



ABOVE • Flyer, a drug-detecting dog, has joined the NIH Police force. See details below.

features

NIH Director Hits Hustings With Frank Presentation on Budget	1
NAS Admits Two NIH Scientists	2
NIH Communicators Win Big	3
Former Institute Director Mourned	12

departments

Briefs	2
Training	10
Volunteers	11

nih record

'NIH at the Crossroads'

Zerhouni Addresses Advisory Councils, Scientific Societies

Providing a strong message backed by a storehouse of data, NIH director Dr. Elias Zerhouni is touring all of the institute and center advisory councils this spring, as well as speaking before a number of scientific societies such as FASEB. He is on a mission to educate an influential percentage of the agency's more than 31,000 outside counselors about NIH's current budget situation: Yes, the budget doubled between 1998 and 2003, but that created a flood of applications that subsequent relatively flat budgets could not hope to reward. As the success rate for competing for an NIH grant dips from a traditional one-third of all applicants to about 1 in 5, there is discontent and there are misperceptions that need



NIH director Dr. Elias Zerhouni addresses the NIA advisory council on May 24. He has been visiting council meetings and scientific societies.

SEE ZERHOUNI, PAGE 6

Evidence Is 'Lab' Tested

K-9 Partners Are Here to Help

By Belle Waring

His olfactory lobe is bigger than ours, and his turbinates—those curvy bones inside the nose—are longer. Under the skin at the nape of his neck, he wears a microchip the size of a grain of rice. This is one NIH employee who's never called in sick. If called to a court of law, he can serve as state's witness without speaking word one.

Meet Flyer, drug dog with the NIH Police.

"They have the right to ask me in court, how did you know that there were drugs present?" says Flyer's handler, assistant K-9 trainer and shift supervisor Sgt. Rick Hawkins. "I can tell them, when he got in the 'scent cone,' his breathing became rapid. He sat and he stared at me. He gave me a look, and I know that look. If he sits, we investigate."

Sitting to alert his handler to the presence of drug contraband is something Flyer, a black Labrador retriever, learned with Hawkins dur-

SEE K-9 PARTNERS, PAGE 4

NIH High School Protégés Honored

By Cynthia Delgado

Hearing presentations by young men and women at the recent Howard Hughes Medical Institute and Montgomery County Public Schools dinner symposium, you might have had to remind yourself that these were high school students, not NIH postdocs or seasoned research fellows. That's because they are among the area's brightest science scholars. Many attendees marveled at how well the students were able to explain their state-of-the-art research and to field wide-ranging questions. The event was the venue for students to showcase the knowledge and skills they gained through doing research in NIH laboratories as part of the Student and Teacher Internship Program (STIP).

The program is funded by an HHMI grant to the MCPS system, which pairs area high school students and teachers with NIH mentoring scientists. Interns first complete a basic molecular biology course and then work in NIH labs for 7 to 8 weeks in the summer. During the

SEE PROTÉGÉS, PAGE 8



Two NIH'ers Named to Academy

Two NIH scientists are among the 72 new members named recently to the National Academy of Sciences in recognition of their distinguished and continuing achievements in original research.

Dr. William A. Eaton is chief of the Laboratory of Chemical Physics, NIDDK. The second honoree, Dr. Carl Wu, is chief of the Laboratory of Molecular Cell Biology, NCI.

The election was held during the 143rd annual meeting of the academy. "Election to the academy is considered one of the highest honors in American science and engineering," said Ralph Cicerone, who became president of NAS in 2005. Those elected in April bring the total number of active members to 2,013; there are an additional 371 foreign associates.

The NAS is a private organization of scientists and engineers dedicated to the furtherance of science and its use for the general welfare. It was established in 1863 by a congressional act of incorporation signed by Abraham Lincoln that calls on the academy to act as an official adviser to the federal government, upon request, in any matter of science or technology.

