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The Second Best Thing About Payday

nih record

ABOVE • *Sierrah Scofield (l) and her mother Jeaneva Scofield helped NICHD celebrate 50 years of child health research. See story at right.*

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The NIH Record is recyclable as office white paper.

'Imaginative Research...from Conception to Old Age'

NICHD Celebrates 50 Years of 'Research for a Lifetime'

By Carla Garnett

What do you get when you take a noble idea, add a determined advocate and combine with a persistent pediatrician? On Oct. 17, 1962, that formula became NIH's ninth institute, or what we now know as the Eunice Kennedy Shriver National Institute of Child Health and Human Development. Recently, NICHD celebrated "Research for a Lifetime," a 50th anniversary colloquium held in Masur Auditorium.

NICHD director Dr. Alan Guttmacher gestures toward a slide showing President John F. Kennedy on Oct. 17, 1962, the day JFK signed legistation creating the child health institute.

"We gather here on this special day to celebrate 50 years and to think about where the next 50 might take us," said NIH director Dr. Francis Collins. "It is indeed an exhilarating moment to see that potential. The science that NIH has the potential to support right now across the board—but particularly in the areas that

SEE **NICHD ANNIVERSARY**, PAGE 6

NIH director Dr. Francis Collins (l) speaks with ACD member Dr. Reed Tuckson.

ACD Workgroup Reports To Receive 'Muscular' NIH Response

By Rich McManus

NIH plans to respond emphatically to recommendations made last June by three working groups that report to the advisory committee to the NIH director (ACD). NIH's responses received a spirited reception at the Dec. 6-7, 2012, ACD meeting and will rely substantially, at a time of budget constraints, on the resourc-

SEE **ACD**, PAGE 4

When Games Are Serious

Editor of 'Games for Health Journal' Visits NIH

By Belle Waring

Videogames have taken on serious purpose.

"There's real power in using games," said *Games for Health Journal* editor-in-chief Dr. Bill Ferguson during his recent talk at NIH. "It's in wanting to get better and managing your own care."

Hosted by NICHD's Division of Intramural Research, Ferguson introduced the peer-reviewed journal as the first of its kind. In a freewheeling talk, he encouraged his audience to submit their manuscripts for publication.

Since its launch in February 2012, *Games for Health* has focused on clinical applications for improving health and well-being, including:

- Disease prevention, self-management, adherence
- Cognitive, emotional, behavioral health
- Games in home-to-clinic telehealth systems

SEE **GAMES**, PAGE 8

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NIH...Turning Discovery Into Health

nih record

briefs

STEP Forum on NIH, Social Media

The staff training in extramural programs (STEP) committee will present an Administrative Strategies forum on the topic "NIH and Social Media: You've Got Connections!" on Tuesday, Jan. 8, from 9 to 11 a.m. in Lister Hill Auditorium, Bldg. 38A (with expo booths open until noon).

Use of social media in the workplace is exploding. NIH social media policies provide guidance for effectively communicating with various communities. How do you match these media to your strategic needs? Come learn from the experts how you can use social media tools such as Twitter, YouTube, Yammer, LinkedIn, Facebook, etc.

Data Integration Workshop, Jan. 10-11

An NIEHS-sponsored program continues its workshop series with an exploration of "Integrating Environmental Health Data to Advance Discovery," Jan. 10-11 at the Keck Center in Washington, D.C. Visit http://nas-sites.org/emergingscience/meetings/data-meeting/ for more information.

The workshop, part of the National Academies Emerging Science for Environmental Health Decisions series, is free and open to the public. To register to attend and webcast access, go to www.surveygizmo.com/s3/1087258/January-Data-Meeting-On-Site-Registration.

This meeting aims to foster discussion about the need for enhanced data integration in environmental health sciences and evaluate the lessons that can be learned from integrative initiatives in other scientific domains. It also offers participants a forum for strategizing about ways the community can take major steps toward improving data coordination and access to advance understanding about environmental effects on human health.

Join the NIH-HHS Mentoring Program

NIH wants you to join the HHS Mentoring Program. Federal employees interested in serving as mentors and mentees across the NIH community are invited to join the NIH January 2013 cohort.

"Partnering for Excellence" through building a confidential, interactive relationship is the cornerstone of this program. The program's emphasis on developing core, leadership and management competencies at various levels will ensure a beneficial experience for both mentors and mentees.

This free program features:

- Peer-to-peer and senior-to-junior mentoring relationships
- Online application and matching system to connect individuals
- Online mentor-mentee orientation
- 1-year mentoring relationship commitment
- Professional development events and activities

As a tool in employee development, the Mentoring Program does not supplant the NIH scientific mentoring and customized IC leadership mentoring programs available to employees in some institutes and centers. Instead, it is intended to fill any gaps where those programs do not exist and enables NIH-wide or even across-HHS relationships.

For more information, visit http://trainingcenter.nih.gov/HHS_Mentoring.html or email nihhhsmentoringprog@od.nih.gov.

Protocol Navigation Lecture, Jan. 7

The first lecture in the 2013 IRP Protocol Navigation Training Program Seminar Series will be held Monday, Jan. 7 from 1 to 2 p.m. in Bldg. 50, Conf. Rm. 1227/1328. The program is a trans-NIH effort to develop resources and tools and to provide training for intramural staff involved in protocol development, writing, coordination and management. Dr. Rebecca J. Williams of NLM's National Center for Biomedical Communications will present "ClinicalTrials.gov: Registration and Results Submission Requirements." For more information, contact Beverly Barham, (301) 594-2494, bbarham@mail.nih.gov or Marcia Vital, (301) 451-9437, vitalm@mail.nih.gov.

