

nih record



ABOVE • Performer Jackie Bird entertained at the recent celebration of Native American and Alaska Native heritage. See back page.

features

1

NIH Prepares to Modify Structure of Institutes, Center

3

Harvard's Church Updates Progress In Personal Genomics

5

New Pond Takes Shape on NLM Front Lawn

12

Song, Dance Enliven Event Honoring Native Americans, Alaska Natives

departments

Briefs 2

Feedback 9

Milestones 11

ACD Hears of Historic Structural Changes Proposed for NIH

By Carla Garnett

NIH's science structure is likely to change as NIH director Dr. Francis Collins announced major proposals to add and subtract institutes/centers on Dec. 8 at the 101st meeting of the advisory committee to the director. NIH is considering creation of a National Center for Advancing Translational Sciences (NCATS, potentially), he said, and an institute studying substance use, abuse and addiction.

NCATS would essentially replace the National Center for Research Resources, as was discussed Dec. 7 by the Scientific Management Review Board (see story below). Plans are to establish the new center by Oct. 1, 2011, as part of the 2012 fiscal year budget.



The board also endorsed a new funding structure for the Clinical Center and

SEE ACD MEETING, PAGE 6

NIH director Dr. Francis Collins and NIH deputy director for science, outreach and policy Dr. Kathy Hudson at the December ACD meeting

SMRB Recommends New TMAT Center

By Rich McManus

The Scientific Management Review Board voted 12-1 on Dec. 7 to recommend that NIH proceed with plans for a new translational medicine and therapeutics (TMAT) center at NIH that would effectively supplant the National Center for Research Resources. The SMRB asked that, in the 3 months before its spring 2011 meeting, NIH study the nuances of replacing NCCR with a new entity that would take advantage of burgeoning scientific opportunities in drug development.

NIH director Dr. Francis Collins hinted at the outset of the meeting that "gradual organizational evolution is not adequate...we need a 'punctuated evolution'...I think structural changes are needed."

He allowed that "change can be unsettling, but also exciting, empowering and challenging," and is a natural consequence of scientific progress.

The TMAT working group, a subset of SMRB,

SEE TMAT, PAGE 4

Not All Soy Created Equal

Researcher Barnes Offers Compelling Reasons to Eat Soy

By Valerie Lambros

Oh, to be young again...This is probably what many attendees of a recent lecture given by Dr. Stephen Barnes of the University of Alabama at Birmingham were thinking.



The lecture, last fall's installment in NCI's Stars in Nutrition and Cancer seminar series, brought a healthy crowd to Lipsett Amphitheater to hear about soy as nutrition, soy as cancer preventive and the chemical makeup of soy, which, as it turns out, is fairly extensive.

For all the hubbub about soy—is it good?, is it bad?—the general consensus in the scientific community, according to Barnes, is that this

SEE SOY, PAGE 8





The NIH Record is published biweekly at Bethesda, MD by the Editorial Operations Branch, Office of Communications and Public Liaison, for the information of employees of the National Institutes of Health, Department of Health and Human Services. The content is reprintable without permission. Pictures may be available upon request. Use of funds for printing this periodical has been approved by the director of the Office of Management and Budget through September 30, 2011.

To receive alerts to our latest issue, send an email to listserv@list.nih.gov with the words "Subscribe NIHRECORD" in the message body.

NIH Record Office Bldg. 31, Rm. 5B41
Phone (301) 496-2125 Fax (301) 402-1485

Web address <http://nihrecord.od.nih.gov>

Editor

Richard McManus
Rich.McManus@nih.gov

Assistant Editor

Carla Garnett
Carla.Garnett@nih.gov

Staff Writers

Jan Ehrman
Jan.Ehrman@nih.gov

Valerie Lambros
Valerie.Lambros@nih.gov

The NIH Record reserves the right to make corrections, changes or deletions in submitted copy in conformity with the policies of the paper and HHS.

briefs

STEP Holds Health Fair Forum

The staff training in extramural programs (STEP) committee will present a Science in the Public Health presentation on the topic "From Amblyopia to Zits: A Health Fair Forum," on Tuesday, Jan. 11, from 8:30 a.m. to 12:30 p.m. in Lister Hill Auditorium, Bldg. 38A.

Do you find it difficult to stand up because the room is spinning? Do your spouse's fingers turn purple for no reason? Do you wonder why shingles have been making a comeback? Come to the health fair to learn more about a range of commonly experienced but not commonly understood conditions. This trans-NIH forum will use a unique format to explore the science, symptoms and treatment options for a dozen such ailments. The forum will include short presentations as well as informational booths to discuss specifics and recent breakthroughs. Come hear what's new, what's changed and what's on the horizon.

