

nih record



ABOVE • Dr. Wendy Nilsen of OBSSR helps a young visitor at the first USA SciFest. See story at right.

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Collins Rocks the Mall

NIH Attracts Thousands at First USA SciFest

By Carla Garnett

Hundreds of NIH'ers banded together for 2 days in downtown D.C. to show thousands of children and families how the agency turns discovery into health during the USA Science & Engineering Festival held Oct. 23-24. NIH was one of more than 500 science/engineering organizations to present more than 1,500 hands-on exhibits and displays on the National Mall and at Freedom Plaza and Wilson Plaza along Pennsylvania Ave.

An estimated 500,000 people attended the first-of-its-kind festival over the 2 days, according to organizers.

Activities and demonstrations at the event were sprinkled with musical performances, game shows and other entertainment, including a Sunday afternoon mini-concert where NIH director Dr. Francis Collins rocked the Mall tent stage.

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NIH director Dr. Francis Collins, "the scientific rock star," draws an enthusiastic crowd at SciFest.



NIAAA Holds 40th Anniversary Symposium

By Scott Edie



NIAAA acting director Dr. Kenneth Warren

For 40 years, NIAAA has been at the forefront of the field of alcohol research, supporting scientists in an array of specialty areas—from genetics and neuroscience to prevention and treatment. Since its creation in 1970, NIAAA's work has helped to redefine the public's perception of alcoholism, leading to the understanding that it is a disease that is both preventable and treatable. Further, NIAAA has brought attention to a number of previously unrecognized public health issues such as the deleterious effects of drinking during pregnancy, the impact of underage and college drinking and the positive and negative

SEE NIAAA ANNIVERSARY, PAGE 4

Professionalism in Medicine

Good Practice Is More than Facts, Figures, Inui Says

By Valerie Lambros

In medical school and in the academic years of a research career, students are expected to learn and retain myriad bits of knowledge, facts and information designed to make them better doctors.

But one of the hardest things to teach,



Dr. Thomas Inui

and what counts in a successful career, is how to be a professional and retain a solid moral grounding, says Dr. Thomas Inui, professor of medicine at Indiana University School of Medicine. He visited campus recently to offer a Grand Rounds for Fellows lecture titled, "Moral Development and

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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

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briefs

STEP Forum on Health Care Reform and NIH

The staff training in extramural programs (STEP) committee will present an Administrative Strategies forum on the topic "Health Care Reform and NIH: What It Means for Your Agency and You," on Tuesday, Nov. 30, from 8:30 a.m. to 12:30 p.m. in Rockledge II conference center, Rms. 9100 and 9112.

The Health Care and Education Affordability Reconciliation Act of 2010 (Affordable Health Care for America Act) became law on Mar. 30, 2010. Extensive discussion and media coverage have focused on the impact on health care services. Yet, news stories scarcely mentioned the role for NIH in enabling health care reform through scientific advances. This forum will describe provisions in the bill of interest to NIH and the potential use of NIH expertise in implementing the objectives of the act. Will execution of the law require changes in programmatic and funding priorities? Come and learn what the future may hold for you.

DDM Seminar Series Starts 5th Season

The Deputy Director for Management (DDM) Seminar Series is set to offer another round of leadership and management presentations beginning this December.

The fifth annual series will host speakers known for delivering insights into workplace concepts, challenges and solutions. The seminars will give NIH employees an opportunity to advance their knowledge of best practices in a variety of leadership and management issues.

The first seminar will feature Simon Sinek on Thursday, Dec. 16 from 11 a.m. to 12:30 p.m. in Masur Auditorium, Bldg. 10. The series continues in 2011 with three more seminars featuring Dr. Mark Crear on Feb. 17, Dr. Beverly Kaye on Apr. 14 and Rick Searfoss on June 16. These presentations will focus on overcoming mental barriers to success, employee retention and satisfaction, inspiring people and the importance of leadership, teamwork and personal performance.

Presentations will be available at <http://videocast.nih.gov> for those who cannot attend or when Masur Auditorium reaches capacity.

Sign language interpreters will be provided. Individuals who need reasonable accommodation to attend should contact the NIH Training Center at (301) 496-6211 or the Federal Relay Service at 1-800-877-8339.

For more information about the DDM Seminar

Series and to view previous videocasts, visit www.ddmseries.od.nih.gov/.

NCRR Hosts Conference on Core Facilities

On Nov. 15-16, the National Center for Research Resources will hold a conference titled, "Moving Forward in the Efficient Management and Use of Core Facilities" to focus on key challenges in accessing and managing research cores and recent NIH initiatives to find solutions.

For the past year, NIH and the extramural research community have been working to improve core facility access and management. Core facilities are centralized, shared resources that provide biomedical researchers with access to instruments, technologies and services as well as expert consultation. Many institutes and centers invest in core resources at research institutions throughout the nation.

This free event in Bldg. 45, which is open to the public, also will feature poster sessions and software demonstrations. For more information and to register, visit www.palladianpartners.com/NCRRCoreFacilities/. The workshop will be video-cast at <http://videocast.nih.gov>.

Individuals who need sign language interpreters and/or reasonable accommodation should contact Monica Barnette at (301) 650-8660 or mbarnette@palladianpartners.com and/or the Federal Relay Service at 1-800-877-8339.

