

nih record



ABOVE • NHLBI study shows heart failure before age 50 is more common in blacks. See p. 10.

features

	1
Obama Order Loosens Stem Cell Research Limits	
	3
NIH Marks Women's History Month	
	5
Expert Discusses War-Related Brain Injury	
	11
New Tool Allows 'Rethinking Drinking'	

departments

Briefs	2
Milestones	8
Digest	10
Volunteers	11

President Directs NIH to Issue Stem Cell Research Guidelines within 120 Days

On Mar. 9, President Obama issued an executive order removing Bush administration limits on federally supported research on human embryonic stem cells and directing NIH to expand its support for human stem cell research.

"For the past 8 years, the authority of the Department of Health and Human Services, including the National Institutes of Health, to fund and conduct human embryonic stem cell research has been limited by Presidential actions," read the order, which contained five brief sections. "The purpose of this order is to remove these limitations on scientific inquiry."

The order, signed at the White House with several NIH officials on hand, allows NIH to "support and conduct responsible, scientifically worthy human stem cell research, including human embryonic stem cell research, to the extent permitted by law." NIH must develop guidelines on the conduct of such research within 120 days of Mar. 9. Specifically, NIH was ordered to "review existing NIH guidance and other widely recognized guidelines on human stem cell research, including provisions establishing appropriate safeguards, and issue new NIH guidance on such research that is consistent with this order. The [HHS] Secretary, through NIH, shall review and update such guidance periodically, as appropriate."

SEE STEM CELLS, PAGE 4

Go For IT!

NIH To Celebrate Earth Day, Apr. 23

NIH will celebrate Earth Day on Thursday, Apr. 23 in conjunction with Take Your Child to Work Day. The festivities will be held from 10 a.m. to 2 p.m. in front of Bldg. 1. Planning is under way, and so far includes a wetlands education bus with mini-classes for children; a plant swap; face painting; opportunities to take home a native Maryland tree seedling; tours of the NIH stream; educational tables on recycling, commuting options, energy conservation, waste management and more; and local vendors who will be selling lunch.

Earth Day IT Contest

As part of Earth Day events, and to improve awareness of the importance of biodiversity, the Division of Environmental Protection is holding its annual "Name IT" contest. The importance of protecting biodiversity for medical research cannot be overstated. Many new drug discoveries come from natural products, sometimes from plant or animal species that are endangered or threatened. For NIH,

Nuland Speaks on Chinese Medicine, Western Science, Acupuncture

By Belle Waring

Dr. Sherwin Nuland, clinical professor of surgery at Yale University and author of *How We Die* and *The Uncertain Art: Thoughts on a Life in Medicine*, recently spoke to a packed house in Masur Auditorium on "Chinese Medicine, Western Science, and Acupuncture." His talk, sponsored by NCCAM, was the inaugural Stephen E. Straus Distinguished Lecture in the Science of Complementary and Alternative Medicine and marked NCCAM's 10th anniversary.

NCCAM director Dr. Josephine Briggs and NIAMS director Dr. Stephen Katz opened with tributes to Straus, NCCAM's founding



Dr. Sherwin Nuland



briefs

Author McKee Featured at DDM Seminar

The Deputy Director for Management (DDM) announces the third DDM seminar of the 2008-2009 series "Management and Science: Partnering for Excellence." The event on Thursday, Apr. 16, from 11 a.m. to noon in Masur Auditorium, Bldg. 10, will feature Annie McKee, co-author of the *New York Times* bestselling book *Resonant Leadership* and co-founder of the global consulting firm Teleos Leadership Institute. Videocasting and sign language will be provided. Individuals who need reasonable accommodation to attend should call (301) 496-6211 or the Federal Relay Service at 1-800-877-8339. For more information about the series, visit www.ddmseries.od.nih.gov or call (301) 496-3271.

NIH Marks 'NanoWeek' Apr. 7-10

Nanotechnology shows promise in fields ranging from disease prevention and diagnosis to novel methods of therapy. In addition, nanotechnology provides tools for improved understanding of molecular and cellular behaviors. To learn what's going on in the field, attend NanoWeek Apr. 7-10. NanoWeek will consist of several events including review presentations from program directors and extramural investigators on Apr. 7 in Natcher Auditorium, starting at 8:30 a.m.; research presentations and laboratory demonstrations from intramural investigators; and a 2-day joint NIH/IEEE workshop on nanomedicine. For more information contact Dr. Karen Peterson, (301) 451-0707.

Parenting Seminars Offered in April

April is National Month of the Young Child. NIH is marking the occasion with free, informative discussions of parenting issues. The two sessions below are from noon to 1 p.m. and are located in Bldg. 31, Rm. 6C10.

Apr. 8, Childhood Anxiety Disorders—This seminar will review the common signs and symptoms of anxiety in youth as well as provide parents with practical strategies for how to deal with anxiety in children and adolescents. Presenter is Dr. Erin Martin, clinical psychologist, NIMH.

Apr. 15, Cyber Safety—The Internet can be a useful tool to increase knowledge and inspire creativity and exploration in young children, but it also has its dangers. This seminar will help parents teach their children the critical thinking and decision-making skills they need to detect dangerous and/or unlawful online behavior. Pre-

sender is George Simms, assistant state's attorney for Montgomery County.

The seminars will be broadcast and archived at <http://videocast.nih.gov>. Individuals who need sign language interpreters or other reasonable accommodation to participate should contact Tonya Lee at (301) 402-8180.