Pedestrian Safety Improved on Campus

All of NIH's intersections and high-traffic areas were recently surveyed as part of a study to improve pedestrian safety. Past accidents were taken into account and NIH's campus was compared to those of similar size. Analysis of the data confirmed that our campus is relatively safe, but there is room for improvement.

Two immediate enhancements have been made to Center Dr. and South Dr. (near Bldg. 50) and South Dr. and Service Rd. West (between Bldgs. 10 and 13). These two sites were selected based on daily high volume of pedestrian and vehicular traffic and a history of past accidents. Improvements force pedestrians to use more visible and predictable walking patterns. Construction on the two intersections started in mid-October and lasted about a month. Additionally, lighting improvements were made to enhance pedestrian visibility across campus.

There are plans to add solar-powered, pedestrian-activated crosswalk lights on Center Dr. in front of Bldg. 1. This is a particularly well-traveled area for both pedestrians and drivers.

Employees are reminded to cross at designated crosswalks, wear reflective clothing and, while driving, remain vigilant and refrain from texting or using wireless devices.

Quality Oral Health Care May Inhibit Dementia

By Jan Ehrman

It's time to 'fess up. Do you brush your teeth after every meal? Floss regularly? See your dentist at least twice a year? If so, you may not only be warding off dental problems, you might also be reducing your risk of developing Alzheimer's disease or other dementias, new study results indicate.

The study supporting a link between proper dental care and cognitive status was conducted by researchers in California and reported in a recent issue of the *Journal of the American Geriatrics Society*. Funding was provided by three NIH components: the National Cancer Institute, the National Institute on Aging and the National Institute of Arthritis and Musculoskeletal and Skin Diseases.

Brain experts have long sought clues to what risk factors may heighten the likelihood of developing Alzheimer's disease and dementias associated with aging. However, aside from genetic factors and increasing age, few identifiable risk factors have been established to date (though a recent study indicates that loneliness in later life may elevate dementia risk). Alzheimer's disease, a disorder of the brain that causes progressive cognitive decline, currently affects as many as 5 million Americans. There is no cure. It is the sixth leading cause of death in the U.S.

As for dental disease, the condition has already been associated with heart disease, stroke, diabetes, Crohn's disease, ulcerative colitis and even a shortened lifespan.

Led by Dr. Annlia Paganini-Hill of the Clinic for Aging Research and Education of the University of California, Irvine, the scientists used mailed questionnaires to assess the association between tooth count/oral health behaviors and the development of dementia in nearly 5,500 elderly men and women who were followed for 18 years. The researchers adjusted for other factors that could have had an impact on the development of dementia such as smoking, alcohol consumption, head injury, education and family history of dementia. Results were based solely on self-reported dental habits and follow-up diagnoses of participants reported by relatives, hospital records and death certificates. (Subjects were not examined by dentists or the investigators).

"The major findings were that good oral health behaviors, as well as adequate natural masticatory function—that is, having enough teeth to chew food successfully—were associated with lower risk of dementia," said Paganini-Hill. "Individuals with inadequate masticatory function [fewer than 10 teeth in the upper jaw and 6 in the lower jaw] who did not wear dentures had an elevated risk for dementia compared to those with an adequate number of teeth," she said.

Dr. Annlia Paganini-Hill

Paganini-Hill noted that, for men, the increase in dementia was 91 percent; for women, the increase was 22 percent. Equally important, "women who did not brush daily had a 65 percent increased risk for dementia compared to those brushing three times a day. In men, the increase was 22 percent," she added.

While these findings are statistically significant, as well as provocative, the scientists are quick to note that their investigation does not indicate that poor dentition causes Alzheimer's disease or severe cognitive decline, per se. However, an association between the two is apparent.

What can be gleaned from these results? "Periodontal pathogens [bacteria] can produce chronic system inflammation, including in the brain, and that could be the contributing factor to the association between dental disease and Alzheimer's," Paganini-Hill explained.

Your best protection, based on this research? Brush and floss every day and see your dentist for regular cleanings and oral exams, the researcher advised.

SEED Program Holds Graduation

Fourteen NCI employees recently graduated from the institute's Senior Executive Enrichment & Development (SEED) Program. The program was piloted in 2007 and has evolved into an internal leadership program for NCI supervisory staff at the GS-14/15 levels. The 12-month program offers the opportunity to develop leadership skills, explore strategies to increase effectiveness, network with peers from across NCI and build a community of practice to advance NCI's mission. The 2012 graduating class includes (front row, from l) Terri Cornelison, Percy Ivy, Elise Kohn, Nina Goodman, former program manager Yasmin Nasser, Carol Kosary, Anu Budhu and Michael Small. At rear are (from l) Rashmi Sinha, Darren Henderson, Kristin Komschlies, Karen Colbert, Steve White, Chand Khanna and Carrie Laurencot.

ACD

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***Above, l**:*
On hand at the 105th gathering of the advisory committee to the director are (from l) Dr. Sally Rockey, NIH deputy director for extramural research; Dr. Lawrence Tabak, NIH principal deputy director; and Collins.

***Above, r**:*
ACD member Dr. Clyde Yancy (l) of Northwestern University chats with Tuckson.

***Below**:*
NHLBI director Dr. Gary Gibbons reports to the ACD about his institute's work.

PHOTOS: BILL BRANSON

es of the Common Fund.

"These are quite muscular responses," Collins told the 105th gathering of the ACD.

Two of the groups dovetail, focusing on the size, sustainability and diversity of the biomedical research workforce, while the third, on Big Data, foresees a need to create a new leadership position to oversee a management enterprise to harness the value of biomedical research data.