Summer Camp Guide 2011

NIH will present four free "Summer Camp Guide 2011" sessions this month, sponsored by the Office of Research Services' Division of Amenities and Transportation Services. All will be held from 11:30 a.m. to 1:30 p.m. Dates and places are:

Wednesday, Jan. 19, Bldg. 10, B1 cafeteria

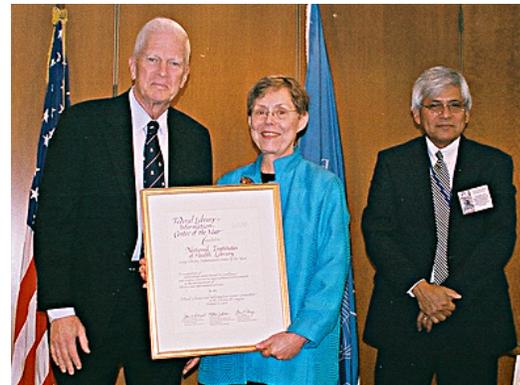
Thursday, Jan. 20, Rockledge II lobby

Tuesday, Jan. 25, Bldg. 31 cafeteria

Wednesday, Jan. 26, Executive Plaza North lobby

Attend one of these events to pick up the 2011 Summer Camp Guide and samples of camp brochures. The guide contains activities in Virginia, Maryland and the D.C. area and separates the camps by cost, type and activities. It also includes additional resources to survey your child's interests. Camp vendors will not be on site, but a child care referral specialist and NIH staff will be available to help you get started.

For those who need reasonable accommodation to participate, contact Tonya Lee at (301) 402-8180 or Federal Relay (1-800-877-8339) 5 days before the event.



Dr. James H. Billington (l), Librarian of Congress and a noted historian, presented the 2009 Federal Library of the Year Award to Suzanne Grefsheim, director, Division of Library Services, Office of Research Services, and Candelario Zapata, acting associate director, Program and Employee Services, ORS.

NIH Library Wins Honor

The NIH Library recently won the 2009 Federal Library of the Year Award from the federal library and information center committee (FLICC), which annually recognizes the innovative ways that federal libraries, librarians and library technicians fulfill the information demands of government, business and scholarly communities and the American public.

The NIH Library was recognized for its leadership in the "green" initiative at NIH, serving as a role model for green procurement and environmental stewardship with the opening on Earth Day 2009 of its Green Terrace, a fully sustainable space. The terrace and a new "green" Information Commons provide a mix of quiet study and interactive social spaces.

The library also expanded its "informationist," or embedded librarian program, into the laboratory setting with the introduction of its bioinformatics training and consultation service. NIH Library informationists provide research support to more than 40 research teams and programs for 16 NIH institutes and centers.

Of special note is the library's donation of 5,000 linear feet of medical journals, already held in trusted digital archives, to help rebuild the collections of the University of Baghdad Medical School.

Created in 1965 and headquartered at the Library of Congress, FLICC also makes recommendations on federal library and information policies, programs and procedures to federal agencies and to others concerned with libraries and information centers.

Harvard's Church Touts Output of Personal Genome Projects

There is something distinctly American about the way Harvard geneticist Dr. George Church approaches the world of genomic sequencing, which he helped invent. At a talk in Masur Auditorium on Dec. 8, his first slide introduced him not only as an innovator, but also as an entrepreneur; the array of .gov, .edu, .org and .com affiliations he displayed spoke of a new Manifest Destiny—everyone from the garage biologist to the medical center superstar is welcome in his milieu, as long as they've got a serious oar in the water.

"We are trying to develop basic enabling technology that will impact all of the NIH institutes," he said. About 5 percent of the human genome is currently missing and has never been sequenced, he noted. "We still haven't sequenced a full human genome."

What's missing is not trivial, either, he said; the likely cause of multiple sclerosis may be in the gaps.

The cost of sequencing has shrunk a million fold in the past 5-6 years, he said, resulting in massive accumulations of data that are challenging our "digestive capabilities." It now costs about \$7,000 to get 95 percent of the human sequence, and the \$1,000 genome is in sight due to innovations since 2005 that are exceeding Moore's law by a factor of 10.

Especially interesting to Church at the moment are small-cohort studies, sometimes involving as few as 1 to 20 people, that are "yielding very exciting, very medically causative and significant alleles of genes."

At the moment, some 2,227 genes are both highly predictive of disease and medically actionable, he said. "Not everything about genomics is actionable—this is a work in progress," he cautioned.

Human beings differ from one another by about 3 million sequences, on average. To plumb more deeply the consequences of those differences, Church touted an open-access, and emphatically democratic, model of investigation termed GET: Genomes plus Environment equals Traits. The volunteer-based personal genome project has so far enrolled more than 13,500 people internationally, who submit samples and family histories that are studied by teams of scientists.

Church described several cutting-edge sequencing technologies (one relying on the "polony exclusion principle," the other on ion torrents and nanopores) that are enabling researchers to realize such advances as detecting rare cells, performing *in situ* sequencing and finding point mutations that lead to multi-drug resistance.

The virtue of the various personal genome projects going on worldwide, he said, is that they tend to be very low cost but also high quality.

Church predicts that "self-monitoring could be the next big wave in consumer electronics...it will be like cell phone use; it will initially start with wealthy people and work its way down."

Perhaps by next holiday season, people will find Church-inspired DNA kits under the tree.—Rich McManus

20 PECASE Honorees Have NIH Ties

Eighteen NIH grantees and two intramural scientists have been selected by the White House Office of Science and Technology Policy to be among 85 researchers to receive the 2009 Presidential Early Career Award for Scientists and Engineers (PECASE), the nation's highest honor for scientists at the beginning of their professional careers.

Since the program began in 1996, NIH has funded a total of 173 PECASE recipients. Awardees were honored by President Barack Obama at a recent White House ceremony.

"I am pleased to announce 20 new PECASE winners associated with the National Institutes of Health," said NIH director Dr. Francis Collins. "Although early in their scientific careers, these young researchers have already shown exceptional potential for productivity and innovation."

