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The Second Best Thing About Payday

nih record

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Jet Engine Yields Electricity, Heat

Cogeneration Power Plant Adds Steam, Watts to Campus

By Rich McManus

Operating nearly noiselessly and producing only the slightest whiff of exhaust, a state of the art "cogeneration" power plant recently came online at NIH. It provides 23 megawatts of electricity (about 40 percent of campus needs) and tons of steam (about 30 percent of what NIH requires) to both heat buildings in winter and sterilize scientific equipment (in autoclaves) year round.

The $38 million facility, built as a sidelong appendage to the Central Utility Plant at the heart of campus, is currently owned and operated by Pepco Energy Services, but will become government property in 10 years. Conceived of as a more efficient and environmentally friendly alternative to purchase of another traditional boiler to meet NIH's rising steam needs, the cogen plant is expected to save more than $15 million annually over the life of the system.

Cogen stalwarts (from l) Dr. Farhad Memarzadeh, John Fratangelo and Joseph Nieves at the Bldg. 11A plant

The plant is also expected to reduce pollutant emissions by 600 tons per year, compared with a traditional boiler, and to reduce future carbon dioxide (a greenhouse gas) emissions by some 100,000 tons per year, according to Dr. Farhad

SEE **COGENERATION PLANT**, PAGE 6

What Scientists Should Know

Primer Offered on Creationism, 'Intelligent Design'

By Carla Garnett

Perhaps there is a place for students to learn about creationism, but that place is not science class, according to Dr. Robert Pennock of Michigan State University, who himself offered a lesson, "What Scientists Need to Know About Intelligent Design Creationism," in a July 13 lecture sponsored by NIGMS. A professor of philosophy and science and technology studies, Pennock has spent more than 15 years following the creationism movement in the U.S. and has published two books on the topic. At NIH, he briefly reviewed the group's history and recent progress.

Pennock said intelligent design (ID) is a relatively new term coined by creationists who want

SEE **INTELLIGENT DESIGN**, PAGE 4

Smell, Taste Disorders Added to Web Site

By Mary Sullivan

They may not be as serious as cancer or heart disease, but problems with smell and taste can make life miserable. Just ask the more than 250,000 Americans who visit their physician every year because of a "chemosensory" disorder.

"People with a smell or taste disorder really have a lower quality of life," says Dr. Gary Beauchamp, director of the Monell Chemical Senses Center in Philadelphia, funded by the National Institute on Deafness and Other Communication Disorders. "They can't fully enjoy the simple aspects of normal life, like eating and drinking, and this can be a real challenge for them. For some of these people, enjoying food and beverages may be one of the few pleasures they have in life."

SEE **SMELL AND TASTE**, PAGE 2

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SMELL AND TASTE

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Who are these people? Adults over the age of 60 are the ones most likely to have a problem with smell and taste, with loss of smell occurring more frequently than loss of taste. Nearly one-third of all Americans between the ages of 70 and 80 have a problem with smell and about two out of three people over the age of 80 do.

It is normal for smell and taste to gradually decline in older people. Taste disorders occur more frequently among older adults who are taking several medications, while colds and upper respiratory infections are the most common cause of smell disorders, followed by medications and head injuries.

Even though chemosensory loss is common among seniors, the causes are still not well understood. To help seniors learn more about smell and taste problems, NIDCD has added these two topics to NIHSeniorHealth.gov, a web site with formats and topics tailored to the needs of older people, co-sponsored by the National Institute on Aging and the National Library of Medicine.

Because the two senses are closely related, many people confuse smell and taste disorders. A problem with taste may actually be a problem with smell in disguise. (Most of us know what it's like to lose the ability to taste food when our noses are stopped up by a cold.)

Taste occurs because taste buds on our tongue, mouth and throat have special cells that can identify five different sensations: sweet, sour, bitter, salty and umami (savory). At birth we have about 10,000 taste buds, but by age 50 that number may begin to decrease, which may explain why some older people like saltier and spicier foods. People with taste disorders often use flavor enhancers to make their meals more palatable.

Smell and taste disorders may not seem serious, but the loss of one or both could put an older person in a potentially hazardous situation. According to Beauchamp, smell lets us know when something in our environment is wrong such as spoiled food or noxious fumes from a gas leak. Taste also protects us by helping us select foods that are healthy and good for us over those that might be bad. (Some plants that are toxic may have a bitter taste, for example). "The ability to identify food is especially important for people with food allergies," he says.

"And," he adds, "for some older people, especially the very old, a smell or taste problem can be devastating. They no longer want to eat or drink or maintain a nutritious diet and they can easily slip into depression."

Researchers at Monell and other NIDCD-supported institutions are looking at ways to restore smell and taste in people who've lost these senses.

