

nih record



ABOVE • NIDA gets into the video business with a film warning of the dangers of AIDS.

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Identifying the 'Next Big Thing' in Science

New NIH Portfolio Analysis Office To Provide 'Incubator Space' for Novel Ideas

By Carla Garnett

What if NIH could peer into a crystal ball and effectively attack the next global health woe 10 or 15 years in advance? How much of a health dividend could the nation collect later if the agency could invest now in some clever—but hard-to-fit-into-any-IC—research project? In the wake of Roadmap success, NIH will attempt to answer such questions as it launches the Office of Portfolio Analysis and Strategic Initiatives (OPASI), which will transform the way NIH finds and funds cutting-edge research.

“One of the most difficult things to do is to usher in change,” said NIH director Dr. Elias Zerhouni on Dec. 2, addressing the 91st meeting of the advisory committee to the director (ACD). “This process has essentially two goals: To allow new science that falls through the cracks to be funded quickly and to make sure new ideas have a chance. This to me is more of a venture capital fund than anything else. We do not want to duplicate what is already being done. We want to allow more flexibility and nimbleness. We want to provide dialogue about cross-cutting science areas. OPASI will provide a cone of exploration, which becomes more important in times of limited funds.”

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Consumer Misperceptions About Tobacco Still Abound, Says Cummings

By Rich McManus

Okay, you're at NIH, and the learned professor comes to town to deliver the lecture titled, “Does the Government Really Need to Do More to Educate the Public About the Risks of Smoking?” It's not simply that Dr. K. Michael Cummings' answer was obvious before he spoke a word, but the manner in which he skewered the tobacco-use habit that also proved entertaining. Even a committed non-smoker had to ask, following his hour-long talk at Executive Plaza North on Nov. 30, “How do smokers continue to do such a disgusting thing to themselves?”

Granted, Cummings was preaching to the choir—a group of NCI cancer prevention and control fellows, not one of whom looked familiar with a nic fit. And maybe humor is the only sane response to the baldness of the pseudo-scientific balderdash issued by tobacco industry propagandists in the past few decades.

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The Shot Heard 'Round the Campus: NIH Flu Clinic Immunizes Thousands

By Jan Ehrman

Michael Jordan and Zita Givens have something in common. Hoopster Jordan was long renowned for his great shots. But he has little on Givens, at least off the court. The National Institute on Aging program analyst has a nice shot of her own—one that required her to visit the Clinical Center, where she rolled up her sleeve and took advantage of a key employee benefit—getting her annual free flu shot.

Givens is a true believer in flu shots. She has been vaccinated at the NIH clinic for at least 10 years, except for last year, when only NIH health care providers and persons designated “at risk” by the CDC were able to get vaccinated, due to a critical nationwide shortage of the vaccine.

“It was so smooth this year. I was fortunate. There was virtually no line, and I was in and out of there in probably less than 5 minutes,” recalls Givens, whose family members, like

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briefs

IT Team Launches Web Site

The NIH IT enterprise architect team has launched a new web site at <http://EnterpriseArchitecture.nih.gov>. The goal of the redesigned site is to make enterprise architecture readily available to anyone who wants to use it.

Through stakeholder feedback, new features were added to include “Your Part,” which describes what to do, and when; the ability to share pages; and the “About” page, which describes NIH’s approach to enterprise architecture.

Users can easily navigate to content using numerous methods based on their mental model or task, i.e., by technology type or artifact type. Also added was a “related links” feature, which will help users find the correct information to learn and apply the architecture.

NIH redesigned the site using Microsoft’s Content Management System to make it easier to use NIH enterprise architecture. It is an online resource for teams and individuals who plan, build or purchase IT systems for NIH.

NIH-Duke Training in Clinical Research

Applications for the 2006-2007 NIH-Duke Training Program in Clinical Research are available in the Clinical Center, Office of Clinical Research Training and Medical Education, Bldg. 10, Rm. B1L403.

The NIH-Duke program, implemented in 1998, is designed primarily for physicians and dentists who desire formal training in the quantitative and methodological principles of clinical research. The program is offered via videoconference at the CC. Academic credit earned by participating in this program may be applied toward satisfying the degree requirement for a master of health sciences in clinical research from Duke School of Medicine.

For more information about course work and tuition costs, visit <http://tpcr.mc.duke.edu>. Email queries about the program may be addressed to tpcr@mc.duke.edu. The deadline for applying is Mar. 1, 2006. Applicants who have been accepted into the program will be notified by July 1, 2006.

Women’s Baseball Team Needs Players, Coach

A women’s baseball team consisting primarily of players from NIH is looking for new players and a coach. The Lasers are located in Rockville and play in the Eastern Women’s Baseball Confer-

ence. They play one game most weekends, May to September, on a regulation ballfield with professional umpires.

The team will train locally in the coming months, indoors and outdoors. The Lasers have a core roster of women 18-52 years old, from all walks of life and with a range of previous baseball and/or softball experience. If you are interested in playing or coaching, contact Susan McCarthy at mccarths@mail.nih.gov.

NIH Library Training Schedule Includes CAM

Complementary and Alternative Medicine Resources is just one of the free classes offered this winter by library staff. Learn how to search, capture and organize information accessible via your desktop. Register soon to ensure your seat in any of the 7 hands-on classes. For details about class content, dates, times and locations, visit <http://nihlibrary.nih.gov/ResourceTraining/>.

STEP Forum on ADHD, Jan. 10

The staff training in extramural programs (STEP) committee will present a Science for All forum on the topic, “Pay Attention! Focusing on ADHD,” on Tuesday, Jan. 10 from 8 a.m. to noon in the Natcher Bldg. main auditorium.