"We estimate the average yearly support over the initial 5-7 years of the [Big Data] programs to be about $125 million," said NIH principal deputy director Dr. Lawrence Tabak.

Generating the most passion around the table were the implementation plans on diversity; in addition to concerns with being fair, NIH is determined not to lose out on the intellectual contributions of society as a whole.

"Lack of diversity is doing damage to our ability to carry out our mission," Collins declared. Added Tabak, "This is about assuring that the best and brightest enter the biomedical research workforce...It means we have to be committed to diversity in all its dimensions." The scientific workforce, he added, "needs to look like our nation."

"This assignment was a time-bomb," said working group co-chair Dr. Reed Tuckson of the UnitedHealth Group. "This is a heavy-laden issue. No matter which way you turn, someone's going to be irritated."

"This is not just a moral imperative," said Dr. Clyde Yancy of Northwestern University, "but... the world changed on Nov. 6, and it's nice to be in the forefront" of a rapidly diversifying culture.

Foreseen in the diversity implementation plan is the hiring of a chief diversity officer and creation of the Building Infrastructure Leading to Diversity (BUILD) Program and a National Research Mentoring Network. Average yearly support for the BUILD/NRMN consortium is estimated to be $50 million, which would fund some 10 primary site institutions and about 600 trainees. Tabak noted that a rigorous mentored research experience "is the single best predictor of a person's choice to pursue a biomedical research career."

"The Common Fund can support it for 10 years," said Collins, "then if it succeeds, we can ask the institutes and centers to fund it further."

Collins said NIH is going to begin implementing the diversity plan regardless of federal budget woes and noted that he is anxious to learn, in coming years, how many of its beneficiaries end up in the National Academy of Sciences or go on to hold named professorships at universities.

The working group on the biomedical research workforce made multiple recommendations to "enhance the training of biomedical researchers and enable tracking of their career outcomes. NIH is planning to enhance training of graduate students and postdoctoral researchers through a grants program that would support innovative approaches to complement traditional research training and by encouraging the adoption of individual development plans for all trainees."

The full report is available at http://acd.od.nih.gov/bwf.htm.

Among other topics at the December meeting:

• The NIH-FDA Tobacco Regulatory Science Program, which not only complements existing NIH tobacco research, but is also one of the few scientific programs to be looking at increased funding—approximately $66 million in new funding in FY 2012. "We expect that will grow," noted Dr. David Murray, director of NIH's

ACD member Dr. Joan Brugge, chair of the department of cell biology at Harvard, makes a comment during the meeting.

Office of Disease Prevention. Among target problems? Adult smoking rates have stalled since 2004 at 20 percent.

• A decision not to dissolve the National Institute on Drug Abuse and the National Institute on Alcohol Abuse and Alcoholism and create a new institute on substance use, abuse and addiction research, as recommended by the Scientific Management Review Board.

"In mid-November, after much deliberation, I decided not to proceed with a structural reorganization of NIAAA and NIDA in favor of pursuing instead a functional integration of the existing research resources," Collins reported. Added Tabak, "We feel confident, we feel very strongly that we can meet the goals of the SMRB recommendations—to change the status quo—through functional integration."

• Adoption of a new, single NIH logo to replace literally hundreds of logos generated over the years by the institutes and centers. That fragmented corporate identity works counter to NIH's desire to be recognized by the public and Congress and appreciated for its work, argued John Burklow, NIH associate director for communications and public liaison. Owing to an unchecked proliferation of logos, "We're making it not just difficult—but impossible—for the public to understand who we are," he said.

Noted Collins, "We certainly need to have a stronger central identity if we are going to have any hopes of improving our ability to communicate with the public and for them to know what we do." He quipped, "It's goodbye to the 'coat-hanger' [NIH's old logo], but it's not going to be easy to get rid of it [since it is carved literally in stone in places around NIH]."

Murray To Discuss Global Disease Burden, Jan. 17 at Natcher

Dr. Chris Murray

The Fogarty International Center will host a presentation and discussion of the Global Burden of Disease 2010 study, which was recently published in *The Lancet*. The study's co-author, Dr. Chris Murray, and his colleagues from the Institute for Health Metrics and Evaluation at the University of Washington will present their data and lead a discussion on Thursday, Jan. 17 from 11 a.m. to 12:30 p.m. in Natcher Auditorium.

NIH director Dr. Francis Collins will introduce the talk, titled "The Global Burden of Disease 2010 Study: What Does It Mean for the NIH and Global Health Research?" Attendees are encouraged to come with questions pertinent to their research areas, so they can help direct the discussion.

The recent GBD 2010 study is the largest single report ever published by *The Lancet*. The project is a systematic, scientific effort to quantify the comparative magnitude of deaths and disability due to diseases, injuries and risk factors by age, sex and geography with a look at these trends over time.

The GBD construct of the burden of disease is health loss, not income or productivity loss. For decision-makers, health-sector leaders, researchers and informed citizens, this approach provides an opportunity to see the big picture, to compare diseases, injuries and risk factors and to grasp the most important contributors to health loss.

Murray is a professor of global health at the University of Washington and director of the Institute for Health Metrics and Evaluation (IHME). A physician and health economist, his work has led to the development of a range of new methods and empirical studies to strengthen the basis for population health measurement, assess the performance of public health and medical care systems and estimate the cost effectiveness of health technologies. IHME is focused on the challenges of measurement of health outcomes, health services, financial and human resources and evaluation of policies, programs and systems and decision analytics.

The proceedings will be videocast. For details, visit http://1.usa.gov/RE5obo.

Do You Know Your Tier?