The intramural honorees are Dr. Brian Brooks, chief of the unit on pediatric, developmental and genetic ophthalmology at the National Eye Institute (he is also chief of the ophthalmic genetics clinic at Children's National Medical Center), and Dr. Charles Venditti, an investigator in the Genetics and Molecular Biology Branch, National Human Genome Research Institute.

Brooks' focus is on the molecular genetics and developmental studies of uveal coloboma, a congenital ocular disease that accounts for about 10 percent of childhood blindness. Venditti studies methylmalonic acidemia and other inherited errors of organic acid metabolism that can lead to lethal disorders in infants.

The grantee winners include: Dr. Dominique C. Bergmann, Stanford University (NIGMS); Dr. Edward A. Botchwey, University of Virginia (NIAMS); Dr. Mauricio R. Delgado, Rutgers University (NIDA); Dr. Amy Nadya Finkelstein, Massachusetts Institute of Technology (NIA); Dr. Alfredo Fontanini, State University of New York, Stony Brook (NIDCD); Dr. Manolis Kellis, Massachusetts Institute of Technology (NHGRI); Dr. Jessica Y. Lee, University of North Carolina at Chapel Hill (NIDCR); Dr. Bradley A. Malin, Vanderbilt University Medical Center (NLM); Dr. Ana P. Martinez-Donate, University of Wisconsin (NICHD); Dr. Kimberly Nixon, University of Kentucky (NIAAA); Dr. Caryn E. Outten, University of South Carolina (NIGMS); Dr. Muneesh Tewari, Fred Hutchinson Cancer Research Center (NIDDK); Dr. Doris Ying Tsao, California Institute of Technology (NEI); Dr. Amy Wagers, Harvard University (NIA); Dr. Ziv Williams, Massachusetts General Hospital (NICHD); Dr. Joseph Wu, Stanford University School of Medicine (NHLBI); Dr. Haoxing Xu, University of Michigan (NINDS); and Dr. Martin T. Zanni, University of Wisconsin (NIDDK).



Above, Dr. Brian Brooks

Below, Dr. Charles Venditti



TMAT

CONTINUED FROM PAGE 1

presented four options to the full board, which was holding its 8th meeting. The group's unanimous favorite was option 2c, which would collocate five major translational entities—the Molecular Libraries Program, the Therapeutics for Rare and Neglected Diseases Program, the Rapid Access to Interventional Development program, the NIH-FDA regulatory science initiative and the Clinical and Translational Science Awards program—plus the Cures Acceleration Network called for (but not yet funded) in health care reform legislation.

The Clinical Center was also evaluated as a candidate for inclusion, but not in the preferred option. A separate SMRB working group recommended that the CC remain intact, albeit with a new governance structure and funding source (as a line item in the OD budget) and a new openness to extramural investigators.

Dr. Arthur Rubenstein, dean of the University of Pennsylvania School of Medicine, chaired the two SMRB working groups considering the fates of both the CC and NCCR. He viewed the TMAT recommendation as “a positive and synergistic way of putting programs together,” but also allowed that “there’s never a perfect fit of blocks, one atop the other.” He also assured that the CC would “have strong functional ties” to the proposed TMAT center.

NCCR director Dr. Barbara Alving warned that the SMRB might not have had adequate time to appreciate the range of NCCR’s activities, calling it a “center of centers.” She cautioned about the budget implications of dismantling NCCR during an era of fiscal austerity. In her view, the MLP, RAID and TRND programs could be incorporated into NCCR. But Rubenstein said there was never any serious consideration of making changes to the existing center. An entirely new center was the TMAT working group’s “default option...we thought about [modifying NCCR] only evanescently,” he said.

A dozen members of the public spoke in favor of NCCR’s virtues, urging that NIH at least slow down to consider the myriad implications of center deconstruction; Collins appointed NIH principal deputy director Dr. Lawrence Tabak and NICHD director Dr. Alan Guttmacher to



Dr. Arthur Rubenstein (r) of the University of Pennsylvania chaired two SMRB working groups that made recommendations Dec. 7. Norman Augustine (l) chairs the full board.

lead a committee that would do a “deep dive, a more granular analysis” to assure that all details of forging a new TMAT entity out of NCCR are considered.

“The goal here is not to dismantle programs in place at NCCR, but to take advantage of...a better match between structure and function,” Collins said. “Protecting NCCR programs and people is a goal.”

Those with concerns about the TMAT plan are invited to offer comments at <http://feedback.nih.gov/>, Collins said.

“This is a momentous occasion,” he concluded. “Creation of a new center doesn’t happen at NIH very often.” Most institutes arise out of political considerations, he noted. “It’s rare to do it on the basis of scientific opportunity...I would call this ‘disruptive innovation’ on a grand scale. I’m quite excited about the potential.”

Collins declined to make a public decision on the TMAT recommendation, adding that HHS Secretary Kathleen Sebelius would need to concur with any center-creation plan at NIH, as would Congress. 



NIH director Dr. Francis Collins participates in SMRB meeting on Dec. 7.

PHOTOS: BILL BRANSON

Stormwater Management Pond Comes to NLM Lawn

You may decry what looks like the desecration of a once-verdant lawn sloping from the National Library of Medicine toward Woodmont Ave., as a joint NIH-Montgomery County project digs things up to create a long-planned-for stormwater management pond, but do not despair: the temporary roadways, built to accommodate construction traffic, will disappear once the job is complete and NIH will be left with plenty of grass plus a new water feature, the “NIH Stoney Creek Pond.”

