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The Second Best Thing About Payday

nih record

ABOVE • *Who got to play on stage recently with U2's the Edge? See story, p. 12.*

features

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Telling Cancer's Human Story

Pulitzer Winner Mukherjee Constructs History of Cancer

By Susan Johnson

In recent years, science has made astounding progress in cancer treatment and prevention. But in the midst of these technological advancements, oncologist and author Dr. Siddhartha Mukherjee asks his colleagues to remember one key point: "Ultimately, the story of cancer is a human story. It's a story about patients."

Dr. Siddhartha Mukherjee

In his lecture on June 15, he spoke, as a special guest of NCI, on "Constructing a History of Cancer." Mukherjee, of Columbia University, won the 2011 Pulitzer Prize for his non-fiction book, *The Emperor of All Maladies: A Biography of Cancer*.

Mukherjee said that a patient was his inspiration. This patient, battling a gastrointestinal stromal tumor, had tried several treatments but relapsed each time. "I'm willing to go on with all of this," she told him after one relapse, "but you have to tell me what I'm fighting."

HISTORY OF CANCER, PAGE 4

Royalty from two regions in Cameroon, Africa, work at NIH.

The Royal We

Kings Are Among Us at NIH

By Carla Garnett

Some 5,900 miles from here, in the northwestern region of Cameroon, Africa, two kingdoms are missing the physical presence of their kings (or *fons*, as they are known in Cameroon). But their loss is NIH's gain—at least temporarily. Fon Kennedy Nganjo, ruler of Njirong, and His Royal Highness Raymond Kangnsen Buhmbi, fon of Kesu-Wum, work at NIH with security contractor MVM Inc.

KINGS, PAGE 6

New Concepts, New Treatments

Decker Lecture Explores Problems In Childhood Growth

By Trisha Comsti

Dr. Jeffrey Baron

What causes some children to have growth problems and be extremely short as adults? This was the question raised at the 8th annual John Laws Decker Memorial Lecture, an event that features the winner of the Distinguished Clinical Teacher Award (DCTA).

Dr. Jeffrey Baron, chief of NICHD's section on growth and development, is the 2011 DCTA winner and was recognized for excellence in mentoring health care professionals and teaching on issues related to patient care. His talk covered three major areas: the factors that regulate growth, how these factors cause growth defects in children and treatments for children experiencing growth problems.

DECKER LECTURE, PAGE 8

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briefs

End-of-Life, Palliative Care Summit

The National Institute of Nursing Research will present a national scientific summit, "The Science of Compassion: Future Directions in End-of-Life and Palliative Care," on Aug. 10-12 at the Hyatt Regency Bethesda. The event will bring together scientists, health care providers, educators, representatives of professional organizations and members of the public to discuss the current status of end-of-life and palliative care (EOL PC) research.

The summit begins with "The Ethics of Science at the End-of-Life: A Town Hall Discussion," an evening panel with leading ethicists in EOL PC research including Dr. Joseph J. Fins, Weill Cornell Medical College; Dr. Karla F.C. Holloway, Duke University; and Dr. Nancy Berlinger of the Hastings Center. Other guests include Susan Dentzer, editor-in-chief of *Health Affairs* and on-air analyst on health issues with the *PBS NewsHour*, and Dr. Marie T. Hilliard, director of bioethics and public policy at the National Catholic Bioethics Center. NINR director Dr. Patricia Grady will offer welcoming remarks.

A keynote presentation by Dr. Ira Byock, three plenary discussions, break-out sessions, an evening juried poster reception and closing remarks by Dr. J. Randall Curtis will compose the remainder of the scientific program. Summit cosponsors include NCCAM, NIA, the Clinical Center department of bioethics, the Office of Rare Diseases Research and the Office of Research on Women's Health.

The summit is free and open to the public, but seating is limited and registration is required (walk-ins will be accepted for the Town Hall event only). Program information, including a link to the registration site and agenda, can be found at www.ninr.nih.gov/scienceofcompassion.

Lecture on Gender Differences in Mild TBI

The women's health scientific interest group lecture series will present "Gender Differences in Mild Traumatic Brain Injury—Outcomes and Potential Effects of Pleiotropic Hormones," on Friday, Aug. 19 from 11 a.m. to 12:30 p.m. in Bldg. 45, balcony A. Speakers will be Dr. David W. Wright, associate professor and director, emergency neurosciences, department of emergency medicine, Emory University School of Medicine, and Dr. Jeffrey J. Bazarian, associate professor of emergency medicine, neurology and neurosurgery, University of Rochester School of Medicine. Individuals who need sign language interpreters to participate should contact Socorro Vigil Scott at vigilscs@mail.nih.gov or (301) 402-8340.

Conference on Enhancing Community Engagement

On Aug. 30-31, the Duke Translational Medicine Institute will present the fourth annual Clinical and Translational Science Award Consortium's community engagement conference "Using Information Technology (IT) to Improve Community Health: How Health Care Reform Supports Innovation." The conference, funded by the National Center for Research Resources, will be held at the Bethesda North Marriott Hotel and Conference Center.

The event will feature leading health information technology and community engagement experts who will discuss the latest successes in applying IT to improve community health and facilitate research partnerships at the federal, state and local levels. Session topics will include using IT to connect the community to clinical care systems; engaging the community through telemedicine and other technology-driven methods; and using patient portals to improve community health connectivity.

