

Still The Second Best Thing About Payday

## NIH Grantees, Alumni Awarded Nobel Prizes

Of the 13 Nobel Prizes in six categories awarded for the year 2000, four were won by NIH grantees, bringing the total number of Nobel laureates funded by NIH to 102 since the honors began in 1901.

All three winners of the Nobel Prize for Physiology or Medicine have links to NIH. Long-time grantees Dr. Eric R. Kandel and Dr. Paul Greengard were honored for their discoveries in signal transduction in the nervous system. Together their work has improved treatments for Parkinson's disease, schizophrenia, depression and holds promise for the improvement of memory in various types of dementia. Kandel, of the Center for Neurobiology and Behavior at Columbia University, and Greengard, who spent a year in the then National Heart Institute but is now with the Laboratory of Molecular and Cellular

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## NIH Welcomes Community Voices On Genetic Research

By Alison Davis

"Let's talk," said NIH to 57 representatives from communities all across America.

NIH recently engaged in a large, sit-down consultation with ethnically diverse communities on the topic of protecting populations during the course of genetic research. The gathering, entitled "First Community Consultation on the Responsible Collection and Use of Samples for Genetic Research," took place Sept. 25-26 at a hotel in Bethesda.

Communities welcomed NIH's invitation warmly.

"I want to thank you for welcoming us into

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## HIGHLIGHTS

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U.S. Department of Health and Human Services National Institutes of Health

October 31, 2000  
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Farmers Rout Hunter-Gatherers

## Diamond Posits a Plausible Human Past

By Rich McManus

Those of you already comfortable giving 50-minute extemporaneous speeches based on your Pulitzer Prize-winning book may not have been impressed, but the audience that heard Dr. Jared Diamond tour 13,000 years of human history at the NIH Director's Cultural Lecture Sept. 18 in Masur Auditorium rewarded him with sustained applause that didn't so much acknowledge the feat of organization and memory as honor an intellectual adventurer who didn't let disciplinary boundaries impede a far-ranging and compelling mind.



Dr. Jared Diamond

Ironically, it was a boundary that Diamond first referred the crowd to following his introduction by NIH acting director Dr. Ruth Kirschstein. She had forewarned that Diamond was about to compress 13,000 years into an hour's talk—"an achievement in and of

SEE DIAMOND, PAGE 8

## Campaign Raises Awareness About Primary Immunodeficiency

By Christina Stile

Their warning signs often go unrecognized. They present themselves as routine, recurrent childhood illnesses such as ear infections, sinus infections and bronchitis; they show little improvement when treated with standard antibiotics. They are the nearly 80 hereditary disorders collectively known as primary immunodeficiency (PI). To raise awareness about this condition and its 10 warning signs, Rep. Nita Lowey (D-NY) joined NIH officials and Fred and Vicki Modell of the Jeffrey Modell Foundation on Capitol Hill to launch a national information campaign about PI.

"Our opportunity lies in continuing to conduct and support cutting edge research that has led to new and innovative ways to treat and even correct many primary immunodeficiencies," said Dr. Duane Alexander, director of NICHD. "Our challenge is to increase awareness of the warning signs of primary immunodeficiencies among parents, health professionals and the public so that no child with this condition goes undiagnosed."

SEE IMMUNODEFICIENCY, PAGE 10



*Dr. Vivian W. Pinn, director of the Office of Research on Women's Health, has been named winner of the Commonwealth Fund's annual Margaret E. Mahoney Award for Outstanding Service for her work in advancing the quality of health care for women everywhere. "Since her appointment in 1991, Dr. Pinn has led the Office of Research on Women's Health in achieving great strides towards improving the health of women," said Karen Davis, CF president. "Through initiatives such as ensuring women's inclusion in medical research and supporting the advancement of women in biomedical careers, Dr. Pinn has realized a mandate to broaden and strengthen research and eliminate gaps in knowledge resulting from women's exclusion from many medical research studies."*

#### NOBEL PRIZES, CONTINUED FROM PAGE 1

Science at Rockefeller University, received the award jointly with Dr. Arvid Carlsson of the University of Gothenburg, who also was once a scientist in the NIH intramural program (but was not subsequently a grantee and is not officially claimed as an NIH-supported Nobelist).

Two other long-time grantees—Dr. James J. Heckman of the University of Chicago, and Dr. Daniel L. McFadden of the University of California at Berkeley—were awarded the Bank of Sweden Prize in Economic Sciences in memory of Alfred Nobel, 2000.

Dr. Ruth Kirschstein, NIH acting director, congratulated the medicine laureates and said, "This work is very important in understanding how the more than hundred billion nerve cells in the brain communicate. I am proud that NIH has provided long-term and consistent support to these fine scientists over decades."

The National Institute of Mental Health has provided more than 30 years of research support to Kandel and Greengard. Support has also been provided by NINDS, NIA, NIAAA, NIDA, NIGMS and NHLBI.

Kandel received the prize for his elucidating research on the functional modification of synapses in the brain. Initially using the sea slug as an experimental model but later working with mice, he has established that the formation of memories is a consequence of short and long-term changes in the biochemistry of nerve cells.

Greengard, who spent 1958-1959 in the Laboratory of Clinical Biochemistry, NHI, under the late Dr. Sidney Udenfriend, was recognized for his discovery that dopamine and a number of other transmitters can alter the functional state of neuronal proteins.

Carlsson, who worked from the mid to the late fifties in the National Heart Institute's Laboratory of Chemical Pharmacology headed by Dr. Bernard Brodie, identified dopamine as a neurotransmitter and established that decreases in the function of dopamine could explain the deficits in Parkinson's disease. Dopamine was subsequently recognized as having a role in psychiatric as well as neurological diseases.

The laureates in economics were recognized for their work in the field of microeconometrics, where each has developed theory and methods that are widely used in the statistical analysis of individual and household behavior, within economics as well as other social sciences.

