



ABOVE • Find out why NIEHS grantee Dr. Daniel Baden is the man to sea, on p. 9.

nih record

Sans Earrings

Sen. Mikulski Returns to NIH, Delivers on Promise

By Carla Garnett

At the time, it was considered an impossible dream: Stop automatic federal budget cuts to biomedical research. But when Sen. Barbara Mikulski (D-MD) came to NIH last year—just over 2 months into her chairmanship of the Senate appropriations committee and mere days before sequestration was set to begin—she vowed to do the impossible. Twelve months later, she delivered.



“You *are* the National Institutes of Hope,” she said in her return Feb. 24, stressing the nickname she’d given NIH during her last visit. “I stopped by to tell you we love you. We’re proud of you. America supports you and we want to do all we can in the federal law books and the federal checkbooks to let you be you!”

Mikulski gave NIH a brief update on “where we are and where we’re going,” and said she was not yet done fight-

SEE MIKULSKI, PAGE 6

Sen. Barbara Mikulski pledged to “work her earrings off” for NIH and returned to campus Feb. 24 to prove she’d done so.

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Thinking Globally

Genomics Research Holds Key to Improving World Health

By Dana Steinberg

Genomics can help us dig for clues toward curing disease; the discipline also proved useful when digging up royal remains buried under a parking lot in England.

Last year, archaeologists unearthed the skeleton of King Richard III. The king was 32 when killed in battle in 1485 and legend said he had a hunchback. The exhumed skeleton was of a young man with severe scoliosis and massive head and face wounds, presumably from battle. But was it really Richard?

Dr. Turi King, a geneticist at the University of Leicester, U.K., has led the DNA analysis team that confirmed this most improbable discovery. Naturally, the DNA was fairly degraded, she said, so to be sure they had the right chap, they had to compare it with a living descendant. After genealogists located two of Richard’s maternal-line relatives, King’s team found



PD conference scientific chair Dr. Thomas Montine

‘Cure for Tomorrow, Care for Today’

NINDS Holds Conference to Set Parkinson’s Research Agenda

By Shannon E. Garnett

NINDS recently held a 2-day conference, “Parkinson’s Disease 2014: Advancing Research, Improving Lives,” bringing together leading researchers, physicians, patients and caregivers to set priorities for Parkinson’s disease (PD) research.

PD affects the lives of at least half a million people across the United States. It is a chronic,





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briefs

STEP Forum/Fair on Project Management

The staff training in extramural programs (STEP) committee will present "Project Management: Successful Collaborations for Work and Life," on Tuesday, Mar. 25 from 9 to 11 a.m. (followed by an information fair until noon in the lobby) at Lister Hill Auditorium, Bldg. 38A.

Are you facing a major project at work? Don't know where to begin? Are you expected to coordinate many moving parts? Our personal lives are also full of projects involving family, friends and acquaintances. This forum focuses on the latest project management concepts, approaches, tools and technologies to help establish effective collaborations and achieve project goals for both work and life.

Circus Premiere Night Benefits Charities

R&W invites children of all ages to enjoy the 143rd edition of The Greatest Show on Earth. Ringling Bros. and Barnum & Bailey Circus comes to Verizon Center on Wednesday, Mar. 19 with a show called Built to Amaze. This is the 17th annual Children's Premiere Night, hosted by R&W and benefiting the NIH charities. A free pre-show begins at 6 p.m.

Over the years, with NIH's help, R&W has taken more than 25,000 children to the circus. R&W's goal is to fill the Verizon Center with friends and family. Orders for tickets can be placed at any R&W store (Bldg. 31, Bldg. 10 or Rockledge) or print out the form on the R&W web site at www.fedesp.com/nih/. For more information, or if you have questions, email David Browne at browned2@mail.nih.gov.

NIH Management Intern Program Recruits

Unlock a new career path with the NIH Management Intern Program, which is recruiting Apr. 7-11. The MI Program is a highly competitive, 2-year career-development program for current NIH employees. MIs come from a variety of job backgrounds including both scientific and administrative fields. Upon completion of the program, MIs transition into an administrative-management career in one of many areas throughout the NIH enterprise. Eligible employees are invited to apply. For program FAQs, upcoming information sessions and details about eligibility, visit <http://trainingcenter.nih.gov/intern/mi/>.

New, Improved HR CARDS Coming

The Human Resources Classification and Recruitment Documents System (HR CARDS) is NIH's web-based library that contains standard, classified position descriptions and associated classification and recruitment documents. The system is used by HR specialists, managers, supervisors and administrative officers to streamline the classification and recruitment process. By using the documents housed in HR CARDS, administrative personnel are quickly able to begin the process of recruiting top-notch talent.

HR CARDS is being rebuilt as a modern and updated web application. The new and improved system will offer users a similar look and feel, new features and the potential for future enhancements.

The upgraded system is scheduled for deployment during the third quarter of FY 2014. In the meantime, the current system will remain available at http://hrweb.psc.gov/pdlibrary_nih.

The new HR CARDS system will include: a new URL; more modern look and feel; improved system security, meaning that it will employ single sign-on technology, enabling users to log in with their NIH user ID and password or NIH PIV card and PIN; easier navigation as the position description, job analysis and applicant assessment documents will have a streamlined view.