"We're trying to understand at the molecular level why aging takes its toll on smell and taste, and specifically why certain medications exacerbate the problem. This work may eventually lead to new treatments for individuals with chemosensory disorders," says Dr. James Battey, NIDCD director.

In the meantime, it's important for older people to remember that most cases of smell and taste loss are treatable, and some even resolve spontaneously. Consulting a family physician can help older adults identify the cause of the problem. A correct diagnosis is important and provides a much-needed reassurance that the smell or taste problem is not imaginary, adds Beauchamp.

"Some people find support groups helpful. Others prefer to use online bulletin boards to share their experiences and come up with various solutions. Regardless of the outcome, older people need to remember that they are not alone. There are thousands of people who are in the same situation," he says.

For more information on smell and taste disorders in older people, visit http://NIHSeniorHealth.gov. For general information on smell and taste, see http://www.nidcd.nih.gov/health/smelltaste/index.asp.

New NIEHS Researcher Named STP Young Investigator of the Year

Dr. Kennita Johnson, who started working at NIEHS just 18 months ago, was selected for the Young Investigator Award at the recent annual meeting of the Society of Toxicologic Pathology.

Her poster, "The Evaluation of Cardiac and Other Soft Tissue Abnormalities in Rat Teratology Studies Using Magnetic Resonance Imaging (MRI)," looked at birth defects using non-invasive imaging techniques. The poster also resulted in a travel award and platform presentation at the June Teratology Society meeting. She is equally enthusiastic about her other poster, "Ultrasonic Analysis, A Tool for Early Detection of Cardiotoxic Lesions: Preliminary Findings."

Johnson's arrival at NIEHS and the Laboratory of Experimental Pathology coincided with a major emphasis on imaging. Until coming to NIEHS, she had no experience in animal research; lab chief Dr. Robert Maronpot said he wasn't sure how it would work to add a postdoc with a physics background to a group of pathologists. Maronpot heads the Laboratory of Experimental Pathology. He said it quickly became apparent that Johnson has a knack for communicating with scientists from different disciplines. Johnson became an integral part of the team, reviewing and modifying study protocols, participating in study management meetings, identifying unique ways to analyze and present imaging data and taking a leadership role in all of the lab's imaging efforts.

"She has been extremely productive, working on cutting-edge rodent-imaging protocols where no two studies are the same," Maronpot said. "She has shown the potential for micro-x-ray, micro-CT, ultrasound and MRI imaging modalities as tools for NIEHS researchers—all this in only 18 months."

Johnson was a Meyerhoff scholar at the University of Maryland, Baltimore County. The Meyerhoff Program is designed to encourage minority students to pursue post-graduate science degrees.

Johnson completed her undergrad work at UMBC, and then went to the University of Florida, where she earned a master's degree in medical physics and a doctorate in biomedical engineering. As she neared completion of her doctoral program, Johnson was invited to present at NIEHS. It was during that visit, she said, that she first learned that the institute conducts small-animal imaging.

Johnson said LEP staff have been very patient and helpful, tutoring her in toxicology and pathology. She enjoys the intellectual freedom afforded at NIEHS, which allows her to develop her own style. Meanwhile, Maronpot says he is eagerly looking forward to Johnson's continued work in multimodality imaging.—**Colleen Chandler**

Researchers Model Avian Flu Outbreak, Impact of Interventions

Two international research teams supported by NIGMS have developed computer models of what might happen if the deadly avian flu, found in birds throughout Southeast Asia, started passing efficiently between people. Could we stop an outbreak at its source before it spreads elsewhere? Yes, according to the simulations.

The H5N1 strain of the avian flu virus has infected a number of species, including domestic poultry, pigs and people. Scientists fear that a genetic exchange between bird and human flu viruses or the accumulation of H5N1 mutations could soon make efficient person-to-person transmission possible. With bird flu continuing to spread in Southeast Asia, the researchers decided to model a hypothetical human outbreak of H5N1 in this region.

Both models incorporated detailed data for Thailand on population densities, household sizes, age distribution, distances traveled to work and other factors. They also included information about the flu virus, such as the possible contagiousness of an infected person. The goals were to visualize how an outbreak might spread and to test the effectiveness of possible intervention strategies, such as the selective distribution of antiviral medication, vaccination and quarantine.

Although the models differed in the specific scenarios they simulated and the containment measures they evaluated, the general conclusions were similar: Preventing a pandemic would require a combination of carefully implemented public health measures introduced soon after the first cases appear. The need for additional measures, the models suggest, increases as the virus becomes more contagious. The results appear in online editions of *Science* and *Nature*.

Because computer models cannot capture all the complexities of real communities and real outbreaks, the researchers will continue to refine their simulations and test different scenarios as new information becomes available.