"Snowmageddon," earthquakes, Hurricane Sandy and derechos are just a few emergency situations that have prompted NIH to take a broader approach in preparing for all types of emergencies to ensure the safety of employees, patients, visitors and animals. It is essential for NIH to maintain its continuity of operations during emergency situations that may affect or close some or all facilities. NIH has developed a plan to communicate to its employees during an emergency situation and help them better understand how to respond during any situation.

NIH is instituting the Employee Emergency Designation Program, a 3-tiered approach based on workers' day-to-day functions.

Tier I—Emergency employees

Tier II—Mission critical/mission operations (non-emergency employee/teleworker)

Tier III—Other mission services & support (non-emergency employee/non-teleworker)

A copy of the guidelines including descriptions of each tier can be found at www.ors.od.nih.gov/ser/depc/info/Pages/default.aspx.

NICHD ANNIVERSARY

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***Above, from l**: Joining Guttmacher (r) in celebrating 50 years of "Research for a Lifetime" are (from l) NIH director Dr. Francis Collins, NICHD deputy director Dr. Yvonne Maddox, Dr. Constantine Stratakis, NICHD scientific director, and Dr. Catherine Spong, institute associate director for extramural science.*

Showing "Camp Shriver" photos from the early 1960s, guest speaker Dr. Timothy Shriver said such pre-NICHD images forecast an entity that bucked convention from its conception.

PHOTOS: BILL BRANSON, ERNIE BRANSON

NICHD has responsibility for—has never been more exciting, more full of promise. Whether we're talking about the basic science of human development or the much more applied research and translation that includes not only children's health but also women's health and rehabilitation, the opportunities now are breathtaking."

NICHD director Dr. Alan Guttmacher said a similar feeling of promise must have infused President John F. Kennedy when he wrote his hopes for the bill creating the institute: "'This legislation will encourage imaginative research into the complex processes of human development from conception to old age.' NICHD has done that and much more."

'Rebellious' Roots

As Collins explained, the institute did not start with unanimous support. In fact, Dr. James Shannon, NIH director at the time, was not enthusiastic about the proposal to fund child health research. He, like many others at the time, held with conventional wisdom—and science back then—that children were a mostly disease-free population that did not need to be studied.

It was Johns Hopkins pediatrician Dr. Robert Cooke, along with fierce advocate Shriver, who met with top congressional leaders, beating back every criticism, framing every counter-argument and ultimately pushing NICHD into existence.

Showing "Camp Shriver" photos from the early 1960s of his boyhood backyard overrun with laughing, frolicking children of all ages and races—most with some intellectual disability—guest speaker Dr. Timothy Shriver said such pre-NICHD images forecast an entity that bucked convention from its conception. That entity now carries his mom's name.

Colloquium Highlights Lifespan Science

To celebrate its 50th anniversary, NICHD gathered nearly two dozen principal investigators and academicians—some former NIH'ers, some grantees, some Nobel Prize winners—to discuss the current state and future of human development research in three segments: Healthy Beginnings; Beyond Childhood: Promoting the Health of Women, Families and Individuals with Disabilities; and the Next 50 Years: Advancing Science, Improving Lives.

NICHD deputy director Dr. Yvonne Maddox introduced the discussion: "I hope today will be a true colloquium—'co,' meaning 'together'… 'loquium,' meaning 'to talk.' Throughout the day, I hope we can all be encouraged to talk together about the brilliant science we at NIH have all had a chance to experience."

Highlights from the research presentations:

• Grantee and Nobelist Dr. Eric Wieschaus of HHMI and Princeton, discussing molecular mechanisms that govern development of the embryo into a complex organism, said NICHD was a pioneer in his field.

Many investigators early on, he explained, had not fully anticipated the extent to which insights gained from studying developmental genes in model organisms such as flies, worms and frogs would help us understand how such genes work in a developing human.

"NICHD was one of the first institutes to really take advantage of that insight in that it had a tradition from the very early days of supporting research in basic developmental biology," Wieschaus explained.

• Nobel laureate Dr. James Heckman of the University of Chicago reviewed dramatic changes over the past 50 years in thinking about individuals' capabilities. It used to be that a person's capacity to flourish was defined largely by IQ, he said. Today, there is more complicated understanding of the ways cognition, personality traits and character skills contribute to a person's success.

Sesame Street's *Cookie Monster joins Collins in a duet of* Happy Birthday, *eventually visiting children's units of the Clinical Center and the Children's Inn. Sesame Workshop vice president Dr. Rosemarie Truglio, a former NICHD advisory committee member, also spoke at the colloquium.*

"Your roots are rebellious," declared Shriver, who serves as Special Olympics chair and CEO.

Remarkable Past, Unlimited Potential

The audience also heard from another pediatrician, one who worked at NICHD for nearly half its existence—most of those 25 years as its leader. Former NICHD director Dr. Duane Alexander summarized the institute's significant research accomplishments.

In a nutshell: From the development of home pregnancy tests to the enormously successful Back-to-Sleep Campaign, from standardization of newborn screenings to virtual elimination of mother-to-child HIV transmission, NICHD-supported science has been at the forefront of nearly every major advance in children's health in the last half century.

Over that time, infant death rates have dropped by more than 70 percent and NICHD has funded nine Nobel Prize winners.

"NICHD has made an enormous contribution to children in this country and to medicine in general," said Cooke, in a one-on-one videotaped conversation with Guttmacher. "What you do for the child seems to make an enormous difference in his life."

Dr. Freeman Hrabowski, president of the University of Maryland Baltimore County, commended NICHD on its longtime commitment to science and, specifically, to scientists. He said researchers can multiply the institute's investment in them by helping to mentor and provide meaningful experiences for the next generation of researchers.