All attendees will receive a free copy of the recently published *Principles of Community Engagement* (Second Edition). To access an online HTML version of this book, visit www.atsdr.cdc.gov/community-engagement.

Clinical health care workers and others interested in community engagement are invited to attend. Registration is $120 for access to all conference sessions, a buffet lunch each day and snack breaks. For more information, visit www.dtmi.duke.edu/ce-workshop or contact Barbara Gregory at barbara.gregory@duke.edu or (919) 681-6833.

Masked Man's Identity Sought by OIR

There is a new heart-valve exhibit in the south entrance of Bldg. 10 that includes this image, taken by an NIH photographer, which appeared in the World Health Organization's magazine World Health *in the summer of 1965. The story was about artificial spare parts—valves, vessels and patches—used by heart surgeons to repair many once fatal or disabling defects in the heart and blood vessels. NIH's Office of Intramural Research is trying to identify the surgeon in the photo. If you know who it is, contact the* NIH Record *office at (301) 496-2125 or email rm26q@nih.gov.*

Walter Cybulski, NLM preservation librarian, prepares wet books for freezing.

PHOTO: E. DÉSHAUN WILLIAMS

NLM Ready to Save Books in Times of Disaster

By Judy Folkenberg

According to a recent survey by Heritage Preservation, a national institute for conservation, over 80 percent of the nation's libraries and museums are not adequately prepared to save their books and other holdings in the event of a disaster. Fortunately, the National Library of Medicine is ready.

"The library has had an effective disaster plan in place for over 20 years," says preservation librarian Walter Cybulski, one of NLM's leaders in disaster planning. Cybulski, who has worked in NLM's preservation and collection management section since 1996, is an avid reader and published poet. He was drawn to the field in part due to a respect for books and libraries his parents instilled in him.

Disaster response planning is one of the main concerns for a library preservation program. After responding to many disasters at other institutions, NLM conservation librarian Holly Herro wanted to provide technical information for first responders at other libraries and museums. The result was a new NLM web site, "Emergency Preparedness and Response: How to Safely Stabilize, Salvage and Recover Collections in the Event of a Water Emergency." The site includes links to short instructional videos and is accessible via hand-held devices, allowing remote access. The site is at www.nlm.nih.gov/hmd/preservation/index.html.

Collections are vulnerable to a number of hazards ranging from mishandling damage and theft to insect infestation, flood and fire. The last two are considered the most threatening. What is destroyed by fire cannot be recovered and what is damaged by water may not be recoverable.

Mitigation is a critical component of a disaster response program, Cybulski says. Eliminating potential sources of problems is as important as being prepared to respond. To protect its rare and historical materials, NLM combines early detection (using a state-of-the-art smoke detection system) with instant notification of the NIH Fire Department. The aim is to detect and remove the source of a fire before the library's sprinkler system needs to be activated.

If a major fire occurs, nothing can be done to save the collection until after the blaze has been put out. Human safety takes precedence over all other disaster response actions, Cybulski notes. Library staff is only permitted to enter a disaster area after building engineers declare the area safe.

If water is discovered in a collection storage area, responders place absorbent matting in the aisles and corridors between bookshelves, to sop up water and prevent staff from slipping on wet floors. Wet vacuums are used to remove water and plastic sheeting is placed over bookshelves still at risk. In some cases, a diverter (essentially a large yellow umbrella) can be hung upside down directly below a ceiling leak to channel water down through a plastic hose to a large trash can.

As the water is cleaned up, fans and dehumidifiers are deployed to dry out the area. "We have a limited window of opportunity to take emergency steps to save water-damaged books," notes Cybulski. "Beyond 48 hours, mold growth will begin to cause irreversible damage."

Small quantities of lightly wet books can be air-dried with fans and delicatessen-type tissue placed between wet pages. In some cases, large quantities of wet books may need to be frozen until a conservator can get to each one and make repairs. The library has 32 cubic feet of freezer space on-site and has a plan to have larger quantities of wet material transported to off-site freezer facilities if necessary.

So far, NLM has been fortunate. Despite a few leaks over the years, there have been only minor losses of collection materials. Having well-trained staff who know how to respond to disasters means NLM's valuable collections of biomedical research material are well-protected for future generations, says Cybulski.

Progress Evident in PNRC II Construction

Progress continues on the phase II expansion to the Porter Neuroscience Research Center as concrete is poured for the second floor of the building. The new 5-story, 306,476-gross-square-feet expansion will house scientists from 8 institutes, with NIA becoming the most recent tenant. The building will include energy conservation features such as solar panels and ground source heat pumps, thus extracting energy from the sun and the earth to achieve energy efficiency.

HISTORY OF CANCER

CONTINUED FROM PAGE 1

"This is a question that's come to all of us," Mukherjee told the oncologists in the audience. However, books that might have helped his patient understand her foe were "unsatisfying," he said. "They were dumbed down. They did a disservice to cancer." To solve this problem, he set out to write a book himself.

In his lecture, Mukherjee outlined the progression of humanity's understanding of the disease and its treatments over thousands of years, from the ancient Egyptians to the Enlightenment and beyond.

Mastectomy, the removal of cancerous breast tissue, is a still-common procedure that has its roots in centuries-old anatomical texts. From the late 19th century through the 1950s, mastectomies removed more and more tissue in an effort to prevent cancers from recurring. But beginning in the 1940s, researchers began developing chemotherapy, which eventually offered doctors a new way of battling this disease.