The project—on the drawing board since the mid-1990s—is designed to improve water quality and reduce stormwater flow rates and stream bank erosion in Stoney Creek, which crosses NIH property on the campus’s southeast border.

The pond will collect water from a 204-acre watershed including much of downtown Bethesda and a portion of the NIH campus. It is expected to ultimately benefit lower Rock Creek and help meet the objectives of Montgomery County’s pollutant discharge elimination system.

Don’t plan on toting a fishing pole, or ice skates or swim trunks to the pond, though; signs will indicate that those activities, along with boating, are not permitted.

The pond’s design includes provisions for capturing trash and oil, which are typical pollutants in an urban setting. There will also be a shallow “safety bench” that will extend out from the shoreline to ensure a shallow water depth along the shore and eliminate steep gradients along the banks.

The 6-acre site will be landscaped with “native trees, shrubs, herbaceous plants, grasses and wetland vegetation [that] will help to support a diverse and balanced community of amphibians, insects, fishes and birds,” according to the project description.

The adjoining community had been concerned about the pond’s becoming a breeding ground for West Nile virus-bearing mosquitoes when plans for the project were first publicized in the early 2000s. But the county department of environmental protection built insect management measures into the design; aerators will trouble the surface water, bug-eating fish will be added and the county will provide insect-detering maintenance.

Today’s pest *du jour*—NIH’s burgeoning population of Canada geese—is also accounted for in the plan. Dense shoreline vegetation should discourage the birds.



Aerial view (above) of the Stoney Creek Pond shows extent of the 6-acre site. Below, heavy equipment grooms the site for its conversion from wetland to pond.

PHOTOS: JESSICA MARCOTTE, VALERIE LAMBROS



OEODM Hails Hiring of Students with Disabilities

For the past 6 years, no other component of HHS has hired more students with disabilities for summer internships than NIH. For that reason, the Office of Equal Opportunity and Diversity Management has bestowed its Making A Difference Award to the institute and center directors and to a variety of supervisors. The award is given to individuals whose efforts result in furthering equal opportunity at NIH.

In 2010, NIH hired 21 interns through the Workforce Recruitment Program, a recruitment and referral effort that connects federal sector employers with highly motivated postsecondary students with disabilities who are eager to prove their abilities in the workplace through summer or permanent jobs. The WRP offers college students and recent graduates an opportunity to intern for 14 weeks each summer with NIH. One of the most favorable outcomes has been the opportunity to hire many of the students as permanent full-time employees.

Most of the interns were hired at the GS-5 to 7 levels and worked in a variety of offices including science, administrative, equal employment opportunity, accounting, budget and grants management. The students bring unique talents and capabilities to NIH to assist it in achieving its mission.

For more information about the program, contact OEODM at (301) 402-4157.



ACD MEETING

CONTINUED FROM PAGE 1

Above, l: Addressing the ACD meeting, NIH principal deputy director Dr. Lawrence Tabak and NIH acting associate director for science policy Dr. Amy Patterson discuss ways the SMRB recommendations might be implemented.

Above, r: ACD member Dr. Reed Tuckson stresses the importance of telling the NIH story in Congress.

PHOTOS: BILL BRANSON

agreed that the hospital's state-of-the-science resources should be open for extramural researchers to use.

"The time is right for us to take bold action to try to transform our nation's translational research enterprise," said Collins. "We will continue of course to invest the majority of our resources in basic science—that is what NIH is all about. That is the foundation for all possible future translational effort, but we are faced now with unprecedented scientific opportunities. NIH has an opportunity now to move forward in a more integrated way to develop new tools and fresh approaches for turning these discoveries into health."

Collins explained that a SMRB working group determined such opportunities "require an entirely new view and not an incremental tweaking."

The new institute on substance use would combine significant portions of research portfolios from both the National Institute on Alcohol Abuse and Alcoholism and the National Institute on Drug Abuse (and probably draw science programs from other ICs as well). At a Sept. 15 meeting, SMRB proposed that NIAAA and NIDA be dissolved to form the new entity.

Consultation with HHS Secretary Kathleen Sebelius and Congress are required for all of these reorganizations. To gather input from as many other stakeholders as possible, NIH launched a new web site, <http://feedback.nih.gov/>, where the public can weigh in on these and other important proposals.

Continuing Resolutions Continue

Since Oct. 1, the beginning of FY 2011, NIH—like the rest of the federal government—has been operating under a series of continuing resolutions. Those CRs keep the agency funded at

the 2010 budget level. President Obama had proposed about a \$1 billion increase in that amount for 2011.

Just before Thanksgiving, congressional negotiations ended on an omnibus bill that would include a 2011 appropriation for NIH. Collins said NIH has not been told exactly what's in the omnibus bill for the agency, but that the \$1 billion proposed uptick might be trimmed.

"It's clear from our perspective that it's going to be a difficult budgetary circumstance for the next few years," Collins said. "It is time for NIH to be able to consider the reality of flat budgets at best."

'This Is the Moment'

Discussing NIH implications following the 2010 election, Collins noted that incoming Speaker of the House of Representatives John Boehner (R-OH) has proposed cutting NIH 2011 funding back to 2008 levels. Soon-to-be House majority leader Eric Cantor (R-VA) announced his agreement and further proposed holding a major congressional oversight hearing each week.

