

nih record



ABOVE • Respect the Turtle. See story on American Indian heritage below.

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Former County Executive Puts Face on Depression Forum

By Sarah Schmelling

If ever there was an example of someone bringing a human face to a medical condition, Doug Duncan is one. Montgomery County executive for more than a decade, he was campaigning for governor of Maryland last June when he was diagnosed with depression. He decided he should drop out of the race and publicly announced his reasons for doing so.

Duncan relayed his story as part of a recent Staff Training in Extramural Programs (STEP) forum, "Depression: Who Cares?" And while researchers provided a wealth of information on topics such as depression in teens and potential new forms of treatment, it was Duncan's personal story that brought the importance of depression study home.

"It's a wonderful example of

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STEP forum speakers included (from l) Dr. Darrel Regier, former county executive Doug Duncan, Dr. Helen Mayberg, Dr. Maurizio Fava, Dr. Jeanne Miranda and Dr. David Shaffer.

The Landscape That House Built Diné/Oneida Ethnobotanist Speaks on Birth of a Museum

By Belle Waring

Recently, Donna House, an American Indian woman of Diné/Oneida origin, told a packed balcony B in Natcher Center how she designed the grounds of the National Museum of the American Indian to honor indigenous heritage.

She took her place at the lectern only after Clayton Old Elk (Crow tribe), holding an eagle feather and circlet of sweetgrass, had blessed the gathering with a prayer chant.

"I am of the Towering House People Clan of the Diné and Turtle Clan of the Oneida," said House. Although born in Washington, D.C., she was brought up on the Diné reservation, where her grandparents and parents handed down the Diné traditional ways. Her lecture was in observance of the 6th annual NIH American Indian and Alaska Native Heritage Month.

The Diné (also known as Navajo) are a sovereign American Indian tribe whose reservation

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Public Input Sought on Genome Studies

By Sarah Schmelling

What if scientists could wave a magic wand that would reveal everyone's DNA, then be able to say, "Aha!—everyone with diabetes has this kind of pattern, and everyone with heart disease has that kind of pattern?" That is the goal of what are known as genome-wide association studies, or GWAS. NIH scientists are currently trying to parse the human genome for disease signatures, and also taking pains to assure that collection of such data maintains donor privacy.

Genome-wide association studies scan a person's entire genome and explore the connection between genotype and phenotype information to find changes associated with a particular disease or condition. They hold tremendous promise for improving public health. GWAS have the potential to uncover new and more effective methods of prevention, diagnosis and treatment.

What still needs to be determined are the policies for using the data obtained in GWAS

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briefs

Next DDM Seminar Features Conger

The next Deputy Director for Management Seminar will feature Jay Conger on Thursday, Feb. 8 in Masur Auditorium, Bldg. 10 from 11 a.m. to noon. Conger is the Henry Kravis research professor of leadership studies at Claremont McKenna College. He has written or co-written more than 90 articles and 11 books and has two new books in progress that focus on best practices in leadership.

The DDM seminar series, "Management and Science: Partnering for Excellence," was launched last November with national bestselling author Dr. Robert Kriegel's presentation, "Sacred Cows Make the Best Burgers: Creating a Change-Ready Organization." He spoke about challenging the status quo and creating change rather than reacting to it. He encouraged the 300 attendees to go on sacred-cow hunts and eliminate processes, systems and positions that are slowing things down and preventing things from running faster, smoother and better.

The DDM series is open to all NIH employees and there is no need to pre-register. For those who cannot attend or if Masur Auditorium reaches capacity, Conger's presentation will be available via NIH videocasting.

Sign language will be provided. More information about the series, including future speaker biographies, can be found at <http://www.ddmseries.od.nih.gov/>. Call the Office of Management at (301) 496-3271 if you have questions.

FAES Presents Chamber Music Series Concert

On Sunday, Feb. 4 at 4 p.m., FAES will present Viviane Hagner and Tatiana Goncharova, violin and piano, in a Chamber Music Series concert at Congregation Beth-El (within walking distance of the NIH campus). Tickets are \$12 for students/fellows and \$28 regular. For more information call (301) 496-7976 or visit www.faes.org.

STEP Forum on Animal Models

The staff training in extramural programs (STEP) committee will present a Science for All forum on the topic, "Animal Models: Behaving Like Humans...Or Like Animals?" on Thursday, Feb. 8 from 8:30 a.m. to 12:30 p.m. in the Neurosciences Center, Rms. C and D.

In the past two decades, a number of clever assays have been designed to measure changes in behavior and cognition in animal models of human conditions such as addiction, depression

and dementia. What are these assays and what are their limits? How are they validated? How closely do they really mimic human biology and behavior? This forum will explore the latest research in this field.

AORN President Visits Clinical Center

"Celebrating Our Perioperative Practice" is the new mantra of the Association of periOperative Registered Nurses (AORN), according to its 2006 president, Paula Graling, who recently visited the Clinical Center. AORN supports registered nurses in achieving optimal outcomes for patients undergoing operative and other invasive procedures. While here, Graling spoke with operating room nurses, surgical technologists and health technicians during weekly in-service. It was the first time that a sitting AORN president visited nurses in the Clinical Center's department of anesthesia and surgical services (DASS).