The citation reads "to James Heckman for his development of theory and methods for analyzing selective samples and to Daniel McFadden for his development of theory and methods for analyzing discrete choice."

Kirschstein expressed her delight that these two

grantees have made such significant advances in the social sciences. "Over the years, most of the Nobel laureates who have been funded by NIH to advance scientific knowledge won their prizes in physiology or medicine, or in chemistry," she said. "I am happy to see that the honor has been extended to NIH-supported work in economics."

Heckman was honored for his pioneering work in accounting for unknown factors affecting statistical samples. He is currently being funded by NICHD to study the effects of earning a high school equivalency diploma, or G.E.D., on an individual's later economic prospects. The National Institute of Mental Health has also provided support for Heckman's early research.

McFadden was cited for his work involving a new theory of "discrete choice," a way to measure how an individual's decisions regarding occupation or housing, for instance, reflect choices among a limited number of alternatives. He has been supported by the National Institute on Aging's Behavioral and Social Research Program since 1986. ■

#### Winter Blues Study Recruits

Do you hibernate in the winter? If you notice that you feel fatigued and down and that your sleeping and eating habits change in the winter, you may be eligible to participate in a research study on seasonal affective disorder (SAD). Diagnostic assessment and treatment consisting of light therapy, psychotherapy or their combination will be offered. There is no charge for participation in the study. Interested volunteers, 18 or older, are invited to call the Uniformed Services University seasonality treatment study for more information, (301) 295-9718. ■

## NIH RECORD

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### Randall To Give Keller Lecture, Nov. 16

Historical writings suggest that the dangers of alcohol use during pregnancy have been suspected for centuries, but only in the past 30 years have scientists proven the connection between fetal exposure to alcohol and birth defects. Fetal alcohol syndrome (FAS), the term used to refer to a set of birth defects caused by maternal consumption of alcohol during pregnancy, is now considered the most common nonhereditary cause of mental retardation. One of the pioneers in the FAS field, Dr. Carrie Randall, will deliver the Mark Keller Honorary Lecture on Thursday, Nov. 16 at 1:30 p.m. in Masur Auditorium, Bldg. 10.

Entitled "Alcohol and Pregnancy: Highlights from Three Decades of Research," Randall's lecture will give an overview of the history of FAS in the United States and the development in the mid-1970's of animal models, including her own, characterizing alcohol as a teratogen. Since identifying the underlying mechanisms of action of alcohol on the developing embryo is critical if therapeutic interventions or preventive strategies are to be devised, she will also discuss relevant advances in this area, including some of her own pioneering work.

Randall is a professor in the department of psychiatry and behavioral sciences and the department of physiology and neuroscience at the Medical University of South Carolina. She is an internationally recognized scientist, credited with having been a major contributor to the research that demonstrated in animal models that alcohol is a teratogen. Her research efforts teased apart maternal and paternal contributions and demonstrated dose-related consequences in the absence of confounding nutritional factors. Her work on prostaglandin synthesis inhibitors to prevent alcohol-related malformations was the first to demonstrate that a pharmacologic intervention can have an effect on the teratogenicity of alcohol. The impact of this work can be measured not only in terms of its contribution to scientific understanding of the mechanisms of FAS, but, as important, its influence on public health policy related to alcohol use during pregnancy. ■

### Health Benefits Fair, Nov. 7

In conjunction with the 2000 Federal Employees Health Benefits Program open season, which runs from Monday, Nov. 13 through Monday, Dec. 11, the Retirement and Benefits Service Center is sponsoring a Health Benefits Open Season Fair. The fair will be held in Bldg. 1's Wilson Hall (3rd floor), on Tuesday, Nov. 7 from 10 a.m. to 2 p.m. Representatives from most of the plans that are available to NIH employees will be on hand to answer employee questions on their 2001 benefits. ■



At the first concert of the 33rd season of the FAES Chamber Music Series at NIH, a bouquet of roses and an award were presented to Mrs. Paula Saffiotti (above, r) for her volunteer work assisting Dr. Giulio Cantoni, music director of the series. The audience, which almost filled Masur Auditorium, responded with applause after Dr. Jacob Robbins (l), president of FAES, thanked both Saffiotti and Cantoni for their 33 years of hard work that have resulted in the NIH community's having many Sunday afternoons of beautiful music performed by world-renowned artists. This season's opening concert, performed by the Brentano String Quartet (below), measured up to the usual excellent standard of the series. Anyone interested in having more information about the music series should call FAES at 496-7975 or visit the web site at [www.faes.org](http://www.faes.org).



### Employee Flu Shot Program Delayed

The Centers for Disease Control and Prevention announced this past summer that distribution of influenza vaccine would be delayed and that fewer doses of the vaccine will be available this year. Although some influenza vaccine was delivered to the Clinical Center, the first priority to receive immunization were patients and the staff caring for them.

As of Oct. 17, a delivery date had not been established for additional doses of influenza vaccine needed to ensure an adequate supply for other NIH staff as part of the usual "Foil the Flu" vaccination campaign. If and when more vaccine is delivered, the Occupational Medical Service will announce an influenza vaccine program via global email and on the web (<http://www.nih.gov/od/ors/ds/flu.html>). ■



Dr. Sharon Pulfer recently joined the Center for Scientific Review as a scientific review administrator in the oncological sciences integrated review group; she is managing the review of applications for Small Business Innovative Review grants in the areas of diagnosis and treatment of cancer, radiation biology and medical physics. Her Ph.D. was in chemistry from the University of Akron, where she was part of the team that developed a patent for polymeric wound healing accelerators. Following her doctorate and before coming to CSR, she was a postdoctoral student in pharmacology at Fox Chase Cancer Center. During this period, she received a National Research Service Award in colloidal systems for targeted drug delivery to brain tumors.

