

nih record



ABOVE • Dancers entertained at NIH's annual MLK celebration; see story below.

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New Tools, New Rules

NIH Releases Social & New Media Policy

By Carla Garnett

Let's face it. To get your message across these days, you most likely have to blog it, tweet it or post it on Facebook. In other words, you have to employ some form of social media. As use of such networks (also called "new media") has become more widespread in pop culture over the last decade, it's also presented tantalizing new ways for the medical research community to connect with more people. Naturally, along with any new tools come new responsibilities and rules for users. Enter the recently released "NIH Social and New Media Policy" (also known affectionately as "Manual Issuance 2809").

"These days of new media are very much like the first days of the Internet," said John Burklow, NIH associate director for communications and public liaison. "We see social media as valuable—and powerful—new resources for communicating and engaging audiences. We want to harness that power in thoughtful ways."

Communication with Consideration

More than 2 years in the making, the social media policy was published Nov. 4. Led by the Office of Communications and Public Liaison, two other Office of the Director components—the Office of the Chief Information Officer and the Office of Management Assessment—worked together to develop the guidance. Their challenge? How

SEE SOCIAL MEDIA, PAGE 6



Dr. David Botstein delivers 2nd Nirenberg Lecture.

Botstein's 'Bots

Evolution in Yeast Yields Clues to Tumor Development

By Rich McManus

Much of what science has learned about genetics in recent decades has yeast to thank for the insights, and few people in American science are putting yeast through a more rigorous curriculum than Princeton University's Dr. David Botstein, who gave the second annual Marshall Nirenberg Lecture at NIH on Jan. 4.

SEE BOTSTEIN, PAGE 4



Dr. Lemuel Russell IV speaks at MLK ceremony.

'A Day On, Not a Day Off'

NIH Celebrates Legacy of Martin Luther King, Jr.

By Trisha Comsti

NIH encouraged everyone to "Remember! Celebrate! Act!" in honor of Martin Luther King, Jr. with a Jan. 12 event sponsored by the Office of Equal Opportunity and Diversity Management.

NIH director Dr. Francis Collins opened the ceremony reflecting on King's contributions in

SEE KING OBSERVANCE, PAGE 8





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NIH...Turning Discovery Into Health



briefs

STEP Forum on Disaster Response

The staff training in extramural programs (STEP) committee will present a Science in the Public Health forum on the topic "Disaster Strikes—Responses from NIH and Beyond..." on Thursday, Feb. 23, from 9 to 11 a.m. in Lister Hill Auditorium, Bldg. 38A.

Hurricanes, tsunamis, quakes and tornadoes—who is there to pick up the pieces? From Katrina to Haiti, NIH first responders and their humanitarian partners have been on the ground providing relief, acute care and long-term follow-up. Come to this forum to learn what your colleagues and others do and how you can help when the next disaster strikes.

HHSinnovates: Vote Today!

Between now and Feb. 24, you can vote for the best ideas in the HHSinnovates awards competition. Innovations from across HHS, including NIH, that improve the way we do business have been submitted and are now in the semi-final round of the competition. Based on votes cast by the HHS community, six finalists will be presented to Secretary Kathleen Sebelius; she will select the top three for recognition at an awards ceremony in the spring.

You can view the innovations submitted to HHSinnovates and cast your vote by going to http://intranet.hhs.gov/abouthhs/programs_initiatives/innovates/index.html.

Vote today and see what innovative ideas your colleagues have already put into practice.

NIH Rare Disease Day, Feb. 29

NIH will recognize Rare Disease Day on Wednesday, Feb. 29 from 8:30 a.m. to 5 p.m. Patients, visitors and staff are welcome to attend presentations and participate in activities in the Clinical Center's Masur Auditorium, supported by the NIH Office of Rare Diseases Research, the Clinical Center, other institutes and centers, the Food and Drug Administration's Office of Orphan Product Development, the National Organization for Rare Disorders and the Genetic Alliance.

Attendance is free and open to the public. In association with the Global Genes Project, all attendees are encouraged to wear their favorite pair of jeans. For more information, including details on registration and an agenda, visit <http://rarediseases.info.nih.gov/RareDiseaseDay.aspx>.

Orioles and Nationals Ticket Sale

The R&W will once again offer tickets to the Baltimore Orioles and Washington Nationals. Orioles tickets go on sale Tuesday, Mar. 6 in Bldg. 31, Rm. B1W30 (outside the R&W gift shop) at 8 a.m. Available are two regular season tickets (2 seats behind first base—section 14BBB seats 7-8). You may buy one set of tickets the first time through the line. After the initial line ends you may come back through again to purchase additional tickets.

Nationals tickets go on sale on Thursday, Mar. 8 outside the Bldg. 31 R&W gift shop, also at 8 a.m. R&W has 2 seats in section 219, row D. The process to purchase tickets will be the same as for Orioles tickets. You must be a 2012 R&W member to buy tickets. Membership is \$7 for the year and can be purchased at the same time you get tickets.

Circus Premiere Night Benefits Charities

The 15th annual Children's Premiere Night with Ringling Bros. and Barnum & Bailey Circus will once again benefit the NIH children's charities. The 141st edition of "The Greatest Show on Earth" comes to the Verizon Center on Wednesday, Mar. 14, hosted by the NIH R&W. A free pre-show starts at 6 p.m. and the circus starts at 7. Over the years, the event has treated more than 25,000 deserving children to the circus. R&W has a goal to fill the Verizon Center with friends and family. Tickets available include Circus Celebrity—front row/interactive seating where you become part of the show \$80 (reg. \$110); front row \$55 (reg. \$75); VIP \$40 (reg. \$55); section 111 & 112 (best seats) \$24 (reg. \$35). Purchase your ticket at the R&W activities desk in Bldg. 31, Rm. B1W30 or call (301) 496-4600. Orders can be placed for tickets at any R&W store.