Participants in the first, groundbreaking trial of a chemotherapy agent were children with leukemia, identified in the researchers' notes only by their initials. In his commitment to showing the human side of cancer, Mukherjee sought out the identities and stories of these children.

For a long time, he was frustrated by many dead ends. But while visiting his parents' home in New Delhi, Mukherjee met the biographer of one of the scientists involved in the trial. Through the biographer, he found a newspaper clipping with the picture and names of one of the trial participants, Robert Sandler, and his brother, Eliot.

"I can't believe I had to go thousands of miles to find someone in Boston," Mukherjee said. A second coincidence followed: Eliot was surprised to find his brother's name while flipping through *The Emperor of All Maladies* in a bookstore. He contacted Mukherjee and shared his memories of this long-lost brother, whose contribution to cancer research nearly had gone unrecognized.

The early successes of chemotherapy began a new era of optimism. Mukherjee read from a full-page newspaper advertisement addressing then-President Nixon: "Mr. Nixon," it read, "You can cure cancer." In fact, the ad suggested, cancer could be eradicated by the bicentennial of the United States.

***Right**:*
"A cancer cell [is], like Grendel, a distorted version of our own selves," said author Mukherjee.

PHOTOS: BILL BRANSON

Mukherjee emphasized the "single c's" in this ad: one cancer and one cure. As scientists learned more about cancer, however, this assumption began to seem unrealistic.

Despite the lack of a single cure, there has been a "change in the relentless trajectory of cancer deaths," he said, with lower mortality every year. A great part of this success comes from our growing understanding of the genetics of cancer, he explained. We now know that each person has his or her own cancer, with hundreds of unique variations in numerous growth-control genes, which, in aggregate, cause the uncontrolled cell growth at the heart of the disease.

"This answers the question of why the 'single c' was so hard to come by," said Mukherjee. Instead, researchers are working on individual, targeted therapies, optimized for each patient's particular collection of genetic variants.

Mukherjee quoted his host, NCI director Dr. Harold Varmus, whose 1989 Nobel Prize banquet speech said: "A cancer cell [is], like Grendel, a distorted version of our own selves."

Unlike the epic hero Beowulf, we have not yet defeated this foe, which arises from our own, unique genetic makeup. But, said Mukherjee, at least we are starting to understand it.

OHR's Trish Wimsatt, Branch G chief, with HR Clinic schedule sign

OHR Hosts First 'HR Clinic' Event

The Office of Human Resources held its first HR Clinic on June 21 at the Natcher Conference Center. The event brought more than 400 members of the NIH administrative community together for a day of free, interactive training classes on a variety of HR topics.

Attendees chose from 20 sessions on 13 topics, everything from Title 42 and HR IT systems to benefits and retirement planning.

In addition, IC administrative staff had the opportunity to meet one-on-one with professionals from various OHR divisions at tables in the Natcher atrium devoted to such topics as: classification, NIH Training Center, Civil, Global Recruitment and others. The stations provided an opportunity for participants to ask questions and connect names with faces, all in a one-stop location.

Between classes, the Natcher atrium was abuzz with questions being answered and networking going on among NIH's administrative and human resources communities.

These interactions were a main goal of the HR Clinic. "Supporting the NIH science mission requires not only educating administrative staff, but also strengthening their working relationships with each other and with OHR," said Trish Wimsatt, OHR Branch G chief and lead organizer of the event.

Wimsatt emphasized the importance of the "Fish Philosophy" themes: Play, Make Their Day, Be There and Choose Your Attitude. Fun, positivity and inclusiveness are all a part of the philosophy.

"We wanted participants to be engaged while learning to create an atmosphere of energy and passion to enhance their experience and be more educated to do what they love to do, even if at the moment they may not be doing exactly what they love," Wimsatt explained.

Participation began even before the day of the event. The ICs serviced by Branch G were involved in planning the clinic from the start.

HR Clinic attendees fill the room for a training session.

Wimsatt (l) and Valerie Gill, director, Client Services Division

Their input allowed OHR to tailor content specifically to their requests.

The preparation appears to have paid off. Survey feedback from clinic attendees has been positive. One said, "I enjoyed the sessions, they were great and informative—a great resource to use as I outreach and network with individuals on behalf of NIAID."

"Customer service and creating a strong, positive relationship between OHR and the ICs staff is a key goal for OHR's Client Services Division," said Valerie Gill, director of the division. "The clinic is one of many strategies we implemented this year to enhance customer satisfaction. After hearing the feedback from the participants at the clinic, I'm pleased to say we have achieved our goal."

OHR Director Chris Major echoed that sentiment. "The response to the HR Clinic has been great," she said. "We look forward to pursuing more initiatives that focus on strengthening our relationships with our customers."—**John Grill**

HR Clinic registration table in the atrium of Natcher Bldg.

PHOTOS: PHIL LENOWITZ

KINGS

CONTINUED FROM PAGE 1

So, how did NIH come to have royalty on its workforce?

Ruling Remotely

Nganjo said he came to the United States because he "was ambitious." In addition to his NIH job as a part-time supervisor with MVM, he also has taught history and U.S. government at Woodbridge Senior High School in Virginia. And he's a graduate student in education at Bowie State University.

Fon Kennedy Nganjo (l), ruler of Njirong, and His Royal Highness Raymond Kangnsen Buhmbi, fon of Kesu-Wum, both kings of regions in Cameroon, Africa, work at NIH.