"These are all going to be major changes in terms of the way NIH is connected to the Congress," Collins said, announcing new chairs of congressional committees. "I think we now have an opportunity, with all of these new members and senators, to tell the NIH story. Many of the incoming members have no real track record on research and health issues. I think we have a responsibility to make sure that the message of NIH's role in alleviating suffering and ensuring competitiveness in the global economy and contributions we make, comes across.

"At every opportunity," he continued, "we will be emphasizing in Congress that if govern-



ACD member Dr. David DeMets of the University of Wisconsin hears of major restructuring in the wind for NIH.

ment doesn't support basic research, it doesn't happen...that we are in fact the source of stimulus for the economy with creation of highly skilled and well-paid jobs, and that biomedical research has always been bipartisan."

ACD member Dr. Reed Tuckson of United Health Group strongly endorsed Collins's determination and suggested adding to the NIH message.

"If ever there was a time that we needed more knowledge that helps us to use these expensive resources in cost-effective ways, to save dollars for the American people while we also improve health status, this is the moment," Tuckson stressed. "NIH's value to the nation is extraordinary."

Work Groups Report

The committee also heard updates from several of its work groups. ACD member and former NIH'er Dr. Maria Freire, president of the Lasker Foundation, discussed the latest findings on the Therapeutics for Rare and Neglected Diseases (TRND) program.

Because the potential market is relatively small for therapies to treat rare and neglected diseases, most traditional pharmaceutical companies are reluctant to spend the resources—time, money, science staff—to study such drugs. Congress instructed NIH to form TRND in fiscal year 2009 to jumpstart projects in this area. TRND's main goal is to speed new drugs through development.

Freire showed TRND's fast-tracked timeline that includes full operation by FY12. Already more than 60 projects have been submitted to TRND for review and possible funding in its first cycle.

ACD member Dr. Shirley Tilghman, president of Princeton University, agreed to chair a new

work group to examine biomedical workforce issues including supply, demand and diversity of investigators in the next decade.

Comings & Goings

In his director's report, Collins noted several senior staff changes at NIH since the June 2010 ACD meeting.

Among new additions to the Office of the Director, he acknowledged NIH deputy director for extramural research Dr. Sally Rockey, who assumed her title officially on Aug. 15; principal deputy director Dr. Lawrence Tabak, former director of NIDCR who was named to the #2 NIH leadership post that next week; and new deputy director for program coordination, planning and strategic initiatives Dr. James Anderson, who began at NIH in late September.

NIH deputy director for science, outreach and policy Dr. Kathy Hudson rose to a newly created post Oct. 24 from her position as Collins's chief of staff.

New directors of budget (Neil Shapiro) and behavioral and social sciences research (Dr. Robert Kaplan, who'll start his job Feb. 1) also join OD's senior staff. In November, Collins added a senior advisor on translational research, Dr. Rajesh Ranganathan, formerly of Novartis.

On the IC leadership front, Collins announced that negotiations are under way in the search for an NHLBI director and that a search has been started for NIDCR director.

Already in place since July are former NIH director Dr. Harold Varmus, who returned to lead NCI, and Dr. Alan Guttmacher, sworn in as NICHD director.

Finally, Collins lamented that NIGMS director Dr. Jeremy Berg had, just a few days before the ACD meeting, announced his intention to leave NIH for the University of Pittsburgh in June 2011.

"Jeremy's leadership will be profoundly missed," said Collins. "He is a most able leader of that institute and has volunteered his time repeatedly and extensively to many other trans-NIH efforts, including his much-needed contributions to peer review, to our efforts to try to improve the diversity of our workforce and especially more innovative awards types like the Pioneer Awards. We are truly sorry to hear of his decision."

A search to replace Berg will be undertaken shortly.

Over the course of the meeting, the group also heard reports on feedback about major changes to conflict-of-interest policies for grantees, as well as updates on pending lawsuits by the ACLU against patents on such DNA products as the BRCA genes and the still-unsettled status of NIH funding for human embryonic stem cell research.

Pilot changes to streamline NIH peer review and announcement of a new intramural-extramural collaboration, the Lasker Clinical Research Scholars Program, were up for discussion as well.

The all-day public portion of the ACD meeting ended in late afternoon. "This is about a three-day meeting packed into one day," quipped Collins. ●

SOY

CONTINUED FROM PAGE 1

Right:
“Not all soy is the same,”
Barnes cautioned. “And not all
soy is soy.”

PHOTOS: BILL BRANSON

plant-based protein can prevent breast cancer in women, but it may depend on how much soy a woman has eaten before, say, her teenage years, and what kind. Current research is now exploring soy’s potential to ward off prostate cancer in men. And while beneficial if eaten at any age, soy’s positive influence seems to pack a greater punch if included as part of a lifelong diet.

“Soy has been around for a long time,” Barnes said, noting records that show the Chinese have been eating it since 2800 B.C. Soy’s presence in the west, however, came much later.

“In 1765, it was introduced to the U.S. in Savannah [and later used as] a coffee alternative during the Civil War,” he said.