Do you know someone with attention-deficit hyperactivity disorder (ADHD)? Up to 10 percent of school-age children have ADHD, which may persist into adulthood. It is a common condition, yet there is much more to be learned. Is ADHD more prevalent in boys than girls? Is it a childhood condition that one can outgrow? Does it develop later in life? How often does it go undiagnosed or misdiagnosed and what are the consequences? Is treatment always necessary or appropriate? Join us as we focus on the science behind ADHD, how it is diagnosed and how it is treated. Hear about ongoing research in the field, and how those with the condition can express their full potential and learn to adapt.

Wednesday Afternoon Lectures

The Wednesday Afternoon Lecture series—held on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—returns from winter recess on Jan. 11 with a talk by Dr. Louis M. Kunkel titled, “Muscular Dystrophy in Humans, Mice and Zebrafish.” He is director, program in genomics, Children’s Hospital, professor of pediatrics and genetics, Harvard Medical School, and HHMI investigator.

For more information or for reasonable accommodation, call (301) 594-5595.

nih record

NIDA Involves Students in Development of HIV Public Service Announcement

New data show continuing increases in the number of AIDS cases among women, youth and racial and ethnic groups in the United States. To combat this trend, NIDA is developing awareness initiatives to reach these populations, youth in particular, to increase their awareness of the relationship between drug abuse, risky sexual behavior and HIV transmission. A new NIDA public service announcement (PSA) does just that by highlighting how drug use can impair a young person's ability to make responsible decisions about sex and thereby lead to HIV infection.

"use ur brain. keep ur body healthy. b drug free."

Prepared in advance of World AIDS Day, Dec. 1, NIDA developed a PSA for television that capitalizes on teens' growing use of cell phones and text messaging as a means to communicate. The PSA opens with a young girl strolling down a city sidewalk, stopping to respond to a message on her cell phone. The exchange follows:

"u hear bout kim?"

"what bout kim?"

"she has HIV!"

"4 real? how?"

"a party

months ago...

she got HIGH

got STUPID

n now has HIV!"

As the two friends exchange text messages, the visual is now a sequence of party scenes, a flashback montage suggestive of drug-taking that leads to sexual involvement. The sequence carries the message that drugs impair judgment and can result in risky sexual behavior and subsequent HIV infection.

It definitely struck that chord with one of the actresses, a student named Zaibaa from Duke Ellington School of the Arts in Washington, D.C., who commented: "What I see is one minute of fun can lead to a lifetime of misery...No one can say 'it's not gonna happen to me!'"

Zaibaa is one of several students from Duke Ellington who were asked to participate in the making of the PSA, serving as actors, production assistants and reviewers. She and Rebecca ("Becca"), both seniors studying theater arts, were chosen from about a dozen hopefuls to portray the two text-messaging girlfriends who



Filming of NIDA's new PSA campaign on the connection between HIV and drug abuse.

share the news about "kim."

"she got HIGH, got STUPID, and now she has HIV."

Asked whether she felt the spot would resonate with her peers, Becca said, "Yes, because it is more dramatic and powerful than I thought it would be, and also more real than most other ads made for teens...Usually my friends and I mock ads for the stereotypes they use, especially about what teens do." Becca happens to be a Katrina evacuee who is living with her aunt in order to attend school in D.C. Back in her hometown of Metairie, La., her home and school—also a performing arts school—were destroyed. She is upbeat and enthusiastic about being a part of the NIDA PSA.

The NIDA team that developed the PSA involved kids from the start to ensure the relevance of messages directed to them. They asked teen experts to review concepts before integrating them in the production of the PSA. The process involved several rounds of focus groups held in Miami, Chicago and Baltimore; mall intercepts, where local teens were stopped and surveyed on how particular nuances were being delivered and an interview forum, which allowed more fine-tuning based on input from students in the D.C. area.

The production team tapped into the Duke Ellington School to find local talent also representative of populations where HIV infection is on the rise. Said Caleb Cooks, the PSA producer, "For me, doing this spot has raised my personal awareness and my feeling of connectedness to the target audience...We really want to take an offensive position with HIV awareness and push this agenda forward—to keep the momentum going." Zaibaa said she, too, enjoyed her involvement in broadcasting the message and being part of something bigger than herself. "I really liked working on this ad because I'm doing something more than just trying to better myself, I'm also part of the cause, the fight, and this is especially important to me, living here in D.C."

Becca and Zaibaa's classmates at Duke Ellington weighed in on the PSA following a screening at the school on World AIDS Day. NIDA also participated in an assembly about drug abuse and HIV infection. On Nov. 29, NIDA invited all those who participated in developing the PSA to attend the press briefing launching the campaign. In addition, the Washington, D.C., Metro system has agreed to display NIDA's HIV ads as a public service in Metro stations and on buses for the month of December. 🗨

FLU CLINIC

CONTINUED FROM PAGE 1

her, have also been vaccinated this year (at an outside facility).

The annual “Foil the Flu” campaign is a joint venture of the Occupational Medical Service, Division of Occupational Health Services, Office of Research Services and the Clinical Center Hospital Epidemiology Service (HES). While the flu clinic has been operating for 20 years, this year’s program was not held in its usual spot at the OMS clinic on Bldg. 10’s 6th floor. It was held in a new venue—outside of the OMS offices on the 5th floor of the new Hatfield Clinical Research Center.

“It’s what we call a dedicated clinic and it worked beautifully,” noted Angela Michelin, infection control specialist with HES. She handles publicity and other administrative duties in connection with the flu program. Meanwhile, the day-to-day details of the clinic were handled primarily by two nurses, Joan Morris and Marge McCombs, though many OMS nurses had a hand in administering the vaccine.