## CONSULTATIONS, CONTINUED FROM PAGE 1

your house!" said John Castillo, a consultant from Okemos, Mich., who attended along with Jose Gamez of Lansing, Mich., to convey Latino views about community involvement in genetics research. Gamez is a community dialogue facilitator on issues of concern arising from the Human Genome Project.

In addition to Latinos—and cutting across a wide swath of America—group participants included African Americans, Asian Americans and Native Americans. Also participating were representatives from several occupations including anthropology, clergy, law, and the natural and social sciences. Patient advocates for various diseases also attended the consultation. Collectively, the group represented 26 states, the District of Columbia, 5 American

Indian tribes, Puerto Rico, Finland, India and the United Kingdom. A resounding message from attendees was, "We want to be included at every stage in the research process."

#### Beyond Individual Protections

Over the past few years, NIH has sharpened its focus on involving the public in its planning processes and in soliciting public opinions about how tax dollars are used to better the health of all Americans.

"This is an issue of extraordinary importance to all of us," said Dr. Ruth Kirschstein, NIH acting director, enlisting the group to help guide NIH in this "new and unknown territory...We need your ideas on how to communicate with, and provide safeguards for, the public."

Judith Greenberg, director of the Division of Genetics and Developmental Biology at NIGMS, organized the community consultation after wrestling with issues surrounding the use of population-based samples in genetics research. As project officer for the NIGMS Human Genetic Cell Repository, a bank of cell lines and DNA used by scientists all over the world, she recognized the urgent need for developing new policies to protect not just individual research subjects (who are explicitly protected under federal legislation), but also populations and communities who participate in genetic research studies.

"Scientists are very interested in identifying genes that play a role in many common disorders—heart disease, diabetes, asthma, cancer—and one way is through studying people who are more closely related to each other, such as people who have similar ethnic or racial or geographic backgrounds," she said.

But Greenberg is well-versed in the potential discrimination and/or stigmatization that could result from such studies if they aren't conducted properly. "It seemed to me that it was time to listen to what the stakeholders—individuals from diverse communities—think about this kind of research,"

she said.

While timely cures and early prevention are the noble goals of research aiming to unearth the genetic roots and determinants of disease, an unintended consequence can be fear, misperception and occasionally stigmatization, said Karen Rothenberg, dean of the University of Maryland School of Law. She spoke in particular about the Ashkenazi Jewish population, which has been intensively studied and has provided researchers with valuable insights about a host of diseases such as Tay-Sachs disease and breast cancer. But the community's involvement has come with a price, she said.

"Fear of genetic discrimination has become a civil rights issue," she said, adding that one public perception is that "Jews have genetic problems."

#### Too Little Information or Too Much?

One theme that reverberated throughout the 2-day meeting was education. Most participants wholeheartedly agreed that there simply isn't enough of it to go around. In particular, many saw the need for an improvement in the training of scientists—including graduate students—in matters related to cultural sensitivity and ethics, especially as they apply uniquely to particular communities.

So-called "helicopter research," in which scientists fly in, retrieve their samples and go home, is simply not acceptable, said Charles Rotimi, a researcher at the National Genome Center at Howard University who conducts field research in small African villages.

"Nobody wants samples to be collected by an arrogant group of doctors in a M\*A\*S\*H\* unit," said Rev. William Nebo of the First Presbyterian Church in Livermore, Calif. He suggested that scientists keep in mind that biological researchers' "unraveling secrets" frequently collides with deep-rooted religious convictions.

Many attendees urged that another pressing need is educating the public. "The problem isn't a lack of information, but an overload of information," said Rabbi Gerald Wolpe of the Louis Finkelstein Institute of the Jewish Theological Seminary in Philadelphia. "Part of dealing with discrimination is providing people with [understandable] information."

#### Trust and Respect

"Why should we trust you?" That's the question communities often ask scientists who visit to conduct genetic studies and collect samples, recounted Maricela Aguilar, a registered nurse and genetics special programs director at the University of Texas Health Science Center in San Antonio.

According to Aguilar, in addition to communicating effectively, researchers must also use common sense and act respectfully. Only then, she predicted, will communities trust scientists.



John Castillo of Okemos, Mich., attended to convey the Latino point of view on genetics research.

For some communities, such as parents of children with incurable genetic diseases, the options seem clearer. "We have to trust you," said Suzanne Kindregan of the A-T Children's Project, a nonprofit organization dedicated to accelerating research toward finding a cure for the disease ataxia telangiectasia.



Gov. Malcom Bowekaty of the Pueblo of Zuni

Native American communities offer yet another view. According to Gov. Malcom Bowekaty, tribal leader for the Pueblo of Zuni, community decisions to participate in genetic research are extremely difficult to make. "If we don't make a decision [about participating in genetic studies] now, our

people will be in a lot of misery and pain," he said. "But we need [access to] good research data to make these important decisions."

#### To Do List

Like any good conversation, the community consultation generated lots more to talk about—and hopes for future community consultations, perhaps with even more time for discussion.

According to Greenberg, approaches NIH may consider are the following:

- Ask researchers to outline in their grant applications specific plans to involve communities in the protocols;
- Permit scientists to build in funds for community involvement in, and ongoing communication about, research projects;
- Encourage training of researchers on issues related to cultural sensitivities and interaction and involvement with communities;
- Compile and publicize a "best practices" list of successful researcher/community partnerships.