Harp Concert Benefits Children's Inn

Groups from the Washington Area Folk Harp Society will play a concert, "Harp Strings for Children's Inn," at the First Baptist Church of Gaithersburg, 200 West Diamond Ave., at 7 p.m. Saturday, Nov. 20. There will be solo harp numbers, "Fantasy for Harp" for harp and piano and performances of varied music (Celtic, contemporary, classical and tangos) by Harp Happy!, the PBJ Trio and the Heatherwood Harp Ensemble. Come enjoy some lively harp music and benefit the Children's Inn at NIH. For more information, visit www.wafhs.org.

NCI's Adhya Elected to Hungarian Academy

Dr. Sankar Adhya, senior investigator and chief of the developmental genetics section, Laboratory of Molecular Biology, NCI, was recently elected as a foreign member to the Hungarian Academy of Sciences. He received the honor for his contributions to the role of DNA structure in gene regulation. The Hungarian Academy elects its members every 3 years.





Dr. Charles Dinarello

PHOTO: UNIV. OF COLORADO SCHOOL OF MEDICINE

Dinarello To Give 2010 Kinyoun Lecture

By Julie Wu

Dr. Charles Dinarello, who purified and cloned interleukin-1 beta (IL-1 beta), once known as the fever molecule, will deliver the 2010 Kinyoun Lecture on Thursday, Nov. 18 at 3 p.m. in Lipsett Amphitheater, Bldg. 10. Dinarello is professor of medicine and immunology at the University of Colorado School of Medicine and a former investigator in NIAID's Laboratory of Clinical Investigation.

His talk, titled "Treating Auto-inflammatory Diseases with Interleukin-1 beta Blockade," will include an overview of autoinflammatory diseases such as type 2 diabetes mellitus and gout and describe differences between these and autoimmune diseases. He also will discuss treatment of inflammatory diseases using IL-1 beta blocking agents.

Dinarello is considered one of the founding fathers of cytokine biology. His work with IL-1 helped to establish the significance of cytokines in inflammatory diseases. His recognition of the importance of IL-1 in inflammatory diseases led to the development of therapies that inhibit IL-1 and thereby reduce disease severity. These therapies include those based on the IL-1 receptor antagonist, monoclonal antibodies and soluble receptors.

Dinarello received his medical degree in 1969 from Yale University. He came to work in NIAID's Laboratory of Clinical Investigation in 1971, alongside Dr. Sheldon Wolff, becoming a senior investigator in 1975. Dinarello left NIAID in 1977 to join the faculty at Tufts University, a position he held until 1996, when he went to the University of Colorado.

He has received numerous awards for his contributions to the cytokine biology field. Most recently, he received the Albany Medical Center Prize in Medicine, the Crafoord Prize from the Royal Swedish Academy of Sciences, the Paul Ehrlich Prize and the Novartis Prize in Immunology.

Dinarello is a member of the National Acade-

my of Sciences. He currently serves on the editorial board of several scientific journals including the *Proceedings of the National Academy of Sciences* and the board of governors of the Weizmann Institute of Science and Ben-Gurion University in Israel.

The Kinyoun Lecture honors Dr. Joseph J. Kinyoun, who in 1887 founded the Laboratory of Hygiene, forerunner of NIH, to study infectious diseases. NIAID sponsors the Kinyoun lecture series, which highlights advances in the understanding of infection and immunity. 

Hudson Named to Deputy Directorship

Dr. Kathy L. Hudson, who has been chief of staff to NIH director Dr. Francis Collins since September 2009, was named NIH deputy director for science, outreach and policy by Collins, effective Oct. 24. She retains her role as chief of staff.

As DDSOP, a newly created position at NIH, Hudson will work closely with and oversee the activities of the associate directors for communications and public liaison (John Burklow), legislative policy and analysis (Patrick White) and science policy (Dr. Amy Patterson).

Hudson has a Ph.D. in molecular biology from the University of California, Berkeley, and had previously been a member of the faculty of Johns Hopkins University since 2002, where she was founding director of the Genetics and Public Policy Center. Her work at Hopkins focused on public policy issues raised by advances in human genetics.

"Kathy's unique combination of scientific knowledge, analytical and communication abilities and experience both within and outside the government will serve her and the agency well in her new position," said Collins.

Hudson first came to NIH in fall 1995, when she joined what was then the National Center for Human Genome Research as assistant director for policy coordination. In that role, she was responsible for the Office of Communications, the Office of Program Planning and the Office of Legislation as head of the newly created Office for Policy Coordination.

Before joining NCHGR, she was senior policy analyst in the Office of the Assistant Secretary for Health, HHS. She advised the assistant secretary on national health and science policy issues involving NIH. Prior to that, she worked in the congressional Office of Technology Assessment as a congressional science fellow.

Before earning her doctorate at Berkeley, Hudson received her B.A. in biology at Carleton College in Minnesota and M.S. in microbiology from the University of Chicago.