This year’s flu clinic began on Nov. 7 with the program operating in three phases—running through the alphabet, visiting off-campus facilities and then running through the alphabet again, with the program concluding at the end of November. During the first week of operation, nearly 4,000 employees were vaccinated. Prior to opening the clinic to employees, the OMS nurses also vaccinated almost 1,900 NIH health care workers. By Thanksgiving, nearly 7,600 employees had been vaccinated.

One advantage of getting a flu vaccination from the NIH clinic is the availability of the vaccine. While some private practitioners are still having difficulty obtaining the vaccine, “last spring the NIH ordered about 10,000 doses,” said Dr. James Schmitt, medical director of the OMS clinic. “The number of doses administered at NIH has increased over the years,” he said, adding that because of good planning, NIH typically has no problem obtaining supplies of the vaccine.

Besides the change of venue, this year’s flu clinic had a secondary and separate purpose from

clinics in years past. “It was good practice for a potential disaster, such as might be seen in the case of bioterrorism or pandemic influenza. This preparedness training actually began 2 years ago in collaboration with the Navy and Suburban Hospital,” said Michelin. She added that the success of the clinic “tells us that this type of mass vaccination clinic really can work during an emergency state.”

The flu, a contagious infection of the nose, throat and lungs, is caused by the influenza virus. The illness is viewed as a major health risk, primarily to specific groups, including the elderly and those with chronic heart, lung or kidney ailments or people with an immunodeficiency disease (e.g., HIV/AIDS). About 36,000 people a year die from complications of the flu, according to the National Institute of Allergy and Infectious Diseases. While medical experts strongly urge that high-risk individuals take the vaccine, unless it is not medically advised, anyone who wishes to avoid the flu can take the shot.

The effectiveness of the flu vaccine depends on how accurate predictions of the flu strain turn out to be. “If we predict the strains correctly, then the vaccine is about 80 percent effective,” said OMS’s Schmitt.

Though this year’s Foil the Flu campaign has ended, you may still be able to get vaccinated by calling the OMS clinic at (301) 496-4411. Or you can check with your local health clinic or health care provider about receiving the vaccine.

Still, you may be wondering, should you get a flu shot? “Get the flu just one time and I think the answer will be pretty obvious,” concluded Schmitt. ●



Genetic Contribution to Mental Illness Tough to Figure, Weinberger Shows

By Latifa M. Boyce

Finding out how genes contribute to mental illness has not been easy for Dr. Daniel Weinberger and other NIMH researchers. What they have discovered is that the path from gene to psychiatric illness seems to be varied and complex.

But complex doesn't mean unapproachable, said Weinberger, director of NIMH's Genes, Cognition and Psychosis Program, during a presentation titled, "Complex Genetics in the Human Brain: Lessons from COMT," at the G. Burroughs Mider Lecture on Oct. 12.

According to him, a lot can be learned about the genetic basis for psychiatric illnesses from research involving a susceptibility gene implicated in schizophrenia. In his talk, he revealed how pieces of the complex puzzle involving a gene that codes for an enzyme, catechol-O-methyltransferase (COMT), may fit together and offer clues about how mental illnesses develop.

"Genes don't code for hallucinations, delusions, panic attacks and depression," said Weinberger. "They don't code for complex human behavior."

Rather, genes code for proteins, which in turn affect the activity of cells, circuits and, ultimately, the brain systems disturbed in mental illness.

Weinberger cited evidence from several NIH-funded studies on the COMT gene that explain some of these intermediate steps. When considered together, these studies provide a better understanding of the complex path from gene to psychosis.

According to Weinberger, it's not surprising that this path is tortuous. Psychiatric illnesses such as schizophrenia are complex diseases that can arise due to various influences—both genetic and non-genetic—including multiple genes, different functional domains within a single gene, the environment and developmental factors. These factors are likely to work together in complex manners to impair various aspects of cognition including attention, mem-

ory and perception—the behaviors underlying many psychiatric illnesses—and increase risk of schizophrenia.

The COMT gene, for example, codes for an enzyme that affects dopamine, a chemical in the brain. Research shows the two common versions of the gene, called *val* and *met*, have opposite effects on dopamine metabolism. According to Weinberger, people who inherit two copies of *val* are likely to perform worse on learning and memory tasks—the same tasks impaired by schizophrenia—because they have less available dopamine in the region of the brain that executes these tasks.

Genetic variations in COMT influence the processing of emotional stimuli in the brain's hippocampus and prefrontal cortex, explained Weinberger. They also have an effect on the efficiency of information processing in the cortical systems involved in executive function, memory and emotions, and may have variable effects on these systems depending on the nature of the information being processed.

COMT may also interact with other genes to confer schizophrenia risk. Researchers suspect there may be more than 10 genes involved. The genes may interact with each other to modify the expression of their individual effects leading to exaggerated, compensated or novel effects.

Genetic variants of COMT may also interact with environmental and developmental factors to increase risk of schizophrenia, said Weinberger. Therefore, looking at genes alone is not enough. For example, a recent study found that people who inherit two copies of the *val* version and used marijuana heavily as teens were 10 times more likely to develop schizophrenia than the general population. In this case, age, marijuana use and COMT were all involved.

Adding to the complexity is emerging evidence that multiple sites of variability in the COMT gene interact with one another to influence risk of schizophrenia.

While it's clear that there is a genetic contribution to psychiatric illness, such interaction must be examined to understand how genes exert their influence.