Stay informed about upcoming changes to the HR CARDS system by visiting <http://hr.od.nih.gov/hrsystems/staffing/pdlibrary/default.htm>.

New Principal Investigator Dashboard Launches

The Division of Occupational Health and Safety announces the rollout of its new PI Dashboard electronic registration system (Nexus) for pathogen and rDNA work applications. The system went live Feb. 18 and is accessible online at <https://oms.ors.nih.gov/>. For details, contact your IC assigned safety specialist or NIH biological safety officer Dr. Richard Baumann, baumannrg@mail.nih.gov. For more safety information, visit www.ors.od.nih.gov/sr/dohs/aboutDOHS/Pages/about_dohs.aspx.



Dr. Cesar Perez-Gonzalez (r) with Alex Trebek on the set of *Jeopardy!*

PHOTO: JEOPARDY! PRODUCTIONS

NEI's Perez-Gonzalez Meets Cool Host, Cruel Buzzer on *Jeopardy!*

By Daniel Stimson

Dr. Cesar Perez-Gonzalez of NEI recently scratched a major item off his bucket list by appearing on the TV game show *Jeopardy!*

He proved himself an able competitor, ultimately earning third place and a \$1,000 cash prize. The show aired Jan. 28 on ABC.

Even though he didn't come out on top, Perez-Gonzalez accomplished his main goal. "I really wanted to get on the show before Trebek retires," he said. The iconic TV personality is 73 and has hosted the show for 30 years.

Perez-Gonzalez works in NEI's Office of the Scientific Director, where he manages a variety of training programs and acts as a mentor to NEI's graduate students, postdoctoral fellows and other trainees. He grew up watching *Jeopardy!* every night with his mother. The show requires three players to demonstrate their knowledge and quick wits by responding to obscure trivia in the form of a question. (Example: "This white coating...is used to prepare a painter's canvas." Correct response: "What is gesso?")

Just getting onto the show is extremely competitive. For most people, the process begins with an online test, for which millions have registered. Hopefuls can take the test repeatedly, but have to wait a year between tries. Perez-Gonzalez passed the online test in January 2012, survived in-person try-outs in Cleveland in May 2012, and got a call to compete on the show in October 2013—just weeks before his eligibility was set to expire.

Between the call and the trip to L.A., he spent most of his free time preparing and quizzing

himself. He holds a Ph.D. in evolutionary biology and felt strong in medical and life sciences. He read up on other areas and studied "You Gotta Know..." fact sheets available from the National Academic Quiz Tournaments web site. But none of that could prepare him for the *Jeopardy!* buzzer, which contestants press when they think they know the correct response.

A person off-screen controls the buzzer system, locking it while Trebek is talking and unlocking it when Trebek is finished. "If you buzz in too early, it will lock you out for about a quarter of a second," Perez-Gonzalez explained. "It's a cruel, cruel device."

Ultimately, he faced "very tough opponents who were a lot faster on the buzzer," he said. Indeed, one of his competitors, Arthur Chu, is still dominating the show as of this writing. Chu has made headlines for his aggressive playing style. While most players tend to progressively move from the easiest, low-reward *Jeopardy!* questions to the hardest, high-reward questions, Chu's selections seem almost random—it's a risky strategy that earns him larger prizes and seems to throw off his opponents. Perez-Gonzalez said it's all just part of the game.

Ever the mentor, he's now offering survival tips to Dr. James Herman, a post-doctoral fellow at NEI who will compete on the show sometime in April. *Jeopardy!* fans should also watch for an "Eye on Health" trivia category and a shout-out to NEI in May, which is Healthy Vision Month. 🗨

NCI Hosts First-Ever Small Business Match-Making Event

For a number of years, the NCI Office of Acquisitions has been dedicated to facilitating and participating in events that promote opportunities for small businesses. The institute recently partnered with the Maryland department of business and economic development (MDBED) to host a match-making event, where current prime contractors met with small businesses to discuss future subcontracting opportunities. The "Primes Meet Subs" event was the first of its kind at NCI.

In total, there were 14 prime contractors who participated, interviewing more than 140 small businesses. More than 20 veteran-owned small business and service disabled veteran-owned small business concerns also participated in the event.

In addition to interviews, participants had the opportunity to speak with representatives from federal, state and local government.

Throughout the day, prime contractors and small businesses alike indicated their appreciation to NCI and MDBED for envisioning and executing such an event. Kristen Mistichelli, director of the NCI Office of Acquisitions, highlighted the importance of these opportunities in building relationships between businesses: "I am thrilled with the level of participation and high accolades that this event has received. I know of opportunities for small businesses that have already been made possible by this event. That is important on many levels. The NCI is committed to small business engagement whenever and however we can incorporate it into our business process."

For more information about events hosted by the Office of Acquisitions, visit <http://rcb.nci.nih.gov/rcb-internet/>.



NCI brokered a meeting where prime contractors met with small businesses to discuss future subcontracting opportunities.

GENOMICS

CONTINUED FROM PAGE 1



Certain parasites might make you violently ill for a couple of days. Others might cause cancer. Dr. Paul Brindley, a microbiology professor at George Washington University School of Medicine and Health Sciences, said millions of people in East Asia have, or risk getting, liver fluke infection, a chronic inflammatory disease often contracted from worms consumed in raw or undercooked seafood. These worms alter the gastrointestinal tract microbiome; the resulting infection greatly raises the risk of developing bile duct cancer.