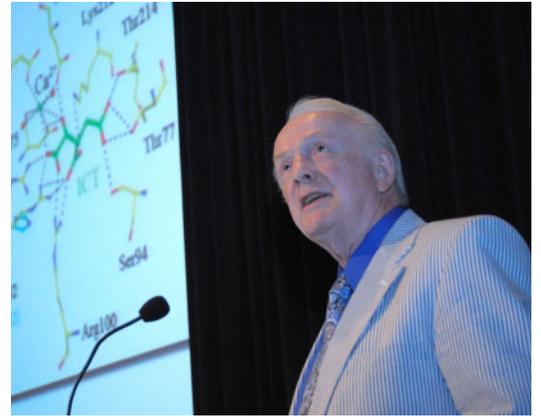
Since then, soy has been used for everything from biofuel, inks and candles to plastics, insulation and clothing. And, of course, food. Though the U.S. is now the world’s largest producer of soy and exports much of it to Asian nations, soy has yet to find its way into the regular diets of Americans.

Barnes said that while Asians consume anywhere between 10 to 50 grams of soy daily (and even higher on the island of Okinawa where the oldest of Japanese live), Americans might only get 1 to 2 grams every day, and much of that may come indirectly. Though tofu and edamame (green soybeans in the pod) are available at most grocery stores, soy often shows up in our shopping carts in a completely different form: in the steaks, pork chops and chicken wings that we buy after those farmed animals have eaten a diet including soy. For us, that doesn’t amount to much of the beneficial compounds.

“Soy is not a chemical substance, it’s a plant. A plant cannot run away from its predators so it’s a very adaptable chemical factory. One of the chemicals is the isoflavones,” said Barnes, naming one of the collection of beneficial compounds in soy. However, Barnes warned researchers hoping to use soy that not all soy is created equal.

“This collection [of compounds] is not constant and varies with the strain of the soybean—where it’s grown and when it’s harvested, rather like a wine,” he said. Consumers are exposed to a range of soy products that come from a variety of origins.

Barnes also said trying to compare the soy found in Asian diets versus American diets



would be like comparing apples to oranges. In Asia, many soy products are fermented variations of the protein, whereas they are often not fermented in the U.S. While U.S. food manufacturers include soy proteins containing isoflavones in their products, their processing alters the chemical composition.

“Not all soy is the same,” Barnes said. “And not all soy is soy.”

Still, soy stands to wield great influence on cancer prevention efforts in the U.S., Barnes said, noting that this country unfortunately has one of the highest rates of breast cancer in the western world. While it can’t help that Americans tend to eat more foods high in fat, salt and empty calories, Barnes said higher rates of cancer and obesity may have more to do with what people aren’t putting on their plates.

“It’s the absence of preventive agents that is more harmful, not what people are eating,” he said. Not only are people not replacing fattier protein sources with something kind to the body like soy protein, they’re not getting the beneficial effects they could from foods based in soy. He’d like to see that change.

“Prevention is probably how we can lick cancer in the first place rather than fixing it once it’s arrived,” he said. 🍌

feedback

Have a question 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: In a recent feedback item about bicycles in buildings (May 14, 2010), it was stated that “The Code of Federal Regulations (CFR) prohibits bringing bicycles into buildings. The NIH Police will enforce the code when witnessing or informed of a violation.” However, this is incorrect. The CFR does not prohibit bringing bicycles into buildings. It explicitly states that bicycles cannot be ridden in buildings. It also states that bicycles cannot be parked in buildings except when parked at bicycle racks. The CFR does not specify what constitutes a bike rack. There are out-of-the-way locations in our buildings (for example, in small unused offices, or against a back wall in my own office), which can serve as convenient places to rack bicycles. I hope that the NIH Police will not try to discourage us from doing so, nor try to cite us for something that is not prohibited.

Response from the NIH Police: Respectfully, the inquirer is incorrect. Bicycles are prohibited in NIH buildings both in the Code of Federal Regulations and NIH Policy Manual Issuance 1411. Per 45 CFR Part 3, Subpart B, 3.23(b), “A person must park bicycles, motorbikes and similar vehicles only in designated areas and may not bring these vehicles inside buildings.” This policy is further clarified in the NIH Policy Manual Issuance 1411, titled, “Bicycles, Bicycle Racks and Locker Facilities.” This policy cites the CFR and also explicitly states, a person “... may not bring these vehicles inside buildings. Designated areas are limited only to bicycle racks and bicycle lockers.”

Feedback: Why isn't Skype allowed at NIH? Wouldn't that application save a lot of money on travel expenses—especially foreign travel?

Response from NIH's chief information officer: Indeed Skype has many appealing features, but it's a package deal that comes with some undesirable problems. For those not familiar with Skype, it's a software application (that works on Windows, Macs and Linux) that allows users to make voice calls over the Internet. Skype-to-Skype voice and video calls are free and low-cost calls can be made to standard landlines and mobile phones. The product also supports instant messaging, chat rooms, file transfer and video conferencing capabilities. It seems perfectly reasonable that folks in the NIH

scientific community would view the use of Skype as an attractive option for communicating with fellow colleagues, especially those in foreign countries.

Unfortunately, Skype falls into the realm of what is called “peer-to-peer” (P2P) communications, an Internet protocol type generally prohibited within federal computing environments, corporate and educational networks because they are deliberately designed to evade network security controls. Because these communications cannot be centrally managed, there's a dangerous potential for introducing new and unknown risks into the enterprise, completely undetected. Skype network traffic is encrypted and thus its content is invisible to intrusion detection sensors. This makes it an inviting vector for hackers seeking to distribute a worm, virus, key logger or other malware. The configuration and security of most implementations of P2P software are entirely under the control of the company and, possibly, the unknown third parties through which these connections pass. The bottom line is that NIH has little or no control over the behavior, security or privacy of unmanaged P2P software. Additional concerns with the use of P2P software include the potential for inappropriate use (through file sharing) and excessive bandwidth (which can negatively affect our network performance).