Young Isaac Barchus is delighted by Cookie Monster.

In explaining why this is essential, Hrabowski noted, "What is it that scientists do in the world? We have shown the world that humankind can have an eternal spring of hope through science. All things are possible."

Humble Beginnings

Guttmacher marveled that the seeds for NICHD's remarkable progress actually were planted by a small task force appointed by President-elect Kennedy in December 1960. Cooke, a member of that task force, recalled that the team agreed unanimously about a need for an NIH institute dedicated to children's health research. A key advisor to the President, Ted Sorenson, concurred. So with support from the President, Cooke and Eunice Kennedy Shriver took their case to Capitol Hill. They met with Sen. Lister Hill and Rep. John Fogarty, among other lawmakers, to press for NICHD. In less than a year, President Kennedy signed the legislation establishing the institute.

In addition to reflections about early NICHD, the anniversary event also gathered nearly two dozen presenters and panelists to participate in an all-day think tank (see sidebar). The day concluded with a special visit by *Sesame Street's* Cookie Monster, who joined Collins in a duet of *Happy Birthday*. The muppet eventually made his rounds to children's units of the Clinical Center and the Children's Inn.

The entire event is archived at http://videocast.nih.gov/launch.asp?17704.

• In addition, Dr. Ralph Brinster of the University of Pennsylvania discussed the mammalian germline; Dr. David Barker of Oregon Health and Science University talked about preventing chronic disease by improving human development; Dr. Neal Halfon of the University of California, Los Angeles, presented "Integration of Research, Health Care and Policy"; and Dr. Geeta Swamy of Duke University addressed the challenge of preterm birth.

• Former NICHD scientist and clinical director Dr. Lynn Loriaux discussed several leading figures who established the institute's intramural research program. Their work led to development of the pregnancy test and the first oral contraceptive.

• Dr. William Crowley of Harvard Medical School recounted 36 years of NICHD-funded bedside-to-bench activities.

• Dr. Carolyn Westhoff of Columbia University offered a comparison of available contraceptive methods in 1962 and 2012, providing a stark reminder of how much the field has changed.

• The past 50 years have also seen a sea change in the perception of research on rehabilitation, including technologies and clinical trials. Dr. Michael Selzer of Temple University School of Medicine reviewed challenges and opportunities in research on repairing, replacing and restoring neural function in disability, either from birth or as a result of disease or injury.

• Dr. Teresa Woodruff of Northwestern University spoke of her nationally recognized Saturday training program in which Chicago high school juniors and seniors learn about both basic research and clinical practice in the context of studying how to preserve the fertility of young cancer patients.

• Finally, a panel chaired by Dr. Linda Giudice of the University of San Francisco addressed culture change in the practice of science. Panelists included former NIH deputy director for extramural research and former deputy director of NICHD Dr. Wendy Baldwin, now of the Population Reference Bureau, Dr. Joan Reede of Harvard University and former NICHD scientific director Dr. Arthur Levine of the University of Pittsburgh.

Panel discusses culture change and the practice of science.

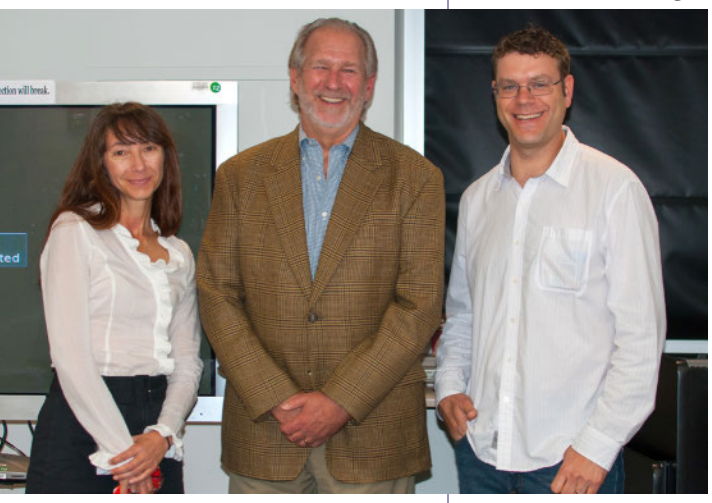
GAMES

CONTINUED FROM PAGE 1

Top:
Games for Health Journal *editor-in-chief Dr. Bill Ferguson pitches the peer-reviewed journal as a new place to publish.*

Below:
Ferguson is flanked by audience members: research consultant Dr. Katherine Wood of NHLBI and NIH Games4Science coordinator Jeremy Swan of NICHD.

PHOTOS: JEREMY SWAN



- Nutrition, weight management, obesity

In a literature review of randomized controlled trials, *Games for Health* concluded that most articles show promising results in use of videogames, with exergames—like those played on Wii—as the top choice. Games also show potential for physical rehabilitation, pain management and education.

"But we're not just interested in dissemination to patients," said one audience member. "We want to get ideas and information back from them."

NIDDK clinical fellow Andrew Demidowich added: "If our goals include the elements needed for behavioral change, then it's not just spitting out dos and don'ts. We want to change the culture surrounding a disease."

For example, children with type 1 diabetes may need fingersticks up to 8 times a day—not easy for anybody, especially a young child.

"So many people lack medical literacy," Demidowich continued. "Doctors lack the time to educate."

But a videogame can normalize fingersticks, as well as create a cohort of friends getting the same message, he said. This can improve adherence.

Ferguson embraced these ideas.

"I'm here not only to share the journal, but to ask you to shape it," he said. "We have a real opportunity to create a product for you…I'm really intrigued in expanding our mission from games-for-health to games-for-science."