FAES Sponsors Free Community Shred Day

We all know that we have to shred excess or outdated patient information to protect confidentiality, but sometimes it's hard to get around to shredding our personal documents for our own protection. On Wednesday, Apr. 22, from 4 to 7 p.m., FAES, in collaboration with Torn2Shredz, will sponsor a Free Community Shred Day. Watch on a closed-circuit TV while your old bank and credit card statements are destroyed and then sent for recycling. Protect your identity while you protect Mother Earth. Limit of two boxes of documents per customer. Event is at the FAES Social & Academic Center, 9101 Old Georgetown Rd., across the street from NIH on the corner of West Cedar Ln. and Old Georgetown Rd.



CORE Week Draws Healthy Crowds

In February, NIH held a health and wellness promotion event called Conditioning and Relaxation Week (CORE Week). Highlighting various forms of physical activity, the week provided an opportunity to try new kinds of activity, learn how to reduce stress and create a positive mindset. Some 1,400 people attended the activities, which included Pilates, running, dancing and various types of yoga (seen above). NIH employees accounted for about 60 percent of attendees and members of the public represented the rest. There were several speakers during the week from NIMH, NCI and NCCAM. Employees should mark their calendars for NIH Mind-Body Week, coming Sept. 8-11. The event will explore the science and practice of yoga, meditation and stress management modalities.

Council of Public Representatives Meets, Apr. 17

The 21st meeting of the NIH Director's Council of Public Representatives will be held on Friday, Apr. 17 from 9 a.m. to 5 p.m. in Bldg. 31, Conf. Rm. 6. The meeting is open to the public. To view the meeting agenda, visit <http://copr.nih.gov/meetings.asp>.

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NIEHS Leaders Speak at Women's History Celebration

By Eddy Ball

NIEHS director Dr. Linda Birnbaum and associate director Dr. Sharon Hrynkow were featured speakers at the NIH 2009 Women's History Month Observance held in Wilson Hall on Mar. 12.

Birnbaum underscored the NIEHS commitment to "stepping up its activities in regard to climate change and global environmental health." Hrynkow presented the keynote talk at the event—"Women Taking the Lead to Save the Planet."

The audience was welcomed by organizer Sally Lee, executive officer of the National Institute of General Medical Sciences, who noted that NIH employs more than 10,000 women, many of them in major roles, including seven who serve as directors of institutes and centers.

Hrynkow has worked in leadership and policy positions at the Fogarty International Center, the State Department and United Nations Foundation. Focusing on her work at NIEHS forming global environmental health partnerships, her talk explored the contributions of women's leadership in protecting the environment through research and activities designed to reverse ecological destruction.

Hrynkow emphasized that "we are very [intricately] tied to our environment." She pointed to the myriad health risks people face in their environments and the anticipated effects of climate change and referred to the sobering predictions of World Health Organization director-general Dr. Margaret Chan, who described climate change as the "fifth horseman" of a looming potential environmental apocalypse.

Hrynkow profiled two women whose contributions to global environmental health may help avert apocalypse—former WHO director-general Dr. Gro Harlem Brundtland and Peruvian social entrepreneur and Ashoka Foundation fellow Albina Ruiz. Brundtland, Hrynkow explained, epitomizes the contributions of women at the highest policy levels, while Ruiz exemplifies the community-based bottom-up approach of activists making significant contributions to environmental health at the local level.

Both approaches, Hrynkow noted, are essential, and both are examples of how women everywhere can take the lead to save the planet. She closed by paraphrasing philanthropist Ted Turner, "Men have had a chance to run the



planet for a long time, and we've seen the outcomes. Now it's time to give women a chance."

Birnbaum highlighted new possibilities at the center of the global environmental challenge. As difficult as the future will be, she concluded, "I see lots of opportunities for us...and I look forward to the journey [ahead]."

The event was sponsored by the Office of Equal Opportunity and Diversity Management. 

The women of the day show off their global awards from Office of Equal Opportunity and Diversity Management Director Lawrence Self (c). They are (from l) Theresa Leland, Sally Lee, Dr. Linda Birnbaum, Dr. Sharon Hrynkow and OEODM Federal Women's Program Manager Margarite Curtis-Farrell.

PHOTO: JENNIFER HALEY



Dr. Kanta Subbarao

Lecture on Pandemic Influenza, Apr. 16

The NIH women scientist advisors committee and Office of Research on Women's Health announce the sixth seminar in the Anita B. Roberts lecture series, which highlights outstanding research achievements of women scientists in the Intramural Research Program.

Dr. Kanta Subbarao will give a seminar titled "The Pandemic Threat of Avian Influenza Viruses," on Thursday, Apr. 16 at 1 p.m. in Lipsett Amphitheater, Bldg. 10.

Subbarao is a senior investigator in the respiratory viruses section of the Laboratory of Infectious Diseases, NIAID. Her research focuses on the development of vaccines against pandemic influenza viruses. Projects in her lab aim to identify potential pandemic influenza strains, generate and evaluate candidate vaccines and better understand protective antibody responses against highly pathogenic influenza viruses.

The lecture is open to the public. Sign language interpreters will be provided upon request. Individuals who need reasonable accommodation to participate should contact Deirdre Andrews at (301) 496-3891 and/or the Federal Relay, 1-800-877-8339, 5 days before the lecture.

STEM CELLS

CONTINUED FROM PAGE 1

During a press teleconference that afternoon, three NIH officials commented on Obama's order and answered a handful of questions.

"NIH applauds President Obama's decision today to lift restrictions," said Dr. Lawrence Tabak, acting NIH deputy director. "This research promises to revolutionize how we conduct research...and will lead to life-saving treatments. We will develop the guidelines as expeditiously as possible."

Tabak said it would likely take NIH the full 120 days to draft guidelines, open them to scrutiny by the public and by scientists, then proceed to issuance. He confirmed that NIH stimulus funds could be used for stem cell research and noted that "the Executive Order does not address the issue of how human embryonic stem cells [hESCs] are to be derived. NIH will take a careful and deliberative look at that. Our goal is responsible and scientifically worthy stem cell research."