NIAAA ANNIVERSARY

CONTINUED FROM PAGE 1

Above, l:

Presenters at NIAAA's 40th-anniversary symposium pose with NIAAA acting director Dr. Kenneth Warren (standing, third from l). They are (standing, from l) Dr. Tatiana Foroud, Dr. Robert Anthenelli, Dr. Robert Voas, Dr. Michael Windle and Dr. Raul Caetano. Seated are (from l) Dr. Edith V. Sullivan, Dr. Jennifer Thomas and Dr. Pranoti Mandrekar.

Above, r:

Thomas discusses the serious consequences for fetuses when mothers drink during pregnancy.

PHOTOS: ERNIE BRANSON

actions that alcohol can have on various organs of the body.

In celebration of its 40th anniversary, NIAAA invited distinguished researchers from across the alcohol research spectrum to participate in a symposium on Oct. 4. The symposium provided a venue for highlighting the work that has been accomplished over the last 40 years, documenting the significant advances that have occurred during this time and forecasting what the future holds for the field.

Acting NIAAA director Dr. Kenneth Warren opened the event by discussing the current breadth of alcohol research and the significant progress made over the past 40 years.

Forty years ago, little was known about alcoholism and heredity. Dr. Tatiana Foroud of Indiana University School of Medicine described studies of twins raised apart from one another and how this helped confirm that family history and genes play an important role in the risk for alcoholism. Based on this and other work, it is now known that about half of a person's risk for alcohol problems is genetic and half is due to a variety of social factors.

Further, intensive research efforts have pinpointed a number of specific genes involved in alcohol dependence as well as their functions. Foroud said this work may open the door for new treatments and medications tailored expressly for the individual, leading to personalized treatment for alcohol dependence.

Although it has long been known that alcohol alters behavior and perception, neuroscience has vastly increased the understanding of how alcohol affects the brain and its functioning. Dr. Edith Sullivan of Stanford University School of Medicine described how alcohol use, both short- and long-term, can have serious effects on the structure of the brain and how it processes informa-

tion, leading, in some cases, to severe mental disabilities.

Dr. Robert Anthenelli of the University of Cincinnati College of Medicine described how alcohol use and abuse often are intertwined with other co-occurring mental health disorders such as anxiety, depression or post-traumatic stress disorder. Some of these effects have been traced to the body's responses to stress; those responses vary considerably in men and women. Co-occurring disorders are an important area of inquiry as they present challenges for both diagnosis and treatment. Therefore, research in this area is vital to successful treatment for many individuals.

The brain is not the only organ negatively affected by alcohol. Early research linked alcohol use to damage to the liver, the organ responsible for breaking down alcohol and helping to eliminate it from the body. Recognizing liver damage from alcohol was just the beginning of our understanding of the medical consequences of alcohol abuse. Dr. Pranoti Mandrekar of the University of Massachusetts Medical Center summarized the latest findings on the effects of alcohol on the body, including the liver, heart, gastrointestinal system, as well as the immune system.

A common misperception from the past was that alcoholism was found primarily in middle-aged men. Research now shows that alcohol dependence is found in people of all ages, both genders and a variety of ethnicities, and that the highest prevalence of dependence is found among those ages 18-24.

Dr. Michael Windle of Emory University discussed the problem of underage alcohol use. Particularly troubling is the effect that alcohol may have on the developing brain. Studies show that the brain continues to develop into a per-

son's mid-20s, and the consumption of alcohol during this time, particularly frequent binge drinking, can affect both memory and behavior.

Dr. Jennifer Thomas of San Diego State University described how the fetus is at risk for serious consequences when mothers drink during pregnancy. Exposure to alcohol prenatally may result in varying degrees of physical, mental and behavioral problems. Research is now helping to identify specific interventions that can mitigate these problems.

The broader effects of alcohol on society were addressed by Dr. Robert Voas of the Pacific Institute for Research and Evaluation, who discussed how alcohol consumption is related to public safety. Research has helped to shape policies and laws that have had significant positive effects. These include raising the minimum drinking age to 21—a law that significantly decreased the number of traffic deaths among young adults—and drinking-and-driving laws that protect all ages across the nation.

In closing, Warren thanked the speakers for their “truly outstanding presentations that directly demonstrated the explosion of the knowledge in the alcohol field over the past 40 years.” Importantly, research is being translated into practice. Increased knowledge of genetics, neuroscience and other fields has led to new medications and treatments, offering hope to people who suffer from alcohol abuse and dependence. And advances in our understanding of alcohol's effects—both harmful and beneficial—are helping to improve public health. ⑦



NCI's Potter Honored

The National Cancer Institute and the NIH Office of Rare Diseases Research recently sponsored a meeting on the Etiology of Chromosomal Translocations. The conference brought together scientists studying the molecular details and pathogenesis of chromosomal translocations and honored Dr. Michael Potter (c), a pioneer in the study of chromosomal translocations. Also on hand were George Klein (l) of the Karolinska Institute and Robert Kyle of the Mayo Clinic.

PHOTO: BILL BRANSON

NIH Leave Bank Available to Three Institutes

The Office of Human Resources recently expanded the leave-sharing benefit known as the Voluntary Leave Bank Program. The leave bank is similar to the Voluntary Leave Transfer Program (VLTP). Donations are placed in a “bank” instead of given directly to a recipient and made available to members who experience a personal or family medical emergency that puts them in a non-pay status.