NIH continues to explore enterprise level controls that might allow desktop computer-based applications such as Skype. In the meantime, individual ICs administer desktop configurations and the security controls that govern their local area networks. Skype is allowed as an exception to policy where ICs have been able to show that they can manage and administer it safely for their user community.

For more information on Skype and other P2P applications, see the NIH P2P Policy at http://ocio.nih.gov/security/NIH_P2P_Policy.doc and the NIH P2P Guide at http://ocio.nih.gov/security/NIH_P2P_File_Sharing_Guide.doc. 📄



CC Holds 7th Gingerbread House Decorating Contest

The Clinical Center held its 7th annual Gingerbread House Decorating Contest from Dec. 3-16. Twenty-seven entries from various departments were on display in the CRC lobby, where passersby were free to inspect the work and cast their ballot for the best creation. Among the entries were Harry Potter and friends participating in an airborne game of quidditch (r), Snoopy snoozing atop his dog house, with Woodstock astride his belly, and a “bench to bedside” tableau. The competition began in 2004 among nursing units as a way to foster teamwork within the then-new CRC.



NIH's Sargent Competes in Olympic-Style Weightlifting

By Sara Rosario Wilson

You would be hard pressed to find “Olympic weightlifter” on any NIH colleague’s curriculum vitae. Yet, for Dr. Jennifer Sargent, it’s one of her favorite hobbies. A visiting fellow in NIAMS’s Laboratory of Molecular Immunogenetics, she spends her days studying sphingolipid signaling and epigenetic regulation in mast cells. But in her spare time, she puts in countless hours of training for weightlifting competitions.

Right:

Dr. Jennifer Sargent competes in the Keystone State Games, an amateur athletic festival.

“I get a lot of puzzled looks when I tell people I do Olympic weightlifting. You couldn’t tell by looking at me. I am 5 feet tall and weigh 120 pounds,” she said.

Sargent recently won second place in the Keystone State Games, an amateur athletic festival held in York, Pa., where she competed in the master’s female powerlifting event. What is most impressive is that she had only been training for 3 months. She described the competition, her first, as friendly.

“Surprisingly, it seems to be a family sport. There were competitors from ages 6 to 70 there,” she said. “The most challenging part for me was to get on stage in front of all those people.” She didn’t let stage fright get to her and competed like a true professional.

Olympic weightlifting is a sport in which participants attempt a single maximum-weight lift of a barbell loaded with weight plates, testing explosive strength. The lifts must be executed quickly, with great mobility and require a great range of motion. Competitors are awarded based on the heaviest weight lifted in the clean and jerk and the snatch, as well as the two events combined.

The clean and jerk is a multi-movement lift in which the barbell is lifted to shoulder height and then jerked overhead. In the snatch, the lifter raises the weight in one uninterrupted motion from the floor to a position over the head. Sargent’s winning lift for the competition was 86 kilos (189 pounds) combined.

A graduate of Dartmouth Medical School in 2009, she got involved in the male-dominated sport through her favorite fitness program, CrossFit, a methodology that combines weightlifting, sprinting, gymnastics and heavy lifting techniques. This rigorous program is used by many police academies, tactical operations teams and military special operations units. Sargent has been doing the program since 2007.

“I learned that while I may not be particularly



fast, I am strong for my size,” she related. Her boyfriend, who is a competitive CrossFit athlete, and her coach recognized her ability and motivated her to compete.

The 31-year-old novice athlete is eager to continue competing. The sport has helped her with goal-setting. “It taught me to work towards something,” she said. By staying organized, she is able to balance training with her role at NIAMS.

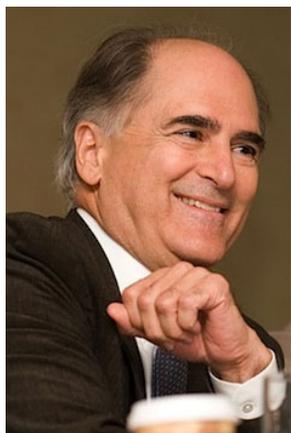
“I train two to three times a week and specifically train for Olympic lifts twice a week, for 2 hours,” she explained. She also follows a strict diet, doesn’t drink alcohol and makes sure she gets plenty of rest. This is in stark contrast with her lifestyle 9 years ago before she moved to the states from her native Australia. “I was never athletic. I was 35 pounds heavier and led an unhealthy lifestyle,” she remembered.

Sargent loves her new lifestyle. “It’s really empowering and requires great strength and mental coordination,” she said. She also acquired some life lessons. “I learned to check my ego at the door. Training for Olympic weightlifting takes a lot of work and patience. It can take years before you master the right combination of strength, speed and coordination,” she concluded.

She looks forward to perfecting her skills and adding more accomplishments to her list. 🏋️



milestones



Whitmarsh Retires from NIGMS

By Jilliene Mitchell

More than 50 years have passed since Dr. John Whitmarsh started his first job sweeping floors and packing weed and insect poisons in a nursery supply warehouse in his

hometown of San Diego. “That was a different time—my grandfather told me he got me a job even though I hadn’t asked for one. I didn’t know you could quit a job—I just did what I was told,” he joked. He has held a variety of positions since then, the most recent as special assistant to the NIGMS director. He recently marked another career change—after 8 years at NIGMS, he retired.