The consultation was sponsored by NIGMS, NHGRI, OD, the Fogarty Center, NEI, NIEHS, NINDS, NIA, NIDCD, the National Science Foundation and the Department of Energy. Many NIH staff attended the meeting. ■

#### Healthy Twins Needed

The Child Psychiatry Branch, NIMH, seeks healthy twins age 5-16 to participate in a study of the brain. The visit involves a brain MRI (which uses no radiation), physical exam, computer testing and an "ouchless" blood draw. Twins will be paid \$160 each and will receive a souvenir photo of their brain. For more information call 496-4319. ■

#### Forum on End-of-Life Issues

A new NIH Special Interest Group, formed Oct. 4 to address issues related to end-of-life research, got off to a fast start and is already launching its first event. An open forum, "The End of Our Lives: Guiding the Research Agenda," will be held on Tuesday, Nov. 14 from 1 to 3 p.m. in Masur Auditorium, Bldg. 10. NIH employees, the public, scientists, clinicians and interest groups are invited to participate.

The recently aired PBS series *On Our Own Terms*, by Bill and Judith Moyers, serves as an impetus for the meeting. Short clips from the series will frame each speaker's remarks. Four speakers who are experts in end-of-life and palliative care will address key issues: Dr. Richard Payne, chief of the pain and palliative care service at Memorial Sloan-Kettering Cancer Center, will discuss ethnic and cultural dimensions. Dr. Ann Berger, chief of the new pain and palliative care service at the Clinical Center, will examine the role of palliative care. Dr. Christine Grady of the Clinical Center's department of clinical bioethics will speak about ethics issues. Dr. Thomas Smith, professor and chair of the division of hematology/oncology at the Medical College of Virginia, will look at the place of technology during the last phase of life. An open dialogue between the speakers and the audience will follow the presentations.

The National Institute of Nursing Research coordinates end-of-life research at NIH and has helped form the special interest group. For more information about the event, contact Ann Knebel at [aknebel@nih.gov](mailto:aknebel@nih.gov). ■

#### Three NIH'ers Elected to IOM

Among the 60 new members recently elected to the National Academy of Sciences' Institute of Medicine are three NIH'ers. New members are elected for their major contributions to health, medicine and such related fields as social and behavioral sciences, law, administration and economics.

The new NIH inductees are Dr. Dennis S. Charney, chief, Mood and Anxiety Disorder Research Program, National Institute of Mental Health; NIMH director Dr. Steven E. Hyman; and Dr. David J. Lipman, director, National Center for Biotechnology Information, National Library of Medicine. DHHS Secretary Donna E. Shalala was also elected.

IOM members are expected to devote a significant amount of volunteer time on committees studying a broad range of health policy issues. Current IOM projects include studies on the creation of a medical system to support long-duration space travel beyond Earth's orbit, the development of new technologies for the early detection of breast cancer, and the safety and efficacy of the anthrax vaccine used by the U.S. military. With the 2000 inductees, IOM active membership now totals 613.

## 14th Research Festival Takes Advantage of Great Weather, Science

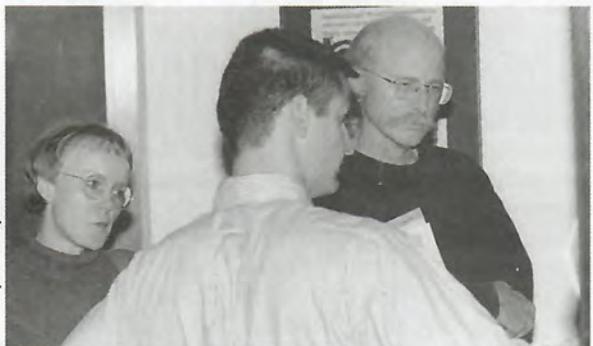


*Dr. Krishnamohan Ketha (r) of FDA makes a point with NIMH's Dr. Sumana Chakravarty.*



*Festivalgoers enjoy near-perfect conditions for the luncheon on the lawn behind the Natcher Bldg.*

*The work of Dr. Mark Esser (c) gets close inspection by Dr. Svetlana Glushakova of NICHD and Dr. Jon Marsh of NIMH.*



*Coffee, science and conversation—enjoying all three are Dr. Timothy Caldwell (l) of NIDDK and NIAAA scientific director Dr. George Kunos.*



*Above, NCI's Easwari Kumaraswamy greets visitor to her poster. At left, NCI's Dr. Stephen Hursting (l) has the attention of NIMH's Brian Weinberg.*

*Clowns from Kapital Klowns roamed the audience entertaining the many hundreds who waited in lines to enter the food tent. An NIH police officer with a trained K-9 dog also gave demonstrations.*



*Dr. Beth Roman points out details of her work to Tim Prindle.*



Dr. Carl Baker (l), chief of the cellular regulation and transformation section in NCI's Basic Research Laboratory, meets with Dr. Gang Dong of NIDCD.



Dr. Robert Burke, chief of the Laboratory of Neural Control, NINDS, gestures to explain his science to on-lookers Dr. Yan Li (l) and Dr. Christopher Poletto, both of NINDS.



Keyboard player David Bach leads his consort through an entertaining set on the Natcher lawn. The band proved popular with the festival crowd; its music is available on CDs sold in all of the R&W gift shops.



At left, NCI's Dr. Klaus Felix chats with colleague Dr. Ofelia Olivero, also of NCI. In the photo on the right, Dr. Robert Duncan explains his poster to Dr. Indrani Som.



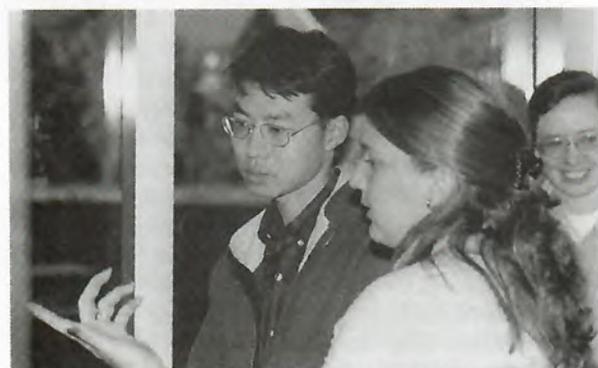
NIAID's Dr. Albert Kapikian (r) appraises a poster from NINDS' Stroke Branch and Dr. Zurab Nadareishvili.