Graling emphasized preserving the profession's future, promoting its practice and protecting patients. She also caught up with several of her past students who were recruited by the department. The visit included a DASS tour by Graling's former colleague Barbara Gallagher and a welcome by Dr. Zena Quezado, DASS chief.

Work/Life Center Hosts Camp-Planning Events

The NIH Work/Life Center and the ORS Division of Employee Services will host Camp Week to help NIH parents plan summer care for their children. Now is the time to start searching for camps and other activities. Attend a camp event to pick up a guide and samples of brochures. Camp vendors will not be present, but a child care referral specialist and NIH staff will be available to help from 11 a.m. to 1 p.m. on Tuesday, Jan. 30 at the Rockledge I cafeteria and Wednesday, Jan. 31 in Bldg. 38's lower lobby. Unable to attend the event? Call the Work/Life Center at (301) 435-1618 for a copy of the Summer Guide or call the Resource & Referral Service at 1-800-777-1720 for assistance in finding care options. All services are free of charge to NIH employees.

For those who need reasonable accommodation to participate, call (301) 435-1619, or the Federal Relay, 1-800-735-2258.

nih record

*CC Houses New Contingency Hospital***NIH, Navy and Suburban Team Up to Enhance Emergency Response**

How can NIH best serve during a disaster? Flanked on the east and west by two other medical facilities, how can NIH harness the unique resources available from each? These questions were answered by the emergency-response partnership formed in 2004 by the Clinical Center and its neighbors, National Naval Medical Center and Suburban Hospital. The CC's role in the partnership was tested during Hurricane Katrina, when the hospital's capacity flexed to accommodate about 100 patients from the Gulf Coast region.

The need wasn't realized, but the preparations were a real-life test of the hospital's capability to accept an influx of patients. Accommodating such a surge is a major role for the CC under the partnership. Navy and Suburban can transfer or divert certain types of patients to the CC so incoming sick and injured can receive care at the facility best suited to provide it.

"The partnership hospitals have complementary strengths," said CC director Dr. John Gallin. "The Clinical Center has physicians who represent almost every medical and surgical specialty and subspecialty. Naval Medical Center staff are skilled and trained to respond to all kinds of emergencies and Suburban Hospital is a level-II trauma center."

HHS recognized the partnership's potential early on—it's the only such collaboration that includes hospitals from the private, government and military sectors—and earmarked a 250-bed contingency hospital for its support. The contingency hospital consists of pre-positioned supplies and equipment ready to set up within the CC. This "within the walls" deployment is both practical and unique, noted Dr. David Henderson, CC deputy director for clinical care and liaison for the partnership. "We have space to put the beds and staff from throughout NIH who have volunteered to provide the care."

The CC was to have received the nation's first of 10 such pre-positioned hospitals. But Katrina intervened and supplies and equipment being assembled in Atlanta were redirected to areas affected by the hurricane, explained Capt. Elaine Ayres, project officer for the contingency hospital.

It took months, but the CC's contingency hospital—200 containers covering 3,000 square feet—has now been reassembled, delivered and stored. "The inventory, tailored to supplement what we already have at the CC, allows us to be self-sufficient for at least 72 hours," said Ayres. If the hospital is activated in response to an emergency, staff here will simply unpack the containers and set up the beds, equipment and supplies in predetermined areas throughout Bldg. 10.

The boxes are color-coded, meticulously inventoried and precisely arranged to simplify logistics. They include everything from beds for patients and cots for staff to IV poles and blood-pressure cuffs.

There are no pharmaceuticals and few supplies that can't be stored indefinitely, she said. Ayres, CC assistant director for ethics and technology development, was the Public Health Service team leader for another contingency hospital sent to Mississippi in the aftermath of Katrina and staffed by NIH volunteers. The experience, she added, provided insight into how such resources can best be set up and used.

The partnership staged its third preparedness drill last month. Previous exercises provided opportunities to practice and refine response processes under fairly realistic circumstances. "Our goal is to be flexible and creative in our response to emergencies," Henderson said. 🗨



Top:
Melvin Moton, who works for material management contractor SI International, helps unload the contingency station in the Clinical Center.

Bottom:
Capt. Elaine Ayres inspects contingency hospital inventory.



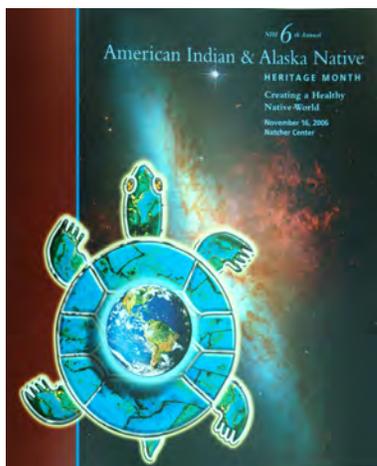
MUSEUM

CONTINUED FROM PAGE 1

Above:
The National Museum of the American Indian at moonrise.

Below:
Commemorative poster shows Turtle present at the creation and embodies a sacred story. The Oneidas' version tells how the Earth was once covered with water until the Great Spirit sent his daughter down from the sky. As she fell, the water animals rushed to prepare a home for her, diving to retrieve bits of Earth from the bottom of the sea. They summoned Turtle and patted the soil over his shell. Dry land grew and formed the place where Sky Woman would live and give birth to twin spirits: good and evil. To this day, Turtle still holds the Earth on his back.