"As these modeling approaches develop," said NIGMS director Dr. Jeremy Berg, "they will offer policymakers and researchers powerful tools to use in strategic planning."

Led by scientists at Imperial College in London and Emory University in Atlanta, this new work is part of the NIGMS Models of Infectious Disease Agent Study research network, which strives to develop computational models of disease spread that will aid the development of effective control strategies.—**Emily Carlson**

INTELLIGENT DESIGN

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their religious views taught in public schools as an alternative to evolutionary biology. He described an ID think tank founded in the late 1990s in Seattle under the name "Center for the Renewal of Science and Culture" as a part of the Discovery Institute. "They literally see evolution as attacking creation and Christianity."

A main tenet of ID is that some natural systems are so complex that only a transcendent intelligent being—presumably God—could have crafted them. The group's ultimate goal and its arguments are not new, he explained, but the new terminology makes people think it is a novel approach.

Calling creationism by a new name—"intelligent design"—does not change the fact that it is not a science.

Calling creationism by a new name—"intelligent design"—does not change the fact that it is not a science, Pennock said, pointing out several potential pitfalls of equating ID with biology. He suggested that teaching ID alongside evolution would undermine U.S. science education, which already lags behind several other industrialized nations. "However, this is not a scientific controversy; it is part of the cultural wars," he said.

The new tack has drawn a lot of attention in the last few years. In at least eight states, Pennock reported, proposals to teach ID in addition to evolution in public schools reached legislative bodies. In Alabama and Georgia, evolution "disclaimer" stickers were placed in science textbooks. Last fall a Dover, Pa., school board mandated that "students be made aware of gaps/problems in Darwin's theory and of other theories of evolution, including but not limited to intelligent design."

In the early 1980s, Pennock recalled, under the guise of "creation science," attempts were made in several states to require a "balanced treatment of creation science and evolution science" in the education system. "They left out any scriptural references," he explained. "The whole point of 'creation science' was to say that 'this is a science.' The idea was to get back into the schools a view that had been taken out, having [creation science] taught as an alternative model."

At that point, Pennock pointed out, several anti-evolution themes were emphasized by creationists: the insufficiency of mutation and natural selection; the idea that humans and apes are not related; an explanation of Earth's geology by catastrophism, or worldwide flood. It was clear, he said, that much of this was taken from the book of Genesis.

Pennock noted that the creationism movement has not been without its internal problems, which may have slowed the effort down before now. "Young earth creationists and old earth creationists dislike each other almost as much as they dislike evolutionists," Pennock said. "The new movement attempts to lay aside differences and unite under a big tent, unite against a common enemy."

One of the biggest hurdles scientists and science educators may have to overcome is terminology, Pennock pointed out. In general, he said, when people say "theory," they can mean viewpoint, opinion or even wild-haired notion. It's different for scientists. "We need to do a better job of teaching 'theory,'" Pennock suggested. "We need to be more careful about the terms we use. We have to change the connotation." In science, he stressed, a theory is "interlinked ideas supported by a bank of evidence." For example, Darwin's theory of evolution should not be seen as some guy's wild guess but as an informed principle backed by documented proof.

Another significant issue scientists will have to take into account is the public's religious views, which Pennock said ID organizations use against evolution. Although "historically there has been a range of ways to interpret scripture broadly to allow for evolution," he noted, "[ID proponents] intentionally set this up so that if you accept evolution—Darwinism—then you are by definition rejecting God. So one of the key things we're going to have to do is disabuse people of that notion. We have to say, 'No, there are plenty of ways to reconcile a religious view with a scientific view."

So what's wrong with allowing both evolution and intelligent design to be taught in classrooms? Why not "teach the controversy" as ID adherents suggest, and expose students to the wide variety of ideas?

Because, Pennock countered, so much of biology, medicine and other life sciences is based on Darwin's theory. ID changes "natural processes into supernatural intervention." Understanding how natural processes work and how researchers go about uncovering them is crucial to learning about science. ID proponents offer negative arguments against Darwinism, but no positive scientific evidence for intelligent design and so ID shouldn't be taught in science classes.

As for where learning about intelligent design should occur, Pennock made a suggestion: "For teaching private religious themes, there's no place like home."

science

Metabolomics: Coming Full Circle

One of the greatest challenges for pioneering researchers in new fields is establishing standards for the exchange of information. That challenge has never been greater than for the emerging field of metabolomics, the study of the myriad metabolites in an organism. A recent workshop sponsored by several NIH entities (the NIH Roadmap Metabolomics Technology Development program, NIDDK, NIGMS and NIEHS) focused on how to share all the complicated data this new field is generating.