Drs. Denise Simmons and Fausto Andreola of NCI pore over a poster.

PHOTOS: RICH MCMANUS

Graduate student Jennifer Mariner of NCI gets NICHD postdoc Dr. Nathan Bowen chewing his finger.



Technical IRTA Anitza San Miguel shows off her work to Dr. Jie Wan of NIAAA.



The David Bach Consort also included (from r) a flautist, bass guitarist and drummer.

DIAMOND, CONTINUED FROM PAGE 1

itself"—but had lingered on Diamond's more extraordinary ventures, including 19 arduous expeditions to islands in the southwest Pacific, and his recent acceptance of the National Medal of Science honor from President Clinton. But when Diamond took the stage, he insisted, "I really am a biomedical researcher hired by UCLA to do biomedical research, and I thank the NIH for its

generous support of my work since 1965. My history work," he quipped, "was bootlegged on the side."

It's true—Diamond is a professor in the department of physiology at the UCLA School of Medicine—but it is his extracurricular work, including *Guns, Germs and Steel: The Fates of Human Societies*, a 1998 book that won the Pulitzer Prize, that has earned

him wider acclaim. "The British edition of my book had the subtitle, 'A Short History of Everybody for the Last 13,000 Years,' but it was disallowed by my American publisher," he confided.

He began by observing that virtually everyone in the packed hall was of Old World-Eurasian origin. "But if we had held this lecture 500 years ago, all of you would be Native Americans. Why didn't it turn out the opposite way?"

The short answer is that cultures blessed by environments favoring agriculture had distinct advantages over nomadic hunter-gatherer cultures; farmers are more stable, numerous, technologically advanced, and developed herd immunity to infectious diseases that were imparted, ironically, by their proximity to domesticated animals. Hunter-gatherer cultures such as inhabited North America 500 years ago succumbed eventually to diseases imported from abroad: "95 percent of the Native American population was killed by European infectious diseases," Diamond reported.

Like a man assembling an enormous jigsaw puzzle, Diamond logically resolved a variety of asymmetries. Whereas slides of faces from around the world displayed the great heterogeneity of the globe's genetic makeup, Diamond discovered large areas of both diversity (the Indian subcontinent, with 1,000 languages, also Australia and sub-Saharan Africa—"the most diverse of all") and vast homogeneity (Europeans, tropical southeast Asia, where "from Malaysia out to the Easter Islands, the people are very similar to one another.") Why, he asked, are there such areas of homo- and heterogeneity?

The time factor—how long humans have inhabited various places—fails to account for these patterns. But what does impose order on seeming chaos is

agricultural expansion in the past 13,000 years, arising from some nine "heartlands" or "home-lands" founded on farming.

"Prior to agriculture, everybody was involved in hunting and gathering," Diamond explained. The nomadic lifestyle was characterized by low population density; "There were about four years between kids, which corresponds to the age at which children can start walking with their nomad parents." These societies didn't produce storable food surpluses: "The printing press, the iron forge, tools and parts—you didn't need these if you were picking up and moving every two weeks."

The rise of agriculture, on the other hand, led to sedentary societies, "living next to orchards, gardens and pastures." A population explosion accompanied the emergence of farming: "There were two years or fewer between births, rather than four...If you're not shifting camp, you can develop heavy technology. You can store food to support the folks who won't devote any time to growing food—the artisans, the kings, chiefs, members of Congress, and other social parasites," he observed. The much larger populations sustainable by agriculture—Diamond said the ratio was about 1,000 farmers per hunter-gatherer—enabled farmers "to kill or drive out hunter-gatherers in all areas suitable for farming." The larger farm societies also evolved germs to infect others. "There were enormous competitive advantages conferred by agriculture, allowing farming societies to smooch or compete with neighbors," he said.

Turning to the world's flora and fauna, Diamond noted "there are so few plants and animals that can be usefully domesticated." For example, there are about 4,000 species of wild mammals, two-thirds of which are rats or bats, "which you can't milk or hitch to a cart." Of some 148 candidate species, only 14 were eventually domesticated, he said, "and 13 of them are Eurasian species, including cows, sheep, goats, pigs, horses, camels, donkeys, yaks and water buffaloes.

"Mammals need a suite of characteristics—at least six," he continued. "You must be able to feed them easily (the koala bear eats the leaves of only one type of eucalyptus tree, hence is unsuitable for domestication), they must reach maturity in a reasonable amount of time (gorillas don't reach full size for 15-20 years, which would exhaust a farmer's patience and resources), they shouldn't fight back ("The grizzly bear would be good for food—it reaches full size in only five years, but it has a nasty disposition, and the power to back it up"), they should breed easily (some animals refuse to breed in captivity, including the vicuna, "producer of the world's finest wool"), they should have a follow-the-leader social structure (sheep being the ideal; North American bighorn sheep, however, have no such



Diamond (c) accepts a plaque commemorating his NIH Director's Cultural Lecture from Dr. Ruth Kirschstein, acting NIH director, and Dr. Michael Gottesman, NIH deputy director for intramural research.

structure and can't be herded) and they should not be able to leap or break fences (gazelles tend to panic when penned).

Interestingly, the asymmetry of disease distribution around the world mimics the asymmetry in the distribution of mammals, Diamond discovered. "The exchange of diseases has been almost entirely in one direction"—from agri-based cultures to hunters. "Crowd epidemic infectious diseases such as smallpox and measles need large populations to sustain themselves, moving from subgroup to subgroup in time for a new crop of babies to emerge...Diseases like smallpox can't have been with us for more than 10,000 years."