Weather Info at a Touch



Wondering where to go for quick information about whether NIH is open for business during inclement weather? Over on the For Employees site of the NIH home page (top right corner of the page, at <http://employees.nih.gov/>), there is a weather info button at www.nih.gov/employee/weatherinfo.htm. The first item links to OPM's operating status and schedules page. You can tell at a glance what to do if the flakes are flying.

There are other useful features at the For Employees site. On the top left, a section includes links to ITAS, Payroll Calendars, Help Desk, campus shuttle schedule, campus maps and other items. There is a Popular Links section, a searchable database of employee-related links called Browse Links and a What's New section for news about upcoming NIH employee-related events. Bookmark these useful sites today.

New Clinical Trial Initiative NINDS Launches NeuroNext

By Marian Emr, Shannon E. Garnett

NINDS recently launched its Network for Excellence in Neuroscience Clinical Trials, or NeuroNext, to conduct exploratory (phase II) trials of treatments for neurological diseases. The new initiative directed by NINDS associate director for clinical research Dr. Petra Kaufmann is designed to expand capability to test the most promising new therapies and increase the efficiency of clinical trials before embarking on large efficacy studies through partnerships with academia, private foundations and industry. NeuroNext also will respond quickly as new opportunities arise to test promising treatments for people with neurological disorders.

“NINDS has learned that one of the best ways to decrease the time and cost of clinical research is through well-coordinated networks,” said NINDS director Dr. Story Landis. “NeuroNext allows us to efficiently test new treatments, to move promising therapies along the pipeline and to provide the expertise and resources that are needed for rapid implementation of large clinical trials.”

In October 2011, NINDS made awards to 25 U.S. clinical sites, a clinical coordinating center and a data coordinating center. It also announced the program in a series of meetings with academic researchers, industry representatives and patient advocacy groups. In November 2011, the institute brought together all of the NeuroNext principal investigators for the first time. The meeting covered topics such as site management, web site development, educational opportunities, network performance metrics and the roles and responsibilities of the PIs, coordinators and institutional review board.

The network is spread across the country to maximize clinical research participation. The majority of sites are at institutions with Clinical Translational Science Awards funded by the National Center for Advancing Translational Sciences. Trials will focus on neurological disorders in adults and children. Because NINDS’s research portfolio includes hundreds of disorders, NeuroNext will not be specific to one disease. However the broad spectrum of neuro subspecialists in the network will enable it to move quickly to design and execute research on a wide variety of neurological disorders.

Historically, two issues—variability in access to powerful clinical research infrastructure (especially for rare diseases) and ability to secure



NINDS held an initial investigator meeting recently to bring together all of the NeuroNext PIs.

intellectual property—have limited testing of new therapies coming from discoveries in neuroscience. NeuroNext will make a strong clinical research infrastructure available for a wide variety of diseases and include exploratory trials based on cooperative research and development agreements between NINDS and industry partners. NeuroNext’s broad partnerships should ensure more rapid access to new therapies for patients.

One innovative feature of NeuroNext is use of a centralized IRB. Trials at multiple centers have traditionally required full review at each participating center, which can result in slowdowns and inefficiencies.

The Data Coordinating Center is housed at the University of Iowa and the Clinical Coordinating Center will be operated by Massachusetts General Hospital. For more information, go to www.ninds.nih.gov/NeuroNext. 📍

NIDDK’s Yang To Give Mider Lecture

Dr. Wei Yang, section chief of the Laboratory of Molecular Biology at the National Institute of Diabetes and Digestive and Kidney Diseases, will present the annual G. Burroughs Mider Lecture at 3 p.m. on Wednesday, Feb. 22 in Masur Auditorium, Bldg. 10. Her talk is “Genome Integrity and Cancer Prevention: Molecular Mechanisms of DNA Repair.”

Yang’s research focus is the study of mutagenic processes in genomic DNA. She is particularly interested in DNA recombination, repair and replication. Her group specifically examines the molecular mechanisms involved in mismatch repair, translesion DNA synthesis and V(D)J recombination.

The Mider Lecture is presented by an NIH intramural scientist in recognition of his or her outstanding contributions to biomedical research. The lecture series was established in 1968 in honor of the first NIH director of laboratories and clinics.



BOTSTEIN

CONTINUED FROM PAGE 1



meeting of NIH's new center for translational sciences.

"I did not know Marshall Nirenberg very well," Botstein said at the outset of his lecture, "but I do remember the first time I heard him talk, in 1962 at Harvard." This was when the world was just learning of Nirenberg's eventual Nobel Prize-winning work deciphering the genetic code.

"It was a transformative thing for me," Botstein continued. "I had just decided not to be a physicist...The coding problem prompted me to study genetics. It was one of the great events of my scientific lecture-going, I have to say."

He recounted that his NIH hosts had preferred the topic of translation to the lecture title he proposed, but Botstein insisted on a basic science emphasis in honor of the occasion, declaring, "There are two senses of the word 'translation': one of these [mRNA to protein] I don't work on, and I don't agree with the enthusiasm for the other."

Later in his talk, in a segment he labeled "A Message for the Sponsor," he touted Nirenberg as a scientist "as basic as they come...For him, the pursuit of understanding was paramount." Botstein declared, "Understanding is what we do...If we starve basic science, there will be nothing left to translate."

In his view, "we spend way too much time looking at the weeds and not enough time looking at the forest. That's our modern dilemma."

Thanking NIGMS for providing the robotic technology used in his studies, Botstein also lamented a common problem plaguing researchers in an era of ever-faster sequencing machines and interpretive skills that can't keep pace.

"We are standing at the bottom of the Grand Coulee dam here, and will be fully underwater by mid-semester," he predicted. A "tsunami of data" outstrips science's capacity to analyze.

Collins assured his guest that NIH continues to embrace basic science heartily. "We recognize that it is our seed corn...Rest assured, there's no crisis here at NIH."

The full talk is archived at <http://videocast.nih.gov/summary.asp?Live=10493>. 

Right:

Botstein answers questions from the audience as NIH director Dr. Francis Collins looks on. Botstein said that hearing Dr. Marshall Nirenberg speak at Harvard in 1962 "was one of the great events of my scientific lecture-going."