Whereas genomics is the study of all the genes in an organism and proteomics the study of all the proteins, metabolomics aims to depict the physiological states of cells and organisms by focusing on carbohydrates, lipids, signaling molecules and other metabolites. To a far greater extent than genomics and proteomics, metabolomics studies also regularly include compounds from the things we eat and breathe, and from the microbes living in our bodies.

The NIH Roadmap initiatives include metabolomics as a major priority, with the goal of understanding and detecting differences in biological pathways and networks between normal and disease states. The presentations at this workshop gave a hint at the enormous potential this type of research holds. The analysis of metabolites in blood, urine or tissue extracts promises to be a powerful tool for disease diagnosis, revealing a snapshot of what biological pathways are going awry.

The complexity of achieving this vision, however, is daunting. Metabolomics data is far more disparate than DNA and protein sequence data. The methods involved in analyzing all these metabolites include NMR, mass spectrometry, molecular probes, electrophoresis and others. Even within these categories, there are myriad techniques for generating and analyzing data. Dr. Oliver Fiehn of the University of California at Davis pointed out in his talk that there are "dozens of techniques" for performing mass spectrometry alone.

Compounding this, metabolomics experiments are very sensitive to protocol changes. As Dr. Wayne Matson of ESA Biosciences, Inc., noted, "The metabolome really depends on where you look." They are snapshots in time, dependent on a host of environmental and experimental design factors that all need to be included in information databases. Something seemingly as simple as how long a sample sits before being frozen or centrifuged can greatly influence results.

Standards-setting is an ongoing process, and this meeting was an early step on a long path. Metabolite names and definitions need to be standardized; databases with disparate data need to learn to talk to each other; and perhaps most challenging, sample descriptions and countless experimental details need to be standardized.

In light of all this activity, it's interesting to note that, while metabolomics is among the most cutting-edge research around, as Dr. Rima Kaddurah-Daouk of Duke University Medical Center (and president of the Metabolomics Society, which co-organized the event) pointed out, it actually follows in the footsteps of the biochemists who first elucidated those metabolic pathways we all studied in our high school and college textbooks. Metabolomics is a return, at an "omics" level, to biochemistry. It is, in a sense, one of the oldest sciences around.—**Harrison Wein**

Fire Damages Building Under Renovation

A fire in the attic of Bldg. 6 broke out Aug. 15, shortly after 5 p.m., drawing NIH firefighters and numerous local departments, but was quickly extinguished. The building was empty at the time and no one was injured. Employees in Bldgs. 6A and 6B adjacent to the historic structure were evacuated during the fire, but later allowed to return. According to the NIH fire marshal, a worker involved in the renovation of Bldg. 6 had been using a torch to cut a vent pipe in the attic. Evidently, hot metal dripped into the roof membrane, where it smoldered unnoticed until after workers had left for the day. Heavy smoke from the blaze drifted across campus. NIH deputy director Dr. Raynard Kington, sitting in his office in Bldg. 1, smelled smoke and turned in the alarm at 5:05 p.m. A second alarm was requested as backup, but the fire was put out by the NIH Fire Department and the second alarm units were placed back in service, said NIH Fire Chief Gary Hess. Other units from Montgomery County and the National Naval Medical Center remained on the scene to assist with salvage and overhaul operations, he added. Some 80 firefighters swarmed the scene at the fire's height. According to Bob McDonald, project officer for the decommissioning of the building, Bldg. 6 was undergoing abatement and soft, interior demolition in preparation for major renovation. This includes removal of interior walls, old lab space—basically a gutting of the inside. That process will continue in the wake of the accident.

Right:
The cogen plant occupies only the left portion of the Bldg. 11 complex shown here. The steel stanchions in front of the cogen facility are a framework under which portable oil-fired boilers can be rolled, for occasions when the gas turbine is shut down for maintenance or repair. The two giant header pipes would carry steam into the plant for dispersion across campus. Notice, too, the segmented chimney coming out of the roof at upper left, which helps disperse emissions.

Below:
Combustion gas generator rotor ready for installation in the combustion turbine. Washington Gas delivers natural gas to NIH at a pressure of 15 pounds per square inch. A 1,200-horsepower Siemens gas compressor ups that pressure to 400 psi in order to feed the jet engine.

COGENERATION PLANT

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Memarzadeh, director of the Division of Policy and Program Assessment, Office of Research Facilities, who is also a leading researcher in bioenvironmental studies. The plant, which has already won a slew of honors for cleanly conserving energy and water, will save more than 640 million BTUs per year, equivalent to the energy use of about 5,000 homes.