PHOTOS: BILL BRANSON

The 11th king of Njirong, a village of about 6,000 citizens, Nganjo inherited the throne from his father in 1998. Kingdom economic woes and his own quest for higher education led him to relocate to the U.S. in 2003.

"I still have to pay tuition and I can only take courses in the evenings," he explained, "but as soon as I [graduate] I'll be on the next plane home."

As chief decision-maker for his homeland, does Nganjo find it difficult to lead from a long distance?

"The world has become a global society," he said, citing the Internet and telecommunications as tools he uses all the time. "I'm constantly in touch with my kingdom with modern technology. The kingdom is an institution just like the United States. When President Obama is out of the country, the United States continues to operate. You have well-organized systems in place to operate when the president is not in the country. My kingdom is the same way."

Buhmbi was enthroned in 1988 in Kesu-Wum. Home to about 20,000 people, Kesu is one of 13 villages that make up the Wum federation. Buhmbi, too, has a competent structure that runs the affairs of his kingdom while he is away. "I have a regent who acts on my behalf," he said.

Buhmbi came to northern Virginia 7 years ago, looking for opportunities to partner with American businesses and organizations that can help foster the development of his fondom. He began working at NIH in 2009.

'A Wonderful Coincidence'

The Republic of Cameroon, which gained its independence in the early 1960s, has an estimated 19 million citizens. The elected president of Cameroon appoints a prime minister, who is the official head of the government. Fons, the country's traditional rulers, govern their individual regions, but are subject to the rules of law set by the nation's overarching government.

Amid tens of dozens of similar self-sustaining kingdoms of various-size populations, the village of Kesu-Wum is about 80 kilometers from the northwest regional capital of Bamenda. The Njirong kingdom is not close enough in proximity to be considered a neighbor, according to Buhmbi.

"Our kingdoms are quite far apart," he explained, estimating that it would take several hours to travel between the two villages. He and Nganjo knew of each other in Cameroon, but met at NIH—working for the same company—simply by happenstance.

"It was just a wonderful coincidence," Buhmbi said.

"You know how they say birds of a feather flock together?" agreed Nganjo. "Well, we just stumbled into each other."

'Uneasy Lies the Head That Wears a Crown'

Although thousands of miles separate the fons from their subjects and in-person visits to their individual kingdoms are rare, distance is not the largest problem these kings have to tackle.

"It's not so easy," Buhmbi admitted. "We have a lot of situations to deal with. While people are preoccupied with personal issues, we as fons or kings have, in addition to our personal issues, the responsibilities of resolving conflicts and ensuring the welfare or well-being of our people at home and in the diaspora.''

Consider, for instance, problems that stem from competing cultures and dueling ideals. One of the most difficult issues Nganjo is grappling with is the obligation to follow tradition. Take his kingdom's custom of polygamy. His father had 13 wives. Nganjo—whose wife and three children live in the U.S. with him—says he has no desire to marry multiple times. His culture, however, pressures him to follow in the footsteps of his forebears.

"I do not want to have to do that, but tradition is very important in my kingdom," he said.

Another practical difficulty for both Nganjo and Buhmbi is their kingdoms' struggling economy.

Opportunities Outweigh Inconveniences

A number of circumstances—political unrest, health hazards, global economic downturn and poor infrastructure—have combined to leave our fondoms wanting, Buhmbi noted.

"Every day you are trying to improve the lives of your people," Nganjo agreed. "We still do not have potable water. We're still looking for engineers to find ways for us to get potable water. We have a government health center that is understaffed and underfunded. We need a laboratory and we lack many of the basic necessities. We have built a secondary school, but it needs textbooks and supplies. Part of my job as king is to get more support and funding for my people."

Buhmbi has reached agreements with the School of Engineering at the University of Virginia and Rotary International to sponsor and develop a Wum water project that will provide potable water to the Kesu and Wum communities.

In addition, Nganjo and Buhmbi, along with other fons in the Washington area, founded the North West Fons Council, which brings together other Cameroonians in the region to help promote tourism, education and economic investment opportunities for their kingdoms.

If just a few of these potential collaborations bring benefits to the kingdoms, then both kings will consider their long-distance leadership successful, despite the inconvenience.

"Our primary concern has always been to promote and protect our cultural values, socio-economic development of our communities, provision of quality health and the economic empowerment of our people," Buhmbi concluded.

National Children's Study To Host Scientific Exchange at NIH

The National Children's Study (NCS) will host "National Children's Study Research Day: Come Learn, Collaborate and Innovate with Us!" on Wednesday, Aug. 24 to share NCS research initiatives and identify opportunities to collaborate and innovate with the broader research community.

The NCS is a multi-site, 21-year observational study. Its goal is to improve children's health by collecting high-quality data on genetic and environmental factors that may influence health outcomes. It is being implemented as two separate but related long-term studies due to its complexity. The first study, a pilot or Vanguard Study, began in 2009 to evaluate the feasibility, acceptability and cost of participant recruitment and retention. It also examines data collection and operations. The Main Study focuses on exposure and response and will observe children from birth through age 21 based on the most optimal approaches identified in the Vanguard Study.

NCS Research Day will bring together NCS scientists, the NIH research community other federal agencies and partners. The NCS will share data and lessons learned up to this point and facilitate collaboration with innovators who attend.