PHOTOS: BILL BRANSON

In a lecture titled "Evolution and Cancer," Botstein showed reams of data gleaned from some 600 cultures of yeast that are being put through hundreds of generations of growth by his collaborators Greg Lang and Michael Desai, using robots for the scut work. By watching evolution at work, they hope to understand the processes that engender out-of-control cell growth, or cancer.

"We can reason from one organism [yeast] to the other [human], much of the time," he assured. From an abstract of his talk: "These ideas motivated a comparison between results of molecular genetic studies of experimental evolution in yeast and the molecular genetic phenomena associated with tumorigenesis and tumor progression. We find some very striking similarities, including recurring genomic rearrangements, alterations of the regulation of specific growth-promoting genes, population-genetic features that affect the fitness trajectories of growth rate variants in evolving populations and physiological and metabolic similarities derived from the conservation of the basic plan of growth and cell multiplication among all eukaryotes."

"What can we learn about the process of evolution from yeast?" he asked, adding that yeast is the source of most of the genetic annotation known to science. Using an advanced version of the chemostat invented in 1950 by Jacques Monod and Leo Szilard, Botstein and his colleagues are interrogating successive generations of yeast—kind of an accelerated version of natural evolution, with its mutations and selection preferences—in search of the underlying causes of cancer.

Again from his abstract: "It is hoped that some of the insights from yeast will aid the interpretation of sequence changes found in tumors, especially in the urgent necessity to distinguish 'driver' from 'passenger' mutations."

A renowned pot-stirrer in U.S. science and the originator—according to NIH director Dr. Francis Collins, who introduced him—of the strategy behind the Human Genome Project, Botstein used the occasion to ally himself firmly with Nirenbergian science and to speak critically of the rush to embrace "translational science."

This was ironic given that, only 2½ hours prior to Botstein's talk, the same venue (Masur Auditorium) played host to an upbeat town-hall



Wilson To Lead NIMHD's Coordination Efforts

Dr. M. Roy Wilson has been appointed deputy director for strategic scientific planning and program coordination at the National Institute on Minority Health and Health Disparities.

“Considering the magnitude of the NIMHD’s responsibilities for trans-NIH coordination, Dr. Wilson’s exceptional leadership will be quite valuable as the NIMHD seeks to strengthen its leadership role for minority health and health disparities research at NIH and create a more cohesive agency-wide program,” said NIMHD director Dr. John Ruffin.

“The timing couldn’t be better for me to join the NIMHD,” said Wilson. “Over the years, I have watched it blossom through its various evolutionary stages, from its early beginnings as an office. It is an honor for me to join Dr. Ruffin and his team at this critical juncture in the transition to an institute [and] to help advance the important work of the NIMHD and the NIH in the elimination of health disparities.”

Wilson is an ophthalmologist by training. He earned his B.S. from Allegheny College, an M.S. in epidemiology from the University of California, Los Angeles, and an M.D. from Harvard Medical School.

He is a member of the Institute of Medicine. During his extensive academic career, Wilson was chancellor of the University of Colorado, Denver, and its Health Sciences Center in Aurora; president of the Texas Tech University Health Sciences Center, Lubbock; and dean of the medical school and vice president at Creighton University. Most recently, he chaired the board of trustees at Charles R. Drew University of Medicine and Science, serving as acting president from 2010 to 2011.

Wilson is no stranger to NIMHD or NIH, having served on the advisory councils of NCMHD and the former National Center for Research Resources, and more recently on the NIH director’s working group on diversity in the biomedical research workforce. During his term on the NCMHD council, he chaired the health disparities strategic plan working group. Wilson also served on the executive committee of the NIH-

funded Ocular Hypertension Treatment Study and chaired the data-monitoring and oversight committee of the NIH-funded Los Angeles Latino Eye Study.

Wilson’s appointment comes at a time when NIMHD is transitioning to an institute with a burgeoning intramural research program and health disparities are gaining increased focus within the Department of Health and Human Services and nationally. 🗨

NIH-Duke Training Program in Clinical Research

Applications are being accepted for the 2012-2013 NIH-Duke Training Program in Clinical Research. The program is designed primarily for physicians and dentists who desire formal training in the quantitative and methodological principles of clinical research. Courses are offered at the Clinical Center via videoconference. Academic credit earned by participating in this program may be applied toward satisfying the degree requirement for a master of health sciences in clinical research from Duke University School of Medicine. The degree requires 24 credits of graded course work plus a research project for which 12 units of credit are given. The program is designed for part-time study, allowing the student to integrate the program’s academic training with his or her clinical training.

Applications are available via email from Benita Bazemore in the Clinical Center’s Office of Clinical Research Training and Medical Education at bbazemore@cc.nih.gov. Additional information regarding coursework and tuition costs is available at <http://tpcr.mc.duke.edu>.

Enrollment in the program is limited. Interested individuals should inquire with their NIH institute/center regarding funding for participation in the program. Email queries about the program may be addressed to tpcr@mc.duke.edu. The deadline for applying is Apr. 15. Successful applicants will be notified by July 1.

OMAR Is Assumed into ODP

Owing to organizational changes in the NIH Office of Disease Prevention, the resources, staff and key activities of the Office of Medical Applications of Research (OMAR), located in ODP, were combined with ODP, its parent office, as of Jan. 10.

According to a note from NIH director Dr. Francis Collins, “This strategic organizational change will help to strengthen ODP’s leadership and coordination of the NIH disease prevention research activities while realizing considerable operational efficiencies. NIH Consensus Development Conferences are expected to be held less frequently and, when held, will focus on topics of highest impact and public health importance.”

Two OMAR activities will continue under ODP leadership: Medicine in the Media course and Medicine: Mind the Gap seminar series. The NIH Consensus Development Conference: Diagnosing Gestational Diabetes Mellitus, sponsored primarily by NICHD, will be held on Oct. 27-29. State-of-the-Science conferences will no longer be conducted.