Beneficiaries of the leave bank are limited to members. For calendar year 2011, membership is offered to federal employees in NCI, NIAID and NHGRI. To become a member, eligible employees must donate one pay period of annual leave accrual (i.e., 4, 6 or 8 hours). This membership donation gives members protection for the entire calendar year. Additional contributions can also be made. OHR hopes to expand the leave bank to all NIH federal employees in 2012, contingent on budget allocations.

Applications to become a leave recipient will be accepted beginning Jan. 4, 2011. To become a recipient you must be a leave bank member; have a qualifying medical emergency (verified through a confidential medical review process); expect to be in non-pay status for at least 24 hours; and submit the application in a timely manner. Approved recipients can receive up to 960 hours for a personal medical emergency, up to 480 hours to care for a family member or a combined total of 1,040 hours. Information about the Leave Bank Program can be found at www.hr.od.nih.gov/benefits/leave/vlbp.

Both the VLTP and the leave bank depend on the generosity of federal employees who contribute leave to support others. Every year there are approximately 100,000 “use or lose” annual leave hours forfeited at NIH. Employees with excess annual leave at the conclusion of the year are encouraged to “use it—but don't lose it”; in other words, support our NIH family and donate to others.

Donations are submitted through the Integrated Time and Attendance System: <https://itas.nih.gov>. Go to the “Donate Leave” button on the left side to make your donation. This will link you to “A Leave Bank” for donations to the leave bank, or an alphabetical list of all approved VLTP recipients. All federal employees are eligible to donate leave to either program.

APAO Donates to Children's Inn

NIH Asian and Pacific Islander American Organization (APAO) recently donated \$500 from the proceeds of its ethnic food fair to the Children's Inn at NIH. Each year, APAO organizes a fair in May on the patio of Bldg. 31 with food, performances and entertainment to celebrate Asian Pacific Islander American Heritage Month.

Shown at the gift presentation are (from l) Dr. Rashmi Gopal-Srivastava, NIH APAO president; Aaron Bell, APAO treasurer; and Children's Inn representatives Fern Jennifer Stone, director of development, and Lauren Conte, special events coordinator. For more information about NIH APAO, visit www.recgov.org/r&w/apao/.





FESTIVAL

CONTINUED FROM PAGE 1

Above, l:

At the Freedom Plaza location, NHGRI director Dr. Eric Green and daughter Abbey demonstrate how to purify DNA from strawberries using household materials.

Above, r:

SciFest participants (from l) Dr. Steven Grant and Dr. David Shurtleff, both of NIDA, and NIDA director Dr. Nora Volkow pass around a brain for attendees to see.

Below, l:

Collins gives a mini-concert on the Mall.

Below, r:

Games to Rewire the Brain. OBSSR's Dr. Wendy Nilsen helps a youngster play a game designed to enhance social perception for children with autism.

PHOTOS: BRUCE FUCHS, BILL BRANSON, DAVE THOMAS, CARLA GARNETT

Wonderful World of Science

"I have this alter ego who likes to get up in front of people and make a fool of myself," he joked, smiling as he took the stage with his acoustic guitar. "You all are part of my alter ego experience."

Dressed in black jeans and a button-down, Collins looked the part of a "scientific rock star," which is how he was billed.

Talking to a crowd made up of about half young people and half not, Collins quipped that some of his songs were older than attendees' parents. He then chatted briefly about some of his own childhood experiences with "boring" classroom science, particularly biology courses. "Science ain't about memorizing stuff," he declared. "It's about figuring things out."

Using the tune from Sam Cooke's 1958 hit *Wonderful World*, Collins coaxed his audience to join in singing the chorus, "But I do know this stuff is cool/If only they taught more science in school/What a wonderful world this would be."

Magic of Discovery

Also on the director's playlist were two hilarious genome-centric songs, *We Really Got the Code on You*, a take on Smokey Robinson's *You've Really Got a Hold on Me* and *Amazing DNA* borrowed from Del Shannon's *Runaway*. *I Did It Their Way*, sung to the tune of classic pop standard *My Way*, made light of the "student experience." The Lovin' Spoonful's *Do You Believe in Magic* (of discovery) completed the show.

"That eureka moment just sets you free...do you believe in magic," sang Collins, in his finale. The artist departed the stage amid calls for an encore.

IC Directors in the Thick of It

Competing with eternal science fan favorites—robots and rockets—NIH features such

as "Beating the Odds for Better Health," "Are You Smarter than a Rat?" and "Attack of the *S. mutans* 3D video game" also generated their own brand of excitement. Lending more of a carnival atmosphere to the event, the COPD Shuttle virtual ride through the lungs was in operation at the Freedom Plaza site, where several SciFest "mobile labs" had spilled onto Pennsylvania Ave.

At NIH booths, attendees could handle a real brain with NIDA director Dr. Nora Volkow at the Mall or extract DNA from a strawberry with NHGRI director Dr. Eric Green at Freedom Plaza.

"I thought the event was outstanding—mission accomplished!" enthused Green afterwards. His daughter Abbey had also been on hand to lend assistance with the extractions.

"She demonstrated how to purify DNA from strawberries using household materials—and did so for 4 straight hours on Sunday morning," he said. "She had a fabulous time doing this. She visited the other exhibits on Saturday and really enjoyed the festival."