PHOTOS: ERNIE BRANSON

Those are the plant's glittering SAT scores, but it took a lot of grit to get there, according to Memarzadeh. He first began pitching cogen as an alternative energy source in the early 1990s, shortly after arriving on campus as an engineer with the NIH Facilities Program. Cogen, he explains, is simply the simultaneous production of electricity and thermal energy from a common fuel, in this case natural gas. It's an ideal technology when there's a consistent need for steam and wattage.

The heart of the plant is an ABB GT10 jet engine built in Sweden and selected largely because it produces less than half the nitrogen oxides of other commercial turbines. "This is the cleanest cogen facility in the entire world," said Memarzadeh.

Fed a diet of highly compressed natural gas, the combustor burns at around 3,000 degrees Fahrenheit and generates a turbine speed of about 7,700 revolutions per minute. About 30 percent of the energy generated is converted to electricity, and 55 percent is converted to steam, which is generated in a boiler at a temperature of around 300 degrees F.

Only about 15 percent of the heat is "wasted" as exhaust, which spirals up through a unique chimney with segments incorporating lands and grooves that act much like the rifling in a gun barrel, sending emissions winding upward to disperse in a more desirable pattern.

The 7,800-square-foot plant broke ground in 2000 on the site of NIH's former waste incinerators, which past NIH director Dr. Harold Varmus closed due to community concerns. "We wedged about 10 pounds of stuff into a 3-pound bag," quips Memarzadeh of the tightly packed building. According to John Fratangelo, a vice president at Pepco Energy Services, Bldg. 11A, the cogen plant, is only about half the size of operations with similar output. "There isn't an extra inch of space."

Highly automated, with more than 12,000 sensors and many miles of cables arrayed in trays emanating from the machinery, the plant requires a round-the-clock staff of only 2 or 3, who occupy a small office dominated by computer screens. The utility-grade computer monitors, duplicates of which Memarzadeh also has on his desk in Bldg. 13, graphically represent every aspect of the plant's operation, from input to output. Temperature, RPMs, pounds of steam pressure delivered, wattage being generated—it's all there on the screen.

Above:
Power turbine ready for installation in the combustion turbine connects to generator to produce power.

Left:
Cogen plant supervisor Nieves, a veteran of the U.S. Navy's nuclear-powered fleet and a Pepco employee, mans a graphic display of all plant operations. The same monitor sits atop Memarzadeh's desktop in Bldg. 13.

Below:
NIH cogen plant facing east, looking down on combustion turbine package from heat recovery steam generator (boiler)

Adjacent to Bldg. 11A is the Central Utility Plant, which houses five traditional gas and oil-fired boilers that produce steam. Interestingly, the condensate (water left over at the end of the steam tunnel's 2-3 mile circuit around campus) from Bldg. 11 is reused, after some mild chemical tweaking, in the cogen boilers. NIH could simply have added another boiler to meet steam demand—it would have been cheaper to build, easier to get permits, and the hardware would already be familiar to power plant staff. But NIH is already at the limit of allowable air emissions, explained Memarzadeh. "The cogen enabled us to meet National Ambient Air Quality Standards more effectively and economically than traditional boilers," he said. "The reason behind this is the stringent requirements that NIH imposed on the contractor. If the contractor didn't meet the emissions requirements as stipulated, Pepco would have been penalized at the rate of $500,000 per one part per million (ppm) deviation from the contract limits." Observed Leonard Taylor, who recently left NIH to lead the facilities operation at the University of Maryland at Baltimore, "Cogen allowed us to grow the campus and stay within the emission standards."

In many ways, the cogen plant represents a series of triumphs over seemingly show-stopping limitations—the site was small, in a busy part of campus; 9/11 happened and made construction far more difficult; many argued NIH had no business generating electric power, and were wary of a jet engine on campus—would it be loud, would the compressed gas pose the danger of explosion?

Memarzadeh, with the support of senior leadership in the Office of Research Services, fought for more than a dozen years to see the project past each obstacle, creating highly technical scientific and economic models proving that cogen

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Right:
Control room operator Henry Valle of Pepco, who like Nieves is a Navy vet, checks boiler water quality.

Below:
Combustion turbine installed and in operation, sheathed in insulation

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would eventually be win-win for NIH. When he began preliminary reports on the subject in the early nineties, he didn't have the family obligations that he has now with two young children, the oldest of whom is 12. "I would probably not be able to devote the time required to complete this project, if I had to start it now. It was an enormous effort," he said.

Interestingly, the cogen was just one of many projects Memarzadeh was responsible for in the past decade. As a research scientist, he has published many articles, monographs and books on air quality requirements in health care and biomedical research settings, and has been invited as guest and keynote speaker at more than 50 national and international engineering and scientific seminars, conferences and symposia.