Weinberger's lecture is available online at <http://videocast.nih.gov/>. Information on several of the studies he mentioned is available on NIMH's web site at <http://www.nimh.nih.gov/>. ●

OPASI

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The new office will identify scientific investment opportunities based on proposals from individual scientists, stakeholders and organizations outside NIH, a Roadmap-like pool of funding applications, data about the burden of illness as well as considerable input from IC directors and such Office of the Director components as women's health, behavioral science and AIDS research. Projects that pass muster with a Council of Councils (representatives from all IC advisory boards) will then be funded for an initial 5-year term, with annual review. After 5 years, progress on the initiative will be

evaluated; if necessary, the project can be granted another 5 years of funding. No initiative will be funded for more than 10 years.

"I want to make it clear that we are not

creating a 28th institute," Zerhouni stressed. "OPASI will have minimum infrastructure. It will be managed primarily by the institutes and centers and the initiatives it funds will be short-term. We're not creating entitlements."

OPASI will have three branches: the Division of Resource Development and Analysis, the Division of Strategic Coordination and the Division of Evaluation and Systematic Assessments. Besides mining for new science, the office will help NIH classify its research into consistent categories across all ICs, which will make it easier to provide more precise information about its whole portfolio to Congress and the public.

"Never before has NIH had a mechanism for scanning or analysis of all of the applications we receive," pointed out NIH deputy director Dr. Raynard Kington, who cochairs the OPASI working group with NIA director Dr. Richard Hodes. OPASI's evaluation arm will be responsible for such a tool.

Each IC will contribute a percentage of its budget to a "common fund for shared needs" that will form OPASI's operating budget. Current Roadmap funds will determine the baseline for the Common Fund, which is 1.1 percent of NIH's total budget in fiscal year 2006. By FY 2008, the percentage is expected to grow to about 1.7.

"Fundamentally, the establishment of OPASI grew out of our success with the NIH Roadmap—it really represents an effort to 'institu-

tionalize' the kinds of collaborations that the Roadmap made possible," Kington explained. "We feel this office will fill a critical need. We should be up and running within the next month."

OPASI has already been formally launched with an announcement in the Sept. 28 *Federal Register*. In addition, some functions and staff positions have already begun to be transferred to the new office, mainly from the NIH Office of Science Policy.

The following are more detailed questions the *NIH Record* asked about the new office and answers from the cochairs of the OPASI working group.

In what ways, if any, do you think OPASI is long overdue for NIH?

Clearly, the time is right for NIH to take a more coordinated approach to the development and funding of trans-agency initiatives. This is true not only because many of the most exciting scientific opportunities and pressing public health challenges we are facing now cut across the mission areas of multiple institutes and centers, but also because the tightening of the NIH budget requires that we be as strategic as possible in catalyzing high-impact research.

What are the next steps in establishing OPASI?

We are getting ready to appoint an interim OPASI director to lead the new office while we conduct a national search for a permanent director. We are also in the process of putting together a governance body to help oversee OPASI's activities—this will be a new working group of the NIH steering committee, cochaired by the OPASI director and an IC director.

How will OPASI improve transparency of the priority-setting process?

From the beginning, Dr. Zerhouni has been clear that the work of OPASI must be as inclusive and transparent as possible. In thinking through how the office will function, we have built in many opportunities for key stakeholders—the scientific community (both internal and external to NIH), patient advocacy groups, the lay public, Congress and others—to help shape the work of OPASI.

For example, in canvassing for possible OPASI initiatives, we will hold panel meetings with outside experts (as we did with the Roadmap), to supplement the expertise we have here at NIH. When it comes time to select initiatives for funding, we will seek input from the ACD, which includes both scientific and lay representatives.

"This to me is more of a venture capital fund than anything else...We want to allow more flexibility and nimbleness. We want to provide dialogue about cross-cutting science areas."

Also, the IC directors will have a prominent role in the OPASI initiatives process.

Obesity is often mentioned as a trans-NIH issue that only recently began to be addressed that way. Is there another “next big thing” on the horizon?

Obesity was mentioned because it is such a striking example of an urgent public health need for which we were slow in developing a coordinated, agency-wide strategic plan—although individual institutes and centers were clearly supporting work on obesity. Part of the problem was that this area cut across the missions of multiple ICs.

In the future, we hope OPASI will provide the analytic resources to identify more quickly important public health challenges such as obesity, determine if the current efforts are effective and facilitate the coordination of efforts of multiple ICs to address this problem.

If necessary, research areas that do not clearly fit within the mission of any one institute or center will go through an open and defined process to determine if they are appropriate for incubation in OPASI and should be supported by use of the Common Fund. Once established, OPASI would, in effect, be constantly scanning the horizon to identify the “next big things.”

Do you anticipate more of a shift toward disease-specific research with OPASI, given the concerns of Congress and the public?

We do not necessarily anticipate OPASI initiating a shift toward disease-specific research—that will depend on the initiatives that are proposed for OPASI consideration, and judgments of scientific priority and opportunity. OPASI will support science that meets the explicit criteria for consideration as an OPASI initiative—among them, that it is truly transformative and that it involves many institutes and centers, or that it represents research that “falls between the cracks.”

One proposed OPASI advantage is “the ability to weigh scientific opportunity against public health urgency.” In these days of immediate health advocacy, it seems that there are only “public health urgencies,” and that the days of pursuing 20-year basic research projects based on intriguing scientific opportunities are over. To what extent do you think basic research is undervalued by people outside the scientific community? How would OPASI help address this?

Our hope is that people outside of the research community are becoming more aware of the critical importance of both basic and applied biomedical and behavioral sci-

ence in improving the quality of their lives. At the same time, we know that any strategic scientific investment process has its limitations. Although there are numerous examples where targeted funding by NIH resulted in significant advances being achieved more quickly than otherwise would have occurred, there are also numerous examples where serendipity played an important role in advancing science to address a particular public health challenge.

Scientists who do basic research can never be sure where it will lead, and there will always be the need for a substantial NIH investment in investigator-initiated basic research that is simply about pursuing an intriguing scientific opportunity.