Dr. Story Landis, director of the National Institute of Neurological Disorders and Stroke, who is current chair of NIH's long-standing stem cell task force, said, "NIH's goal is to expand stem cell research. We should consult with other organizations' guidelines, and make use of previous deliberative processes."

NIH already has in place guidelines on stem cell research, governing not just the 21 lines of hESCs permitted by the Bush administration but also adult stem cells and other types. But the current guidelines were based on limitations imposed by the previous administration.

In response to reporters' questions, Tabak noted that "there has never been a ceiling on" the amount of funds committed to stem cell research. "We have no preconceived number in mind. Scientific opportunity and merit will drive the process." Added Landis, "We're looking forward to getting a lot of excellent applications."

Dr. Lana Skirboll, acting director of NIH's new Division of Program Coordination, Planning, and Strategic Initiatives, noted, "We expect to be spending more on stem cell research in the future." She said the average stem cell R01 grant is about \$375,000 per year for 4-5 years.

Asked what immediate benefits the President's order will have, Tabak responded, "The most immediate benefit is that it signals the scientific community that this field will be expanded...It has enormous potential and should be especially attractive to young scientists just entering the field."

For more information on this topic, visit <http://stemcells.nih.gov/index.asp>. 

CSR Welcomes IRG Chief Bent

Dr. Katherine Bent has joined the Center for Scientific Review as chief of the health care, delivery and methodologies integrated review group.



Bent comes from the Department of Veterans Affairs central office in Washington, D.C., where she served as a scientific program manager in the Office of Research and Development. She oversaw and fostered a diverse scientific portfolio of health services research related to managing and treating chronic conditions, health profession education and nursing. She also organized peer review groups, assisted researchers at various stages of the funding process and conceptualized and arranged scientific meetings and professional symposia.

Bent, who started at CSR on Mar. 1, has a doctorate from the University of Colorado Denver Graduate School. Among other degrees, she also is an advanced practice registered nurse who graduated from the University of Virginia with specializations in complex illness and home and community health.

Her IRG reviews applications for research on health and health-related behaviors of individuals and populations, particularly studies related to socio-environmental factors, cultural factors and processes and more. It is located in CSR's AIDS, Behavioral and Population Sciences Division.



Dr. Maria Mouratidis is an expert on TBI and PTSD.

Putting Pieces Back Together Brain Injury Expert Discusses War Casualties

By Judith Folkenberg

The wounds of war are serious and each new war seems to generate new kinds of wounds. The current wars in Afghanistan and Iraq are no exception. Service members from these two wars are coming home with injuries that have never been seen before by medical experts. They are also recovering, which would have been impossible in wars such as Vietnam.

Dr. Maria Mouratidis, a Bethesda Naval Medical Center expert on traumatic brain injury (TBI) and post-traumatic stress disorder (PTSD), recently spoke on “Trauma and Resilience: Mind, Body, and Spirit,” at the National Library of Medicine. TBI occurs when sudden trauma causes damage to the brain. It is rapidly becoming one of the most frequent injuries in the United States—1.4 million people are diagnosed each year. TBI is also one of the major injuries resulting from the two current wars.

Improvised explosive devices (IEDs), or home-made bombs, are the major cause of TBI and PTSD in returning servicemen. The injuries are mostly seen in men under age 25. Because of the nature of IEDs, the wounds pose many new challenges, said Mouratidis.

“With land mines, for example, you generally get clean-cut shrapnel wounds,” she observed. IEDs, however, are filled with such destructive substances as nails and ball-bearings, toxic chemicals such as rat poison, biological toxins and radiological materials. The wounds themselves are jagged, irregular and varied because of the varied contents and pressure. The shock wave from an IED, for example, can burst an intestine.

While it took an average of 2 weeks for wounded Vietnam War soldiers to arrive in the U.S., today injured servicemen and women

often arrive at Navy within 2 days of their injuries. They travel on planes that are basically flying intensive care units.

“They get here so fast that often their watches are still set on Baghdad time,” said Mouratidis.

Once they arrive in Bethesda, “we begin the Battle of Bethesda,” to save the patient’s mind, body and soul, she said.

Craniotomies—operations in which part of the skull is removed to allow a swelling brain room to expand—are performed. Also, after patients heal, one or more plastic surgeries may be needed, to repair damage.

Families are flown in and a multidisciplinary team of physicians, psychologists, physical therapists, nutritionists and even a Golden Retriever therapy dog named Laura Lee all help in the patient’s recovery. One of the biggest issues, said Mouratidis, is that many returned servicemen and women don’t show the effects of TBI/PTSD until months after they come back.

“The injuries can be quite serious, yet they are not easily discernible in some cases,” she noted.

NLM has a role in helping returning veterans and their families. On Medline-Plus.gov, the library’s consumer health web site, one can find the latest information on PTSD and TBI.

Within MedlinePlus is another resource, “Go Local.” Using it, consumers can find health facilities and services in their localities, including clinical social workers, marriage counselors, adult day care for those with TBI and hospitals that have services geared towards patients with PTSD/TBI. The site is updated constantly so that the latest information is available.

Despite the horrific nature of many war injuries, Mouratidis emphasizes a message of hope. As one injured veteran, who had been blinded in his left eye by an IED, said, “My right eye is getting stronger every day.”