Diamond maintains that herd domestic animals are the origin of most human pathogens, passed as zoonoses, and eventually becoming specialized diseases of humans. "Measles came from cattle, so did tuberculosis," he said. "Influenza is from pigs, pertussis is from pigs." He is still hunting for the animal origins of smallpox, mumps and rubella, and challenged NIH scientists to help him in the quest.

As for plants, of 200,000 wild plant species, only a few are suited for domestication. Cereals, he said, provide half of humanity's calories today, but only 56 species of large-seeded wild cereals are edible; these tended to originate from the eastern Mediterranean and Fertile Crescent, along with China, about 8,500 B.C. That 90 percent of the languages spoken by modern humans trace their origins to these two homelands is no surprise to Diamond.

The asymmetrical spread of crops and livestock around the globe can be explained, at least in part, by considering a simple geographic fact: Eurasia, with its 10,000-mile east-west axis, offers a largely continuous habitat, whereas, Africa and the Americas, with their longer north-south axes, in which day length and climate vary greatly, offer diverse habitats. "That's why the wheel never made it from Mexico to the Andes," said Diamond, by way of illustration.

"The first farmers had huge advantages—politically, agriculturally, technologically—over hunter-gatherers, whom they conquered and infected," Diamond summarized. "The ancient equivalents of guns, germs and steel led to massive population turnovers...Environment, not human biology, is the answer to the supremacies we see today.

"The broadest pattern of history is attributable to differences among continental environments, not biological differences among the people themselves," he concluded.

During a brief question period, Diamond was asked to look 13,000 years into the future and make predictions. "The coming 50 years from now will be the subject of my next book," he teased, but warned that a flood of environmental problems will preoccupy humanity in that timeframe. "Let's get past them first," he counseled. ■

### Yamada To Give Guroff Lecture

Dr. Masashi Yamada, assistant professor at Osaka University, will give the Gordon Guroff Memorial Lecture on Neuroactive Growth Factors on Friday, Nov. 3 from 4 to 5:30 p.m. in Lipsett Amphitheater, Bldg. 10. His talk is titled, "Neurotrophin-induced Intracellular Signaling in Neuronal Cells."

Guroff, who died in July 1999 in an automobile accident in New Hampshire, had been deputy



Dr. Gordon Guroff

scientific director of NICHD since 1982. He was best known for his groundbreaking research on neurotransmitters, the chemical messengers that brain and nerve cells use to communicate.

Guroff began his NIH career at what was then the National Heart Institute in 1959. He is most well known for discerning the molecular mechanism by which certain amino acids are converted to the neurotransmitters serotonin, norepinephrine and dopamine. This mechanism, which involves a molecular process known as hydroxylation, eventually became known in professional circles as the "NIH shift."

### Annual Leave: Use It or Lose It

Annual leave in excess of the maximum carryover balance (in most cases 240 hours) is normally forfeited if not used by the end of the current leave year. If you have not already planned to take those excess hours of annual leave, you should discuss your leave with your supervisor now while there is still time to schedule it. Your biweekly Earnings and Leave Statement tells you how much annual leave you must use so that you will not lose it when the leave year ends on Saturday, Jan. 13, 2001.

In spite of planning, circumstances sometimes arise that prevent you from taking leave that has been scheduled and approved earlier during the leave year. In such cases, you and your supervisor are jointly responsible for ensuring that any "use or lose" leave is officially rescheduled. This year, your use or lose leave must be scheduled not later than Saturday, Dec. 2, 2000.

Should you or your supervisor have questions regarding use or lose leave, contact your human resource office or other appropriate program official designated by your institute or center. ■

### Female Volunteers Needed

The Behavioral Endocrinology Branch, NIMH, is seeking female volunteers ages 18-55 to participate in studies of the effects of reproductive 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.

They will complete daily rating forms and be offered participation in one or more protocols. Payment will be in accordance with the duration of each visit and the type of protocol. For more information, call Linda Simpson-St. Clair, 496-9576.

## IMMUNODEFICIENCY, CONTINUED FROM PAGE 1

PI comprises about 80 disorders that hinder the body's ability to fight infection. The widely varied symptoms of these disorders leave thousands of PI sufferers undiagnosed or misdiagnosed. Because PI infections don't respond to standard treatments, a misdiagnosis can result in death. This problem is especially dangerous among those in minority and economically disadvantaged communities because they often do not have access to regular health care services or are uninsured.

One goal of the campaign, explained Alexander, is to increase awareness about PI and its warning signs among health professionals and the public to allow better diagnoses and treatments.

Fred and Vicki Modell established the Jeffrey Modell Foundation in

memory of their son, Jeffrey, who was born with an inherited immunodeficiency. Since its founding, the JMF has remained active in supporting research, educating physicians and patients and raising public awareness about immunodeficiencies. Last year, NICHD, in conjunction with the JMF, published a booklet about PI diseases, entitled *Primary Immunodeficiency: When the Body's Defenses Are Missing*. This publication has proven helpful to those who have PI, or suspect they have it, and their families.

To alert pediatricians to the awareness campaign, Alexander sent a letter to the 50,000 members of the American Academy of Pediatrics in early September. Included with the letter was a copy of The 10 Warning Signs, a poster produced by the JMF that outlines the 10 most common symptoms of PI, in both English and Spanish. NICHD also sponsored grand rounds at the Clinical Center on Sept. 20 on Severe Combined Immunodeficiency (SCID). Topics of the meeting included the known causes for SCID, its features and the role of early diagnosis in its treatment. In May, the institute sponsored the Gene-based Understanding of X-linked PI Disorders Symposium at the meeting of the Pediatric Academic Societies and the AAP.

"We are happy to be part of this effort," Alexander said. "As a result of this research and the public education effort we are launching today, patients with PI can look forward to a much brighter future."