Genomics is also having a profound effect on cancer research worldwide. Dr. Thomas Gross, deputy director of science at NCI's Center for Global Health, said the rate of cervical cancer is 10 times higher in developing countries than developed ones. But it's been difficult in many regions to get women into clinics to test for human papillomavirus (HPV). New molecular biology techniques may soon pave the way for commercial HPV tests. In China, lung cancer is the second leading cause of cancer-related deaths among women, even among non-smokers. Now scientists have identified different gene mutations in smokers and nonsmokers to help researchers develop more targeted therapies.

Genomics studies are also helping mental health researchers gain a better understanding of characteristics unique to certain ethnic groups. Genomic sequencing is helping to unlock clues about bipolar disorder in Latin American populations, said Dr. Thomas Lehner, chief of the Genomics Research Branch at NIMH. Scientists also are studying gene variants of schizophrenic patients in African countries.

Various conditions and treatments affect different people around the world in distinct ways. Genomics is helping to identify and address a wide range of global health problems; there's plenty more to be done.

"We need funding for grants for global field research through schools of public health and medicine," urged Dr. Jim Herrington, director of the International Relations Division at the Fogarty International Center. "The outcome will be interdisciplinary teams and cross-fertilization of these interactions between people with various backgrounds to solve the difficult problems that we're coming across today and into the future." 

that the DNA matched. King and her team are now getting ready to sequence Richard's genome by extracting DNA from a sample of his bone. Deciphering Richard's genetic code may offer clues about the late king's health and ancestry.

Genomics, or the interaction of genes with each other and with the environment, can help solve historical riddles, such as identifying a 15th-century king. The burgeoning field is now shaping all areas of health, from infectious and non-communicable diseases to inherited conditions. The impact of genomics around the world was discussed at the NIH symposium, "The Role of Genomics Research in Global Health," on Feb. 6 in Natcher Bldg.

Diseases such as cancer, cardiovascular disease, diabetes and autism affect people worldwide across all demographics. "These are all diseases that have been linked to changes in a larger microbial community as a whole," said Dr. Julia Oh, a postdoctoral fellow at NHGRI. "Changes in the fundamentals of these microbial communities, our microbiome, not only are themselves associated with disease, but also pathogens don't work alone. Community context can influence the transmission, susceptibility to, or severity of a disease-causing pathogen."

Studying genomic diversity can be a key to unlocking answers about infectious diseases around the globe. Scientists are sequencing and comparing the genome composition of multiple isolates of the same species to uncover the genetic basis of phenotypes of interest, such as drug resistance, and to identify antigens with the goal of designing new vaccines.

Dr. Joana Carneiro da Silva, assistant professor, Institute for Genome Sciences at the University of Maryland School of Medicine, has been studying the tick-borne parasite that causes East Coast fever (ECF) in cattle in Africa. More than 20 million cattle are at risk in 11 countries of sub-Saharan Africa; 1 million cattle die from ECF each year.

Scientists have devised a new approach to sequence the genome of this cattle parasite without sacrificing the host and are now studying host specificity as well as improved vaccine design. Said Carneiro da Silva, "This is transformational also for human pathogens as we work to develop highly effective vaccines." One such clinical trial under way is for the PfSPZ vaccine that would immunize people against malaria.

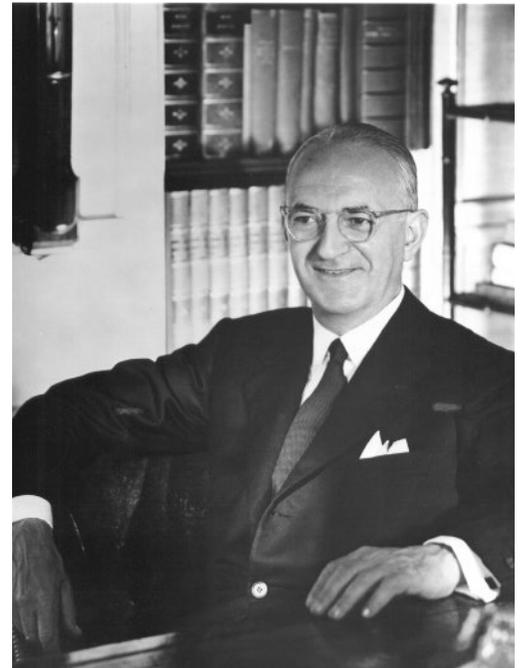
Food-borne parasites are another global challenge.

Right:
NIMH's Dr. Thomas Lehner (l) discussed "The Genetic Architecture of Mental Disorders Across the Globe" and NEI's Dr. Gyan Prakash (r) offered opening remarks at the symposium.

Below:
Dr. Mark Guyer, deputy director of NHGRI, discusses H3Africa (Human Heredity and Health in Africa), a collaboration between NIH and the Wellcome Trust. The partnership aims to increase collaborations among African investigators and expand genomic research infrastructure across the African continent.