PHOTOS: BILL BRANSON



covers about 18 million acres in northeastern Arizona, Utah and New Mexico. It is the largest area assigned to Indian jurisdiction within the U.S., although the Diné's historical boundaries are much larger than the current reservation.

"I started as a molecular biologist to become a doctor," House said, "but I couldn't separate mind and body." Instead she became a botanist for the Nature Conservancy, surveying federally listed endangered plant species—as well as those "culturally endangered, important for ceremonies, medicine or food"—as she developed a program to protect and conserve the biodiversity of indigenous lands in the southwest. She then worked for 11 years on the planning committee of the National Museum of the American Indian, part of the Smithsonian Institution. The NMAI opened in fall 2004.

"A Native perspective is so tied to the land," she said. "When you ask them who they are, they describe what's around them." She found herself working with conventionally educated architects—a clash of worlds. For starters, they wanted to plant tulips, that springtime staple of the National Mall. She told them tulips were not native—not even to the U.S.

"That was a new topic at the Mall," she laughed. Along with her search for indigenous, unhybridized plants—at 11 different nurseries across the country—came her struggle to teach a different focus, an Indian focus: that we are not a transcendent species but a part of nature to which we bear responsibilities.

For their part, her colleagues had never had a project where the grounds were as important as the architecture. She persuaded them to orient the building entrance to the east—unlike its fellows, which open onto the Mall (north-south)—and to set prisms into the southern wall. These elements align with the solar calendar, solstices and equinoxes.

"We reflect our environment; our prayers are focused there. I decided to honor that," House said. "Many people have gone extinct and this [museum] is in memory of those people."

She introduced herself to the place by canoeing the Potomac and walking the site, "to let the landscape know I was there and to acknowledge all the different plants and animals who live around us."

Around the museum now are four micro-habitats indigenous to the region: an upland hardwood forest, eastern meadowlands, traditional croplands and lowland freshwater wetlands. The wetlands rhyme with the site's original marshy spots and the little-known Tiber Creek, which runs underground in the vicinity. "It's still under there," said House, and still flows into the Potomac.

Her plantings include native phlox, dogwood, bloodroot, willow and soft-stem bulrush, among 189 genera and 30,000 individual plants. Vivid slides showed these beauties in close-up, as well as the sweep of the project in architectural drawings and ritual ceremonies.



Donna House (Diné/Oneida) designed the grounds of the National Museum of the American Indian.

Seeds and plants were blessed before being brought in and incorporated into the landscape.

Each item bore a particular meaning to diverse tribes across the Americas and all were donated or loaned from as far away as Québec, Chile and Hawaii. These included “Grandfather Rocks,” which are not seen as dead or inert.

“Boulders are very important,” she said. “We see them as people...we had to acknowledge this natural element as equal to us.”

And there was one more story, she told the audience.

“When talking to the commission about the boulders,” she said, she wondered how to explain the meaning of stones to people in suits. They had to give their approval and “were totally stone-faced,” she laughed. Then one simply took her off to a corner and, to her surprise, produced a small stone he’d been totting around in his pocket. Then another “suit” produced something cached in his pocket—he too, had a stone.

“Well, I thought, this is wonderful, to share this connection,” she said. “So different world views are going to come together!”

Thus a museum was born. For more information about the NMAI, visit <http://www.nmai.si.edu/>. 

Lindquist Addresses Cultural Competency In Indigenous Health Promotion, Outreach

The need for cultural competency when developing a health promotion or outreach effort with American Indians and Alaska Natives was recently addressed in a presentation by Dr. Cynthia Lindquist, a member of the NIH director’s council of public representatives and president of Cankdeska Cikana Community College in North Dakota. Also known as Ta’sunka Wichapi Win (Star Horse Woman), Lindquist recently kicked off a seminar series for the NIH American Indian and Alaska Native health communications workgroup at Lipsett Amphitheater.

Lindquist emphasized the need for understanding the sociocultural aspects that may influence the development and dissemination of effective health communication. “You need to understand our history. It’s different from other minority groups,” she said. Sharing her experiences as a Dakota woman, she warned the audience of the dangers of making generalizations when there are about 560 different federally recognized Indian tribes. Each has unique needs, language and culture. But their commonalities, she said, include their history, perspectives and beliefs.

The history of the Native people of America is marked by racism, discrimination and oppression, she said. And distrust of the federal government remains. American Indians have a holistic, long-term perspective of the world, said Lindquist, emphasizing the connection between an individual with his or her family, community and Mother Earth. Traditions and culture are the root of their belief system. “Something holy moving,” she said, is the Dakota expression reflecting our relationship with one another and Earth. The underlying premise when working with American Indians and Alaska Natives is to recognize the need to create connections, she emphasized. These cultures believe that we are all linked by a higher being.

Examples of cultural keys to consider when working with American Indian and Alaska Native populations include: human interactions and relationship-building are important; identify a person in the community to act as a liaison; traditions are embedded in the culture; elders and tribal elected officials are revered in their communities; shake hands, but don’t stare for too long in the eyes; listen carefully and attentively; food and humor are good, always in a respectful way; be open-minded and have an open heart; be flexible with your time—things happens with a purpose when they need to happen; Indian country moves cautiously, thoughtfully and slowly. 