"What makes the NCS unique is that the Vanguard Study serves as a test bed, where multiple scientific methodologies, tools and technology platforms for data collection will be selected and systematically evaluated," said Capt. Steven Hirschfeld, acting NCS director. "We want to share our research so we can identify linkages with other programs here at NIH and government-wide."

NCS Research Day is about more than just child health research. "We are interested in bringing together basic and clinical researchers from multiple scientific areas, as well as those working to [provide innovations in] research informatics, operations, regulatory processes and community engagement," said Hirschfeld.

The meeting will include many topics such as feasibility studies of whole genome sequencing of NCS families, new data collection methods, integrated terminology, new objective assessments of health across the life course, innovative technologies and informatics approaches, sampling results and health disparities insights.

NCS Research Day will be held in Natcher Auditorium. Data will be presented in a plenary session that will be available on NIH Videocast. Posters will be on exhibit in the Natcher atrium throughout the day.

All are welcome to attend this free event. Registration and more information are available at www.nationalchildrensstudy.gov/ncsresearchday.

Collins Addresses Leadership Program Participants

"I not only use all the brains that I have, but all that I can borrow." NIH director Dr. Francis Collins (l) shared this quote from Woodrow Wilson with 20 senior leaders participating in NIH's Executive Leadership Program (ExLP). The quote is a Collins favorite that emphasizes the value of teamwork in organizations. Participants listened as he discussed his journey from the bench to NIH director and provided advice on how they can continue to be successful at NIH. The ExLP is a 6-month, competitive leadership program targeting aspiring "Top 5" and existing NIH leaders. Visit http://trainingcenter.nih.gov/ExLP.html for more information.

DECKER LECTURE

CONTINUED FROM PAGE 1

***Above**:*
Baron explained that when a child comes into the office with a growth problem, "You have to consider hundreds of diagnoses with each individual."

PHOTOS: BILL BRANSON

"The central concept in this field is that children get taller because their bones get longer. And their bones get longer because of the growth plate, a thin layer of cartilage that is found in vertebrae and at the ends of long bones," Baron said.

Childhood growth is carefully regulated by multiple factors including hormones, genes and nutrition. "If we want to understand childhood growth and growth disorders, we have to understand the regulation at each of these levels," Baron said.

The presence of growth hormone, for example, is important for normal childhood growth. But diagnosing growth hormone deficiency is not easy. For one thing, it is hard to get an accurate reading of how much growth hormone a child's body is making. Current tests for growth hormone deficiency often yield false positive results. "In my opinion, we're over-diagnosing growth hormone deficiency left and right," Baron said.

He also explained that what looks like growth hormone deficiency may really be growth hormone insensitivity, meaning the body makes growth hormone but cannot properly respond to it.

What roles do other hormones play? Glucocorticoid has a slowing effect on growth. Others, like thyroid hormone and androgen, have accelerating effects on growth. The hormone estrogen, however, reveals a more complicated story.

"When it comes to estrogen, it's often said it's a two-edged sword," Baron noted. While estrogen can accelerate growth, it can also accelerate aging of the growth plate and hasten the time at which growth will stop.

Children also need good nutrition to grow properly—meaning the right amount of calories and nutrients. Poor nutrition can affect hormone levels in a way that negatively affects growth. For example, children who are not getting proper nutrition might be able to produce growth hormone, but their bodies cannot properly respond to it. Baron said that in this way, "Malnutrition can be thought of as an acquired form of growth hormone insensitivity."

He further explained that our bodies have evolved to conserve energy in times of starvation. "Growth is a luxury that can be postponed for better times," Baron said.

Another piece of the childhood growth puzzle lies in our genes. Researchers have identified over 200 genes required for normal growth plate function. A mutation in the SHOX gene, for example, can lead to severely abnormal skeletal growth.

How do we diagnose and treat children with growth problems? Baron explained that when a child comes into the office with a growth problem, "You have to consider hundreds of diagnoses with each individual."

Doctors start by charting a child's growth curve and can move into more complicated assessments like genetic testing. After diagnosis, treatments can include medications that increase the rate as well as the duration of growth. Injections of growth hormone have successfully increased the rate of growth but remain controversial because the long-term safety of the treatment is unknown.

Researchers are cautiously optimistic about treatments that extend the duration of growth, including one drug still in clinical development that can "shut off" estrogen as a way to prolong growth. Baron noted that this drug and several others have great potential but are not yet ready for "prime time."

Baron thanked the fellows in the Endocrinology Training Program who nominated him for the teaching award. "It's one of the great pleasures of this job," said Baron. "To teach you, to learn with you and to take care of patients together."

The lecture honors the memory of Dr. John Decker, director of the Clinical Center from 1983 to 1990. He oversaw major advances at the CC, including the development of the positron emission tomography program and the clinical use of magnetic resonance imaging.

milestones

NIGMS Retires a 'Fund of Knowledge'

By Emily Carlson

Did you know that a Maryland license plate can have no more than seven characters? This is one of many facts you might have learned from Dr. Bert Shapiro, an NIGMS program director for 35 years.

Around the institute, Shapiro was the go-to guy for anything you needed to know. Whether you wanted a list of sites to see while traveling in Italy or trivia about a Nobel Prize winner, Shapiro had the answer. And by the end of your conversation, you usually got more than you bargained for.

"I've never met anyone with a memory like his. He knows so many facts and has so many stories to tell," said Dr. Cathy Lewis, director of the NIGMS Division of Cell Biology and Biophysics, where Shapiro was a branch chief.