Good timing. NIH Games4Science, a new group sponsored by NICHD, is creating a network for interested colleagues. Jeremy Swan, who coordinates the group and manages the listserv, suggested these uses for games:

- Building a virtual maze—for mice
- Creating 3-D monkeys—for other monkeys
- Teaching algorithms—for game developers
- Crowdsourcing to nonexperts—for example, gamers using Foldit, an online game about how proteins fold, helped solve the structure of an enzyme involved in the reproduction of HIV. Foldit gamers shared author credit in *Nature*.

Interactivity is key. But what about metrics?

Games with avatars—visual representations of the players—seem to work, Ferguson said, as long as you can identify with the avatar. "But there has been very little research on metrics. This is fertile ground for study."

We know that video games appeared in the 1980s, and by the next decade they were a national trend. In 2009, as the White House launched initiatives on science, technology, engineering and mathematics, President Obama asked STEM to examine what makes an effective video game. Design competitions took off and in 2010 came the National STEM Video Game Challenge. In November 2011, the Federal Games Guild, led by the White House Office of Science and Technology Policy, was launched.

Meanwhile, the NIH database RePORT currently lists more than 50 separate research projects using video games, with total funding over $38 million.

Two-thirds of American households now play video games and 40 percent of gamers are women and girls—a large, diverse and engaged cohort.

Even as Ferguson rushed off to catch his train, folks lingered in an impromptu meeting: What would we need to plan a successful game jam? A conference on games? What makes a game fun?

The group ranged from medical to techie, including Dan Henry, visiting from USAID.

"Something I did as a kid actually has social value," he said. "Now I'm interested in more hard science."

For information on *Games for Health Journal*, visit www.liebertpub.com/g4h.

milestones

Long-Time NIMH Researcher Crawley Departs

After a career of more than three decades at NIMH, Dr. Jacqueline "Jacki" Crawley has retired to take a position as the Robert E. Chason chair in translational research at the University of California, Davis, MIND (Medical Investigation of Neurodevelopmental Disorders) Institute. Crawley came to NIMH in 1979 as a postdoctoral research associate fellow, remaining since then except for 2 years with the neurobiology basic research program at DuPont.

Returning to Bethesda as a tenure-track faculty member in 1983, she built a rodent behavioral neuropharmacology laboratory at NIMH. With the advent of knockout and transgenic mice, the field had many geneticists willing and able to generate mouse lines, but few people to turn to for behavioral characterization. Her lab became the go-to place for mouse characterization not only within NIH, but also across the nation and then the world. Her book *What's Wrong With My Mouse? Behavioral Phenotyping of Transgenic and Knockout Mice* has since become the gold standard for conducting reliable mouse behavioral research.

Crawley cites the ability to develop these methods—made possible by the scientific flexibility afforded her by working in the intramural program—and the mentoring of young scientists who contributed to this research as highlights of her time at NIMH.

More recently, her lab has developed mouse behavioral assays to mirror symptoms of autism in humans, allowing researchers to test investigational compounds for their potential to reverse social deficits, repetitive behaviors and communication disorders. The lab recently reported that a single compound, mGluR5, could effectively reduce repetitive behaviors and ameliorate social deficits in two mouse models of autism.

Among the numerous honors Crawley has received over her career are the Distinguished Scientist Award of the International Behavioural and Neural Genetics Society, the Marjorie A. Myers Lifetime Achievement Award of the International Behavioral Neuroscience Society and the Autism Awareness Day Keynote Award. She is looking forward to collaborating with clinical experts in autism research, allowing her to develop better models of autism and other neurodevelopmental disorders, with the ultimate goal of discovering effective therapeutics.

Burklow Wins Presidential Rank Award

John Burklow, NIH associate director for communications and public liaison, is one of 8 HHS civil service executives to win the 2012 Presidential Rank of Meritorious Executive. "The awards are presented to a very select group of career civil service executives and senior leaders whose integrity, strength, leadership and sustained performance have earned them one of the most prestigious honors in government," said HHS Secretary Kathleen Sebelius.

Burklow has served as NIH's top communications professional since 2002 and has been a member of the Senior Executive Service since June 2006. From 1999 to 2002, he served as NIH deputy associate director for communications. Before that, he worked in the National Cancer Institute's Office of Cancer Communications, where he began as an intern and rose to deputy director.

Burklow has received numerous NIH Director's Awards, NIH Office of the Director Merit Awards and Special Act or Service Awards since 2001, for a total of more than 20 outstanding performance awards.

Walport To Deliver Barmes Lecture

Sir Mark Walport, director of the Wellcome Trust, will deliver the annual David E. Barmes Global Health Lecture at NIH on Wednesday, Jan. 30 at 11 a.m. in Masur Auditorium, Bldg. 10. Recently named the U.K.'s next chief science adviser, Walport has titled his talk "Global Health: From John Snow to Genome Science."

The Wellcome Trust, a global charitable foundation dedicated to improving health, is a partner in NIH's H3Africa initiative, intended to develop genomics capacity across Africa.

Before joining the trust, Walport was professor of medicine and head of the division of medicine at Imperial College London. He has been a member of the Prime Minister's Council for Science and Technology since 2004. He is also a member of the India U.K. CEO Forum, the U.K. India Round Table and the advisory board of Infrastructure U.K. and a non-executive member of the Office for Strategic Coordination of Health Research.

He has undertaken independent reviews for the U.K. government on the use and sharing of personal information in the public and private sectors. He received a knighthood in 2009 for services to medical research and was elected as fellow of the Royal Society in 2011. He will become U.K. chief scientific adviser on Apr. 1, 2013.