The event on Capitol Hill spotlighted an NIAID grant that will address gaps in knowledge about PI, including its prevalence among minority and uninsured populations. NICHD, NIAID and NCI are providing equal funding toward this grant. The public-private partnership sponsoring the campaign includes NIH, the JMF, the Centers for Disease

Control and Prevention, the American Red Cross and industry groups.

Campaign materials also include a parent information kit and a children's storybook. For online versions of the materials, visit the JMF web site at [www.jmfworld.com](http://www.jmfworld.com). ■

### Mobile Mammography Screening Set

Mobile mammography screening will be offered at several locations for NIH employees, their families and others associated with NIH such as IRTA's, visiting scientists, contractors and volunteers. The screening dates and van location are:

Nov. 1	Bldg. 10 parking lot 10H
Nov. 9	EPN/EPS parking lot behind EPN
& Jan. 11	
Nov. 15	Rockledge visitor parking lot behind RKL1
Nov. 22	NSC parking lot next to 6003 Executive Blvd.
Dec. 13	Bldg. 45 front of building

The van will be at each site from 9:30 a.m. to 3:45 p.m. To schedule an appointment, call (202) 994-9999. Refer to the web site at <http://odp.od.nih.gov/whpp/events/mammography.html> for any updates or changes in schedule or location.

The screening program is conducted by the George Washington University Breast Care Center. Screenings are conducted by female technologists; a board-certified radiologist specializing in mammography will interpret the films. The results will be reported to you and your doctor.

Each screening should take about 20 minutes and will cost \$138. GW will bill some insurance companies directly; check with your insurance company to see if yours will apply. If your insurance plan is not set up for direct billing, you can pay by check or credit card at the screening and submit a request for reimbursement to your plan. (HMO members, check with your plan manager to ensure that your mammogram will be covered). ■

### Diabetic Volunteers Needed

Seeking diabetic volunteers ages 18-65 on oral diabetic medications or diet controlled, for screening of vitamin C blood level. Must be off vitamin C supplements at least 1 month prior to screening blood level. Payment of \$25 for blood level determination. Possible eligibility for further studies dependent on vitamin C level. Contact Gail Sullivan at 496-3244. ■

### Deaf Awareness Program, Nov. 9

NIH's 2000 Deaf Awareness Program will be held on Thursday, Nov. 9, from 11:30 a.m. to 1 p.m. in Lipsett Amphitheater, Bldg. 10. For more information, visit <http://www1.od.nih.gov/oeo/events/deafawareness2000.htm>. ■



A poster announcing the 10 Warning Signs for Primary Immunodeficiency takes center stage at its unveiling during an event on Capitol Hill. Also shown are (from l) Fred Modell, from the Jeffrey Modell Foundation (JMF); Debbie Longo, whose 4-year-old son, Christopher, died last year from undiagnosed PI; Vicki Modell, also of JMF; Dr. Duane Alexander of NICHD; Kareem Edwards; Lawrence Jackson, who has been successfully treated for PI for the last 18 years; and Theresa Brown Jackson, Lawrence's mother and Kareem's grandmother.

## Computer Classes

All courses are on the NIH campus and are given without charge. For more information call 594-6248 or consult the training program's home page at <http://training.cit.nih.gov>.

Using SQL to Retrieve DB2 and Oracle Data	11/2-3
Intro to Statistics Using SAS/INSIGHT Software	11/6-7
C Language	11/6-9
Data Warehouse <i>Query</i> : Procurement & Market Requisitions	11/8
Introduction to Statistics	11/8-9
Data Warehouse <i>Query</i> : Human Resources	11/9
Cost-Benefit Analysis	11/13
Budget Tracking	11/13
Data Warehouse <i>Analyze</i> : Budget & Finance	11/13
Genetics Computer Group (GCG) Sequence Analysis	11/13-15
WIG - World Wide Web Interest Group	11/14
Using SAS/STAT Procedures to Perform ANOVA and Regression	11/14-16
SAS Programming Fundamentals I	11/16-17
New Features in SAS Version 8	11/17
Data Warehouse <i>Analyze</i> : Human Resources	11/17

### Open Season for FAES Insurance

The FAES Health Insurance Program is holding open season from Nov. 1-30. The program is open to those who work for or at NIH in full-time positions but are not eligible for government benefits. This includes NIH fellows, special volunteers, guest researchers, contractors and full-time temporary personnel. The minimum enrollment period is 3 months.

Open season is for those who did not enroll when first eligible and for current subscribers to make changes. Appointments are required. FAES offers two health insurance plans: CareFirst BlueCross BlueShield Blue Preferred PPO, and CIGNA HealthCare, a health maintenance organization (HMO). Also offered is a voluntary dental insurance plan.

Information about rates and benefits that take effect Jan. 1, 2001, may be obtained from the FAES website at [www.faes.org](http://www.faes.org), or from the FAES business office, Bldg. 10, Rm. B1C18. ■

### Healthy Children Needed

The Pediatric and Developmental Neuropsychiatry Branch, NIMH, seeks boys and girls 6 to 13 years of age, to participate in a movement study. Volunteers should have no history of medical or neurological disorders (including seizures and hearing problems), and should not be taking any prescribed medications. Participation requires a phone screening and neurological examinations. Single and paired-pulse TMS will also be performed. Participants will be compensated for their effort and time (approximately 3 hours). For more information, call Chris Barker, 496-5323. ■

### Walsh, Director of NIDDK CURE Center, Mourned

Dr. John Harley Walsh, 61, world-renowned for his research in gastrointestinal physiology, died of complications of a heart attack June 14.

An NIDDK grantee for more than 27 years and an NIH Merit Award recipient, he was the research chief of the Center for Ulcer Research and Education (CURE) of the UCLA digestive diseases division. He was also the Straus professor of medicine at the UCLA School of Medicine.