Dr. Cynthia Lindquist (second from r) is joined by (from l) Nicole Schuett, seminar coordinator; Dr. Janet Austin, director of the NIAMS Office of Communications and Public Liaison; and John Burklow, NIH associate director for communications and public liaison.



DEPRESSION

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Above:

Dr. Darrel Regier, executive director of the American Psychiatric Institute for Research and Education, moderates the STEP forum.

PHOTOS: BILL BRANSON

what honesty when dealing with a health issue can do for a community,” said Dr. Darrel Regier, executive director of the American Psychiatric Institute for Research and Education and moderator of the STEP forum.

Before handing the floor to Duncan, Regier provided an overview of the characteristics and prevalence of depression. It affected 10 million adults in the U.S. in 2006 and 2 million children and adolescents ages 10-17. Major depressive disorder creates \$37 billion in annual workplace costs in the U.S. and increases both worker absenteeism and presenteeism, or when a worker is present but not productive. It can exacerbate other physical illnesses, greatly affect relationships and social life and, at its worst, lead to suicide.

He explained that for the diagnosis of a major depressive episode, 5 out of 9 symptoms are required. These include a depressed mood, decreased interest in pleasure or activities, change in appetite or weight, change in sleep, fatigue or loss of energy, physical slowness or agitation, feelings of worthlessness or guilt, a decreased ability to think or concentrate and thoughts of death and suicide. He discussed the differences between major depressive and bipolar disorders, the role family history plays in the condition and the causes of depression that seem to be a combination of genetic vulnerability and environmental stressors. Only 51 percent of people with depressive disorders get treatment in any given year, Regier said.

Duncan drove all these points home. He has a family history of depression: his grandfather

and father struggled with it, and he’s one of 13 siblings, many of whom have shown signs of depression at varying levels. But at close to 50 years old and seeing no signs in himself, Duncan had believed he didn’t have “the family curse.” When, a few years ago, he started having “feelings of worthlessness” and found himself dreading having to go to a public event, he thought it was just “the normal stress of the job.” But the feeling worsened as he began his campaign for governor. “I had 9 of the 9 symptoms,” Duncan said, referring to Regier’s list. “[The depression] hurt physically.” He described the pain as a “pit in the stomach that won’t go away.”

When it finally hit him that he must be suffering from depression, he immediately saw a psychiatrist who diagnosed him with major depressive disorder. And though he started treatment right away, he realized he could not run for governor. “I decided, I can win this thing if I’m myself, but I’m not myself,” he said. When he announced in June the reason for dropping out of the race, he received an outpouring of support. People said he was courageous for announcing it this way, he said. “But, to me, what took courage was to admit that I couldn’t do this on my own.”

“I decided, I can win this thing if I’m myself, but I’m not myself.”

—Doug Duncan, on dropping out of the Maryland governor’s race after being diagnosed with depression

It took Duncan about 5 months, he said, to feel like himself again. And now he’s making a concerted effort to talk about his experience with depression and “try to de-stigmatize it.”

This need for educating the public on depression was echoed by all the forum speakers. Dr. Jeanne Miranda, a professor in the department of psychiatry and biobehavioral sciences at the University of California, Los Angeles, discussed disparities in depression care in this country. She said that if it was difficult for Duncan to face the condition, “imagine what it’s like for minority and low-income women.” She explained that mental disorders are more common among the poor and while they are not more common in minorities than in other populations, symptoms of mental disorders are. Furthermore, minorities are less likely to get mental health care and to receive appropriate mental health care when they seek it.

However, Miranda said, some studies offer hope. She described her work on a randomized controlled trial of 267 women screened in county clinics. Though the trial required a lot of outreach and effort to get the women in to receive treatment, she said the response to the interventions was very positive. From her research, Miranda said, it's clear that it's very important to develop community interventions that would bring more support for helping individuals who are depressed get mental health care.

Dr. David Shaffer, a professor and chief, division of child and adolescent psychiatry, College of Physicians and Surgeons at Columbia University, discussed another group for whom depression needs further community outreach: children and teens. He looked at recent trends in teens feeling sad or hopeless and discussed the psychopathology for teen depression as well as treatment options and response. He gave an overview of research on suicide in adolescents and examined the question of the effect of selective serotonin reuptake inhibitors on the age group.

Dr. Maurizio Fava, associate chief of psychiatry for clinical research and director, Depression Clinical and Research Program, Massachusetts General Hospital, provided an overview of treatment options for depression. He reviewed the way antidepressants work and discussed pharmacotherapy with naturally occurring compounds like the "wildly popular" St. John's wort as well as electroconvulsive and other neurotherapeutic treatments. Fava is co-principal investigator of the STAR*D Treatment Trial and he outlined some of its findings. It showed that in a patient's first and second attempts at treatment, "the chances of remitting...are greater than 50 percent," Fava said. However, if the patient tries a third or fourth method of treatment, the chance of remission is reduced.