The annual David E. Barmes Global Health Lecture is sponsored by the National Institute of Dental and Craniofacial Research and the Fogarty International Center. NIH director Dr. Francis Collins will give introductory remarks. The lecture will be videocast. For more information, visit http://1.usa.gov/Zoj8KA.

digest

Regular Marijuana Use by Teens Continues to Be a Concern

Continued elevated use of marijuana by the nation's eighth, 10th and 12th graders was also combined with a drop in perceptions of its potential harms in this year's Monitoring the Future survey, an annual survey of eighth, 10th and 12th-graders conducted by researchers at the University of Michigan. The survey was carried out in classrooms around the country under a grant from the National Institute on Drug Abuse.

The Monitoring the Future survey showed that teens' perception of marijuana's harmfulness is down, which can signal future increases in use.

The 2012 survey shows that 6.5 percent of high school seniors smoke marijuana daily, up from 5.1 percent 5 years ago. Nearly 23 percent say they smoked it in the month prior to the survey, and just over 36 percent say they smoked within the previous year. For 10th graders, 3.5 percent said they use marijuana daily, with 17 percent reporting past month use and 28 percent reporting use in the past year. The use escalates after eighth grade, when only 1.1 percent reported daily use, and 6.5 percent reported past month use. More than 11 percent of eighth graders said they used marijuana in the past year.

The Monitoring the Future survey also showed that teens' perception of marijuana's harmfulness is down, which can signal future increases in use. Only 41.7 percent of eighth graders see occasional use of marijuana as harmful; 66.9 percent see regular use as harmful. Both rates are at the lowest since the survey began tracking risk perception for this age group in 1991. As teens get older, their perception of risk diminishes. Only 20.6 percent of 12th graders see occasional use as harmful (the lowest since 1983), and 44.1 percent see regular use as harmful, the lowest since 1979.

Experimental Agent Briefly Eases Depression Rapidly in Test

A drug that works through the same brain mechanism as the fast-acting antidepressant ketamine briefly improved treatment-resistant patients' depression symptoms in minutes, with minimal untoward side effects, in a clinical trial conducted by NIH. The experimental agent, called AZD6765, acts through the brain's glutamate chemical messenger system.

Existing antidepressants available through prescription, which work through the brain's serotonin system, take a few weeks to work, imperiling severely depressed patients, who can be at high risk for suicide. Ketamine also works in hours, but its usefulness is limited by its potential for dissociative side-effects, including hallucinations. It is being studied mostly for clues to how it works.

"Our findings serve as a proof of concept that we can tap into an important component of the glutamate pathway to develop a new generation of safe, rapid-acting practical treatments for depression," said Dr. Carlos Zarate of the National Institute of Mental Health, which conducted the research. He and his colleagues reported on their results online Dec. 1, 2012, in the journal *Biological Psychiatry*.

New Test Offers More Information on Genetic Causes of Stillbirth

A more precise method for examining a fetus' genetic material may help detect abnormalities in 40 percent more cases of stillbirth than does the traditional method, according to an NIH network study. A stillbirth occurs when a baby dies in the womb prior to delivery at or after 20 weeks of gestation. In the United States, stillbirth occurs in 1 of every 160 births.

When pregnancy ends in stillbirth, doctors may attempt to examine the baby's chromosomes with a technique known as a karyotype. The karyotype is an image of an individual's chromosomes and is used to look for an abnormal number of chromosomes or for abnormally shaped chromosomes. However, karyotyping requires cells to be grown in culture, which is often not possible in a stillbirth. So researchers sought a technique that would be more reliable.

They compared the results of karyotypes from more than 500 stillbirths to results from microarray analysis, a genetic method that detects small segments of missing parts of chromosomes (deletions) or additional sections of genetic material (duplications) that cannot be seen by karyotype.

The findings appeared in the *New England Journal of Medicine*.

volunteers

Have a Family History of Alcohol Addiction?

The National Institute on Alcohol Abuse and Alcoholism is seeking men and women ages 21-30 with a family member (parent or sibling) with a history of alcohol addiction. Our study seeks to identify genes that are related to the response to alcohol in humans (study 11-AA-0180). Volunteers should be healthy and drug-free. Qualified participants will be reimbursed for their participation. The study involves a screening visit and two outpatient visits at the Clinical Center. For more details and to participate, call (301) 435-9397 or email AlcPGstudy@mail.nih.gov.

Asthma Research Volunteers

Individuals 18 years or older with asthma are sought to participate in a 1- to 2-day research study in the Cardiovascular and Pulmonary Branch at the National Institutes of Health. A thorough medical evaluation and monetary compensation will be provided. If interested, call (301) 402-1553.

Overweight Volunteers Needed

NICHD is looking for men and women ages 35-70 who are overweight and have abnormal glucose levels. After an initial screening visit for general health assessment, participants will undergo treatment with a cortisol-blocking medication (mifepristone) or a non-active pill (placebo) for 7 days. Each participant will take both study agents with a gap of 6 to 8 weeks between the two. Testing before and after treatment with the study medications will include blood drawing over 24 hours, urine collection, an oral and an intravenous glucose tolerance test and 1- to 2-day overnight inpatient stay. Compensation will be provided. For more information, call 1-800-411-1222 (TTY 1-866-411-1010) and refer to study 11-CH-0208.

Have Disorders of Digestive Tract?

If you have disorders of the esophagus, stomach, intestines, or bowel, or think you may have one, you may be eligible to participate in a research study looking at the causes of these diseases. All study-related tests and procedures will be provided at no cost. Results will be shared with your physician. Participants must be 18 or older. For more information on study 12-DK-0154 call 1-866-444-2214 (TTY 1-866-411-1010) or visit http://clinicaltrials.gov. Se habla español.