OPASI will help complement those investments with strategic support in areas that cut across the agency’s missions and that are identified with the advice of the broader scientific community.

In effect, OPASI will build on the Roadmap efforts to address the roadblocks that are inhibiting progress on a number of scientific fronts. For example, the Roadmap is supporting a concerted effort to provide methodological breakthroughs that will allow scientists to solve the 3-dimensional crystal structure of membrane proteins. This sounds like incredibly basic research, and it is, and yet a number of human diseases—including cystic fibrosis, diabetes and Alzheimer’s disease—are caused by changes or mutations in membrane proteins, and a third of the human genome codes for membrane proteins.

Clearly, this work will have broad implications in many fields of biomedical research. We expect that OPASI will support initiatives that will catalyze research being done in many scientific disciplines and that relate to the missions of many institutes and centers.

Under what circumstances, if any, will OPASI change the number/scope of existing ICs? Could OPASI recommend, for instance, that some current ICs be combined or dissolved?

While the establishment of OPASI represents a major organizational change at NIH—indeed, one that we hope will help stimulate a cultural shift, as well—the mission of the office does not encompass the authority to change the number of ICs at the agency. As Dr. Zerhouni has stated publicly, we hope that OPASI will achieve a “functional integration” in the sense that it will bring together diverse components of the agency for a common scientific purpose. With sufficient functional integration, we believe that we can overcome the challenges in trans-NIH coordination that result from the large size and structural complexity of the agency. Again, the Roadmap has shown us how effective this can be.

What’s the one concept you want employees to keep in mind about OPASI?

In many respects, OPASI is about innovation and transformation—this new entity will foster the funding of innovative science, at the same time that it transforms how NIH collectively pursues cross-cutting initiatives. Our hope is that the support OPASI gives will provide an “incubator space” to accelerate critical research efforts that address major, cross-cutting NIH priorities. 🍎

TOBACCO TALK

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Owing largely to extensive federal litigation against the tobacco industry, we now know that its campaign to sidestep or discredit decades of scientific findings damning tobacco use has been deliberate and shrewd.

Only two weeks after then Surgeon General Dr. Luther Terry issued the landmark 1964 report linking smoking to a variety of health ills including lung cancer, a memo circulated at the top of one of the largest cigarette manufacturers, declaring: “We must give smokers...a psychological crutch and self-rationale to continue smoking.”

Cummings, who is chair of the department of health behavior in the division of cancer prevention and population sciences at Roswell Park Comprehensive Cancer Center in Buffalo, spent much of his lecture illuminating how Big Tobacco has cleverly offered a variety of crutches to succeeding generations of potential smokers.

The first crutch was filters; adding them to popular brands gave the illusion of a safer smoke. Next came so-called “light” cigarettes promising

less tar, in the early 1970’s, which initially were not embraced by consumers, but gradually grew in popularity, especially with female smokers, whom the ads targeted. Cummings paused to decry the recent “celebration” of the 50th anniversary of the Marlboro cigarette brand: “How can you legitimately celebrate the anniversary of a product—Marlboro—that alone has caused an estimated 2.3 million American deaths over the past 50 years—more than the number of Americans killed in all wars combined? Marlboro is the only product I know of where the flavor outlasts the customer.”

Cummings does not fault the mass media campaigns of the past 30 years with failing to acquaint Americans with the dangers of smoking. To the contrary, they have been highly effective, he said, and the overwhelming majority of people know that smoking is risky behavior. The problem today is that smoking’s true dangers have been soft-pedaled by industry and largely unexplored by major ad campaigns.

For example, how many people know that smoking damages small blood vessels in the eye, and is the leading cause of preventable blindness in the U.S.? Smoking raises risk of heart attack, stroke, lung cancer and other cancers

Little League Activism Launches Educational Crusade

It was not as a firebrand that Dr. K. Michael Cummings began his anti-tobacco message at EPN recently, but as a dad who, while coaching his son’s Little League baseball team, became alarmed at the number of anxious parents puffing away in the bleachers. “One third of the patients at our cancer center are there because of smoking. Running our local Little League got me involved in trying to do something about smoking,” he said. “I believe in the adage, ‘Think globally, act locally.’ I managed to convince some of the parents to stop, we made our baseball park smoke-free and we put anti-tobacco billboards along the outfield fence.”

His lecture included a timeline of the past 55 years of grappling between the multinational tobacco industry and the medical research community, a classic sort of David versus Goliath scenario.

In 1950, the *British Medical Journal* published a landmark paper by Doll and Hill showing that smoking was an important risk factor in lung cancer. By January 1954, the industry pledged its “aid” to the research effort and created its own Tobacco Industry Research Committee.

“This is where the conspiracy begins,” noted Cummings.

The TIRC’s first job was to retain public relations firm Hill & Knowlton, he explained. Their advice was to declare that the link between smoking and health was unproven, but to support a research program to study the question.

TIRC hired an eminent scientist as its scientific director, Dr. Clarence Cook Little, former president of the University of Michigan and past president of the American Cancer Society. He was to serve in that post from 1954 to 1971, declaring all the while that cigarettes were safe. Much of the research funded by TIRC, which in 1964 was renamed the Council for Tobacco Research, had little if nothing to do with smoking and health, and the organization never officially conceded that smoking caused cancer in its entire 45-year history.

In 1958, the tobacco industry created the Tobacco Institute (TI), essentially a PR and lobbying arm for the business, Cummings said. Both the TIRC and TI were run by the same management group of industry lawyers who helped keep the myth alive that smoking was an unproven cause of cancer, heart disease and chronic obstructive pulmonary disease.