PHOTOS: BILL BRANSON





At left, National Eye Institute director Dr. Paul Sieving (r) accepts a bust of Dr. Jules Stein on behalf of NEI. The bust is a gift from Research to Prevent Blindness (RPB). On hand are RPB representatives (from l) Ambassador William vanden Heuvel, Katrina vanden Heuvel and Dr. Brian Hofland. At right, Stein was crucial in establishing NEI.

NEI Pays Tribute to Founding Father Stein

The National Eye Institute paid tribute to the late Dr. Jules Stein recently. After making millions in show business, Stein spearheaded a campaign that convinced Congress to establish NEI in 1968.

Born in 1896, Stein paid his way through medical school at Rush Medical College by arranging musical acts at local Chicago nightclubs. He began private practice as an ophthalmologist in 1921, but his work booking musical acts continued to grow. Broadcast radio was emerging at the time, ushering in a new era of entertainment. In 1924, he established the Music Corporation of America (MCA) and decided to stop practicing medicine. By the 1950s, Stein had grown MCA into a global media empire that included not only music but also film and television.

But as his business grew, Stein never lost his passion for vision science. In 1960, he founded the nonprofit organization Research to Prevent Blindness (RPB) and began using his personal wealth and business acumen to advocate for increased federal support for vision research. At the recent event, RPB donated a bronze bust of Stein to NEI, which will be housed in the NEI director's office. The bust was created by renowned Cubist sculptor Jacques Lipchitz.

"As you look back through the history of health advocacy and NIH, Dr. Stein was a member of

an august group," said NIH deputy director Dr. Lawrence Tabak at the event. He compared Stein to other influential supporters of biomedical research, including Mary Woodard Lasker, Edwin Whitehead and Victor McKusick—founders of the Lasker Foundation, the Whitehead Institute and the Genetic Alliance, respectively.

Representing RPB at the event were its president Dr. Brian Hofland; RPB board member Katrina vanden Heuvel, who is Stein's granddaughter and editor and publisher of *The Nation*; and her father Ambassador William vanden Heuvel, who is also an RPB board member.

"My grandfather believed that blindness was most effectively fought at the points of prevention and treatment," said Vanden Heuvel. "At the time RPB was founded, there were several hundred organizations nationwide spending billions to provide services to the blind and visually impaired, but there wasn't a single organization dedicated to eradicating the diseases that caused blindness."

"The lack of a far-reaching, concerted attack on the causes of blinding diseases amounts to a national disgrace," Stein testified to Congress in 1967. "Until we put leadership and direction of eye research in the hands of those who best understand ophthalmic problems, we will witness the continuous, steady rise in the incidence of blindness in this nation and throughout the world." Both Congress and President Lyndon B. Johnson found Stein's argument persuasive and in August 1968 established NEI.

NEI director Dr. Paul Sieving, who unveiled the sculpture with Vanden Heuvel, spoke of the stunning pace of discovery over the past decade and NEI's current campaign to catalyze innovation in vision research through the NEI Audacious Goals Initiative. "We have great opportunities in front of us—opportunities that I think Jules Stein would appreciate as an entrepreneur." 📌



MIKULSKI

CONTINUED FROM PAGE 1

Above, l:

NIH director Dr. Francis Collins (l) and NIH intramural scientists stand behind Mikulski as she addresses a Masur Auditorium assembly on Feb. 24.

Above, r:

Mikulski's recent NIH visit began with briefings on research with several scientists. At top right, Dr. Carole Sourbier, a research fellow in NCI's Urologic Oncology Branch, shows Mikulski results from a study of type 2 papillary kidney cancer.

PHOTOS: BILL BRANSON, ERNIE BRANSON

ing—not just for NIH, but also for the Food and Drug Administration, the National Science Foundation and for the entire federal science and technology enterprise.

Introducing the senator, NIH director Dr. Francis Collins recalled, “Sen. Mikulski promised in a legendary statement that she was going to work her earrings off for NIH. Nothing has ever been truer.”

In Masur Auditorium at an assembly of employees, Mikulski declared, “I’m back and you’ll notice that I have no earrings on!”

The outlook had been bleak when the senator stopped by in the first quarter of 2013. NIH was set to suffer a 5 percent budget cut in the first fiscal year alone of sequestration, with even more sizable cuts in the following years. Collins outlined the effects: Grants already approved would go unfunded in nearly every region of the nation, promising avenues of research would go unexplored and fewer patients would be admitted to the Clinical Center. What was worse though, Collins said, was the instability and unreliability of funding in general. Scientists—some in the earliest stages of their careers—not knowing whether they could count on NIH support, would leave the research arena altogether.

In the succeeding months, working across political party lines and across both houses of Congress, the senior senator from Maryland managed to get the draconian cuts cancelled for NIH for FY 2014 and 2015.

“Sen. Mikulski’s tireless efforts on our behalf have helped ensure that our important mission will go forward again at full strength after what has been a very difficult 10-year period

of loss of purchasing power for research,” Collins said. “She did this, orchestrating a feat that many thought would be impossible in our time. She secured a bipartisan compromise on the federal budget.”

In January, Congress passed a 2014 omnibus appropriation bill that included a \$1 billion increase for NIH above the post-sequester level.

“While we still have a ways to go to make up for the losses that have happened over the last 10 years,” Collins explained, “we can finally breathe a sigh of relief that the downward spiral of support is drawing to an end. A corner has been turned and so, senator, we really want to thank you.”