If you have questions or comments about the changes, contact Dr. Paul Coates, acting director, Office of Disease Prevention (coatesp@od.nih.gov).

Coyote Decoys Appear on Campus

In an effort to manage the goose population on campus, coyote decoys have been placed strategically to scatter the untidy creatures. This decoy was seen on the Bldg. 1 lawn on Jan. 31. No telling where he’ll turn up next.

PHOTO: LAURA STEPHENSON CARTER





SOCIAL MEDIA

CONTINUED FROM PAGE 1

Above, from l: Communicating in real time with instant feedback via some kind of handheld device is the new reality.

The NIH Office of Science Education uses Twitter.

Below: NIH has launched a Facebook presence.



to use the new technologies to relay science and health messages effectively while also protecting the privacy of our partners in research—patients, the public, and NIH’s reputation and electronic resources.

Representatives from several other NIH components—including institute and center communication directors, IC information systems security officers, various intramural research programs and institutional review boards, patient recruitment, the Office of General Counsel—also contributed ideas or helped fine-tune the policy.

“Social media offers new and different ways to communicate and interact with individuals and the research community,” said NIH acting CIO Andrea Norris, NIH’s new director of the Center for Information Technology. “NIH engaged extensively in discussions and forums with staff to make sure the new policy addressed issues or concerns related to social media. While this took some time, it resulted in a more effective policy.”

Each IC is developing its own plan to implement the policy—all in strict accordance with the issuance. “Everyone is following the same set of rules, but small things are being tailored by specific ICs for their needs,” explained Dr. Marin Allen, OCPL

deputy director, who chaired the policy-writing committee. In a memo to executive officers, OCIO released use of social media on Feb. 7.

Look Before Leaping

But wait. Before you jump fingertips first into the fray, there are things you need to know (see sidebar “Getting Sociable at NIH”). If you plan to use new media while at NIH, you should read NIH’s rules of engagement at <http://oma.od.nih.gov/manualchapters/management/2809/>.

No matter how long you’ve been personally using such sites as Twitter, LinkedIn and YouTube, new issues crop up if you intend to post while working at NIH.

“NIH has unique needs, including participant recruitment and privacy requirements,” Burklow noted. “Standards are key to appropriate use of social media, as with any communication tool.”

Primarily, developers of the new policy advise, keep a good bit of professional distance between “home you” and “work you.” Also, remember that one of the great advantages of many new media outlets—real-time dialogue with the public—can be a double-edged sword.

‘No Place Like Home’ Getting Sociable at NIH

Dorothy’s mantra that “there’s no place like home” turns out to be a handy motto for using social media at NIH. No matter how long you’ve been blogging and tweeting, if you intend to post as an employee, you should take Manual Issuance 2809, NIH Social and New Media Policy, to heart.

“I hope before they get started that employees who want to use social media will read the whole policy, of course, and especially the checklist in the appendix,” notes Karen Plá, NIH senior official for privacy, who served on the committee that wrote the guidance.

She says there are a couple of things employees need to keep in mind when using, for instance, Tumblr, MySpace or Twitter:

■ “The majority of social media sites are owned by third parties, not by the federal government,” she says. “That means we have no control or say over how they manage or use or store the information we post.” Of course NIH can make suggestions and offer guidelines for using the information we provide, but networks are under no obligation to incorporate input from us.

■ “The opportunity to communicate in real time also presents a number of risks,” Plá explains. Obviously, NIH’ers will not be required to monitor a Facebook page 24/7, for example, but employees should realize that the public might post on an NIH site at any time. “These sites collect a lot of information, feedback and input.”

As Dr. Barbara Karp, chair of the combined Neuroscience institutional review board, notes, interactive sites such as Sur-

vey Monkey keep access to and analyze user data. “That includes IP addresses of people who respond to your questionnaires,” she says. “At this time, it is not clear that we should be allowing third party access to our data, so we don’t allow use of this particular site for research studies that we review.”

Give some thought to what you want to accomplish with social media, devise a strategy and consider its possible results, advises Karp.

“These can be very helpful tools,” she concludes. “We just need to think very carefully about how we use them. It’s a brave new world. Be careful.”

Find NIH’s new media policy in full at <http://oma.od.nih.gov/manualchapters/management/2809/>.

Rock Talk

Helping connect you with the NIH perspective

Our Commitment to Supporting the Next Generation

Posted on February 3, 2012 by Sally Rockey

I've talked to you over the past year on many aspects of the biomedical research pipeline. But one issue, the plight of the early career researcher, has been front and center almost from the first day I joined NIH. Over a long period of time, NIH has made a concerted effort to make sure that faculty members in their early careers have a fair chance when they compete against more established investigators. If you enjoy history, a [complete description](#) of our programs starting in 1977 is available on our website.

Over the past three decades, we've seen profound shifts in the average age at which a principal investigator receives their first R01. During the period from 1980 to 2001, the average age increased nearly 0.3 years per year. Since that time, the average age at first R01 award has leveled off near 43 for PhDs. It is higher for researchers with an MD or an MD/PhD.

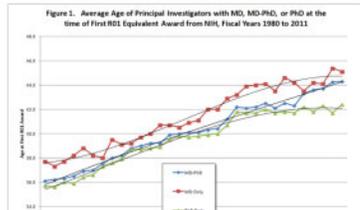


Figure 1. Average Age of Principal Investigators with MD, MD/PhD, or PhD at the time of their first R01 award from NIH, Fiscal Years 1980 to 2011.



Dr. Sally Rockey is 2012 Deputy Director for Extramural Research, serving as the principal scientific leader and advisor to the NIH Director on the NIH extramural research program.



NIH deputy director for extramural research Dr. Sally Rockey maintains a blog called "Rock Talk."

"With sites like Facebook, for instance, people can and do respond back 24 hours a day," pointed out Dr. Barbara Karp, chair of the combined NeuroScience institutional review board. Before there was a new media policy, investigators she works with asked to use such sites for research subject recruitment, which is a regulated activity.