Nation's Science Orgs, Side by Side

Alongside exhibits from other federal science agencies such as the Department of Energy, NASA and the National Science Foundation were offerings from academia such as "The





Dr. Tiziana Cogliati (l) and Dr. Jennifer E. Mehren of NEI volunteer for “More than Meets the Eye.”

Physics of Music” from American University, “Insectopia” from Duke University and “Legos Can Show What Happens on the Nanoscale” from Johns Hopkins University. Media organizations such as PBS Kids sent mascots from such hit shows as *Dinosaur Train* and *Sid the Science Kid*.

Lockheed Martin, one of several festival corporate sponsors, offered more than 2 dozen exhibits, including “Sprockit the Interactive Robot” and “3D Journey Across Mars.”

Dozens of satellite events focusing on science were also conducted around the nation throughout October.

John Burklow, NIH associate director for communications and public liaison, and Dr. Bruce Fuchs, director of the Office of Science Education, chaired the NIH-wide SciFest effort. OSE’s Dr. Dave Vannier coordinated agency activities and exhibits with several hundred NIH volunteers.

“The event enabled youth to learn, discover, interact and embrace the joys of science and engineering,” said Randy Schools, president of the Recreation & Welfare Association, who also helped organize NIH’s involvement. “The scientific community came together and showcased many of their success stories.”

To see video of the event, go to www.usasciencefestival.org.



Above:

At left, Dr. Diego Capurro, a dental public health resident with NIDCR, watches kids play a 3D game developed by Firsthand Technology through an NIH small business grant. At right, Ari Hollander of Firsthand chats with NIDCR communications director Susan Johnson.



Left, top:

Special guest Biggest Loser Pete Thomas (r), who has lost 185 pounds, shares his life-size “before” photo as well as tips for healthy eating. He’s joined by NIH Executive Chef Robert Hetetnemi.



Left, bottom:

Using a bracelet scanner, a youngster checks himself in at the “Beating the Odds for Better Health” exhibit.

Below:

On the National Mall, hundreds of visitors gather at NIH tents, which were themed “Turning Discovery into Health.”



PROFESSIONALISM

CONTINUED FROM PAGE 1

Right:

Guest speaker Inui found a lacking culture at Indiana University School of Medicine and set about addressing its shortcomings.

PHOTOS: MICHAEL SPENCER

Professionalism in Medicine: Learning to Use Two Traditions of Open Ocean Navigation.”

Professionalism may seem like a simple concept, he said, but in medicine and biomedical research, some situations can be tricky. However, regardless of who defines characteristics of a good doctor—the Association of American Medical Colleges, the National Board of Medical Examiners or the American Board of Internal Medicine—certain terms recur.

“We have a larger vocabulary that we could use, but we use these same words again and again. They all begin to sound like the Boy Scout Law,” Inui said, referring to the organizational creed whose main principles—being kind, loyal, trustworthy, brave, cheerful and clean—are intended for scouts, but could easily be applied to a practicing physician or clinical researcher.

“On a busy day in the clinic, being helpful, friendly, courteous, kind and cheerful are all good things. Patients do appreciate them. They see them as attributes,” he said.

By regarding what it means to practice medicine or research in this way, and by using idealistic terms such as these to describe the profession, Inui said, it suggests that we place the good practice of medicine in the domain of morality, humanism and perhaps of spirituality.

“In this way, we express a view of medicine as a moral enterprise, a virtuous activity,” he said.

He asked the audience to discuss in pairs or trios examples of professionalism at work or the cringe-inducing lack thereof.

Some said they had seen good examples in office settings or labs and others testified to situations in the clinic that left them shaking their heads.

“You all have an idea of what professionalism is,” he said. “You can recognize it when it’s there and when it’s absent.”

It’s this kind of sharing through stories that forms the backbone of a program Inui and colleagues installed as a teaching tool at Indiana. Prior to his arrival at the school some 7 years ago, the atmosphere at the school was demonstrably clouded. According to Inui, data accumulated through exit surveys found that students were disillusioned and cynical, almost resigned to the idea that going through medical school was more about competition and outlasting



classmates than about trying to be the most effective, compassionate doctors possible.

Inui found that professors were generally not engaging students in ways that made sense to them.

He used a quote from theologian Paul Tillich to describe what was happening at the school: “The fatal pedagogical error is to throw answers, like stones, at the heads of those who have not yet asked the questions.”

The teaching staff had to make changes, ones that meant their students would, like Inui’s Grand Rounds audience, participate in defining and identifying what makes a good doctor. In effect, the professors needed to teach students the principles of navigating an ocean of ethical and moral dilemmas.

Inui offered the metaphor of two ancient modes of high-seas navigation: the European method using sextants and stars and the more sensory-based Pacific Islander method of observing winds and currents to guide passage. Some balance of the two modes—the empirical and the intuitive—is optimum, he suggested.

For a number of years now, Indiana’s curriculum has included a forum where students share experiences that have illuminated something about their chosen profession. Most times, these are intangibles that can’t be measured or reflected in a letter grade. Instead, they are lessons reminding them that to be a doctor is also to be a human being, said Inui.