Shapiro's vast knowledge base and approachability are part of his legacy within NIGMS and the scientific community he helped nurture. He retired from NIH on July 1.

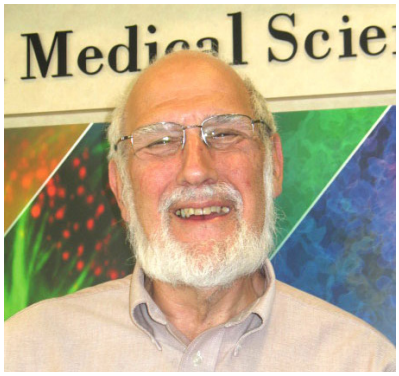
"Bert recalls NIGMS history, people, procedures and events, and he applies and shares this knowledge when addressing any current issues," said then-NIGMS director Dr. Jeremy Berg. "We will miss his wisdom and perspective."

One of the efforts Shapiro says he is most proud of is leading the NIGMS Medical Scientist Training Program (MSTP), which supports students pursuing a combined M.D.-Ph.D. During the 17 years he directed the program, he saw hundreds of students graduate from it. And many more contacted him for career advice.

"It was a rare day I didn't get a call from someone thinking about going into the program," he said. "I was the friendly voice on the other end."

But Shapiro also spent a lot of time talking to the faculty who managed MSTPs at institutions across the country. By knowing what each site was doing, he could learn about and share best practices with everyone, ensuring that the program's quality continued to rise.

"He made use of his extraordinary memory and fund of knowledge to bring out the best in the program and academic sites," said Dr. Nancy Andrews, an MSTP graduate, a former MSTP site director and now dean of Duke University Medical School. "A generation of physician-scientists owes its perspective and capabilities to Bert's dedication and vision."



Dr. Bert Shapiro

PHOTO: EMILY CARLSON

Because of this leadership, Shapiro thought he'd put "MSTP KING" on his license plate. But, as he soon found out, that was too long. Knowing a bit of Latin, he came up with "MSTP REX."

Shapiro, who started college at age 16, earned his doctorate from Harvard University, where he taught biology and conducted research prior to joining NIGMS in 1976.

Interested in both the sciences and arts, Shapiro realized his curiosity was too broad to focus on a narrow area of research, namely the study of certain proteins that help nerve-signaling ions flow across cell membranes. Being a program director in cell biology, he says, let him not only stay abreast of scientific advances but also allowed him to help shape their direction.

"I've watched and encouraged careers, especially those of new investigators," he said. "I've worked hard to be in their cheering section."

One example is Dr. Rod MacKinnon, a Rockefeller University researcher who received the 2003 Nobel Prize in chemistry for his NIGMS-supported research. He said, "Bert has overseen all of my NIH grants and has offered invaluable advice, especially at the earliest stages when I was just trying to figure out how to make it as a scientist…He has made a difference."

For someone who enjoys discovering and sharing new facts, science has offered Shapiro the perfect career: Research advances, by definition, bring forth new information.

While he'll miss his daily interactions with colleagues and scientists, Shapiro said he won't miss the commute. Shortly before his retirement, he and his wife moved to Annapolis, where Shapiro now plans to spend his days fishing and swimming. He also will subscribe to the *New York Times* so he can challenge himself with the daily crosswords—an addictive hobby he once reserved for plane rides. His overall goal, he says, is to "learn as much as I forget!"

Principles of Clinical Pharmacology Course

The Principles of Clinical Pharmacology course, sponsored by the Clinical Center, will begin in Lipsett Amphitheater, Bldg. 10 on Sept. 1. The course will be held Thursday evenings from 6:30 to approximately 7:45 and will run through Apr. 26, 2012.

The course covers topics such as pharmacokinetics, drug metabolism and transport, assessment of drug effects, drug therapy in special populations and drug discovery and development.

Registration is open to all interested individuals at no cost unless the course is being taken for graduate credit. The course may be taken for credit through FAES as PHAR 500 I and PHAR 500 II; contact FAES directly at (301) 496-7976. Deadline for registration is Aug. 31. Certificates of participation will be awarded at the end to all students who attend 75 percent of the lectures. More information is available at www.cc.nih.gov/training/training/principles.html or by calling (301) 496-9425.

digest

Mental health experts are calling for a greater world focus on improving access to care and treatment for mental, neurological and substance use disorders.

Global Research Initiative Launched to Improve Mental Health

Mental health experts are calling for a greater world focus on improving access to care and treatment for mental, neurological and substance use (MNS) disorders, as well as increasing discoveries in research that will enable this goal to be met.

The Grand Challenges in Global Mental Health Initiative, led by NIMH and the Global Alliance for Chronic Diseases, has identified the top 40 barriers to better mental health around the world. Similar to past grand challenges, which focused on infectious diseases and chronic, noncommunicable diseases, this initiative seeks to build a community of funders dedicated to supporting research that will significantly improve the lives of people living with MNS disorders within the next 10 years.

Twenty-five of the specific challenges were described in an article published July 7 in *Nature*.

Investigators Discover Mechanism That May Be Important for Learning, Memory

New findings in mice suggest that the timing when the neurotransmitter acetylcholine is released in the brain's hippocampus may play a key role in regulating the strength of nerve cell connections, called synapses. Understanding the complex nature of neuronal signaling at synapses could lead to better understanding of learning and memory and novel treatments for disorders such as Alzheimer's disease and schizophrenia.