The next major volley in the battle was the Surgeon General’s *Smoking and Health* report issued Jan. 11, 1964, to which the industry responded with a disinformation campaign that extended for 50 years. “It would be nice if tobacco companies would keep the promise they made to smokers in 1954 when they declared that they would stop selling cigarettes if they were ever found harmful to human health,” Cummings said. “Today the cigarette industry says there is no such thing as a safe cigarette, so I guess it is time that they keep their promise and find something else to sell.”

and impotence, yet one survey showed that 40 percent of smokers believed they were at no greater risk of these ailments than someone their age who doesn't smoke. Fifty to 60 percent of survey respondents thought that modern cigarettes are less dangerous than they used to be, which Cummings said is not true.

One of the three major studies Cummings cited sought to learn what smokers know about the ingredients in their smokes. Most were aware of nicotine and carbon monoxide, but few were aware that cigarettes contain lead, ammonia, urea ("a pee in every pack" said one wag), arsenic, cyanide and radioactive material. "Once smokers learn the truth about their smokes, they can begin to make an informed decision about smoking and most will choose to quit," Cummings said. "Of course, quitting smoking isn't easy because smokers get hooked on nicotine, but knowing and appreciating the risks of smoking is the first step towards helping smokers beat their nicotine addiction...We're talking about the most lethal consumer product ever marketed."

Many cigarettes today are contaminated with plastic (the cellulose acetate used in filter production often finds its way into smokers' lungs, a condition known as "filter-fiber fallout"), shoe polish (used to paint the normally clear cellulose acetate white) and fake tobacco (studies have shown that 20-30 percent of a typical cigarette is actually "reconstituted" material containing random ingredients ranging from whatever's been shoveled off the tobacco barn floor to stale tobacco recycled from unsold packs of cigarettes.) Adding insult to injury is the fact that a pack of cigarettes costs only a nickel to manufacture; compare that with whatever you paid for your last pack.

Another tobacco industry ruse is that cigarette filters are "vented," allowing fresh air to mix with each inhaled puff. Problem is, the vents are not only invisible but also are almost microscopically small. And because they are located near the filter's end, they are normally blocked by the holder's fingertips, Cummings showed.

In the main, people know smoking is bad for you (though many are unaware, for example, that nicotine is not the cancer-causing aspect of a cigarette). And most who smoke (more than 56 percent, in one international study) intend to quit sooner or later. But the industry gives them just enough optimism to believe they are doing less harm to themselves than they actually are, and continues to tout the canard that smoking is not addictive and can be set aside painlessly at any time.

So, to answer his lecture's title, Cummings gives a resounding "No!" It's not enough to communicate smoking's risk in scanty detail, especially when it is countered by massively opposing messages issued by the tobacco industry (there is an entire science of measuring advertising impact, based on such arcana as GRPs, or gross rating points, which both sides in the battle employ).

His solution? Yes to more ads—they work. Yes to graphic warnings on cigarette packages—studies show that the more frankly the damage is presented, the more the product repels potential users. Yes to more harm-reduction efforts, more extensive use of NRT (nicotine replacement therapy, usually by gum, patch or lozenge), more clever advertising (especially educational kits that mimic the artwork of popular cigarette brands) and laws banning indoor smoking.

Concluded Cummings, "You can't make someone quit smoking, but educating people so they can make an informed choice is where we should start. Requiring cigarette companies to limit the nicotine in their cigarettes to non-addictive levels would help, too, since it would make it easier for addicted smokers to be able to exercise their choice to quit." According to Cummings, most smokers would try to quit if they knew the truth about their cigarettes. 🗨

Minority Program Director Is a 'Professor of Year'

Dr. Carlos G. Gutierrez, director of two NIGMS minority programs at California State University, Los Angeles, was recently honored as a U.S. Professor of the Year. The award, established by the Carnegie Foundation for the Advancement of Teaching and the Council for Advancement and Support of Education, went to four individuals this



year in recognition of their extraordinary dedication to undergraduate teaching. Gutierrez, a professor of chemistry, directs the NIGMS-funded Minority Access to Research Careers and Minority Biomedical Research Support programs. He is also a former member of the National Advisory General Medical Sciences Council. "Dr. Gutierrez is well known as an energetic and effective advocate for student and faculty development, particularly through his efforts to encourage underrepresented minority students to enter the sciences. He shows us what is possible and sets a standard for others to follow," said Dr. Clifton Poodry, director of the NIGMS Division of Minority Opportunities in Research. Over the course of his career, Gutierrez is credited with mentoring more than 200 students.

NIH Training Center Classes

The Training Center supports the development of NIH human resources through consultation and provides training, career development programs and other services designed to enhance organizational performance. For more information call (301) 496-6211 or visit <http://LearningSource.od.nih.gov>.

Purchase Card Training	1/9
Travel for Administrative Officers/ Approving Officials	1/18
Price Reasonableness in Simplified Acquisitions	1/19
Travel for NIH Travelers	1/19
Knowledge Management and Strategic Human Capital	1/25

FAES Announces Spring Courses

The FAES Graduate School at NIH announces the schedule of courses for the spring semester. The evening classes sponsored by the Foundation for Advanced Education in the Sciences will be given on the NIH campus.

Courses are offered in biochemistry, biology, biotechnology (daytime courses), chemistry, immunology, languages, medicine, microbiology, pharmacology, statistics, toxicology, alternative medicine and courses of general interest.

It is often possible to transfer credits earned to other institutions for degree work, and many courses are approved for category 1 credit toward the AMA Physician's Recognition Award.