On stage with Mikulski, Collins said, were several grateful scientists—“just a few of NIH’s finest, eight of the thousands of researchers that we support who are making new discoveries every day.”

Mikulski assured NIH’ers that she and other lawmakers were well aware of the various hardships the workforce had endured over the last year, noting not only the drastic spending cuts but also the 16-day government shutdown that furloughed 74 percent of NIH employees last fall.

Mikulski said she—working with fellow lawmakers Sens. Patty Murray (D-WA) and Richard Shelby (R-AL) and Reps. Hal Rogers (R-KY), Chris Van Hollen (D-MD), Nita Lowey (D-NY) and Paul Ryan (R-WI)—were able to “stare down the shutdown crowd” to get a bipartisan budget agreement.

“For this year,” she continued, “we know that first of all there’ll be certainty—no sequester...and no shutdown in fiscal 2014.”

For upcoming appropriation battles, Mikulski said her top priority is “to make sure we pre-



Mikulski tours a lab of the NCI Urologic Oncology Branch with (from l) research fellow Dr. Christopher Ricketts, branch chief Dr. W. Marston Linehan and Dr. Ram Srinivasan, head of the branch's molecular cancer section.

serve innovation, opportunity and social justice. We want to promote innovation particularly in life sciences.”

Concluding her remarks before taking questions, Mikulski said, “Everywhere that I travel—in my own state and throughout the country—the National Institutes of Health is the most well known and the most revered institution in the federal government. You are beloved...because they know that every day and every way you wake up not thinking about you. You wake up thinking about we the people and how to help people have opportunity and hope when they face medical situations.”

Responding to a query about what it will take to motivate other lawmakers to increase federal science spending, the senator encouraged her colleagues in Congress to listen to “the compelling human need” voiced by constituents and to visit medical schools in individual communities. NIH, she pointed out, funds centers of scientific excellence in every state across the country via its extramural research program.

Mikulski also said she intends to hold a hearing on the state of research and innovation in the U.S., both to inform legislators and to offer them more incentives to boost federal science budgets.

“I think we need the will and I think we can find the wallet,” she said.

Mikulski left the auditorium to a standing ovation. 🗨️



The Straus Lecture poster session featured pain research from NCCAM's intramural division by (from l) Dr. Chantal Villemure, Dr. Alex Chesler, Dr. Mark Pitcher, Scott Thompson, Dr. Lucie Low and Marta Ceko. At right is guest lecturer Dr. Robert M. Califf.

PHOTOS: LISA HELFERT

Califf Lectures on Changing Landscapes of Clinical Trials, Pain

Dr. Robert Califf recently gave the Stephen E. Straus Distinguished Lecture in the Science of Complementary Health Therapies, “A New Fabric for Clinical Research: Application to the Pain Problem.” NCCAM’s lecture series honors its founding director.

Califf is principal investigator of the NIH Health Care Systems Research Collaboratory, vice chancellor for clinical and translational research and professor of medicine at Duke University Medical Center and co-principal investigator of the National Patient-Centered Clinical Research Network (PCORnet) recently funded by the Patient-Centered Clinical Outcomes Research Institute.

Califf explored challenging areas in the current clinical research enterprise such as data, operations and oversight/ethics. He explained that we need to balance the needs of people to have information for their health choices yet simultaneously protect the rights they have when they are involved in clinical research. Califf emphasized the importance of research, noting that “as a country, the U.S. is doing poorly in terms of our health status compared to our economically developed competitors. One reason is that our understanding is incomplete about what’s effective and not effective in our choices about health and health care. Most [of these choices] are not supported by good evidence.”

On the topic of pain, he said it is “an enormous problem affecting about one-third of Americans and we don’t know much about it from a therapeutic perspective...The science is moving along quickly, but the application of therapies is far behind.” The widespread use of opioids is fraught with problems, Califf added, and researchers need to work with each other, patients, industry and academia to more rapidly advance knowledge about pain.

One ideal tool, he said, would be a “cloud-based national data network enabling analysis and dissemination of data quickly as results are known...The NIH Collaboratory has been an important experimental effort and with its success, we have confidence that PCORnet will also succeed in dramatically increasing our evidence base for health and medicine.”

“It was a pleasure to hear Dr. Califf, who is probably the leading clinical trialist in the U.S. and epitomizes the legacy of Steve Straus,” said Dr. Josephine Briggs, NCCAM director. “We are working closely together on the NIH Collaboratory, an exciting Common Fund project involving many NCCAM staff. This project is building the capacity to perform real-world studies important to NCCAM’s mission.”

A subsequent poster session featured work by NCCAM intramural researchers on pain. Califf’s talk is available at <http://videocast.nih.gov/summary.asp?Live=13283&bhcp=1>.—Ellen O’Donnell



PARKINSON'S
CONTINUED FROM PAGE 1

Above, from l:
PD2014 featured more than 30 speakers including Dr. Karen Marder (l) and Dr. Werner Poewe.

NINDS director Dr. Story Landis explains goals of the PD2014 conference.

Below:

The conference was divided into three panels to consider clinical, translational and basic research.

PHOTOS: BILL BRANSON

progressive, neurodegenerative condition and is one of the most common disorders occurring later in life. Currently available treatments provide relief from some symptoms, but do not halt the ultimate progression of the disease.