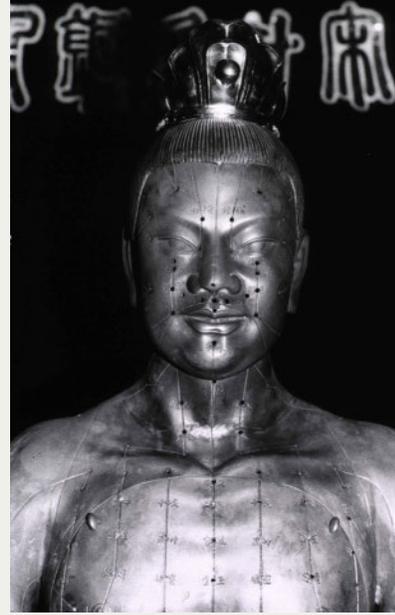
NEI 40th Anniversary Symposia Series

To commemorate its 40th anniversary, NEI is organizing five symposia on genetics and genomics, neuroscience, glaucoma and novel therapeutic paradigms.

The first symposium, on Genetics and Genomics in Vision, is planned for Apr. 16-17. It will examine recent exploits in genetics and genomics and their impact on vision research by bringing together geneticists, biologists and clinicians. It begins Thursday, Apr. 16 in Lister Hill Auditorium, Bldg. 38A, from 4 to 5:30 p.m. The symposium continues Friday, Apr. 17 in Lipsett Amphitheater, Bldg. 10, at 8:30 a.m.

Upcoming symposia include: Optical Coherence Tomography, June 1-2; Neuroscience and Vision, Nov. 20; Focus on Glaucoma, Feb. 19, 2010; and Novel Therapeutic Paradigms and Blindness, May 21, 2010.

NEI’s goal is to cement existing interactions and establish new collaborative initiatives with colleagues in other NIH institutes, and in the wider extramural community, to elucidate the genetic and biological basis of eye diseases and their treatment. For a complete program listing, visit www.nei.nih.gov/anniversary/symposia/.



to influence chi, roughly translated as “vital energy, life force.”

“Chi is responsible for the harmonious function of the body...or homeostasis,” said Nuland.

In the West, science is based on a separation of phenomena into component parts; researchers propose hypotheses to explain them and design experimental studies to test them.

Meanwhile, the Chinese world view is based on how we function in harmony and the interdependent balance of yin and yang. We fit into the world’s natural function not by subjugating nature but rather by understanding its laws, since “man is an integral part of the natural world,” said Nuland. Over centuries, he said, these ideas barely changed at all.

Acupuncture uses fine-gauge sterile, disposable needles inserted at points along meridians—vast energy channels in the body. Held between thumb and forefinger, the needles can be gently rotated in place or attached to a mild electric current.

The meridians are part of traditional Chinese medical knowledge and aren’t analogous to any Western element of anatomy or physiology. Needles are used to change the flow of energy through meridians and the organs through which that energy flows.

During Nuland’s visits to China, western observers were becoming increasingly aware of acupuncture’s practical applications. In surgical cases using acupuncture anesthesia exclusively, he observed firsthand an 80 percent success rate: “The only sensation [reported by patients] was that someone was working [on the surgical site], but no pain.

“In spite of what I was seeing,” he said, “I remained in disbelief...We tried to fit it in with science we understood.” Was it a hoax? Auto-suggestion, indoctrination, placebo effect?

He cited studies showing that, in surgical patients, acupuncture increases endorphin



ACUPUNCTURE

CONTINUED FROM PAGE 1

Above, l:
Nuland confers with NCCAM director Dr. Josephine Briggs at the inaugural Straus Lecture.

Above, r:
Eleventh-century anatomical model used to teach physicians location of acupuncture points

Below, r:
Nuland times two, at the lectern and (back row, 4th from left) as a member of the Yale-China Association medical committee, Hunan Medical University, late 1980s

NIH PHOTOS: BILL BRANSON
HISTORICAL IMAGE COURTESY WHO
AND NLM

director and an internationally recognized clinician-scientist. Straus died in 2007.

Nuland first witnessed acupuncture back in the late 1980s, when, as a member of the Yale-China Association medical committee, he frequented China’s Hunan Medical University. There he observed major surgery using acupuncture for anesthesia (coaching in relaxation breathing and light preoperative sedation were used, but no general, regional or local anesthesia).

Patients tolerated the procedures well, reporting only slight discomfort. Moreover, they required little to no post-operative pain medication.

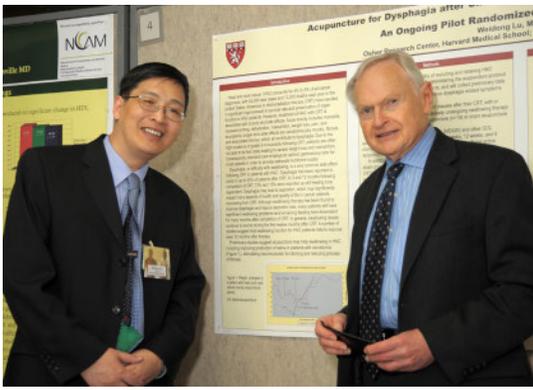
Why, when China already had Western-trained physicians, was acupuncture still in standard use? In the 50 years prior to his visits, Nuland said, the field of anesthesiology had greatly expanded in the West, but “the large armamentarium available here was not available in China.”

In 1958, Chairman Mao had directed that Western methods be used if available, yet he also insisted that traditional Chinese methods were not to be abandoned.

“[The Chinese] are not waiting for theoretical justification,” wrote *New York Times* columnist James Reston of his own experience as a surgical patient in China in 1971, when he received acupuncture for post-appendectomy pain. “They have enough pragmatic evidence.”

Almost 40 years later, Western biomedical science has yet to explain acupuncture’s success in the operating room, Nuland said.

China has its own explanation of how the body works and how human beings fit into the cosmos. As far back as the 10th century B.C., Chinese texts show the therapeutic use of needles



With Nuland (r) at a poster session following the Straus lecture is Dr. Weidong Lu, currently on the acupuncture service at Dana-Farber Cancer Institute.

receptors in the caudate nucleus in the brain and raises endorphin levels both there and in the blood.