Dr. John Harley Walsh

"John has been a leader in gastroenterology research and has made important and lasting contributions to our understanding of gastrointestinal hormones, gastric acid production and peptic ulcer disease," said Dr. Jay Hoofnagle, director, Division of Digestive Diseases and Nutrition, NIDDK. "His death occurs not at the end, but in the middle of a very active and productive career."

Celebrated for his innovative research and visionary leadership, Walsh received the Abbott Distinguished Research Award for excellence in gastrointestinal physiology from the American Physiological Society in April. He served as president of the American Gastroenterological Association from 1994 to 1995. He also trained a generation of young investigators in digestive disease research.

"John was a consensus builder in the field and at his center," said Dr. Frank Hamilton, chief, Digestive Diseases Program Branch, NIDDK. "He saw talent in people that he worked with and nurtured it."

In 1970, Walsh began his more than 30-year career at UCLA School of Medicine. He started working with Dr. Morton L. Grossman, founder of the Center for Ulcer Research and Education at the Veterans Administration Westside Hospital in 1974. After Grossman's death in 1981, Walsh became leader of the center.

Born in Jackson, Miss., Walsh received his undergraduate and medical degrees from Vanderbilt University. He then completed an internal medicine residency at New York Hospital and Cornell Medical Center. Before joining UCLA, he was a research associate at the Veterans Administration Hospital in New York City.

Walsh authored over 500 published articles and book chapters on the regulatory physiology of gastric secretion, and was a member of several professional societies. He was a scientific reviewer on numerous study sections, a member of the NIDDK Advisory Council and served on the digestive diseases advisory board.

Walsh is survived by a daughter, Courtney S.W. Phleger of San Francisco; a son, John Harley Walsh Jr. of Brooklyn Heights, N.Y.; a sister, Cecile W. Wardlaw of Jackson, Miss.; and three grandchildren.

"He will be sorely missed by us at the NIH and by the whole gastroenterology community," said Hoofnagle.

### Hypertensives Needed for Study

Seeking volunteers with high blood pressure ages 18-55 to participate in insulin studies. If you are on medication to control blood pressure, you must be able to be off your medication for two 1-week periods and be able to monitor your blood pressure daily while off the medications. Payment of \$300 with completion of two separate outpatient studies. Contact Gail Sullivan at 496-3244. ■

Goal Is \$1,325,000

## NIH Kicks Off 2000 Combined Federal Campaign

By Janet Howard

Beautiful weather—perhaps the harbinger of a generous giving season—abetted NIH's Combined Federal Campaign kickoff, held Oct. 3 in a tent erected in the Bldg. 31 courtyard. NIAMS director Dr. Stephen Katz, whose institute is the NIH lead for the campaign, is the effort's vice chair. He opened the program, speaking on behalf of NIH acting director Dr. Ruth Kirschstein.

"Dr. Kirschstein sends us a reminder that the success of the campaign depends on the active participation of NIH employees," he said. "She asks that we commit our time and energy to spread the word to all NIH employees about what a wonderful experience it can be to respond to the needs of those we have never met. Our financial goal for CFC 2000 is \$1,325,000. Last year NIH exceeded its goal. Dr. Kirschstein also reminds us that our goals—as DHHS employees—should always include helping those who

are least able to help themselves, because it all comes back to you."

Katz continued, "There are many people in our neighborhoods, our city, our country and our world who are incredibly vulnerable, and the CFC works to make a difference for those people."

Jim Donahue, special assistant to the FDA deputy commissioner and DHHS CFC campaign manager, stressed the importance of the CFC to the crowd, asking keyworkers to encourage all employees to participate by giving, by talking about the CFC to their peers, and by advertising the campaign using signs, email and word of mouth.

The crowd then rock 'n rolled to such tunes as "Money (That's What I Want)," a specially rewritten version of the folk song, "This Land is Your Land," and "Runaway" by NIH band The Artists (formerly known as the Directors) featuring NIAMS's Becky German, lead singer; Katz on guitar and vocals; John O'Shea, lead guitar, mandolin and vocals; NICHD's Tracey Rouault, keyboards; and NIDDK's John Tisdale, bass guitar and vocals.

Next, a puppet show called "Tree House," was presented by Blue Sky Puppet Theater. The play featured the talents of Steve Hildebrand and Penny Russell, who animated five puppets on an elaborate



NIAMS director Dr. Stephen Katz—this year's CFC vice chair—fronts *The Artists*, who played for the crowd.



Jim Donahue, FDA and DHHS CFC campaign manager

PHOTOS BY BILL BRANSON



Blue Sky Puppet Theater presents "Tree House."

stage set. The show's theme—targeted toward the campaign's keyworkers—stressed how important it is to set a goal, strive for it and never give up.

Katz closed the program with an earnest appeal. "We can't give up on those who need us the most. Please give generously. It all comes back to you." ■

### Wednesday Afternoon Lectures

The Wednesday Afternoon Lecture series—held on its namesake day at 3 p.m. in Masur Auditorium, Bldg. 10—features Dr. Nancy L. Craig on Nov. 8, speaking on "Tn7: A Smarter Transposon." She is professor, department of molecular biology and genetics, and HHMI investigator at Johns Hopkins School of Medicine.

On Nov. 15, Dr. Dennis Selkoe, professor of neurology, Brigham and Women's Hospital and Harvard Medical School, will discuss "Presenilins, Notch and the Genesis and Treatment of Alzheimer's Disease."

For more information or for reasonable accommodation, call Hilda Madine, 594-5595. ■

### Attention Female Computer Users

Do you experience work-related pain, numbness or tingling in your fingers, hands or wrists? Are you a female between the ages of 21 and 50 who is currently working full time? If so, you are invited to participate in a research study of job stress and hand/arm symptoms that can help you learn more about your problem. The study includes a \$100 payment. For more information call (301) 295-3672. ■