As concluding speaker, Dr. Helen Mayberg, a professor in the departments of psychiatry and neurology at Emory University School of Medicine, discussed the role of brain imaging in the development of new treatments for depression. She said the feeling Duncan described—of simultaneously suffering an active anguish with a mental "numbness"—offers "a clue that parts of the brain may be working in concert, but doing very contradictory things." Mayberg has tried to determine the circuitry of depression by looking at the parts of the brain that change when a person goes from a neutral to sad mood. A part you see "turning up," she said, is called area 25, and as it gets more active, the frontal cortex "turns off." In a deep-brain stimula-

tion study of six chronically depressed patients, Mayberg and her colleagues determined to try to "turn area 25 down" by placing electrodes in the brain in a surgical procedure. The patients related a resulting feeling of "intense calm" and said it felt as if the pain, the "pit in the stomach" Duncan described, had been removed. All six patients are in remission, and though they do have ups and downs, they now handle stress differently. "It's clear this is not a mood elevator, this is removing a negative," Mayberg said.

It was further evidence that clinical depression is different than being sad, that additional research into causes and treatment are vital and that the more the illness is brought to light by researchers—and by public figures like Duncan—the more often depression can be overcome. 🗨

Portier Honored by World Innovation Foundation

Dr. Christopher Portier, NIEHS associate director, has been named a fellow of the World Innovation Foundation. According to WIF, "Membership in the World Innovation Foundation is now becoming considered in many parts of the world...[as] recognition of being a major global innovator of the highest order." Members include a number of Nobel laureates, heads of international organizations and inventors. WIF invites into its membership individuals who have profoundly influenced the development of research and made innovative applications in their fields. The foundation honored Portier for his contributions to environmental medicine and the development of cutting-edge toxicological risk assessment.



TOWN HALL

CONTINUED FROM PAGE 1

supported or conducted by NIH. How should data be shared for further study among researchers? What are the best ways to protect the privacy of people who participate in the studies?

To address these and other questions, an NIH-wide working group was appointed by NIH director Dr. Elias Zerhouni to look at the issues involved, put together a draft of policy and gather feedback from the public before going forward. A town hall meeting was held recently to hear from the public on the policy.

The benefits of GWAS are “new disease understanding and more treatment options,” said Dr. Elizabeth Nabel, chair of the GWAS ad hoc workgroup and director of NHLBI. She defined GWAS as a study of

genetic variation across the human genome, “which is designed to identify genetic associations with observable traits such as blood pressure or weight or the presence or absence of a disease or condition.”

The data should be shared, she said, because it could improve the health of the public.

Nabel noted that several institutes are already proactively sharing GWAS data, including NEI, NIDDK, NHGRI, NHLBI and NINDS, and said there should be a mechanism to “maximize data-sharing among members of the scientific community,” which, in turn, could lead to a better understanding of the health needs of the public and more effective diagnostic tools and treatments. She outlined several diseases in which GWAS data has already proven helpful, including hypertension, type-2 diabetes and age-related macular degeneration.

The three core elements of the policy for sharing GWAS data, Nabel said, are data management, scientific publication and intellectual property. A key part of managing data is to protect research participants—volunteers who have given informed consent. Therefore, guidelines have been suggested about how best to remove all personal identifiers before the data is submitted to the GWAS depository. The draft policy also proposes rules for investigators’ access to the data, the publication of research findings and intellectual property claims relating to the information.

During the 90-day public-comment period for the policy, 196 responses were received, Nabel said. Key issues raised by the public included ensuring the privacy of research participants, how the repository would be managed and overseen, ownership of data, timing of data release for patenting and data standards, access and security.

Just days before the town hall meeting, NIH announced the launch of a genotype and phenotype (dbGaP) database, which will archive and distribute data from two sources—the Framingham Heart Study and the Genetic Association Information Network—and potentially could be used for other studies producing GWAS data. At the meeting, Dr. Jim Ostell, chief of the Information Engineering Branch,

Key issues raised by the public included ensuring the privacy of research participants, how the repository would be managed and overseen, ownership of data, timing of data release for patenting and data standards, access and security.

NLM, gave an overview of the new depository to illustrate how GWAS data could be shared.

Following these presentations, two panels of speakers addressed public questions. At the panel on data management, Dr. Francis Collins, director of NHGRI, emphasized that the strong intention of the policy is to “key-code” all of the genetic information given by research participants. The goal is to make sure “genotypes and phenotypes are not associated with any personal identifier such as name, address or Social Security number,” he said, therefore the draft policy outlines ways to eliminate this information.

People have also asked if the genetic data itself could be an identifier, he said, explaining that right now it couldn’t, because it would have to be compared to other data. “Genotype information without any comparison doesn’t reveal anything about personal identity,” Collins said. “The concern is, might there be, especially in the future as more genetic data is collected on individuals...greater opportunity for mischief, where it might be possible for those link-ups to be made.”

Collins said that though “it does seem that at the present time, the risk of that is extremely low, the issue really is about the future.” The

reason for the stipulations about user access to the data in the policy, he explained, is that even if all identifying data for participants is removed, “we want users to take this very seriously, as data that they should treat with care.”

Questions from attendees in the first panel discussion included what to do about samples that were submitted prior to requiring participants to provide informed consent, whether there would be training in the approval process for Institutional Review Boards and whether an association found in a participant’s data would be reported back to the participant. Attendees also raised the issues of the possibility of other government agencies having access to the data, the costs of collecting and transmitting it, the possibility of encouraging “altruistic” participants who aren’t interested in maintaining their privacy and enforcement of the agreements investigators make in order to access the data.