Neurons in the hippocampus, one of the parts of the brain that is thought to have a critical function in learning and memory, communicate with each other at synapses by releasing various neurotransmitters, including acetylcholine and glutamate, which stimulate electrical signals in the adjacent neurons.

For years, neuroscientists have been working to determine which cellular processes allow humans to learn from experience and store memories and how these processes are compromised by conditions such as schizophrenia and Alzheimer's disease. Now, NIEHS researchers believe they have found one such mechanism for synchronizing changes in the strength of synapses. The results of the study were published online July 13 in *Neuron*.

Receptor Limits Rewarding Effects of Food, Cocaine

Researchers have long known that dopamine, a brain chemical that plays important roles in controlling normal movement, and in pleasure, reward and motivation, also plays a central role in substance abuse and addiction. In a new study conducted in animals, scientists found that a specific dopamine receptor, called D2, on dopamine-containing neurons controls an organism's activity level and contributes to motivation for reward-seeking as well as the rewarding effects of cocaine.

A report of the findings, by researchers at NIAAA and colleagues at the Institute for Research on Genetic Engineering and Molecular Biology in Argentina and the University of Michigan Medical School, appeared online July 10 in *Nature Neuroscience*.

"Research in humans and other species has shown that increased vulnerability to drug addiction correlates with reduced availability of D2 dopamine receptors in a brain region called the striatum," explained study coauthor Dr. David Lovinger of NIAAA. "Furthermore, healthy non-drug-abusing humans who have low levels of the D2 dopamine receptor report more pleasant experiences when taking drugs of abuse."

Study Shows Reduction in Death for Men with Prostate Cancer

Short-term hormone therapy given in combination with radiation therapy to men with early-stage prostate cancer increased their chances of living longer compared to treatment with radiation therapy alone, according to a clinical trial supported by NCI.

Benefits of the combined treatment were limited mainly to patients with intermediate-risk disease and were not seen for men with low-risk prostate cancer. The results appeared July 14 in the *New England Journal of Medicine*. The trial was conducted by the Radiation Therapy Oncology Group.

The study, the largest randomized trial of its kind, enrolled nearly 2,000 men with low- and intermediate-risk prostate cancer and followed their health status for more than 9 years at 212 centers in the United States and Canada.—**compiled by Carla Garnett**

feedback

Want to know about some aspect of working at NIH? You can post anonymous queries at www.nih.gov/nihrecord/index.htm (click on the Feedback icon) and we'll try to provide answers.

Feedback: This is a question about compressed work schedules and NCI's requirements vs. NIH's. NIH allows reasonable latitude for crafting schedules that meet the 40-hour work week and your position requirements as long as your supervisor agrees. I put together a schedule that met all the NIH requirements for my official tour of duty and it seemed to be okay for a while. Then an NCI auditor said absolutely not, we only allow a single compressed work schedule—the 2-week one with a day off in the 2 weeks in a specific schedule. No way could I do two half-days off or any other schedule, only the single one they specify. This does not jibe with the official HHS position supporting teleworking, flexible schedules and avoiding contributing to traffic difficulties. Given BRAC problems as well as the official positions, will NCI reconsider permitting real flexible schedules that are consistent with job duties? And why does NCI have a policy that is radically different from NIH?

Response from the NIH Office of Human Resources: NIH has two types of work schedules: compressed and flexible work schedules. Under both schedules, an employee is required to work a minimum of 8 hours on each scheduled work day. A compressed work schedule, by definition, requires an employee to work a fixed 80 hours each pay period on fewer than 10 work days. In contrast, a flexible work schedule allows employees to vary their arrival and departure time or remain on a fixed work schedule; however, credit hours can also be earned. So, the NCI auditor was correct in stating that you cannot split your regularly scheduled day off, under either work schedule option, into two 4-hour work days. NIH recognizes and supports workplace flexibilities and recently rolled out the new Telework Enhancement Act provisions to promote greater use of telework, to meet our continuity of operations, promote employee efficiency and improve employee work/life balance.

In an effort to give greater work schedule flexibilities, we are looking into piloting new options under the flexible work schedules. These new options can be tailored to meet the unique needs of organizations, as well as promote greater flexibilities to meet work and life demands.

Feedback: We are constantly hearing about budget cuts at NIH. Insides of buildings are old and outdated (especially bathrooms). Where then does the money come from to put in brand new landscaping and a fancy expensive driveway in front of Bldg. 12B? Why was this even done? The driveway leads to nowhere and the money could have been used for more practical purposes.

Response from the Office of Research Facilities: The events of 9/11 and the Oklahoma City bombing led to significant security changes on the NIH campus including new requirements for government buildings. As part of these security enhancements, the roadway between Bldgs. 50 and 12 needed to be closed. Rather than leave the area as a vacant asphalt lot, a plan was developed to return the area to a grassy state as part of ORF's responsibility for managing grounds and road surfaces and to improve stormwater runoff controls.

All of the water from the NIH campus eventually travels to the Chesapeake Bay and contributes to the health or deterioration of the bay. This greening project serves to improve our overall streams and waterways and reduce NIH's impact on the environment and improve water quality in the bay.