'Common Sense, Standard Rules Apply'

"We had concerns about privacy and confidentiality," she said. "For example, Facebook users often tend to provide personal, private information when posting a comment on an institution's web site, not realizing or perhaps not caring that their information could be viewed by the public. We don't monitor our postings and web sites in real time, and we worry about our ability to respond or take down private information in a timely way."

Also, Karp explained, investigators must be careful about what is posted and understand that information posted on an NIH page represents the agency.

"Not everyone who works for NIH is authorized to speak on behalf of NIH," said OMA's Karen Plá, NIH senior official for privacy, who helped draft the manual chapter.

Finally, don't let the new policy or a few helpful tips stop you from exploring these new opportunities to engage the public. Social sites can yield valuable insights and collaborations (see sidebar "Do Social Media Have Any Impact?").

"We are well-positioned to deal with the opportunities and challenges of social media," Norris assured. "These are great technologies for engaging the public and interacting with colleagues. But, as with any technology, common sense and standard rules and guidance still apply. Be cautious of any message, post or link that looks suspicious. If it looks suspicious, it usually is."

Much Ado About...Anything?

Do Social Media Have Any Impact? One Group Offers Answers

Real-time response. Instant feedback. Inexpensive communication with a wide audience. The purported benefits of new social media technology are becoming legendary. But are these new networks generating measurable audiences? Is new media any better at engaging the public than, say, such traditional forms of communicating as newspaper and journal ads?

We asked Dinora Dominguez of the Clinical Center's Office of Communications, Patient Recruitment & Public Liaison, which opened a Twitter account in February 2009 and created a Facebook page later that year. Last August, the group launched a YouTube channel.

Potential research volunteers are an important audience for the Clinical Center, but, Dominguez points out, "our social media address more than recruitment." Does the recruitment team use new media differently than they use more traditional communication channels?

"It can be difficult to compare [media] since these tactics have different goals," she says. "The newspaper is a very direct call to action, urging the reader to contact us for this particular study. Our social media messages are of an educational tone and have a 'soft' call to action, providing the reader with more info. Tracking responses from a newspaper ad that might have a unique phone number is more measurable, in terms of cause and effect. However, the Facebook posts regarding patient recruitment studies are some of the most 'shared' posts. What that tells us is that the content is valuable to our audience, so this is important to us too."

Which technology gets the most response?

"This is an interesting question because our most 'popular' tool is not necessarily the one that fosters the most engagement," she notes. "Our most 'popular' platform is Twitter, with 18,000 followers. However, in terms of engagement, we have a smaller subset of just less than 2,000 people who regularly interact with our content on Facebook. We think this says a lot about the trend of the tools and how people use them. People use Twitter for a news feed; people use Facebook for engagement."

What have you learned about the people who respond to your messages via social media?

"Our analytics show that we have a total of about 20,000 connections—followers, friends, etc.," Dominguez concludes. "Of those who disclose their age and sex, the average is 38 years old and it is a fairly even split of men and women."

Check out the Clinical Center's Facebook page, <https://www.facebook.com/NIHClinicalCenter>.



KING OBSERVANCE

CONTINUED FROM PAGE 1

Above, from 1:

Female and male dance troupes from Duke Ellington School of the Arts in Georgetown entertained the audience at NIH's MLK observance. NIH director Dr. Francis Collins gave opening remarks.

Below:

The dancers appeared in both solo and group performances.

PHOTOS: ERNIE BRANSON



promoting equality, social justice and opportunity for all. In 1994, as Collins reminded the audience, Congress designated MLK Day as a national day of service and encouraged everyone to take part in a volunteer project and make the holiday “a day on, not a day off.”

Collins recalled the recent dedication by President Barack Obama of the new King Memorial in Washington, D.C., and quoted part of Obama’s address about King: “He gave voice to our deepest dreams and our most lasting ideals. He was a man who stirred our conscience and thereby helped to make our union more perfect.” NIH continues to support King’s ideals, Collins said, including giving back to the community through the MLK Day of Service.

Dr. Roland Owens, assistant director of the Office of Intramural Research, introduced keynote speaker Dr. Lemuel T. Russell IV, saying, “In addition to his dedication to science, he has shown a commitment to mentoring and teaching throughout his career.”

As a regulatory toxicologist for the Environmental Protection Agency, Russell evaluates the risk and safety of industrial chemicals for the EPA’s New Chemical Safety and Assessment Branch.

He told the story of his career and how he got where he is today. Russell’s successful career as a scientist, and the fact that he had the opportunity to excel in the field of scientific research, can be seen as part of King’s legacy.

In Russell’s field of toxicology, he regulates the materials that are introduced into the lives of people, such as industrial chemicals. His position involves identifying substances that might be dangerous for human exposure. Exposure to these substances may often be mitigated to levels that improve safety through use of personal protective equipment so they do not bring harm to human health.

Included in his remarks was a discussion of the civil rights movement, particularly racial integration in the military and how this created

opportunities in other fields, including scientific research.

Referencing some dire statistics shared by President John F. Kennedy in a speech in 1963, Russell illustrated the gap between white and African-American children during that era. Kennedy said that an African-American baby born in 1963 was about half as likely to complete high school as a white baby born in the same place on the same day and only one-third as likely to finish college. This same African-American child was twice as likely to become unemployed and had a life expectancy that was 7 years shorter than a white child.

Russell then shared a picture of himself, his brother and his sister. “I’m 8 years old here,” he said. “It’s Easter Sunday, 1968. It’s significant because 10 days earlier, Dr. King was assassinated.”

Later, another photo showed him in a laboratory at Walter Reed Army Institute for Research in 1998. “If you look at where I started off with the picture from 1968, I’ve come full circle,” said Russell. “At this point, I have my first academic degree in chemistry and I’m working as a researcher developing antidotes to toxins and treatments for parasitic diseases that soldiers encounter in different war environments.”

His work has included research into protecting soldiers from cyanide, investigation of the effects of toxicants associated with Parkinson’s disease and the development of potential antidotes for many toxins affecting soldiers in war zones.