The Department of Energy also named him an "Energy Champion" for proposing an innovative use of turbine generators for steam-pressure reduction at the Clinical Research Center. The system helped HHS save $1.5 million in new construction costs and $170,000 in future annual energy costs.

"Without Farhad, the technology for [the cogen project] wouldn't exist," said Taylor. "This is really cutting-edge technology, especially how clean it burns. We initiated a concept and proved it could work. We turned a hypothesis into reality—and titanium [the turbine rotors are made of this very strong metal]...A combination of mechanics and thermodynamics gave us this result."

Memarzadeh concluded, "The cogen project was an extremely complex one that presented numerous unforeseen conditions, but the project was completed within budget. The success of cogen was a result of others' efforts besides my own. If it weren't for the help of construction project managers Reza Jafari of NIH and John Fratangelo of Pepco and the NIH contract officer, Ken Roman, the cogen could not have been built."

NCI Grants Program Targets Cancer Disparities

By Neil Swan

Building on past successes, the National Cancer Institute recently launched a Community Networks Program with $95 million in grants designed to reduce cancer disparities through community-based participatory education, research and training among racial and ethnic minorities and underserved populations. The goal is to significantly improve access to, and utilization of, beneficial cancer interventions in those populations. Some 25 grantee institutions will be part of the CNP, which is being administered by the Center to Reduce Cancer Health Disparities (CRCHD).

Dr. Mark Clanton, NCI deputy director for cancer care delivery systems, said, "The NCI has made a strong commitment to cancer care delivery for health disparities reduction. Programs such as the CNP are important to helping us ensure that all communities benefit from the strides we are making in improving quality and access to cancer care for all Americans."

The goal of establishing CNP's trustworthiness and long-term commitment to the communities is based on the perception, noted by CRCHD director Dr. Harold Freeman as well as communities themselves, "that all too often when community health research and outreach projects end, there is no lasting impact or contribution to the health of the participating communities."

The CNP is a natural progression of NCI's community health activities for minority and underserved populations. In the 1990s, efforts focused primarily on cancer awareness. In 2000-2004, NCI's Special Populations Networks included cancer awareness, research and training activities with an eye toward developing culturally appropriate education materials, reported Dr. Kenneth Chu, chief of the Disparities Research Branch of the CRCHD.

"We are starting the CNP on the premise that knowing is not enough," Chu said. "We need to reduce cancer disparities in the community by getting people to act—to engage in prevention measures and get early detection tests."

CNP projects include eight in African American communities, four for Hispanics and Latinos, four for American Indians and Alaska Natives, three for Pacific Islanders, two for Asians and four in underserved communities.

Throughout the 5-year life of the CNP, NCI will continually evaluate grantees' strategies and activities to help them address the cancer health spectrum, stretching from cancer prevention and early detection tests with outreach to the community through patient navigation (assisting patients with resolving their abnormal screening test results through diagnosis and on to appropriate treatment) to rehabilitation (cancer survivorship programs including support groups). One emphasis of the survivorship component is designed to counter attitudes of "fatalism" toward cancer in some minority groups.

The grantees are charged with developing activities to span this continuum. The CNPs will be developing active partnerships with community groups, screening clinics and hospitals in their communities. All CNP community projects will also develop collaborations with NCI's Cancer Information Service, a national information and education network. In addition, each project will integrate activities with at least three other NCI programs such as those dealing with cancer disparities, the development of minority researchers, intramural clinical trials, epidemiology studies and treatment clinical trials.

Program managers meet weekly to monitor and evaluate grantees' activities. In addition, a CNP Summit will be held every year in Washington, D.C., so that principal investigators and staff can have a forum in which to share information on successful strategies and common problems. At this year's summit, July 18-20, all NCI division directors were invited to present updates on their cancer health disparities activities and identify opportunities for collaboration.

New Innovations at NIEHS Day Care Center

In keeping with a tradition of staying on the cutting edge of early childhood education, the new day care center that NIEHS shares with EPA is taking shape as an innovative facility that promises to entertain, coddle and educate youngsters. NIEHS Administrative Officer Dona McNeill (r) stands in the new center, which is nearing completion. The building is designed so it is easy to monitor what is happening in the classrooms. Frosted glass walls with circles of clear glass divide the classrooms from the hallways. The clear circles allow parents standing outside a room to see nearly everything happening inside the room. Besides the bells and whistles modern child care centers require—toy sterilizers, keypad front door access, state-of-the-art security and fire monitoring systems and Internet connections—the building was designed to incorporate many of the "green features" required by EPA such as high ceilings, using as much natural lighting as possible. The new $3.6 million First Environments Early Learning Center is designed to stimulate a child physically, creatively and intellectually. Each classroom will have a door to an outside play area. The exterior walls facing the outdoor play areas feature huge windows spanning nearly floor to ceiling. Instead of a playground, the new facility will have an "outdoor learning environment" with sensory paths, plants, water fountains and sculptures, seating rocks, semi-secluded privacy areas that teachers can easily monitor and sculptures. Construction began nearly 2 years ago. The center has hired a cook from Whole Foods, a natural foods grocery story, to prepare meals using more fresh foods. The day care center will also have a greenhouse and a garden. The cook will work with staff to plan the garden, making good use of the food produced there, McNeill said.