Endorphins are naturally occurring hormones that act as the body's own painkillers. The caudate nucleus, periaqueductal gray matter located deep in each hemisphere of the brain, is involved with body movement and coordination, learning and memory, and (as some non-acupuncture studies show) feelings of affection and trust.

We in the West need a new paradigm, Nuland said, because "there are phenomena that cannot be fully explained by the scientific method. Perhaps a new paradigm will have room for yin and yang and chi channels."

During a lively Q & A, Nuland noted that acupuncture's primary function at this time in the U.S. is for treating chronic ailments, such as back pain, with "excellent or good" results.

As for the ongoing studies, indications are that, with acupuncture, "endorphin levels go up, receptors increase, and they stay up."

In closing, he circled back to honor NCCAM's founder: "The reason I'm discussing acupuncture," he said, "is because I think Dr. Straus would have gotten a huge kick out of this discussion."

Following the talk was a poster session including the work of two young scientists who've received the Bernard Osher Foundation/NCCAM CAM Practitioner Research Career Development Award: Harvard Medical School's Dr. Weidong Lu, currently on the acupuncture service at Dana-Farber Cancer Institute, and Oregon Health and Science University's Dr. Helané Wahbeh, who is studying meditation and PTSD. ●

Sex, Drugs and Viral Load: Integrating HIV/AIDS Prevention and Treatment

A major challenge in the ongoing battle against HIV/AIDS is preventing those who are already infected from transmitting the virus to others. With advances in treatments for HIV infection and other opportunistic illnesses, more people are living longer and healthier lives with HIV. The downside of this otherwise good news is that the time period for an individual's ability to infect others is growing and too many HIV-positive individuals erroneously believe that their infectivity diminishes as their viral load decreases during effective therapy. As many as 35 percent of HIV-positive individuals report engaging in high-risk sexual behaviors.

Dr. Seth Kalichman, professor of psychology at the University of Connecticut and a grantee of both NIMH and NIAAAA, has spent much of his research career trying to understand the behavioral aspects of AIDS and HIV transmission. His work, along with that of others, has examined HIV transmission risk among HIV-infected individuals. These studies, discussed at a recent OBSSR lecture (archived at <http://videocast.nih.gov/>), confirm that the period immediately preceding HIV infection is characterized by high rates of risky behavior, signifying the potential for rapid spread of HIV during acute infection—that is, before someone knows he or she is infected. Reduction in risky behavior often is seen immediately following an HIV diagnosis, but the tendency toward safer sexual behavior is not always lasting.

Kalichman has found that an individual's state of health and beliefs about his or her infectivity are important factors relating to transmission risks. Thus, HIV treatments—and their effects on an individual's health and sense of well being—directly interface with transmission risks, adherence to treatment, infectivity beliefs and actual infectivity. For example, people who do not adhere to therapy also are more likely to engage in high-risk behaviors. Those who believe they are less infectious because treatment has reduced the viral load in their blood also are more likely to engage in risky behavior. In fact, individuals with a low viral load in the blood may still have a high viral load in semen—thus infectivity is not reduced. Only the combination of treatment adherence, lack of resistance to therapy and absence of sexually transmitted diseases (which influence genital shedding of HIV) can actually reduce blood and semen viral load and therefore reduce infectivity.

Kalichman also notes that chronic periods of asymptomatic HIV infection are generally associated with some degree of reversion to risky behaviors. As people feel better, they take on more risk. His team has looked at CD4 cell counts—which are used in making a formal diagnosis of AIDS—and risk behavior. People with low CD4 counts (i.e., progression to AIDS) engage in fewer sexual and drug-related risk behaviors.

In sum, HIV risk reduction interventions for infected people must be tailored to address the health status, beliefs and psychological challenges individuals face as they progress through the stages of HIV infection. Kalichman is conducting a randomized clinical trial testing individual and group interventions aimed at prompting beliefs and behaviors that contribute to safer sexual behaviors, stress reduction and treatment of depression, substance abuse and isolation—all factors that contribute to behaviors that increase risky behavior and higher rates of HIV transmission.

EARTH DAY

CONTINUED FROM PAGE 1

one could plausibly say “Endangered Species, Endangered Mission.”

What is IT?

In past years “IT” has been a plant species from far off lands in Africa and India. This year, IT comes from the U.S.A. and you definitely would not want to find IT in your garden. It is also hard to imagine a more unlikely source of a new billion-dollar blockbuster drug than IT.

This year’s mystery organism may not be above ground before mid-spring so we will have to speak for IT and provide a few clues:

▲ Part of me is neurotoxic but I’ve also had real and imagined healing powers for a long time. My reputation with humans has always been very mixed, even with the Native Americans who have always lived near me.

The Tohono O’Odham and the Pima believed that I possessed spiritual powers capable of causing sickness and the Apache believed that just getting near me could bring death. The Seri and Yaquai believed that part of me provided important healing powers.

▲ Only recently have my virtues been demonstrated. I contain a peptide that was developed into a drug for treatment of type-2 diabetes. It works by stimulating the secretion of insulin in the presence of elevated blood glucose.

▲ I’m listed as threatened under the U.S. Endangered Species Act and am a protected species in the states where I live; there aren’t many of my kind left. Habitat destruction from overgrazing, truck farming and the planting of cotton is taking its toll.

▲ A bigger member of my extended family was the star of a movie made in 1959. The director later became Festus Hagan in *Gunsmoke*.

If you are having trouble learning and remembering all of these clues, another experimental drug derived from me might also help. Unfortunately, the drug won’t be approved before Earth Day.

Sometimes, clues about my species name are a bit suspect. This last one isn’t.