NIH’s MLK celebration also included entertainment from the Duke Ellington School of the Arts Dance Ensemble. The group, consisting of third- and fourth-year dance majors, performed several solo and group pieces set to traditional African-American spiritual music. 🎶



milestones

OER's Turley Retires After 31 Years at NIH

By Manju Subramanya

In 1985, when NIH grants management staff were laboriously calculating budgets by hand for the extramural grants they managed, Tom Turley hit upon a solution. Lotus 1-2-3 had just reached



the market and Turley, then at NIDDK, quickly devised a customized spreadsheet that became the rage across ICs. A grateful grants management community awarded a stunned Turley the grants management advisory committee's Excellence Award and a cash award.

That knack for taking a tedious, manual process and making it automated and efficient has been the signature style of Turley, chief of the Web Development and Technology Branch in the Office of Extramural Research (OER), who retired in January after 31 years at NIH.

"His vision, unheralded though it might have been, has been critical in many ways," said Joe Ellis, director of OER's Office of Policy for Extramural Research Administration. "He has turned around projects almost on a dime and has allowed NIH and OER to respond quickly."

The projects came fast and furious, fueled by Turley's reputation for quick turnarounds of complicated projects. His back-end work included the high-profile NIH Human Embryonic Stem Cell Registry, the Financial Conflict of Interest database and the GM certification system. Along the way, he picked up six NIH Director's Awards.

Turley worked for 17 years in grants management at NIDA, NIDDK and NHLBI before transitioning in 1997 to head OER's web branch. He was dubbed the "Father of the Infonet" for leading the creation, in 1997, of the Grants Management Infonet, a repository of NIH grants policy and procedures that changed the way grants management staff got their information.

The web was in its infancy and Turley created the site with HTML code that he taught himself.

"He is willing to help wherever he can and brings his business knowledge of the extramural program to bear on his web projects, which is phenomenal," said Dr. Sally Rockey, NIH deputy director for extramural research. "He does the work of many men and women. It is going to be really, really tough when he is gone."

Rockey cited in particular Turley's work on the stem cell registry; his leadership on the Section 508 compliance project and his work with Grants.gov relating to electronic submission of grant applications.

Turley said it has been a great run in his "GM life" and his "web life," the dual paths that distinguished his career. "It has been a whirlwind, really a great career—the people I have met, the things I have done," he said. The Damascus resident credited his wife, Kathy, for being supportive of his many hours of evening and weekend work. With his three grown children, Matt, Keith and Kristin, having left the nest, Turley in retirement hopes to indulge in his passions of woodworking, gardening and camping.

His parting advice for his successor: "Don't come in and try to change the world overnight. You have a great base to start with—the people who work here are wonderful."

Weymouth, of Safra Lodge, Mourned

Jan Weymouth, 62, who was executive director of the Edmund J. Safra Family Lodge at NIH before retiring to Rehoboth Beach, died of carcinoma cancer on Jan. 2 at home.

She began her NIH career in 1970 after working at the 4-H Foundation. In 1977, she joined the Division of Space Management. From 1983 until 2000, she helped manage Clinical Center space and facilities.

Weymouth was instrumental in launching the CC's hospitality services program, which deployed staff to the front entrance and to three hospitality desks to welcome patients and improve customer service.

In 1999, approval was given to begin program and design work on what would become the Safra Lodge, a 34-room house for adult patients and their families adjacent to the CC. For 4 years, Weymouth continued her hospital duties while planning the interior design and management of the lodge. She served as executive director of the lodge from 2004 to 2007, overseeing everything from construction to staffing.

Her colleagues said Weymouth was the kind of person who knew how to get things done; many referred to her as "1-800-CALL-JAN."

She is survived by her husband of 41 years, Rob Weymouth, who is also retired from NIH; daughter Kristen; and a brother, Richard Hautf.

Contributions in Weymouth's memory may be made to the Foundation for the National Institutes of Health for the Edmund J. Safra Family Lodge, 9650 Rockville Pike, Bethesda, MD 20814-3999.



Right:

Dr. Michael Martin recently retired after 34 years at NIH. He expected only a brief stint here at first, but a training program exposed him to a rewarding career in research management.

CSR's Martin Retires

Dr. Michael Martin has a sharp eye and keen ear. An avid birder since his late 30s, he has traveled to the Amazon, Antarctica and other locations featuring often-elusive wildlife. But he is also apt to spot an osprey or eagle that fellow commuters completely miss on the Cabin John Parkway.

In his 34 years at NIH, he was also well-known for his big heart and desire to help people—fellow employees, grant applicants and those ultimately served by the research NIH funds. His philosophy: “It’s all about people.”

From 1999 until the end of 2011 when he retired, Martin was at the Center for Scientific Review as division director of physiology and pathology and as special scientific advisor to the CSR director. In addition to his people-related talents, he was a creative, thorough thinker.

“He is great with data analysis to understand an issue,” said Christine Melchior, chief of the integrative, functional and cognitive neuroscience integrated review group. “What we refer to as ‘Michael plots’ are now standard.”

Martin grew up in Concord, Calif. After graduating from the University of California, Berkeley, he went to Fiji with the Peace Corps. Drawing a low lottery number (2, to be exact) in the Vietnam-era draft, he enlisted in the U.S. Army Reserves as a medical corpsman.

He then embarked on what he calls “one of the best moves in my life”—graduate and post-doc work in the University of Bristol, England’s, department of physiology. In addition to satisfying research into the role of amino acids as transmitters, the international perspective, he said, was “a wonderful growing experience for a fifth-generation Californian.”

Martin came to the neurology institute for what he thought would be a few years at NIH. Instead, he discovered his calling through the Grants Associate Program, designed to train investigators in research management. “I met people across NIH,” he said. “I learned about the variety and complexity of what you could do with a Ph.D.—in addition to the lab, I saw lots of other opportunities to work with people and science.”

Martin went to NCI and then became a deputy associate director at NIGMS. He was responsible for coordinating council reviews and developing and evaluating programs. He said he also learned how to supervise others from then-deputy director Sue Shafer. “What she taught me I have used for the rest of my career,” he said.