“The scientific community must constantly scan the horizon for new scientific opportunities in Parkinson’s disease, assess our progress rigorously and be strategic in how we invest our resources,” said NINDS director Dr. Story Landis in opening remarks.

The goals of the meeting, which convened recently at Natcher Conference Center, were to: assess significant research challenges, gather input from the scientific and lay communities (including people with PD, their caregivers, family members and advocates) and identify a set of recommendations to advance PD research and treatment. These recommendations could then be used to inform the efforts of NINDS as well as PD investigators and PD

organizations in their quest to reduce the burden of illness due to Parkinson’s.

Despite weather challenges on both days, which led to travel problems for some speakers, presentations ignited lively discussion by attendees both in person and online.

“This is not the usual scientific symposium,” said conference scientific chair Dr. Thomas Montine of the University of Washington. “We view you as the next panel of experts. Our expertise varies. Some of us are experts from coping with this disease every day. Some of us are experts from caring for loved ones who have or had Parkinson’s disease. Some of us are advo-

cates for those with Parkinson’s disease or their health care providers. Many of us here are physicians or scientists in government, industry or university...Lots of us have multiple roles.”

“The recommendations presented at this meeting range from understanding the biological causes of PD to turning that understanding into interventions,” said Landis. “To test potential interventions as expeditiously as possible, we must reconceptualize clinical trial design. In brief, it’s planning across the entire PD research spectrum.”

More than 200 people attended the conference; several hundred joined via NIH videocast. The program featured more than 30 speakers and was divided into three panels to consider clinical, translational and basic research.

Presentations covered such topics as opportunities for innovation in clinical research and trial design, improving outcome measures in PD research, building a translational pipeline for PD therapeutics (including target identification and validation and development of innovative treatments), understanding the neurobiology and neuropathology of disease and the potential of neural circuit modification for understanding and treating Parkinson’s.

Overarching themes included:

- ▣ Developing precision medicine to match the molecular and clinical heterogeneity of PD

Day one concluded with a forum of advocacy experts moderated by Dr. Amy Comstock Rick, CEO of the Parkinson’s Action Network.





PD2014 day two featured a public comments session during which several members of the PD community addressed the proposed recommendations.

- ❑ Deepening our understanding of the basis of variation among individuals with PD (with respect to response to therapies, racial and ethnic background and impact of symptoms on quality of life)
- ❑ Developing experimental models to investigate normal and abnormal functions of PD gene products and characterizing high-dimensional data—spanning from genomics to electronic medical records and promoting their analyses by multi-specialty teams
- ❑ Filling critical gaps in our knowledge with innovative technologies
- ❑ Supporting key infrastructure to fuel discovery including repositories with standardized data and biospecimens and organized data-sharing from clinical and experimental studies to promote facile comparison.

The first day ended with a forum, “PD Research Evaluation: A Multi-Stakeholder Perspective,” which featured a presentation on research evaluation by Dr. Ann Bonham of the Association of American Medical Colleges.

On the second day, after panel discussions, 11 members of the PD community commented on the proposed recommendations. “A theme we heard from the public comment session is the need for a cure for tomorrow but care for today,” said Montine, summarizing the session.

A conference report on the recommendations was presented to NINDS’s National Advisory Neurological Disorders and Stroke Council at the end of January. Watch the NINDS web site for the final draft of PD2014 research recommendations. 📄



Dr. Daniel Baden stands beside samples in the red tide study culture room.

PHOTO: UNCW/JAMIE MONCRIEF

NIEHS Helps Launch Marine Biotechnology Facility

NIEHS grantee Dr. Daniel Baden has a new home for his research into the potential health benefits of a toxic marine microorganism. The 69,000 square-foot Marine Biotechnology in North Carolina (MARBIONC) center is an innovative public-private partnership to advance health research and translation.

Baden, an expert in the field of marine biology and an NIEHS grantee since 1991, is director of the Center for Marine Science (CMS), the University of North Carolina Wilmington partner in MARBIONC. He also administers the nonprofit MARBIONC development group.

Scientists in the UNCW MARBIONC program have been working toward the goal of turning materials in the marine environment into new products, drugs and technologies, as well as creating potential spin-off companies and jobs. As its UNCW web site proclaims, “MARBIONC is in the business of transforming the mysteries of the deep into the miracles of the marketplace.”

Research under way at CMS is representative of the way MARBIONC plans to translate basic research. Baden’s work with extremely toxic microorganism blooms that flourish in warm Atlantic waters led to the surprise discovery of a natural antitoxin, brevenal, produced by the organism. It turns out that brevenal has potential for treating patients with cystic fibrosis, chronic obstructive pulmonary disease and other lung diseases.

According to NIEHS Oceans and Human Health Program director Dr. Frederick Tyson, the opening of MARBIONC marks a major success coming from the harmful algal bloom research that NIEHS has supported for several decades.

“Characterization of the mechanisms of toxicity associated with brevetoxins, and the ultimate identification of brevenal and its therapeutic potential, was the key research driver that led to establishment of the MARBIONC development group and the state-of-the-art marine research facility,” he said.—Eddy Ball

Nurse Staffing, Education Linked to Reduced Patient Mortality

Hospitals in Europe where nursing staff care for fewer patients and have a higher proportion of bachelor's degree-trained nurses had significantly fewer surgical patients die while hospitalized according to a new study. These findings underscore the potential risks to patients when nurse staffing is cut and suggest an increased emphasis on bachelor's education for nurses could reduce hospital deaths.