Can you guess IT? Entries should be sent to green@mail.nih.gov. Winners will be randomly selected from entrants submitting correct entries. ●



This year, IT comes from the U.S.A. and you definitely would not want to find IT in your garden. It is also hard to imagine a more unlikely source of a new billion-dollar blockbuster drug than IT.

milestones



NIH acting director Dr. Raynard Kington and new NIEHS director Dr. Linda Birnbaum at her recent installation ceremony

PHOTO: STEVE MCCAWE

Birnbaum Installed as NIEHS, NTP Director

NIEHS and the National Toxicology Program formally welcomed their new leader, director Dr. Linda Birnbaum, on Mar. 13 with a morning installation ceremony and an “Afternoon of Science” featuring distinguished lecturers. Guests at the installation ceremony included NIH acting director Dr. Raynard Kington and other NIH officials, U.S. Congressman David Price, NIEHS and NTP advisory and scientific board members, friends, family and institute employees.

The highlight of the day was the formal swearing-in of Birnbaum by Kington. However, as Birnbaum and the other speakers made clear, the ceremony was also deeply infused with symbolism—an event marking the appointment of the first woman and first toxicologist to hold the position of director in the institute’s 43-year history and a reassessment of the direction NIEHS will take in the months and years ahead.

“It is truly an honor to serve as the director of the NIEHS and the NTP,” Birnbaum said. “This is a very special day for me, and it’s even more special because so many of my family members, friends and colleagues are here to share this occasion with me.” Seated in the audience were her mother, husband David, two daughters and a host of friends and colleagues from her careers at NIEHS, NTP and the Environmental Protection Agency.

Birnbaum spoke of her personal quest for equilibrium between the personal and professional—“I try to have some fun every day”—and her optimism that America today is indeed experiencing

the rise of “a national movement for positive and constructive change” in the nation’s relationship with the environment. As she reminded the audience that “we all need to make the whole [of NIEHS and public health in general] bigger than the sum of the parts,” she reiterated her dedication to comprehensive translational research, “open communication and transparency” and “empowering those who work for me and with me” at what she described as “the world’s premier environmental health research organization.”—Eddy Ball



NIAID’s Battistone Mourned

Mabel Battistone died recently at age 91. Few people begin 30-year federal careers at an age when many people are eligible to retire, but she was one of them.

Born in Fairfax, Va., in 1917, she married Stefano (Stephen) Battistone in 1939. She planned to get a job after getting married, but was talked out of it by her husband. After the younger of her two children finished high school, she told her husband that she intended to work outside the home.

In 1973, at age 55, she began her career in project control in the Division of Research Grants, now called the Center for Scientific Review. She briefly worked in fellowships and then moved on to the NIAID records management office under the late division director Dr. John Diggs. She left NIAID briefly to work in NCI’s Grants Review Branch but returned to NIAID, working under the new division director, Dr. John J. McGowan, and deputy director, Allan Czara, until she retired at age 85. During her time at NIAID, she managed the secondary level of peer review for grants during NIAID advisory board meetings.

Her colleagues were surprised when she told them she was leaving and asked, “Can’t you stay for a few more years?” She never took sick leave during her entire career and with her saved sick leave she was able to add one year of time to her career for a total of 31 years of service.

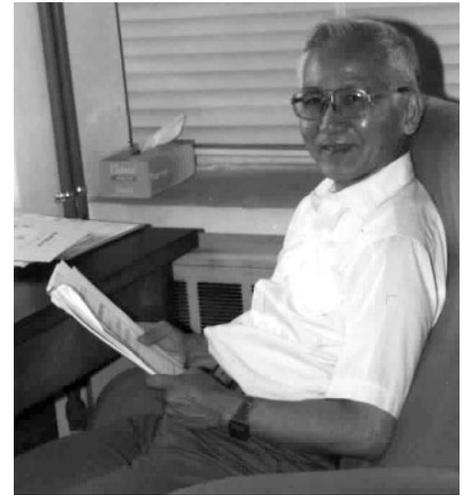
She was known as a self-starter with boundless energy. Anyone needing help knew that Battistone was the right person to ask. Her office is still referred to as “Mabel’s shop.”

Battistone was an active member of NIH Lodge 2547 Order, Sons of Italy in America, even though she was an Italian by marriage.

Former NIAID Virologist Takemoto Dies

Dr. Kenneth K. Takemoto, 88, a retired virologist at NIAID who studied viruses associated with human cancers, died Feb. 27 at his home in Kensington.

He was born Kaname Takemoto in rural Kapaa, Hawaii, on the island of Kauai. He was a freshman at the University of Hawaii when the Japanese attacked Pearl Harbor. While not interned, he was, however, classified as an “enemy alien” and discharged from the university’s Reserve Officer Training Corps. He and other young Japanese Hawaiians eager to contribute to the war effort had to work for a year to prove their loyalty.



In 1943, the Army allowed the young Japanese Americans to volunteer. Takemoto served as a combat medic in Italy with the all-Japanese American 100th Infantry Battalion, 42nd Regimental Combat Team. He received a Bronze Star and a Purple Heart with an Oak Leaf Cluster.

He moved to Washington in 1946 and enrolled at George Washington University on the G.I. Bill. He received three degrees from GWU—his bachelor’s degree in 1948, his master’s in 1950 and his doctorate in 1953.

He accepted a postdoctoral fellowship at NIH, which led to a full-time job lasting 32 years. Takemoto is recognized internationally for his studies of DNA tumor viruses, which include SV40, mouse polyoma virus and human adenoviruses. He carried out some of the earliest experiments of the human polyoma viruses, BKV and JCV, the latter now recognized as the causative agent of progressive multifocal leukoencephalopathy, a degenerative demyelinating disease frequently seen in immunosuppressed individuals. He also taught at the NIH graduate school and the University of Hawaii, and lectured at other universities and research laboratories including Harvard, Yale and Johns Hopkins universities and Cold Spring Harbor Laboratory in New York.