ORF takes into account a number of factors to prioritize which projects should be funded first. Because this project was primarily an exterior improvement project, it was on hold for several years. However, it was funded last fiscal year because it will provide an appropriate balance between physical security, emergency vehicle accessibility, reduced stormwater runoff and an attractive exterior venue for collaboration among the multiple institutes and centers that occupy Bldgs. 50 and 12.

It is always a challenge to balance project priorities, especially in these tight fiscal times. While recognizing that each expenditure must be thought through carefully, ORF still wants to provide attractive outdoor spaces for employees. The landscaped environment of our Bethesda campus is the result of many years of careful planning and maintenance. The campus master plan proposes additional projects aimed at improving the quality of the campus pedestrian experience in the future.

Feedback: Given the risks to human health described in the *NIH 12th Report on Carcinogens*, what is NIH doing to request that the contractors who run all of the food facilities in NIH-tenant buildings switch from styrofoam coffee cups to heavy cardboard cups, made for hot beverages?

Response from the Office of Research Services: The NIH cafeterias have been using styrofoam-free cups for almost 2 years now. As part of the overall efforts to reduce our carbon footprint and help "green" the NIH, the Office of Research Services worked with Eurest, our food services vendor, to replace all styrofoam cups with compostable cups. We are also working with the operators of our retail stores, Maryland Business Enterprise Program for the Blind, to find an economical substitute in their operations.

***Top, l**:*
On stage before the U2 concert, the Edge (r) lets NIH director Dr. Francis Collins take a few practice licks, as Clinical Center patients (from l) Nachiketa Bhatnagar, Lauren Weller and Andrew Windland watch. "Oh, I just played a little 12-bar blues," Collins said later.

***Top, r**:*
A guitar enthusiast, Windland takes a turn on Edge's amped-up 6-string. Later, Edge autographed the guitar Windland brought with him.

***Above**:*
Guitar in hand, Weller chats with the Edge.

***Right**:*
On stage with the Edge and Collins are Weller, Windland and Bhatnagar, accompanied by family members. Also shown is Dr. William Li (l) of the Angiogenesis Foundation.

PHOTOS: DIANE BAKER

'More Than Just the Music'

Collins, Young People Take in U2 Concert

NIH director Dr. Francis Collins and three young people being treated at the Clinical Center recently enjoyed a U2 concert at Baltimore's M&T Bank Stadium. U2 guitarist and vocalist David Howell Evans, known better as the Edge, invited the group onstage before the concert for a few practice guitar licks and photo opportunities.

The Edge, who sits on the board of directors of the Angiogenesis Foundation, had visited Collins last October to talk about cancer research. When the "U2360°" tour came near the Washington, D.C., area, Collins, himself an avid guitarist and rock music enthusiast, invited a few CC patients to visit the Edge and experience U2 in concert.

"I'd met the Edge last fall and we'd hit it off," Collins said. "He'd mentioned then that perhaps when U2 played in this area, I could come to the show. It was actually my wife, Diane Baker, who suggested that maybe several young U2 fans at the Clinical Center might also enjoy seeing the concert."

A group of 8 attended the show from NIH. The young people were each accompanied by one family member. Collins and Baker paid for their own concert tickets. Attendees gave the experience a rave review, appreciating the event on a deeper level.

"The whole show was about more than just the music," said CC patient Lauren Weller, age 26. "You could tell they cared about important issues. It was very personal."

Indeed, the Edge has a personal connection to health issues beyond his membership on the AF board. His daughter Sian is a leukemia survivor.

"In addition to being a guitar wizard, Edge is a very thoughtful guy," Collins said. "He has, of course, phenomenal skills as a guitarist, but he also has an impressive ability to learn about things that are not easy for a lot of people to wrap their brains around."

The NIH group spent about an hour pre-concert with the Edge, chatting and generally just hanging out.

"When we got there, we were first shown to the green room," Collins recalled. "A bit later, Edge showed up to meet us. He was very gracious. He took us all on a tour backstage. Because the show is 360 degrees, backstage is actually under the stage. We got to see all the control boards, and we met Edge's guitar technician, Dallas.

"Then, to my surprise, Edge said, 'Let's go up on stage.' So there we were, in an arena that seats about 82,000, looking out over a few thousand in the audience who had arrived early. Edge hands over a guitar that is already hooked to the sound system. He was really very attentive to the kids. A couple of them knew a little bit about guitars, and when Edge slipped that guitar on their shoulders—that was priceless! Cancer just sort of slipped into the background for awhile."

During the visit, the Edge also hand-delivered to one youngster a pair of sunglasses worn by U2 lead singer Bono and autographed a guitar brought by patient Andrew Windland, age 12.

"It was pretty cool," concluded 17-year-old CC patient Nachiketa Bhatnagar.

Partway through the concert, Collins got another surprise: Bono sent him a shout-out.

"That generated a lot of calls and emails later from friends," Collins admitted, laughing. "Most of them were saying, 'You weren't really at the concert, were you?' and I said 'Of course I was. Why wouldn't I be at a U2 concert!'"

In fact, Collins had met Bono previously and they had talked about the singer's commitment to the global health effort.

"I really admire all of the great work the band is doing," concluded Collins. "They obviously have this celebrity status and they have made a conscious decision to use that status for good."

After the concert, Collins said he and the rest of the group were "exhilarated and exhausted, but we all were talking about how meaningful the evening had been. We all agreed—even the young people for whom it's probably not cool to admit being impressed by something—even they agreed that it had been a once in a lifetime experience."—**Maggie McGuire, Carla Garnett**