In turn, Shafer said Martin was a key player in



keeping the institute running. “He has a good problem-solving approach,” she said. “That and a good sense of humor really helped him accomplish so much.”

Melchior reported to Martin for many years. “You could count on him to be supportive,” she said, noting he encouraged many co-workers to start or complete degrees. He was also known for, and teased about, his love of chocolate. “If I had something non-urgent to talk to him about, I would email him I had chocolate in my office. He’d always show up at the door.”

Martin is a member of the Cherokee Nation. His grandmother was born in the Cherokee Nation, Oklahoma, before it became part of the United States. She eventually graduated from Stanford School of Nursing. His background spurred an interest in minority health, especially health research and training in Native American/Alaska Native communities. While at NIGMS, he helped coordinate a national conference on Native American research and careers in health. He also helped develop an RFA, Native American Research Centers for Health, still in use, in which the principal investigator is an American Indian or Alaska Native organization.

In retirement, he and his wife plan to visit family in California and friends in Europe. But their first trip is a birding expedition to Malaysia and Borneo in February. 📍

Sailing Association Open House, Feb. 23

The NIH Sailing Association invites everyone to its open house on Thursday, Feb. 23 from 5 to 8 p.m. at the FAES House at the corner of Old Georgetown Rd. and Cedar Ln. Explore your interest in learning to sail and discover all the opportunities for sailing with the NIHSA. There will be information about 6-week basic training classes, the club’s racing program and social activities offered by NIHSA. A fee of \$5 at the door includes pizza and snacks. Cash bar for beer and wine. Look for NIHSA posters and flyers around campus. For more information, visit www.recgov.org/sail.

digest

Probable Mechanism Underlying Resveratrol Activity Found

NIH researchers and their colleagues have identified how resveratrol, a naturally occurring chemical found in red wine and other plant products, may confer its health benefits. The authors present evidence that resveratrol does not directly activate sirtuin 1, a protein associated with aging. Rather, the authors found that resveratrol inhibits certain types of proteins known as phosphodiesterases, enzymes that help regulate cell energy.

These findings may help settle the debate regarding resveratrol's biochemistry and pave the way for resveratrol-based medicines. The chemical has received significant interest from pharmaceutical companies for its potential to combat diabetes, inflammation and cancer. The study appeared in the Feb. 3 issue of *Cell*.

"Resveratrol has potential as a therapy for diverse diseases such as type 2 diabetes, Alzheimer's disease and heart disease," said lead author Dr. Jay H. Chung, chief of the Laboratory of Obesity and Aging Research, NHLBI. "However, before researchers can transform resveratrol into a safe and effective medicine, they need to know exactly what it targets in cells."

Gene Regulator in Brain's Executive Hub Tracked Across Lifespan

For the first time, scientists have tracked the activity, across the lifespan, of an environmentally responsive regulatory mechanism that turns genes on and off in the brain's executive hub. Among key findings of the study by NIH scientists: genes implicated in schizophrenia and autism turn out to be members of a select club of genes in which regulatory activity peaks during an environmentally sensitive critical period in development. The mechanism, called DNA methylation, abruptly switches from off to on within the human brain's prefrontal cortex during this pivotal transition from fetal to postnatal life. As methylation increases, gene expression slows down after birth.

Epigenetic mechanisms like methylation leave chemical instructions that tell genes what proteins to make—what kind of tissue to produce or what functions to activate. Although not part of our DNA, these instructions are inherited

from our parents. But they are also influenced by environmental factors, allowing for change throughout the lifespan.

"Developmental brain disorders may be traceable to altered methylation of genes early in life," explained Dr. Barbara Lipska of the National Institute of Mental Health, lead author of the study. "For example, genes that code for the enzymes that carry out methylation have been implicated in schizophrenia. In the pre-natal brain, these genes help to shape developing circuitry for learning, memory and other executive functions which become disturbed in the disorders. Our study reveals that methylation in a family of these genes changes dramatically during the transition from fetal to postnatal life—and that this process is influenced by methylation itself, as well as genetic variability. Regulation of these genes may be particularly sensitive to environmental influences during this critical early life period."

Lipska and colleagues reported their work Feb. 2 online in the *American Journal of Human Genetics*.

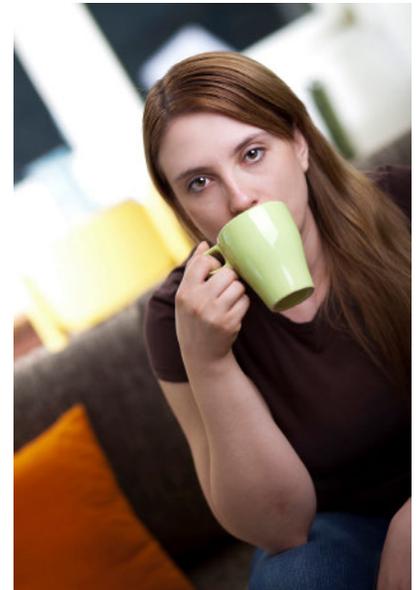
Caffeine Consumption Linked to Estrogen Changes

Asian women who consumed an average of 200 milligrams or more of caffeine a day—the equivalent of roughly two cups of coffee—had elevated estrogen levels when compared to women who consumed less, according to a study of reproductive age women by researchers at NIH and other institutions.

However, white women who consumed 200 milligrams or more of caffeine a day had slightly lower estrogen levels than women who consumed less. Black women who consumed 200 milligrams or more of caffeine a day were found to have elevated estrogen levels, but this result was not statistically significant.

The changes in estrogen levels among the women who took part in the study did not appear to affect ovulation. Studies conducted in animals had suggested that caffeine might interfere with ovulation. The study was published online in the *American Journal of Clinical Nutrition*.