The second panel discussion, moderated by Dr. Laura Lyman Rodriguez, special advisor to the director of NHGRI, focused on scientific publication and intellectual property. She said that during the public-comment period, the main questions raised in these areas concerned the 9-month period investigators must wait before publication, what would be done about conflicting conclusions in the literature, if there would be collaboration with the original investigators on new research published and procedures for acknowledgement, as well as issues concerning the ownership of data and the timeline for patentability.

All of the issues raised during the meeting will be considered as the working group continues, Nabel said, emphasizing that they want an “open, deliberative process,” that addresses all concerns. The group hopes to have the final policy in place by this spring, she said, adding that its members “look forward to an ongoing dialogue.”

The draft policy is available online at <http://grants2.nih.gov/grants/gwas/>. 



ORWH seminar panelists (from l) Joan Bardsley, Dr. Peter Savage, Dr. Robert Ratner, Dr. Alka Kanaya and Dr. Griffin Rodgers answer questions from attendees.

Stopping the Clock on Diabetes in Women

ORWH Seminar Examines Strategies for Prevention

“Twenty-one million Americans currently have diabetes and 9.7 million of them are women,” said Dr. Griffin Rodgers, acting director of the National Institute of Diabetes, Digestive and Kidney Diseases at a recent ORWH Women’s Health Seminar series, “Stopping the Clock on Diabetes in Women: Strategies for Prevention and Treatment Across the Lifespan.” As the country’s most common chronic illness, with an estimated 4,000 Americans diagnosed every day, diabetes poses a great challenge to the nation’s public health system. Rodgers said, “There have been remarkable medical advances and technologies involving many NIH institutes. Through our efforts we will continue to improve diagnosis and treatment, as well as cure this disease.”

Dr. Alka Kanaya of the University of California, San Francisco, explained that the current diabetes epidemic involves type-2 diabetes and that the increase “has been remarkable, particularly among African-American women.” She pointed out that the upswing in diabetes rates has affected other racial/ethnic groups as well. Kanaya said that multiple risk factors for diabetes—including racial/ethnic group, older age, family history, gestational diabetes and obesity—demonstrate that the disease is a “complex interaction of genes and environment.” She stressed that “because diabetes is rising in every subpopulation, we must focus on prevention.”

Dr. Robert Ratner of MedStar Research Institute in Washington, D.C., spoke about gestational diabetes. “Our entire health care system could be overwhelmed” if we do not take steps to identify and treat pregnant women with gestational diabetes, he said. He emphasized that prevention can start with “improving the way you live.” He cited the Finnish Diabetes Prevention Study that showed lifestyle changes cut the development of diabetes by 58 percent. Ratner’s summary of studies showed that “the very high conversion rate to diabetes [in women with gestational diabetes] requires long-term and continuous monitoring.”

Dr. Peter Savage, acting director of NHLBI’s Division of Prevention and Population Sciences, also emphasized that although progress has been made in treating diabetes, there are still many remaining challenges. “The leading cause of death in diabetic patients, particularly in women, is cardiovascular disease and there is a clear association with duration of diabetes and development of cardiovascular disease,” he explained. While the risk for developing CVD is the same for type 1 and type 2, preventing diabetes is still a key to reducing CVD. “Once you have diabetes,” Savage concluded, “the treatment must be aggressive to prevent CVD.”

Looking at diabetic care in the real world, Joan Bardsley of MedStar Research Institute said, “Diabetes care is primarily self-care and good communication with a health care provider is related to better outcomes.” She noted that “self-care is also a challenge to health care providers who need to know what their patients are doing.” Citing the Diabetes Attitude Wishes and Needs Study, the largest global study of diabetes patients and their health care providers, she said 33 percent of patients do not follow treatment recommendations. “We need collaborative self-management plans,” said Bardsley. “These must be plans that respect the individual’s strengths, needs and concerns. Health care providers and patients must identify sources of personal motivation. Look at the person behind the diabetes.” 

NIH Training Center Classes

The Training Center supports the development of NIH human resources through consultation and provides training, career development programs and other services designed to enhance organizational performance. For more information call (301) 496-6211 or visit <http://LearningSource.od.nih.gov>.

Giving and Receiving Performance Feedback	1/29, 1/31, 2/8, 2/13
NIH Foreign Travel (NBS Travel System)	2/5-6
NBS Transition: Simplified Acquisition Review	2/6
Human Capital Group Supervisory Skills Training	2/6-8

NIH Celebrates National Mentoring Month

Mentoring is essential to the success of the NIH OD intern programs: Emerging Leaders, Management Internship, Presidential Management Fellows and STRIDE. Mentors serve as valuable sources of information and advice. They help interns understand the federal government, NIH and individual programs. In the intern programs, mentors are assigned within the first 90 days. The mentor/mentee relationship is personal and can contribute greatly to the intern's success. The mentor/mentee relationships last 2 or 3 years, depending on length of the intern program. Mentors are always needed.