He particularly enjoyed working with postdoctoral fellows and with exchange scientists from Japan who spent time at NIH. Toward the end of his career, he worked on the AIDS virus, which was still something of a mystery at the time.

Takemoto received the Public Health Service Commendation Medal in 1970 and the Meritorious Service Medal in 1975. He retired in 1984. He loved tennis, golf and fishing, especially surf-fishing for bluefish in the fall at Assateague Island. He also kept a small vegetable garden.

He was known for his sense of humor. While reluctant to talk about his wartime experiences, his son recalled, “if he beat a friend at tennis, you’d never hear the end of it.”

Survivors include his wife of 58 years, Alice Takemoto of Kensington, his son, Paul Takemoto, a daughter, Ruth McInroy, and three grandchildren. ☺

Heart Failure Before Age 50 More Common in Blacks

As many as 1 in 100 black men and women develop heart failure before the age of 50, 20 times the rate in whites in this age group, according to new findings from the National Heart, Lung, and Blood Institute. In the study, heart failure developed in black participants at an average age of 39, often preceded by risk factors such as high blood pressure, obesity and chronic kidney disease 10 to 20 years earlier. Findings from the 20-year observational study Coronary Artery Risk Development in Young Adults study (CARDIA) were published in the Mar. 19 issue of the *New England Journal of Medicine*.



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By the 10th year of the study, when participants were between ages 28 and 40, 87 percent of black participants who later developed heart failure had untreated or poorly controlled high blood pressure. Black participants who developed heart failure were also more likely in their young adulthood to be obese and have diabetes and chronic kidney disease. Furthermore, 10 years before developing heart failure, they were more likely already to have some level of systolic dysfunction, or impairment in the ability of the heart muscle to contract, visible on echocardiograms.

“The disproportionate rate at which heart failure impacts relatively young African Americans in this country underscores the importance of recognizing and treating risk factors for heart disease,” said NHLBI director Dr. Elizabeth Nabel. About 5 million people in the United States have heart failure, and it results in about 300,000 deaths each year.

Vaccine Shows Promise in Preventing Cytomegalovirus Infection

Each year, approximately 8,000 infants in the United States develop severe hearing, mental or movement impairments after becoming infected with cytomegalovirus (CMV), a common virus passed on to them while still in the womb. Now, results of an NIAID-sponsored trial involving 441 CMV-negative women give rise to optimism that a vaccine to prevent congenital CMV may be closer. Women

who received the trial vaccine were 50 percent less likely to later become infected with CMV than were women who received a saline injection. The research team, led by Dr. Robert Pass of the University of Alabama at Birmingham, published their findings in the Mar. 19 issue of the *New England Journal of Medicine*.

“This trial demonstrates that a statistically significant degree of protection against maternal CMV can be achieved through vaccination,” Pass said. “This is an important step along the path towards the ultimate goal—a vaccine that can protect infants from congenital CMV infection.” He notes that a larger trial would be needed to conclusively prove the efficacy of any candidate CMV vaccine for this purpose. “However, for everyone interested in CMV vaccine development, this is an encouraging result.”

The clinical team screened 18,463 women and the trial took 7 years to reach its enrollment goal. In the final analysis, women who received the trial vaccine were significantly more likely to remain uninfected throughout the 42-month follow-up period than those who received a saline injection.

Trial Shows No Early Mortality Benefit from Annual Prostate Cancer Screening

Six annual screenings for prostate cancer led to more diagnoses of the disease, but no fewer prostate cancer deaths, according to a major new report from the Prostate, Lung, Colorectal, and Ovarian (PLCO) Cancer Screening Trial, a 17-year project of the National Cancer Institute. The PLCO was designed to provide answers about the effectiveness of prostate cancer screening.

“What this report tells us is that there may be some men who are diagnosed with prostate cancer and have the side-effects of treatment, such as impotence and incontinence, with little chance of benefit,” said NCI director Dr. John Niederhuber. “Clearly, we need a better way of detecting prostate cancer at its earliest stages and as importantly, a method of determining which tumors will progress. Many of the molecular studies we’re currently sponsoring will hopefully yield new, better ways of definitively classifying which men need treatment and which can consider watchful waiting. Until we have developed and verified a new test’s benefits and harms, as we have done with the PLCO, regular visits to your doctor to monitor your health are still strongly recommended.”

Results appeared online Mar. 18 in the *New England Journal of Medicine* and Mar. 26 in the print version. NCI does not have a recommendation about prostate cancer screening.



'Rethinking Drinking' Offers Tools to Assess, Change Risky Habits

How many drinks have you had while enjoying a bottle of wine with a friend? How strong is your mixed drink? Do you wonder whether your drinking pattern might be considered risky?

Just released, the National Institute on Alcohol Abuse

and Alcoholism's web site and booklet, *Rethinking Drinking*, answer these questions and more to help people reduce their risk for alcohol problems. The new products offer evidence-based information about risky drinking patterns, the signs of an alcohol problem and strategies for cutting down or quitting. The web site (RethinkingDrinking.niaaa.nih.gov) also provides interactive tools, including calculators that estimate the alcohol content in common cocktails and beverage containers.

According to an NIAAA survey of 43,000 U.S. adults, about 3 in 10 adults drink at levels that elevate their risk for alcoholism, liver disease and many other physical, mental health and social problems. Some of these people already have alcohol-related problems and it's safest for them to quit. But most of these "at-risk" drinkers can reduce their chances for harm by cutting down to within the low-risk drinking limits presented in *Rethinking Drinking*. For men, these limits are no more than 4 drinks on any single day and 14 drinks per week, and for women, no more than 3 drinks on any day and 7 per week.