Classes will begin Jan. 23; mail registration ends Dec. 30 and walk-in registration will be held Jan. 4-10, 2006. Tuition is \$115 per credit hour, and courses may be taken for credit or audit. Courses that qualify for institute support as training should be cleared with supervisors and administrative officers as soon as possible. Both the vendor's copy of the training form and the FAES registration form must be submitted at the time of registration. Note that FAES cannot access training forms entered in the NIHTS system; a signed hard copy (vendors' copy of SF 182 form) is needed in order to process registrations for classes. Asking your institute to pay your tuition is a preliminary step to registration, but does not constitute registration with the FAES Graduate School.

Catalogs and spring schedules are available in the graduate school office in Bldg. 60, Suite 230; the foundation bookstore in Bldg. 10, Rm. B1L101; and the business office in Bldg. 10, Rm. B1C18. To have a catalog and schedule sent, call (301) 496-7976 or visit <http://www.faes.org>.

Sustainability Interest Group Forms

A new interest group dedicated to promoting sustainable practices at NIH is currently evolving. The group will help develop recommendations and procedures for lessening the NIH community's impact on the environment. The group will promote the NIH Environmental Management System, environmental awareness and share practices that reduce consumption and increase reuse, recycling and conservation.

Some activities the group may pursue include an Earth Day festival in April, a "Garage Sale" for trading unwanted lab supplies, an environmental film series, an environmental speaker series, stenciling of storm drains ("Drains into Chesapeake Bay") and recycling/energy conservation contests among buildings or institutes.

The sustainability interest group is open to all. There is an email list where people can post ideas, questions and observations. To join, sign up for the Greenserve mailing list at <https://list.nih.gov/archives/greenserve-l.html>.

NIBIB Welcomes New Interdisciplinary Training Director

Dr. Richard Baird recently joined the National Institute of Biomedical Imaging and Bioengineering as director of the Division of Interdisciplinary Training. His specialty areas include extramural training and career development. Prior to joining NIBIB, he was director of research at the Harold W. Siebens Hearing Research Center at the Central Institute for the Deaf in St. Louis. Baird received his doctorate in electrical engineering and computer sciences from the University of California, Berkeley. Following a postdoctoral fellowship at the University of Chicago, he became a research scientist at the R.S. Dow Neurological Sciences Institute and an adjunct faculty member in the department of physiology and pharmacology at Oregon Health Sciences University in Portland. In 1998, he became head of the Fay and Carl Simons Center for Biology and Hearing and Deafness at the Central Institute for the Deaf, Spencer T. Olin professor in the department of speech and hearing at Washington University, and an adjunct faculty member of the department of otolaryngology and the department of anatomy and neurobiology at Washington University School of Medicine in St. Louis. He also founded and directed the Inner Ear Consortium, a group encouraging collaboration among researchers working on the development, function and regeneration of the inner ear and supporting state-of-the-art core facilities in digital imaging, electron microscopy, molecular biology and electronic services.



CC Bioethics Department Honored

The Clinical Center's department of clinical bioethics is among winners of the 2005 Award for Excellence in Human Research Protection, announced Dec. 8 by the Health Improvement Institute. The department was honored for innovation in producing its *Framework and Benchmarks for Evaluation of Research*. The award was given for demonstrated excellence in promoting the well being of people who participate in research. Sponsors of the awards program included the American Diabetes Association and Pfizer Inc.

Toastmasters Hold Weekly Meetings

The NIH Toastmasters meet every Friday from noon to 1 p.m. in Bldg. 38, Conf. Rm. B. All interested employees and contractors are invited to come as guests or members. For more information contact Hannah Tang at tanghan@mail.nih.gov or at (301) 496-6595 or Crystal Smith at crystals@mail.nih.gov or (301) 496-9225. Visit the group's web site at <http://www.nihtoastmasters.org/>.



volunteers

Healthy Adults Sought

Healthy adults 18-50 years old are needed to participate in the study of an investigational West Nile Virus vaccine. Financial compensation is provided. The study is being conducted by the Vaccine Research Center. Refer to study 05-1-0126. To volunteer, or for more information, call 1-866-833-LIFE (toll-free) or TTY 1-866-411-1010.

Volunteers Needed for Anthrax Vaccine Study

NICHD is seeking healthy men and women, ages 18-30, to participate in an investigational anthrax vaccine study conducted at NIH. Medical tests will determine eligibility. Compensation provided. Call 1-800-411-1222 (TTY 1-866-411-1010). Refer to study 04-CH-0283.

Healthy African Americans, Africans

Healthy African Americans and Africans with low white blood count needed. You can help researchers at NIH understand why individuals with low white blood count remain healthy. Call 1-800-411-1222 (TTY 1-866-411-1010) and refer to study 03-DK-0168. Compensation is available.

Healthy Women Needed

The Behavioral Endocrinology Branch, NIMH, is seeking female volunteers ages 18-55 to participate in studies of the effects of menstrual cycle hormones on brain and behavior. Volunteers must have regular menstrual cycles with no changes in mood in relationship to menses, be free of medical illnesses and not taking any hormones or medication on a regular basis. Payment will be in accordance with the duration of each visit and the type of protocol. For more information, call Linda Simpson-St. Clair, (301) 496-9576 (TTY 1-866-411-1010).

Healthy Volunteers Needed

Platelets are blood cells that help to stop bleeding. People with abnormal or missing platelet sacs tend to bleed longer than other people. NIH doctors are conducting a study to examine how platelet sacs are formed and what happens to cause bleeding disorders. Study results may contribute to the medical care, treatment and prevention of problems associated with this disorder. If you have been diagnosed with abnormal platelets, call 1-800-411-1222 (TTY 1-866-411-1010). Refer to study 04-HG-0226.