Illustrative examples are shared in groups and discussed so that students get a chance to think about how they may act in similar circumstances. The program has fundamentally altered the way many students see their role as future doctors.

“The question is: How will you make your choices?” Inui said. “Are you prepared for the complexity of the world? Are you prepared to muddle through while staying connected to your fundamental values in complex circumstances? You will be judged by what you choose to do again and again in these situations—this is what is meant by character.”



ORWH director Dr. Vivian Pinn (r) welcomes guest speakers at the recent seminar on environmental exposures. They are (from l) Dr. Shuk-mei Ho, Dr. Frederick Miller, Dr. Melissa Friesen and Dr. Frederica Perera.

ORWH Seminar Explores Effects of Environmental Exposures on Gene Action

Children exposed prenatally to high levels of polycyclic aromatic hydrocarbons (PAHs)—an air pollutant found in diesel exhaust—scored lower on tests of mental and physical development compared to children who had lower prenatal exposures, said Dr. Frederica Perera, who presented the research at the Environmental Exposures and Women's Health seminar on Oct. 5.

Perera, of the Mailman School of Public Health at Columbia University and the Columbia Center for Children's Environmental Health (CCCEH), was one of four speakers at the seminar in Lipsett Amphitheater. It was the latest in the Women's Health Seminar Series organized by the Office of Research on Women's Health.

Perera summarized two CCCEH longitudinal studies that found that children exposed to higher levels of PAHs while still in the womb had lower IQ scores and more behavioral problems, including anxiety, depression and attention deficits. The effects persisted among the children, who were last tested at age 6. She discussed the results of this and other CCCEH studies in terms of epigenetics—the effect the environment has on gene action.

Dr. Shuk-mei Ho of the University of Cincinnati College of Medicine has studied how prenatal exposure to diethylstilbestrol (the synthetic estrogen more commonly known as DES) and genistein (a phytoestrogen found in soy products) can play a role in the development of uterine cancer. Mouse studies suggest that if exposure to genistein occurs prenatally, it can lead to uterine tumors. Genistein and DES appear to reprogram the uterine epigenome when exposure occurs early in life by altering a subset of genes, she said.

The prevalence of autoimmune diseases, which primarily attack women of childbearing age, is increasing globally, said Dr. Frederick Miller of the National Institute of Environmental Health Sciences. These diseases entail a chronic

immune activation, in a genetically susceptible individual, following an environmental exposure. A number of genes have been associated with these diseases, some of them linked to multiple autoimmune diseases. A variety of substances have been identified as possible environmental triggers. Research needs to determine which gene-environment interactions lead to which syndromes and should proceed globally, he said.

Dr. Melissa Friesen of the National Cancer Institute said that when it comes to assessing occupational cancer risk, women are not simply small men. Occupational risk to men and women should be assessed separately for a variety of reasons, including hormonal changes in women that may change their risk for the same exposures, particularly when they occur earlier in life. Differences between men and women in breathing rates, heart rates and fat levels may also play a role in differential risk. 🗳️

NIH Effort Earns 'GreenGov' Award

The White House Council on Environmental Quality recently announced eight federal winners of the 2010 GreenGov Presidential Awards for exceptional efforts to promote sustainable operations at their agencies.

Winning a "Green Dream Team Award" was the interagency working group on climate change and health, which was led by NIEHS staff. Fogarty International Center staff and representatives of other HHS agencies and federal departments also served on the working group and were coauthors of the report, "A Human Health Perspective on Climate Change," which was published in April. It provides a baseline assessment of the current state of knowledge of the health impacts of climate change and informs projections of future impacts.

"President Obama asked the federal government to lead by example when it comes to building a sustainable future focused on clean and renewable energy," said Nancy Sutley, chair of the CEQ. "The winning entries are clearly leading by example in their innovative use of environmentally responsible products and technologies."

CEQ solicited award nominations and, along with a panel of judges, reviewed the nominations and recommended the 2010 award recipients to the President. The eight winners were selected from more than 300 nominations and were recognized at a White House reception Oct. 7.

OPM Releases New Supervisor Training Regs

Supervisory development is under the spotlight across the federal government as OPM recently amended its training and development regulations. HHS will soon be coming out with guidance further defining supervisory training.

OPM wants new scientific and administrative supervisors to receive formal training in the initial 12 months of their new roles as supervisors. In addition, retraining is required every 3 years. Training must at a minimum cover actions, options and strategies addressing unacceptable performance, mentoring employees, employee performance improvement and productivity and conducting employee performance appraisals.

NIH plans to interpret and clarify these regulations by developing an NIH-specific policy that incorporates various IC voices. A cross-IC supervisory training committee has formed. The committee will be formalizing the policy and reaching out to the NIH community. To stay updated on pending guidance and committee activities, visit http://trainingcenter-test.od.nih.gov/mandatory_supervisory_training.html.

The NIH Training Center already offers a course that meets the supervisory requirements: NIH-Supervisory Skills Training. In addition, individual ICs may offer courses and/or programs meeting the above areas.

NIH-Funded Research Shows that Digital Images Manipulable by Mind

Move over, touchpad screens: New research funded in part by NIH shows that it is possible to manipulate complex visual images on a computer screen using only the mind.