Midlife & Menopause Research Studies Seek Healthy Volunteers

Healthy women ages 40-60 are invited to participate in outpatient research studies. Compensation is provided. Call (301) 496-9576 and refer to study 88-M-0131.

Postpartum Depression Research Studies

Women ages 18-50 who had PPD in the past are invited to participate in outpatient research studies. There is no cost for participation. Compensation is provided. Call (301) 496-9576 (TTY 1-866-411-1010) and refer to study 95-M-0097.

PANDAS Research Study for Children

The National Institute of Mental Health and Yale Child Study Center are jointly conducting a research study of intravenous immunoglobulin (IVIG) for 4- to 12-year-old children with pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS). Children who, after a strep (streptococcal) infection, have suddenly and rapidly developed obsessive-compulsive symptoms for the first time or after a period without symptoms, are eligible. Call Rachel Kuschner at Yale (203) 737-5588 or Lorraine Lougee at NIH (301) 435-6652 (TTY 1-866-411-1010). Email Rachel.Kuschner@yale.edu or lougeel@mail.nih.gov.

NICHD Committee Promotes Positive Work Environment

In conjunction with NICHD's 50th anniversary (see story on p. 1), the institute's worklife enrichment (WE) committee held an employee information fair at the recent NICHD awards ceremony. The committee promotes a positive and productive worklife culture and advises the NICHD director on matters that influence morale and well-being, including support of inclusion, diversity and disabilities awareness.

The WE committee has four parts: the Culture Club, which sponsors cultural events; the health and well-being committee, which promotes employee health and worklife balance; the safety and occupational health committee, which tries to make the workplace safer; and the Take Your Child to Work Day committee, which coordinates NICHD's participation in this event.

WE committee members, along with other NIH organizations, staffed tables to distribute information about topics such as cultural appreciation, employee health and well-being, child care and telework. Visitors could pick up pamphlets about ergonomic workstations and NIH fitness centers, volunteer for the 2013 Take Your Child to Work Day, sign up to be a child's pen pal through the NICHD-Highland Elementary School Partnership, gather information on how to be more environmentally friendly and learn about resources for child or elder care.

The committee is looking to partner with other NIH organizations and ICs on worklife initiatives. If interested, contact Dr. Deborah Henken or Kathleen Stephan, co-chairs of the WE committee, at nichdwecommittee@mail.nih.gov.

WE committee member Dr. Kathy Mann Koepke (l) describes committee programs to Presidential Management Fellows Susan Vorkoper (c) and Laura Damiano.

New CSR director Dr. Richard Nakamura

Nakamura Named CSR Director

NIH director Dr. Francis Collins announced the selection of Dr. Richard Nakamura as new director of the Center for Scientific Review on Dec. 3, 2012. He broke the news at a meeting of the CSR advisory council via a trans-Atlantic phone call.

Nakamura has been serving as acting CSR director since September 2011. He leads CSR's 450 scientists and administrative staff, overseeing their efforts to manage over 80,000 incoming grant applications a year and review the majority of them in CSR peer review groups. CSR holds 1,500 review meetings a year, involving about 16,000 reviewers from the scientific community.

"Richard has done a tremendous job of leading CSR in this transitional period," said Collins. "CSR has experienced many changes in a short amount of time, and Richard has demonstrated extraordinary leadership abilities as CSR continues to evaluate its trans-NIH peer review processes by putting improved and more efficient procedures in place so the NIH can fund the most promising research."

In accepting his appointment, Nakamura emphasized the key role peer review plays in advancing science and ensuring the wise use of taxpayer funds and the importance of working collaboratively with all stakeholders at NIH and in the scientific community.

He listed some initial priorities for CSR:

- Become more scientific in assessing approaches to improving the efficiency and particularly the quality of NIH peer review.
- Work hard to understand and address racial disparities in NIH reviews.
- Collaborate with the NIH and scientific communities to identify critical problems such as the definition of a "new" application and to develop solutions.

He concluded, "I want others to know that CSR is not just the place that conducts reviews but we are an organization that is fundamentally committed to the science of the U.S."

Nakamura spent more than 33 years at the National Institute of Mental Health, where he has served as both its scientific director and deputy director. He also was acting director of NIMH from 2001 to 2002. During his time at NIMH, he received a number of leadership awards, including the Presidential Rank Award.

Nakamura came to NIMH in 1976 as a postdoctoral fellow. In the mid-1980s, he coordinated NIMH's Biobehavioral Program and later was chief of its Integrative Neuroscience Research Branch. Between 1997 and 2007, he served as deputy director. From 2007 to 2011, he was scientific director. While at NIMH, he also has held other positions, including associate director for science policy and program planning; chief, Behavioral and Integrative Neuroscience Research Branch; and coordinator, ADAMHA Office of Animal Research Issues.

Nakamura earned his B.A. in psychology from Earlham College in Richmond, Ind., his M.A. in psychology from New York University and his Ph.D. in psychology from the State University of New York at Stony Brook. He has expertise in a number of areas, including cognitive and comparative neuroscience, science policy/funding and ethics in science. He has published 30 peer-reviewed scientific journal articles, most related to neurocognition in primates.

'Nutcracker' Entertains Inn Children

The American Dance Institute visited the Children's Inn at NIH on Dec. 18 to perform a version of The Nutcracker. *"They generously donated their time to perform for the families in our Giggles Theatre," said Ryan Whited, the inn's family program manager. Joining the ballet dancers on stage were inn guests (from l) Hallie Luton, 7, of Texas; Isabella Ramos, 5, of Washington state; and Robert Mills III, 1, of Georgia. The event was sponsored by the NIH Recreation & Welfare Association.*