training

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Visualization in MIPAV	9/13

Wednesday Afternoon Lecture

The Wednesday Afternoon Lecture series—held on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—resumes after its summer break with a talk by Dr. Adrian R. Krainer on Sept. 7. He will address "Alternative Splicing in Health and Disease." Krainer is professor, Cold Spring Harbor Laboratory, Cold Spring Harbor, N.Y.

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

New Clinician's Guide Issued for Helping Patients Who Drink Too Much

The National Institute on Alcohol Abuse and Alcoholism has released a new guide for health care practitioners to help them identify and care for patients with heavy drinking and alcohol use disorders. *Helping Patients Who Drink Too Much* is now available free online at www.niaaa.nih.gov and in print, with a pocket version included.

The 2005 guide provides a research-based approach to alcohol screening and brief intervention for both primary care and mental health clinicians. It updates earlier NIAAA guidelines, which focused solely on primary care providers and used a lengthier screening process.

In the new guide, alcohol screening is simplified to a single question about heavy drinking days. If a patient drinks heavily (5 or more drinks in a day for men; 4 or more for women), the guide shows how to assess for symptoms of alcohol abuse or dependence. Whether the patient has an alcohol use disorder or is a heavy, at-risk drinker, the guide offers streamlined, step-by-step advice for conducting brief interventions and managing patient care.

The guide's target audience now includes mental health clinicians because alcohol use disorders are more common in mental health patients than in the general population.

Print copies of the guide can be ordered through NIAAA at (301) 443-3860 or downloaded from the NIAAA web site above. For training, a PowerPoint slide show on the guide will be posted on the web site in the near future.

Plain Language Nominations Due Sept. 16

All NIH employees are welcome to submit nominations for the 2005 NIH Plain Language Awards. Now in its sixth year, the awards program honors NIH products that are exemplary in communicating information clearly, concisely and to the point. A nomination packet for each item must be received by Ann Brewer in Bldg. 1, Rm. B1-42, by Friday, Sept. 16.

All types of communication products completed from Jan. 1, 2004, through Sept. 16, 2005, are eligible, including letters, brochures, web sites, press releases, scientific papers and reports as well as internal memos, forms, newsletters and manuals. The Plain Language guidelines and nomination form are available at http://execsec.od.nih.gov/plainlang/awards.

volunteers

Cancer Survivors, Controls Needed

A study needs volunteers who have been diagnosed and treated for brain or breast cancer, are between the ages of 20 and 70 and were working full time for at least one year prior to diagnosis. We also need healthy volunteers who have never been diagnosed with cancer and have no chronic illness, are between the ages of 20 and 70 and who have been working full time for at least the past year. You will be asked to complete a 1-hour questionnaire online with questions related to work and health. Participants will be compensated and receive a free Livestrong yellow wrist band. If interested, go to http://cimo1.usuhs.mil/mps/jhansen/Inclusion.tp4 and enter any username and password you wish. Research is conducted by the Uniformed Services University of the Health Sciences and American University.

Stopping Your Estrogen Therapy?

NIMH is investigating whether mood, anxiety and irritability occur when you stop taking your estrogen or estrogen/progesterone combination therapy. Participants should be between ages 45-60, have a past history of perimenopausal mood symptoms responsive to estrogen therapy (ET) or combination therapy, be currently taking ET or combination therapy and be in good physical health. For information, call Linda Simpson-St. Clair at (301) 496-9576 (TTY 1-866-411-1010).

Perimenopausal Depression Study

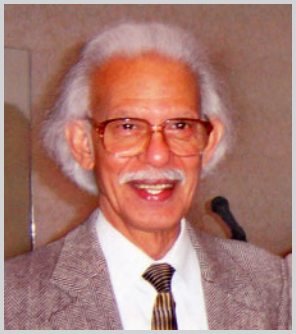
Are you experiencing mood disturbances and has your menstrual cycle been irregular for at least 6 months? You may be eligible to participate in an NIMH study of phytoestrogens in the treatment of perimenopausal mood symptoms. This 8-week study is seeking women ages 40-60 years old in good physical health and medication-free. Call Linda Simpson-St. Clair at (301) 496-9576 (TTY 1-866-411-1010).