The study, published in *Nature* on Oct. 28, found that when research subjects had their brains connected to a computer displaying two merged images, they could force the computer to display one of the images and discard the other. The signals transmitted from each subject's brain to the computer were derived from just a handful of brain cells.

"The subjects were able to use their thoughts to override the images they saw on the computer screen," said the study's lead author, Dr. Itzhak Fried, a professor of neurosurgery at the University of California, Los Angeles. The study was funded in part by NINDS and NIMH.

The study reflects progress in the development of brain-computer interfaces (BCIs), devices that allow people to control computers or other devices with their thoughts. BCIs hold promise for helping paralyzed individuals to communicate or control prosthetic limbs. But in this study, BCI technology was used mostly as a tool to understand how the brain processes information and especially to understand how thoughts and decisions are shaped by the collective activity of single brain cells.

1000 Genomes Project Publishes Analysis of Completed Pilot Phase

Small genetic differences between individuals help explain why some people have a higher risk than others for developing illnesses such as diabetes or cancer. In the Oct. 28 issue of *Nature*, the 1000 Genomes Project, an international public-private consortium, published the most comprehensive map of these genetic differences, called variations, estimated to contain approximately 95 percent of the genetic variation of any person on Earth.

Researchers produced the map using next-generation DNA sequencing technologies to systematically characterize human genetic variation in 180 people in 3 pilot studies. Moreover, the full scale-up from the pilots is already under way, with data collected from more than 1,000 people.

"The pilot studies of the 1000 Genomes Project laid a critical foundation for studying human genetic variation," said Dr. Richard Durbin of the Wellcome Trust Sanger Institute and co-chair of the consortium. "These proof-of-principle studies are enabling consortium scientists to create a comprehensive, publicly available map of genetic variation that will ultimately collect sequence from 2,500 people from multiple populations worldwide and underpin future genetics research."

Severe Sepsis Associated with Later Cognitive, Physical Decline

Older adults who survive hospitalization involving severe sepsis, a serious medical condition caused by an overwhelming immune response to severe infection, are at higher risk for cognitive impairment and physical limitations than older adults hospitalized for other reasons, researchers have found.

The research, conducted by the University of Michigan and supported primarily by the National Institute on Aging, appeared in the Oct. 27 issue of the *Journal of the American Medical Association*. The average age of study participants was 77 at the time of hospitalization for sepsis.

Dr. Theodore Iwashyna and colleagues found that an older person's risk of cognitive decline increased almost threefold following hospitalization for severe sepsis. They also found that severe sepsis was associated with greater risk for the development of at least one new limitation in performing daily activities following hospitalization.

Improving Moms' Literacy Skills May Be Best Way to Boost Children's Achievement

Researchers funded by NIH concluded that programs to boost the academic achievement of children from low-income neighborhoods might be more successful if they also provided adult literacy education to parents.

The researchers based this conclusion on their finding that a mother's reading skill is the greatest determinant of her children's future academic success, outweighing other factors such as neighborhood and family income.

The analysis, performed by Dr. Narayan Sastry of the University of Michigan and Dr. Anne R. Pebley of the University of California, Los Angeles, examined data on more than 3,000 families. The study, which appeared in *Demography*, was supported by NICHD.



New research funded in part by NIH shows that it is possible to manipulate visual images on a computer screen using only the mind.



volunteers

The phone numbers for more information about the studies below are 1-866-444-2214 (TTY 1-866-411-1010) unless otherwise noted.

Plaque Regression

If you have narrowing of the arteries and are taking statin medication, you may be eligible to participate in a study that will investigate if using magnetic resonance imaging is an effective method of measuring plaque in comparison to other methods available to estimate your risk of heart disease and stroke. All participants will come to the Clinical Center and receive statin medication or be willing to modify their current dose. The study will last approximately 24 months. All study-related tests and medications will be provided at no cost. Participants must be 55 years of age or older. Refer to study 10-CC-0214. Se habla español.

Non-Invasive Imaging: Healthy Volunteers

If you are a healthy volunteer and have not been diagnosed with heart failure or ailments, you may be eligible to participate in a study that will evaluate the accuracy of non-invasive imaging testing in assessing how the heart functions. Study participants will be required to travel to NIH for initial screening and will undergo an MRI or CT scan with iodine contrast. The study duration is approximately 24 months. All study-related tests and medications will be provided at no cost. Refer to study 10-CC-0153. Se habla español.

Non-Invasive Imaging: Patients

If you have been diagnosed with heart failure and you are not claustrophobic, you may be eligible to participate in a study that will evaluate the accuracy of non-invasive imaging testing in assessing how the heart functions. Study participants will be required to travel to NIH for initial screening and will undergo an MRI or CT scan with iodine contrast. The study duration is approximately 24 months. All study-related tests and medications will be provided at no cost. Refer to study 10-CC-0153. Se habla español.

Asthma Study for Adults, 18-65

You may be eligible to participate in a clinical research study with the drug DAS 181. The investigational drug is currently being studied as a potential treatment for the flu. The goal of the study is to determine if DAS 181 can safely be given to individuals with well-controlled asthma. The study will last between 6-12 weeks and there are a total of 12 visits required. In order to participate, you must have had well-controlled asthma for at least the past 3 months, not be allergic to milk or milk products and not be taking oral corticosteroids. Compensation is provided. Refer to study 10-I-0085.