Jet Lag Study Recruits

NIH researchers are looking for travelers going east 6-8 time zones to study the effects of replacing hormones disrupted by jet travel. Participants will take a study medication (hydrocortisone, melatonin or placebo), fill out questionnaires and obtain salivary samples. Travel stay of 4-10 days at destination required. Time involved will include one screening visit and blood work and one follow-up visit. Healthy adults, ages 18-65 call 1-800-411-1222 (TTY 1-866-411-1010). Refer to study 05-CH-0037.



NICHD Council Gains Six

Recently, six new members were appointed to the National Advisory Child Health and Human Development Council. Shown are (back row, from l) Dr. Judith G. Hall, professor, department of pediatrics at British Columbia's Children's Hospital in Vancouver; Dr. Ralph Kauffman, chair of the medical research department at Children's Mercy Hospital in Kansas City; Dr. Sergio R. Ojeda, senior scientist and division head at the Oregon National Primate Research Center in Beaverton, Ore.; Dr. Donald Stein, Asa G. Candler professor of emergency medicine at Emory University School of Medicine in Atlanta; and Dr. William Z. Rymer, director, department of research, Rehabilitation Institute of Chicago. Not available for the photo was new council member Tracey Klein, an attorney with Reinhart, Boerner, Van Deuren, S.C., in Milwaukee. Shown in the front row are NICHD deputy director Dr. Yvonne Maddox (l) and institute director Dr. Duane Alexander.

Take a Guided Tour of the Bartók String Quartets

Music lovers can take a guided tour of the Bartók string quartets with Dr. Joel Berman and members of the Beethoven/Bartók Cycle Quartet, well-known for presenting a similar performance-lecture series featuring all 16 Beethoven string quartets. For the first time, the quartet will present all six Bartók string quartets in the same unique format.

Bela Bartók has been called the "Hungarian Beethoven." His six string quartets are a *tour de force* of creative imagination that ensure Bartók a place among the greatest composers who ever lived. While well-loved, these complex quartets are not always easy to understand. The performance-lecture series is designed for people who love music, regardless of musical training.

All the quartets are performed live. Each quartet is featured for two of the 12 sessions, which include multiple performances, musical excerpts and a lecture outlining structural features unique to the work. A detailed outline of each quartet—designed to be followed as the music is being performed—provides a guided tour through the inner workings of Bartók's music.

The series is being offered by the FAES Graduate School, course #GENL 158 (1.5 credits or audit), spring 2006, Mondays, 5:30 to 7:30 p.m. For more information on series content, call Berman at (301) 946-2311 or email BBCQuartet@aol.com. For registration information, call (301) 496-7976 or visit www.faes.org. Register by mail through Dec. 30, or in person Jan. 4-10, 2006.

Guidelines Bridge Information Gap on Environmental Health

New guidelines issued by the National Environmental Education & Training Foundation will provide pediatric health care providers with new educational tools for recognizing and reducing environmental triggers for asthma.

NIEHS funded the development of the guidelines, *Environmental Management of Pediatric Asthma: Guidelines for Health Care Providers*. They are based on the National Asthma Education and Prevention Program Guidelines for the Diagnosis and Management of Asthma, and include practical strategies for managing asthma that can be included in educational curricula and clinical practices.

The guidelines are built on current best practices, including competencies for managing environmental asthma triggers in pediatric care, a user-friendly environmental history form, intervention guidelines, patient flyers that can be reproduced and distributed and a list of references.

The NIEHS journal, *Environmental Health Perspectives*, recently published a study on the need for more training for doctors and nurses on environmental health to prepare them to prevent, recognize and manage diseases with environmental exposure components.

The complete guidelines are available at <http://www.neetf.org/Health/asthma.htm>. 🔗

Grantee Jarvis Featured on 'Nova'

The public television show NOVA scienceNOW recently featured an NIH grantee who is also a former participant in two NIGMS minority programs. A profile of Dr. Erich D. Jarvis, an associate professor in the department of neurobiology at Duke University Medical Center, aired on Oct. 18. The profile, available online at <http://www.pbs.org/wgbh/nova/sciencenow/3214/03.html>, provides insight into Jarvis's decision to change his career aspirations from a dancer to a scientist and describes his research on vocal communication in songbirds. He participated in the NIGMS Minority Biomedical Research Support and Minority Access to Research Careers (MARC) programs as an undergraduate student at the City University of New York, Hunter College, where he received a bachelor's degree in biology and mathematics in 1988. He went on to become a MARC predoctoral fellow at the Rockefeller University, receiving a Ph.D. in molecular neurobiology and animal behavior in 1995. He is currently an NIMH and NIDCD grantee and is among the 13 recipients of this year's NIH Director's Pioneer Awards.



ASHA Honors NINDS's Ludlow

Dr. Christy Ludlow, chief of the laryngeal and speech section of the NINDS Medical Neurology Branch, recently received the Honors of the Association Award from the American Speech-Language-Hearing Association (ASHA).



The award recognizes individuals who have made outstanding contributions to the field of speech, language and hearing, and is ASHA's highest honor.

Ludlow was chosen because of her research contributions that have increased understanding of spasmodic dysphonia and other neurologically based voice disorders and provided new treatment strategies for people with these disorders. Her research has emphasized neurophysiological, neuromuscular, behavioral, modeling and brain imaging approaches.

Ludlow first came to NIH in 1974 as a speech pathologist in the NINDS Communicative Disorders Program. She later became head of the speech pathology unit in the institute's Intramural Research Program. In 1989, she joined NIDCD as head of the speech and voice unit, and in 1999 she returned to NINDS as chief of the laryngeal and speech section. Her current research is funded in part by NIDCD.

ASHA is a national professional scientific association of more than 120,000 audiologists, speech-language pathologists and speech, language and hearing scientists. This year, Ludlow was one of five professionals to receive the Honors award at ASHA's national convention, held Nov. 18-20 in San Diego. 🔗