Characteristics of an ideal mentor include aptitude for teaching and desire to help; managerial experience, technical skills and organizational/cultural savvy; strong interpersonal and communication skills; high energy level; positive outlook and sense of humor; and availability of time for regular and ad hoc meetings.

Responsibilities include assistance in locating and selecting rotational assignments; general counseling on any concerns the mentee may have; providing feedback about strengths and needs; and help in preparing career development plans.

Mentors commit to serve the length of the program (2 or 3 years). They meet with the mentee two times per month, for at least an hour each time, and attend training sessions.

If you are interested in being a mentor, contact Judith Phillips of the NIH Training Center, (301) 451-7301, phillipsju@od.nih.gov.



Ambudkar Named Chief of NIDCR's Gene Therapy Branch

Dr. Indu Ambudkar was recently named chief of NIDCR's Gene Therapy and Therapeutics Branch (GTTB). Prior to her appointment, she was acting chief of the branch. Ambudkar is known for her work on Ca²⁺ signaling and calcium entry mechanisms.

Her research addresses the physiology of salivary glands and has led to the identification of calcium channels critical for the regulation of salivary gland fluid secretion. She and her colleagues at GTTB are working to understand the molecular basis of salivary gland function and to develop strategies for treating salivary hypofunction caused by conditions such as Sjögren's syndrome or radiation treatment for head and neck cancer.

Ambudkar joined NIDCR in 1985 as a visiting associate and became a senior staff fellow in 1988. In 1993, she was tenured and appointed chief of the secretory physiology section in the branch she now heads. She also held an appointment as an adjunct assistant professor in the department of pathology at the University of Maryland School of Medicine between 1991-1996.

Before coming to NIDCR, Ambudkar was a research assistant professor at the University of Maryland School of Medicine and also served as a research associate in its department of biological chemistry.

A native of India, she earned a B.Sc. in biology and an M.Sc. in biochemistry from Lucknow University in India. She then received a Ph.D. in biochemistry from Madurai Kamaraj University, also in India.

Ambudkar has published extensively on calcium signaling mechanisms in health and disease. She has also served as a member of the editorial board of several journals in her field, including *Cell Calcium* (current), the *Archives of Oral Biology* and *Membrane Biochemistry*. She is a member of the American Society for Biochemistry and Molecular Biology, the Society of General Physiologists and the Biophysical Society, as well as other professional organizations.



Stopping Your Estrogen Therapy?

NIMH is investigating whether mood, anxiety and irritability occur when you stop taking your estrogen or estrogen/progesterone combination therapy. Participants should be ages 45-65, have a past history of perimenopausal mood symptoms responsive to estrogen therapy or combination therapy and be in good physical health. For information call Linda Simpson-St. Clair, (301) 496-9576 (TTY 1-866-411-1010).

Are You Nearing the Perimenopause?

The Behavioral Endocrinology Branch, NIMH, seeks healthy female volunteers ages 40-50 to participate in longitudinal studies of the perimenopause. Volunteers must have regular menstrual cycles and be medication-free. Periodic hormonal evaluations, symptom ratings and occasional interviews will be performed. Participants will be paid. Call Linda Simpson-St. Clair, (301) 496-9576 (TTY 1-866-411-1010).

Heart Disease Risk Factors Study for African Americans

Healthy volunteers are needed for a study investigating the relationship of obesity to heart disease risk factors in healthy, non-diabetic African-American men and pre-menopausal women between ages 18-49. Specifically, the study is looking at risk factors for triglyceride concentration and the triglyceride-related risk factors of unhealthy cholesterol (low-density lipoprotein) and body fat distribution. There will be a series of four outpatient visits to the Clinical Center, in which participants will have body fat analyses, EKG, blood tests including cholesterol profiles, an oral glucose tolerance test, resting energy expenditure and an intravenous glucose tolerance test. Compensation is provided. Call (301) 402-7119 for information. Refer to protocol 99-DK-0002.

Men and Women Needed

Men and women ages 55-65 are needed to participate in a study of alcohol metabolism and responses. Study participation includes one 3-hour screening visit and two 8-hour study visits. Participants must be social drinkers in good health. Compensation will be provided for time and participation. If interested contact Shilpa at (301) 451-0308 or email ETOHSTUDY-L@mail.nih.gov.

Tongue Study Needs Volunteers

Individuals with tongue weakness or tongue movement coordination problems are needed for NIH research study. For more information call 1-866-444-2214, TTY 1-866-411-1010. Refer to study 01-CC-0044.

Study of Ankylosing Spondylitis

Do you have ankylosing spondylitis? Consider volunteering for an NIH research study. Compensation is provided. For information call 1-866-444-2214 (TTY 1-866-411-1010). Refer to study 03-AR-0130.

Anthrax Vaccine Study

NICHHD anthrax vaccine study (04-CH-0283) seeks healthy volunteers ages 18-45. This vaccine is expected to be as effective as the licensed anthrax vaccine (AVA) but it is purer and should be safer. Medical tests will determine eligibility. For more information call 1-877-444-9980 (TTY 1-866-411-1010). Compensation is provided.

NCI Appoints Hesse Branch Chief

Dr. Bradford W. Hesse has been named chief of the Health Communication and Informatics Research Branch in the Behavioral Research Program of the Division of Cancer Control and Population Sciences, NCI. He has been with NCI for 3 years, first as a health scientist administrator in the branch for a year and then as acting chief for the past 2 years.