Bronchiectasis Study for Adults, 18-65

You may be eligible to participate in a clinical research study with the drug DAS 181. The investigational drug is currently being studied as a potential treatment for the flu. The goal of the study is to determine if DAS 181 can safely be given to individuals with bronchiectasis. The study will last between 6-12 weeks and there are a total of 12 visits required. In order to participate, you must have had a chest CT within the last 12 months that establishes a diagnosis, not be allergic to milk or milk products and not be taking corticosteroids. Compensation is provided. Refer to study 10-I-0085.



NIDCD director Dr. James Battey (c) welcomes new council members (from l) Drs. Gerald Berke, Lauren Bakaletz, Saumil Merchant and Bevan Yueh. Dr. Carolyn Stern is not shown.

NIDCD Council Adds Five Members

The National Deafness and Other Communication Disorders Advisory Council welcomed five new members at its recent meeting. The meeting included a presentation by NIH director Dr. Francis Collins, who described NIH research highlights and areas of emphasis and answered questions from council members. The new members are:

Dr. Lauren Bakaletz, professor in the department of otolaryngology, Ohio State University, and vice-president for basic science research at the Research Institute at Nationwide Children's Hospital, Columbus, Ohio. Her work includes understanding the pathogenic mechanisms operating in otitis media, particularly the roles of bacterial adhesives and biofilm formation.

Dr. Gerald Berke, chief of head and neck surgery in the school of medicine at the University of California at Los Angeles. His scientific work includes voice disorders, swallowing problems, snoring, deviated or perforated septa, parathyroid and thyroid disease and trauma.

Dr. Saumil Merchant, the Gudrun Larsen Eliassen and Nels Kristian Eliassen chair in otology and laryngology at Harvard Medical School. His research interests include pathology of the middle ear to better understand sound transmission through normal, diseased and reconstructed middle ears.

Dr. Carolyn Stern, a family physician and partner of DeafDoc.org, a web site that covers health care issues using American Sign Language and captions. She also works as an urgent care physician in the Unity Health System and is medical director at Rochester School for the Deaf.

Dr. Bevan Yueh, professor and chair of the department of otolaryngology/head and neck surgery at the University of Minnesota. His scientific interests include head and neck surgery, clinical epidemiology, head and neck tumors, salivary gland tumors and thyroid tumors.

NIMHD Concludes Inaugural Health Disparities Course

Experts and scholars from around the country and abroad recently visited the NIH campus for the National Institute on Minority Health and Health Disparities' inaugural course on health disparities. The course featured former Surgeon General David Satcher and lecturers from the Harvard School of Public Health, Northwestern University, the Joint Center for Political and Economic Studies and George Washington University, just to name a few.

Course attendees participated in a series of lectures and dialogue on the principles of health disparities research. More than 40 health care and public policy professionals as well as members of community-based and faith-based organizations attended the course, titled *Translational Health Disparities: Integrating Principles of Science, Practice and Policy in Health Disparities Research*.

"We are very pleased with the course participants' enthusiasm, energy and commitment to ending health disparities," said Dr. John Ruffin, director of NIMHD. "They are now prepared with information and resources to take back to their respective communities to serve as advocates who can translate their knowledge into practice. This allows us to build our capacity to eliminate health disparities."

Course modules focused on biological and non-biological determinants of health as well as a range of social, political, economic, cultural, legal and ethical theories related to health disparities. Scholars learned about factors that lead to poor health such as environment, social status, immigration laws and access to care. Other modules focused on genetics and genomics as well as ethical issues relating to health disparities and cultural competency. Experts discussed the challenges of recruiting people from health disparity populations into clinical trials. They also shared their experiences translating and disseminating scientific knowledge with policymakers and the public.

Ruffin announced that NIMHD would host the course on an annual basis. "I believe that we must continue to engage people in better understanding the considerable health disparities faced by millions of Americans. I can think of no better way to get the message across than by empowering the people who work directly with communities that are expe-



NIMHD translational health disparities course participants and lecturers

riencing health disparities. This is a course that I believe anyone involved in health disparities work at the NIH should also attend."

At the end of the course, participants were asked to formulate a plan for health disparities innovation research in their communities. Details about next year's course will be announced soon. 🗨

Fogarty Welcomes New Advisory Board Members

The Fogarty International Center recently welcomed several new advisory board members. Dr. Maria Freire and Dr. Derek Yach will provide guidance on funding awards and other activities. In addition, Dr. Kevin DeCock, new director of global health at CDC, has joined the board in an *ex officio* capacity.

Freire is president of the Albert and Mary Lasker Foundation.

Prior to that appointment, she was CEO of the Global Alliance for TB Drug Development, which became the world leader in tuberculosis drug development under her leadership. She also directed NIH's Office of Technology Transfer from 1995 to 2001.

Yach is senior vice president of global health policy at PepsiCo Inc., where he heads engagement efforts with major international policy and scientific groups. Previously he was responsible for global health initiatives at the Rockefeller Foundation and headed the division of global health at Yale University.



Fogarty International Center director Dr. Roger I. Glass (l) welcomes new advisory board members Dr. Maria Freire and Dr. Derek Yach.