters@cossa.org Telephone: (202) 842-3525

The Consortium of Social Science Associations (COSSA) is an advocacy organization promoting attention to and federal support for the social and behavioral sciences.

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