Hesse received his Ph.D. in social psychology in 1988 from the University of Utah, where he studied the interpersonal aspects of computer-mediated communication. He then served as a member of the committee for social science research on computing at Carnegie Mellon University and went on to co-found the Center for Research on Technology at the American Institutes for Research in Palo Alto, Calif.

As a contractor before coming to NCI, he directed projects for the Departments of Education and Labor, the Centers for Disease Control and Prevention and NIH. He has consulted for Apple Computer, Hewlett Packard, Xerox, Microsoft, Sun and Netscape and serves on the board of advisors for the American Psychological Association's online resource, PsycINFO.

Among his current responsibilities, Hesse serves as program director for NCI's Centers of Excellence in Cancer Communication Research and is director of the biennial Health Information National Trends Survey. Since coming to NCI, he has focused on using the power of health information technologies to help lessen the burden of cancer.

"Brad's two decades of research and development experience in health communication, health informatics, survey methodology and user-centered computing provide an ideal foundation for his leadership of this critical and rapidly growing area," said Dr. Robert Croyle, DCCPS director.

What's Light Got to Do With It?

Deisseroth's 'Optogenetics' Targets Brain Circuits

By Belle Waring

Using light to relieve suffering has a long history. From ancient Egypt to Victorian London, unfiltered sunlight was regarded as a fundamental cure for rashes, rheumatism and rickets.

As scientists discovered that light is not a simple element—that it is both wave and particle, with a spectrum of bandwidths, some invisible to the human eye—they teased out its properties and created more sophisticated treatments.

Phototherapy's modern era begins with Niels Finsen, awarded the 1903 Nobel Prize in medicine for the use of carbon-arc lamps to treat cutaneous tuberculosis—TB of the skin.

Today's therapies include blue light to treat newborn jaundice; lasers—intensely concentrated light—to repair vision; and light boxes to ease seasonal affective disorder, a form of depression.

In a recent visit to NIH, Stanford University's Dr. Karl Deisseroth asked his audience to consider this: What if we could treat psychiatric diseases like major depression with high-speed light pulses? And do that in a genetically targeted way?

His talk, "Bringing Bioengineering to Psychiatry," was part of the NIMH Director's Innovation Speaker Series and drew an SRO crowd to the Neuroscience Center.

Deisseroth began with a basic statement of need. According to the World Health Organization, major depression is the leading cause of disability, both in the U.S. and worldwide. In those age 5 and older, major depression is the leading cause of disabling disease.

"Psychiatry needs a quantitative approach," he said. "Not to denigrate neurotransmitters, but simply talking about neurotransmitter levels doesn't do justice to the brain as a high-speed processing and storage apparatus."

Neurotransmitters are the brain's biochemical messengers; they affect mood and thinking. Some antidepressant drugs work by adjusting the levels of neurotransmitters.

Deisseroth's lab combines technologies from optics, genetics and bioengineering to map neural-circuit dynamics in psychiatric disease on a millisecond time scale. He holds a dual appointment in bioengineering and psychiatry—"an



Dr. Karl Deisseroth is bringing his expertise in bioengineering to psychiatry.

unusual mix," he says—and is the recipient of many honors, including the NIH Director's Pioneer Award.

Also a clinician in Stanford's psychiatry department, Deisseroth sees patients weekly.

Brain cells important in both normal functioning and disease, he explained, are typically embedded in dense, complex tissue. This makes them hard to reach with conventional electrical stimulation methods. He and others have nonetheless used techniques such as transcranial magnetic stimulation or deep-brain stimulation (DBS) to treat patients with refractory—unmanageable—depression.

He cited lessons learned from using DBS: "Subjects reported sudden calmness and lightness," he said. This occurred in patients who had not responded to previous treatment.

With his expertise in bioengineering, he then developed methods that are "all optical—no electrodes." Very simply, here's how it works.

First, he adapted a naturally occurring protein from green algae, which contains a light-activated ion channel. Using this protein, he introduced a gene into mammalian neural tissue. He then combined this technique with "high-speed optical switching"—pulses of light.

The result altered neural processing at the level of the synapse—the junction between nerve cells. Taking advantage of the noninvasive quality of light, he had found a way to "photostimulate" mammalian neurons.

"Just with the introduction of a single gene, without a chemical cofactor," he said, "it was temporally precise and tunable on a millisecond scale."

One of the things that impressed him most, he said, was that he found no toxicity: no change in membrane resistance, resting potential or cell death.

Next, Deisseroth plans to investigate reward circuitry for addictive behaviors.

There is clinical need in other areas as well. In addition to targeting neurons, he said, his new technology could apply to "the excitable cells": skeletal, cardiac, smooth muscle and the insulin-secreting beta cells.

"The common theme," he said, "is the [current] lack of noninvasive, high-precision methods to control excitable cells for drug screening or therapeutics." The faster you can screen drugs for side effects, the faster you can rule out the compounds that do harm. Thus the need for innovative work in "optogenetics."

"You could greatly advance drug discovery," he said.

He admits it will be a long time before this new paradigm will find clinical use in humans. "Maybe 5, 10 years," he predicted. "But I think the tide will turn." ●