The study, supported by the European Union's Seventh Framework Programme and NINR, is the largest and most detailed analysis to date of patient outcomes associated with nurse staffing and education in Europe.

Known as Registered Nurses Forecasting, the study estimated that an increase in hospital nurses' workloads by one patient increases the likelihood of in-hospital death by 7 percent. Also, a better educated nurse workforce was associated with fewer deaths. For every 10 percent increase in nurses with bachelor's degrees, there was an associated drop in the likelihood of death by 7 percent. The results of the study were published in the Feb. 25 issue of *The Lancet*.

"Building the scientific foundation for clinical practice has long been a crucial goal of nursing research and the work supported by NINR," said NINR director Dr. Patricia Grady. "This study emphasizes the role that nurses play in ensuring successful patient outcomes and underscores the need for a well-educated nursing workforce."

Researchers Identify Mutation Linked to Severe Form of Cushing's Syndrome

Mutations in a gene containing part of the information needed to make an enzyme that provides energy for governing basic cell functions appear to contribute to a severe form of Cushing's syndrome, according to researchers at NIH and nine European research institutions.

Cushing's syndrome results when the body is exposed to too much of the stress hormone cortisol. The syndrome may result when the body itself produces excess cortisol, causing

symptoms that may include high blood pressure, muscle weakness or osteoporosis.

The study was published online in the *New England Journal of Medicine*. In a letter to the editor of the journal, members of the NIH research team and researchers in Italy reported that a mutation in another gene containing information needed to make yet another portion of the enzyme appears to be central to Carney complex, a rare disease that causes multiple tumors and is characterized by increased cortisone levels.

"The mutation we identified appears to give rise to one of the most common kinds of adrenal tumors seen in Cushing's syndrome," said study co-first author Dr. Constantine Stratakis of NICHD. "The discovery suggests a clear path forward for investigating medications that might block the production of excess cortisol."

NIH Adds Substantial Set of Genetic, Health Information to Online Database

Researchers will now have access to genetic data linked to medical information on a diverse group of more than 78,000 people, enabling investigations into many diseases and conditions. The data, from one of the nation's largest and most diverse genomics projects—Genetic Epidemiology Research on Aging (GERA)—have just been made available to qualified researchers through the database of Genotypes and Phenotypes (dbGaP), an NIH online genetics database.

The GERA cohort—average age 63—was developed collaboratively by Kaiser Permanente and the University of California, San Francisco. The addition of the data to dbGaP was made possible with \$24.9 million in support from NIA, NIMH and the Office of the Director. Dr. Catherine Schaefer of Kaiser Permanente Northern California and Dr. Neil Risch of UCSF are co-principal investigators for GERA.

"Data from this immense and ethnically diverse population will be a tremendous resource for science," said NIH director Dr. Francis Collins.

The GERA cohort is part of the Research Program on Genes, Environment and Health (RPGEH), which includes more than 430,000 adult members of the Kaiser Permanente Northern California system. Data from this larger cohort include electronic medical records, behavioral and demographic information from surveys and saliva samples from 200,000 participants obtained with informed consent for genomic and other analyses. The RPGEH database was made possible largely through early support from the Robert Wood Johnson Foundation to accelerate such health research.—compiled by Carla Garnett



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milestones

Poodry, Longtime NIGMS Diversity Champion, Retires

By Susan Athey

Dr. Clifton “Clif” Poodry, who spent almost two decades leading NIGMS and NIH efforts to increase the diversity of the scientific workforce, retired from federal service in January.

Claiming he wasn’t “quite ready to retire—just yet,” he was back at work 3 days later, although down the street a bit. He’s settling into his new position as a senior fellow at Howard Hughes Medical Institute.

Following a long-held interest in improving science education, Poodry said his new job at HHMI entails “thinking and helping to shape” educational programs, something he became an expert at throughout his NIH career.

Poodry joined NIGMS in 1994 as first director of its Division of Minority Opportunities in Research. At the time of his arrival, MORE contained only a handful of programs and a small staff. Thanks to Poodry’s leadership and vision, the effort grew into what is now the Division of Training, Workforce Development and Diversity (TWD). The division houses a variety of research training, career development, diversity and capacity-building activities.

Poodry said the “fun of the job” as TWD director was implementing new activities and working with a “tremendous staff” to get things done. During his tenure, he led the development of a number of NIGMS programs such as the Institutional Research and Academic Career Development Award, the Native American Research Centers for Health and an R01 program aimed at understanding interventions that promote student interest in and preparedness for careers in the biomedical and behavioral sciences. He also advised on NIH-wide programs such as the newly announced Building Infrastructure Leading to Diversity (BUILD) initiative.

“Clif is a passionate, deep thinker who dedicated his career to building a strong and diverse scientific workforce,” said NIGMS director Dr. Jon Lorsch.

Over the years, Poodry managed portfolios in every program in his division, as well as one in mitochondrial genetics for NIGMS’s Division of Genetics and Developmental Biology. He also led an effort to provide cross-divisional grant assignments, giving program directors across the institute experience managing TWD grants, and vice versa.