Study Seeks Research Participants

Employees receiving the smallpox vaccination at the Occupational Medical Service as part of their employment requirements are asked to consider participating in a study looking at the body's immune response to the vaccine. There are a total of 9 visits, 7 visits within the first 2 weeks at the 11th floor clinic in Bldg. 10. Each visit consists of a blood draw, throat swab and skin swab and is compensated. Visits are arranged around your schedule but must occur in the morning or early afternoon. Each visit is about 30 minutes or less. For more information call Patricia Hohman at (301) 496-8412.

Lyme Disease Study

Do you think you have Lyme disease? People with active Lyme disease are invited to participate in a study at NIH. Evaluation and treatment provided. For information call (301) 496-8412.



NCI's Kashmiri Is Mourned

Dr. Syed V.S. Kashmiri, 68, of NCI's Center for Cancer Research, Laboratory of Tumor Immunology and Biology, passed away on July 19, after a long battle with cancer. He will be remembered for his intellect, seminal and highly innovative contributions to the field of genetic engineering of immunoglobulin molecules and for his extreme kindness.

Kashmiri received his B.Sc. and M.Sc. from Lucknow University in India and his Ph.D. from Duke University. Prior to coming to NIH, he worked at the Rockefeller University, Johns Hopkins University and was an associate professor at the University of Pennsylvania. He became a member of the Laboratory of Tumor Immunology and Biology at NCI in 1987.

As head of the molecular biology group, Kashmiri worked on the development of genetically engineered immunological reagents for the diagnosis and therapy of human tumors and searched for target genes for human cancer vaccines using bioinformatic tools. He developed a world-renowned reputation for his ability to modify immunoglobulin genes to render them more applicable and effective in targeting human tumors. He received numerous patents for these innovative studies, and published more than 60 peer-reviewed manuscripts during his career. He received many awards, including several NIH Merit Awards and Technology Transfer Awards.

Kashmiri was generous in offering the training facilities of his laboratory to students and young investigators. He had the uncommon ability to transmit his love and passion for science and research to his young trainees. Many of his former student-trainees went on to pursue higher studies at medical and graduate schools, and retained enduring ties to his laboratory. Citing his mentorship of new investigators, the NIH Asian/Pacific American Organization gave him its Outstanding Achievement Award in 2001.

Beyond his role as a scientist, Kashmiri enthusiastically participated in many gatherings of artists, writers, poets and scholars in the greater Washington area. He was a well-recognized poet in his native language, Urdu, and occasionally hosted literary get-togethers in his own house.

He is survived by his wife, Rafia Kashmiri, and a son, Tabish Kazmi, a medical student. He will be very much missed by his family, friends and colleagues.

seen

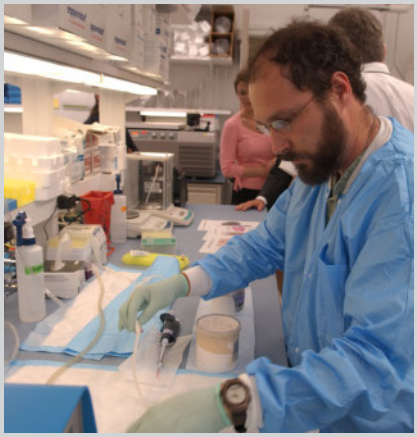
White House Staffer Gerson, Former Miss America Tour NIH

PHOTOS: ERNIE BRANSON

Miss America 1999 Nicole Johnson Baker, a diabetes consultant who also serves on NIH's Council of Public Representatives, and her husband, Pittsburgh news anchor Scott Baker, toured NIH on July 29 with Michael Gerson, President Bush's assistant for policy and strategic planning.

Top:
Dr. Thomas Wellems (seated, l), chief of NIAID's Laboratory of Malaria and Vector Research, and Dr. Owen Schwartz (standing, c), discuss changes on the surface of human red blood cells infected by malaria parasites. Gerson (seated, c) and Scott Baker look on.

Above:
From left, the Bakers and Gerson hear about the Human Genome Project from NHGRI director Dr. Francis Collins (fourth from l) and Mike Erdos (r) of NHGRI's Genome Technology Branch.



At right, clockwise:
Baker (second from l) and Gerson get close-up views of Anopheles stephensi *mosquitoes, which can transmit malaria. Observing are Dr. Yasmine Belkai (l) of NIAID's Laboratory of Parasitic Diseases and NIAID director Dr. Anthony Fauci (r).*

Dr. Tovi Lehman of LMVR assists in demonstration.

Dr. Andrew Arai of NHLBI's Laboratory of Cardiac Energetics gives a presentation titled "Cardiovascular MRI Research: From Bench to Bedside to Populations."