"People can still have trouble drinking within these limits, especially if they drink too quickly, have certain medical conditions, or are older," says NIAAA acting director Dr. Kenneth Warren. Among people who exceed the low-risk limits, about 1 in 4 already has an alcohol use disorder—alcoholism or alcohol abuse—and the rest are at increased risk for these and other problems.

"We know that many heavy drinkers are able to change on their own," notes Dr. Mark Willenbring, director of NIAAA's Division of Treatment and Recovery Research. "*Rethinking Drinking* is a convenient way to provide information and tools, especially for those who want to make a change before they develop symptoms."

The *Rethinking Drinking* booklet can be downloaded from the web site or ordered by telephone: (301) 443-3860. 📞



Like To Learn More about Overcoming Barriers to Exercise?

If you are an African-American adult female, consider becoming part of a research study to identify motivations to exercise, exercise patterns, barriers to exercise and solutions to overcome them. Share your personal experiences and opinions in an effort to develop a health program to successfully manage an exercise routine. Call (301) 295-9718 or send an email to weightmanagement@usuhs.mil for more information.

Children's Inn Needs Bilingual Volunteers

Volunteers are needed to staff the welcome desk and assist with educational programming. Welcome desk volunteers greet families as they arrive and provide front-line customer service in person and by telephone. Educational aides provide English tutoring to non-English-speaking residents. Welcome desk shifts include: Friday evenings 4:30 to 8:30, Saturdays 12:30 to 4:30 p.m. and 4:30 to 8:30 p.m. Educational aide schedules vary. Volunteer requirements include: must speak fluent Spanish, excellent verbal communication skills, ability to respond flexibly and resourcefully to the functions of the position, satisfactory completion of volunteer application, background checks and in-processing procedures. For more information contact Laura King, lking@mail.nih.gov or (301) 451-9454.

Drinkers Needed for Study

Do you drink alcohol? Drink daily or almost daily? Are you between the ages of 24 and 60? NIAAA is seeking men and women to study whether a medication for smoking cessation (Chantix) may affect drinking. Volunteers should be healthy and drug-free. Qualified subjects will be reimbursed for their participation. The study lasts 9 weeks and requires 5 outpatient visits and one overnight visit at the Clinical Center. For more details, call (301) 451-0308.



Dr. John Norvell exploring (and photographing) the Great Wall of China

PHOTO: JERRY LI

New Frontiers for NIGMS's Norvell

By Emily Carlson

Put a pin in each country visited by Dr. John Norvell and the globe will soon resemble a pin cushion. Vacation photos—some of them award-winning—show him on African safari, cruising to the Arctic Circle, climbing Egyptian pyramids and snorkeling the waters of the Galapagos Islands. Just last year, he went to Greece and the Yucatan peninsula.

“You never wanted to be the person who followed John during staff photo shows,” said colleague and fellow travel enthusiast Dr. Michael Rogers, who helped organize informal lunches for Norvell and others to share their recent vacation pictures.

To celebrate his retirement from a 32-year career at NIH, Norvell and his wife packed their bags for a 3-week trip to Australia and New Zealand—two countries not yet stamped in Norvell's passport.

“I like to experience a little bit of everything,” he said, adding that his 1969 postdoctoral research experience in Denmark sparked his interest in travel.

After earning his Ph.D. in physics from Yale University and doing research at Brookhaven National Laboratory, Norvell came to NIH in 1975. He worked with Dr. David Davies at NIDDK to set up a research program for cap-

turing the 3-dimensional structures of proteins and other biological molecules. After a short stint with the National Academy of Sciences, he returned to NIH as a program director for NIGMS—his address for more than 30 years.

While Norvell has managed a number of NIGMS research portfolios and other responsibilities during his career, two have made him legendary to his friends and colleagues across NIH and the biomedical research community.

One is research training, an area that Norvell said originally brought him to NIGMS. When he first joined the institute, he helped manage multidisciplinary training grants and postdoctoral fellowships. Norvell's duties included making more than 100 visits to universities and medical schools. Until his retirement on Mar. 2, Norvell directed the \$184 million program, which supports graduate students, including M.D./Ph.D. candidates and clinical postdoctoral fellows at more than 70 institutions. Under his stewardship, the program has grown to include new training disciplines that represent multi- and interdisciplinary areas, and to emphasize efforts that increase the diversity of the research workforce.

As a program director in structural biology, Norvell worked with former NIGMS director Dr. Marvin Cassman to identify a major challenge of the field: determining the shapes of thousands of proteins quickly and cheaply. Norvell in 2000 helped spearhead the Protein Structure Initiative (PSI). As director of the 10-year, \$600 million effort, he coordinated the research of 23 collaborative teams that have created structure determination pipelines and new technologies to solve and study more than 3,500 protein shapes.

While admired for his ability to manage two large grant programs, Norvell was respected even more for his character.

“Whether it was training, research or spearheading a whole new field such as structural genomics, he approached each project enthusiastically and thoroughly,” said Dr. Helen Berman, who directs a PSI resource center and the Protein Data Bank.

In retirement, Norvell will focus on his hobbies: bike riding, swimming and, of course, travel.

Saying goodbye to NIH, he admitted, is bittersweet. “I have so many things that I'm looking forward to doing now that I'll have time, but I'm really going to miss the stimulating and intellectual life I've had here,” he said. 🍷

Wednesday Afternoon Lectures

The Wednesday Afternoon Lecture Series—held on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—features Dr. Ananth Karumanchi, Beth Israel Deaconess Medical Center, Apr. 8, speaking on “Pathogenesis of Preeclampsia.”

On Apr. 15, Dr. Lois Smith will address, “Understanding Angiogenesis through Retinopathy.” She is an associate professor of ophthalmology at Harvard Medical School and a physician at Children's Hospital Boston.

For more information or for reasonable accommodation, call Sarah Freeman, (301) 594-6747 or email sarah.freeman@nih.gov.