Dr. Clifton Poodry (r) created this platter out of a maple tree taken down near NIH. He presented it to staff before leaving NIGMS in January. It is inscribed on the back, “For my NIGMS friends.”



“These assignments helped staff to learn about the challenges—and the importance—of building a robust biomedical research workforce that better reflects the diversity of the U.S. population,” Lorsch said.

“Clif truly believed that we must value people for the breadth of thought that they bring and how their contributions to the diversity of our collective thinking move us forward,” said Dr. Ernest Marquez, a former MORE branch chief who went on to become president of the Society for Advancement of Chicanos and Native Americans in Science (SACNAS) after retiring from NIH.

“I am in total agreement with what Clif taught all he encountered, that the value of diversity goes beyond representation in numbers,” Marquez added.

Prior to joining NIGMS, Poodry was a biology professor and an NIGMS grantee studying *Drosophila* developmental biology at the University of California, Santa Cruz, where he had worked since 1972. In the early 1980s, he served a 2-year stint at the National Science Foundation. There, Poodry and fellow staff member Jane Peterson (now at NHGRI) created a minority supplement program that later became a model for the NIH diversity supplement program.

A native of the Tonawanda Seneca Indian Reservation in western New York, Poodry earned a B.A. and M.A. in biology from the State University of New York at Buffalo and a Ph.D. in biology from Case Western Reserve University. He received an honorary doctorate of science from the State University of New York at Buffalo in 1999.

Poodry was twice elected to the SACNAS board of directors. He was also a board member of the American Indian Science and Engineering Society. In 1995, he received the society’s highest honor, the Ely S. Parker Award, for lifelong accomplishments in science and contributions to the American Indian community.

Poodry has also been recognized as a long-time contributor to the NIH Blood Bank, having made more than 110 donations.

When asked what he’ll miss most about NIGMS and NIH, Poodry quickly responded, “The people and the interactions we’ve had over the years.” In addition to current staff, Poodry mentioned the relationships he’s maintained with former staff who have gone on to positions in other institutes and agencies and postdoctoral students he mentored along the way.

While spending the early part of his “retirement” working full-time at HHMI, Poodry will continue to pursue his wood turning and archery hobbies and enjoy time with family. You might even see him around campus—either walking past NIH gates as he makes his way to his new job or over at the Blood Bank making another donation. 📍



Gene Kelly Film Graces NLM Collection

By Shana Potash

Among the treasures preserved by the National Library of Medicine is a World War II U.S. Navy training film directed by and starring Gene Kelly, who was then a rising Hollywood star. *Combat Fatigue Irritability* is a historically significant yet largely unknown work. Now, NLM's History of Medicine Division (HMD) is making the 1945 film available to a wide audience, with supplementary materials from NLM historians, including a unique interview with Kelly's daughter, Kerry Kelly Novick.

Novick, a developmental psychoanalyst who studied under Anna Freud, was a guest speaker during NLM's February board of regents meeting. HMD has added her talk to its Medical Movies on the Web portal. The site features a full-length version of *Combat Fatigue Irritability* with written commentary by NLM historian Dr. Michael Sappol.

Speaking as a daughter and as a mental health professional, Novick talked about her father and aspects of the film that are still relevant for service men and women and their families.

"When my father joined the Navy in World War II, our lives changed as they did for so many other families," Novick said. She and her mother moved east and lived with her grandmother to be closer to Kelly. He was stationed in Anacostia, making training films for the Navy's photographic unit.

Combat Fatigue Irritability focuses on Kelly's character, Seaman Bob Lucas, whose ship is torpedoed and sunk. He's in a military hospital, trying to understand why he's angry, on edge and unable to get along with people the way he once did.

The desire to learn more, Novick said, is some-

thing she got from her father and that he demonstrated in making the film—he prepared by having himself admitted to military psychiatric hospitals.

Novick said there is a "culture-wide tendency to view emotional, psychological or mental troubles as weakness or failure" and diagnostic labels like "PTSD" or "shell shock" may make veterans reluctant to seek help. "A strength of this film is that it gives us a single sailor to focus on, reminding us perhaps that considering each person's individual story is at least as important as the diagnosis," she said.

She lauded the film for including interactions with family, children and the community to demonstrate how their behavior affects Seaman Lucas and vice versa. And she noted the importance of addressing feelings of guilt, or what's now termed "moral injury."

"These are wounds to the soul, the effects of having done something that conflicts with the moral code that a person was raised in or from the feeling of guilt for having failed to do something, again violating their moral code," she explained.

Novick also praised NLM for preserving history (her father had a lifelong interest in the subject) and recognized NIH and NIMH for their research efforts.

"Mental health parity puts all aspects of care on equal footing, acknowledging also the interconnectedness of emotional and physical health," she said.

In addition to Medical Movies on the Web, HMD is providing an interview with Novick on its blog, *Circulating Now*. Visit <http://circulatingnow.nlm.nih.gov/tag/gene-kelly/>. 

Above:

Famed actor Gene Kelly (l) once appeared in a U.S. Navy training film, which is now being made available at NLM. Kelly's daughter Kerry Kelly Novick (r) gave a talk about the film at a recent meeting of NLM's board of regents.

PHOTO: MICHAEL SPENCER