"The results indicate that caffeine consumption among women of child-bearing age influences estrogen levels," said Dr. Enrique Schisterman of NICHD. "Short term, these variations in estrogen levels among different groups do not appear to have any pronounced effects. We know that variations in estrogen level are associated with such disorders as endometriosis, osteoporosis and endometrial, breast and ovarian cancers. Because long-term caffeine consumption has the potential to influence estrogen levels over a long period of time, it makes sense to take caffeine consumption into account when designing studies to understand these disorders."



Made Ya Blink

Microscope Technique Turns Fluorescing Blobs into Well-defined Molecules

By Belle Waring

Seeing a lone molecule up close and personal just got faster and easier thanks to a new technique developed by scientists at NIDCD and NICHD.

“It’s very practical and very accessible,” said Dr. Bechara Kachar, head of the NIDCD Laboratory of Cell Structure and Dynamics and senior author on the study. “It doesn’t require further technical development and the software is freely available. We hope that more researchers will take advantage of it.”

Even the most powerful light microscopes have limitations, and so to discern very tiny structures, scientists label them with “probes.” The fluorophore, a probe that absorbs and gives off light, works like a pedestrian wearing a Day-Glo vest at night. If you see the vest, you can bet there’s a person underneath. If you see the fluorophore, you can safely assume a molecule is occupying the same spot.

Over time, as fluorophores emit light, they blink and bleach (lose color) like fireworks fading in the night sky. Kachar’s team wondered if measuring these changes could help track individual molecules.

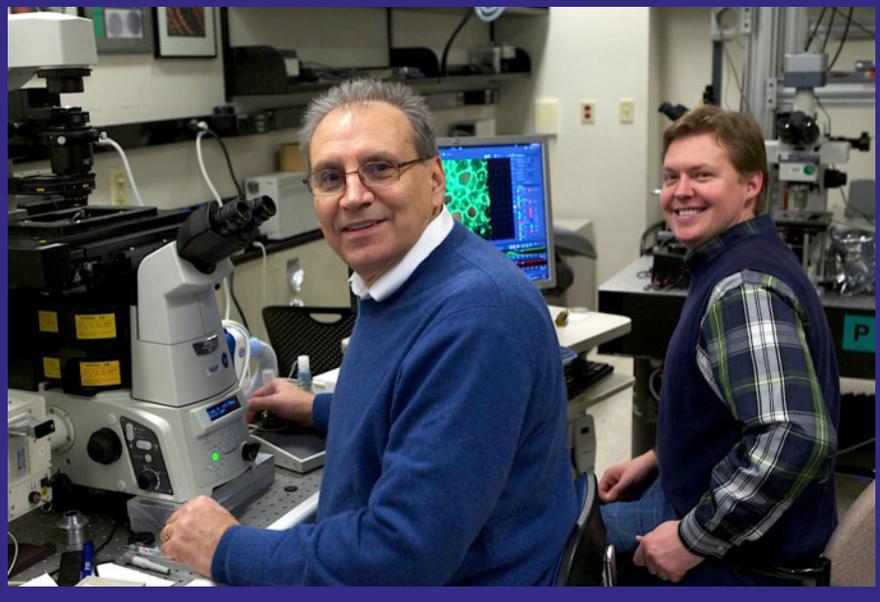
“Fluorescence images often look like blobs, since molecules overlap one another,” said first author Dr. Dylan Burnette of NICHD. Seeing them more precisely would require more elaborate and costly equipment and expertise—at least that was the conventional opinion.

So they made a technical and conceptual leap. First, they videorecorded a sequence of images in real time. Then, using copyright-free software developed at NIH (called ImageJ), they digitally subtracted—from each image—the subsequent image overlapping it. This left the earlier image intact and let them see precisely where each molecule had been.

“If you take a photograph of the foliage of a tree in the summer, you cannot clearly visualize each leaf, although you know they are there,” said Kachar. “However, in autumn, when the leaves start falling individually, we can pinpoint the location of each leaf as it falls.”

Once they had detected each “fallen” or bleached molecule, they could calculate precisely its original location coordinates to make a comprehensive molecule-map within a cellular structure.

“Bleaching/blinking-assisted localization



Dr. Bechara Kachar (l) of NIDCD and Dr. Dylan Burnette, an NIGMS fellow currently with NICHD, have developed a new microscope technique.

microscopy, or BaLM, is a relatively simple and accessible new technique,” said Kachar. “Molecular information can now be attained where before there were only fluorescing blobs.”

This may help find molecular hallmarks of diseases. The study appeared in the Dec. 13, 2011 online issue of the *Proceedings of the National Academy of Sciences*.

“We always knew that all the data was there,” said Kachar. “We just had to reveal it.”

Trent Lectureship Features Vogelstein, Feb. 29

The 10th annual Jeffrey M. Trent Lectureship in Cancer Research will be held at 10 a.m. on Wednesday, Feb. 29 in Natcher Bldg.’s Kirschstein Auditorium. The presenter is Dr. Bert Vogelstein, Clayton professor of oncology and pathology and director of the Ludwig Center for Cancer Genetics & Therapeutics at Johns Hopkins University School of Medicine. He also is a Howard Hughes Medical Institute investigator. His topic is “Cancer Genomes and Their Implications for Basic and Applied Research.”

Vogelstein was the first researcher to elucidate the molecular basis of a common human cancer. His work on colorectal cancers forms the paradigm for much of modern cancer research, with profound implications for diagnostic and therapeutic strategies in the future.

Vogelstein attended the University of Pennsylvania, where he graduated with distinction in mathematics. He obtained his medical degree at Johns Hopkins University School of Medicine and performed his residency in pediatrics at Johns Hopkins Hospital. Following his clinical training, he completed a post-doctoral fellowship at the National Cancer Institute, focusing on the development of new approaches to study human cancers.

Vogelstein has received numerous awards recognizing his pioneering studies on the pathogenesis of human cancers. He is a member of the American Academy of Arts & Sciences, the National Academy of Sciences and the Institute of Medicine. According to the Institute for Scientific Information, Vogelstein is currently the most highly cited scientist in the world.

NHGRI established the Trent Lectureship in 2003 to honor its founding scientific director.