Whitmarsh began his professional career in 1980 as an assistant professor of biology at Queens University in Ontario, Canada. The next year, he joined the University of Illinois at Urbana-Champaign (UIUC) faculty, where he worked in the plant biology and biochemistry departments for 21 years. During that time, he was a visiting professor at the Max-Volmer Institute for Biophysics and Physical Chemistry in Berlin, Germany, from 1989-1990. Whitmarsh served as director of the UIUC Center for Biophysics and Computational Biology from 2000 to 2002, when he joined NIGMS.

Whitmarsh held several positions at NIGMS, including program director in the Division of Cell Biology and Biophysics, assistant and acting director of the Center for Bioinformatics and Computational Biology and acting director of the Office of Program Analysis and Evaluation. In 2007, he assumed the special assistant role he held until retirement.

“John has been an outstanding resource for NIGMS and NIH, leading programs and administrative efforts with great care and diligence,” said Dr. Karin Remington, director of the NIGMS Center for Bioinformatics and Computational Biology. “He did this in a way that

engendered the confidence and respect of his colleagues, and he aimed first and foremost for the success of the scientific endeavor and public trust at hand. In everything I’ve seen him undertake, his heightened sense of professionalism and dedication was clear.”

While at NIGMS, Whitmarsh spearheaded many projects including the NIH Roadmap’s National Centers for Biomedical Computing Initiative, the Joint NSF/NIGMS Mathematical Biology Initiative and the NIGMS Biomedical Workforce Initiative. He was also responsible for enhancing an NIGMS program that provided grantees with supplemental funding to support individuals from groups that are underrepresented in the biomedical and behavioral sciences.

“John completed his service as acting director of the Center for Bioinformatics and Computational Biology just at a time when we were re-thinking some of our diversity programs, including the diversity supplement program. He reshaped that program, demonstrating tremendous leadership. He also contributed his scholarship and critical thinking to many other issues,” said Dr. Jeremy Berg, NIGMS director.

Dr. Clifton Poodry, director of the NIGMS Division of Minority Opportunities in Research, added, “John always brought a fresh perspective to our discussions about our programs—and often helped us to understand the issues better. He has my deep respect and gratitude.”

Whitmarsh studied physics as an undergraduate at the University of California, Berkeley, and earned a Ph.D. in physics from Harvard University. He conducted postdoctoral research at Purdue University and the Center for Nuclear Studies in Gif-sur-Yvette, France. He received many honors and awards while at NIGMS, including two NIH Director’s Awards.

“I’ve enjoyed my career at NIGMS,” said Whitmarsh. “There’s a family atmosphere here and the management structure enables people to make changes and to express themselves. I will really miss my friends here.”

Though his federal career may have come to an end, Whitmarsh attests that his working days are not over. “I plan to continue working—hopefully someplace where I can combine my research and administrative experience. I would like to be able to contribute to the scientific workforce and/or training,” he said.

In addition to a new career, Whitmarsh will adapt to a new life in Los Angeles. He plans to spend more time with his children and grandchildren—the reason for his address change. “I’ve already made a deal with my kids that I will be ‘Papa Au Pair’ one day a week,” he said. “I’m looking forward to it.”



At left, a researcher explains her poster to Dr. Jeffrey Henderson of the Black Hills Center for American Indian Health. More than 20 posters were displayed in the session. At right, Dr. Malcolm King, scientific director of the Canadian Institute of Aboriginal Peoples' Health, discusses the metrics of health disparities within the three major communities of native peoples (First Nation, Inuit and Metis) across Canada. PHOTOS: BILL BRANSON

NIH Celebrates Native American and Alaska Native Heritage

NIH recently held its 10th annual observance of Native American and Alaska Native Heritage Day in Kirschstein Auditorium, Bldg. 45. Events included a scientific presentation, cultural performance, food tasting and poster displays.

Dr. Malcolm King, a member of the New Credit, part of the First Nations people located in southern Ontario, gave the scientific talk. He is scientific director of the Institute of Aboriginal Peoples' Health, Canadian Institutes of Health Research.

He described community-based research among aboriginal peoples in Canada. "Contributions of local knowledge, oral history and cultural understanding are often missed opportunities that can provide important depth and breadth for researchers and a more robust and complete perspective into disease prevention and health promotion," he said.

Jackie Bird, a Dakota Indian and championship hoop dancer, gave the cultural performance. She sang traditional songs in her native language and English and engaged members of the audience in her tribute to the four points of the compass of Mother Earth. She also manipulated more than 20 hoops to form images and tell a story.

The day was capped by a scientific poster session by more than 20 young American Indian and Alaska Native researchers. The session, sponsored by the Indian Health Service and the Native American Research Centers for

Health program, highlighted research activities that engage local populations to better understand health disparities of Native Americans.

Hosting the event was the NIH American Indian and Alaska Native Employee Council. Sponsors included the Fogarty International Center, the National Institute of General Medical Sciences and the NIH Office of Equal Opportunity and Diversity Management.



Above: Dr. Philip Smith of the Indian Health Service opens the program with a blessing in Navajo language.

Left: Champion hoop dancer Jackie Bird accompanies herself on guitar between sets of intricate hoop dances.