NIH Receives Recycling Award

NIH's Division of Environmental Protection was recognized May 24 for "Excellence in Recycling" from Montgomery County's department of public works and transportation, division of solid waste services, recycling section. The award, known as the SORTT—Smart Organizations Reduce and Recycle Tons—recognizes the large volume recycled here, as well as the provision of convenient and accessible collection containers throughout the buildings and grounds. NIH was among 13 honorees in the "Outstanding Achievement, Business" category.

During the last fiscal year, NIH recycled 3,000 tons of material. Accepting the award were Don Wilson, chief of DEP's Waste and Resource Recovery Branch, and Janie Lee.

NIH Sailing Association Open House

The NIH Sailing Association invites everyone to its open house on Saturday, July 30 from 10 a.m. to 3 p.m. at Selby Bay Sailing Center in Mayo, Md. Explore your interest in learning to sail and discover opportunities for sailing with NIHSA. There will be demonstration sails for adults in the club's 19-ft. Flying Scot sailboats. Fall sailing classes begin Aug. 22; this is a good chance to preview the boats and meet the members. At the open house you can join the club and sign up for the 6-week adult sailing class. Directions to the event are on the club's web site: www.recgov.org/sail. Come check it out—sailing, food, drinks and beer for \$5 per person.

Presidential Succession at NIHAA



Shown at the May 25 NIH Alumni Association board of directors meeting is outgoing president Paul Van Nevel (l), who is receiving a plaque for his service from incoming president Charles "Chick" Leasure. Leasure, formerly NIH deputy director for management, retired in February 2004 after 38 years in a variety of executive positions throughout NIH. Other officers elected are Levon Parker, vice president, and Marc Stern, secretary. Newly elected board members are James S. Alexander, Calvin B. Baldwin Jr., Dr. Dennis Cain, Dr. Donna J. Dean, Dr. George Galasso, Janyce Hedetniemi, Dr. Gerald S. Johnston, Dr. Kira K. Lueders, Dr. Ramesh K. Nayak, Dr. Theodore J. Roumel and Dr. John F. Sherman. Activities planned for the fall include the group's annual meeting and sponsorship of the James A. Shannon Lecture. The NIHAA is now in its 18th year and membership is open to past as well as present NIH staff. For more information about the organization, call (301) 530-0567 or visit www.fnih.org/nihaa/nihaa.html.

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K-9 PARTNERS

CONTINUED FROM PAGE 1



Top:
Nice to nose you: Flyer, NIH's only certified drug-sniffer, serves on the K-9 team along with 10 bomb-sniffers. A dog's nasal cavities contain over 220 million olfactory receptors; the human version has 5 million.

Right:
Olfaction in action: Assistant K-9 trainer and shift supervisor Sgt. Rick Hawkins poses with his partner. Donated to NIH by Lab Rescue, Flyer is now licensed to work anywhere in Maryland.

PHOTOS: BELLE WARING

ing 12 weeks of K-9 training. Upon graduation, Flyer became NIH's only Maryland state-certified drug-sniffing dog in a team that includes 10 "bomb dogs." Two days a month of retraining keep that certification fresh.

Judges have ruled that a canine sniff is not a search under the Fourth Amendment, and when a certified dog smells drugs or explosives, then alerts his handler, the dog's response establishes probable cause. If the case goes to trial, Flyer's duties may include court time. He stands by (or sits by, in a climate-controlled squad car) in case he's called to demonstrate how he sniffs out evidence, properly hidden right in the courtroom.

The canine sense of smell is so superior that dogs can tease out faint odors, even from a confusing soup of, say, room fresheners, pork sausage and truck exhaust. Once Flyer's instinct was honed by training, he could track and find hashish, cocaine, crack cocaine, Ecstasy, heroin, certain prescription drugs, as well as money tainted with drug residue.

"A dog we trained with the Harford County sheriff's office found a gun used in a murder," reports Hawkins, who started work at NIH the day before 9/11. He trains K-9 units with Lt. Rick Johnston for the United States Park Police, Amtrak Police, U.S. Marshals, Ann Arundel County, Hampstead Police in Carroll County and the Smithsonian Police. It's done as a courtesy, says Hawkins—a trade-off. "We take the dogs on escalators, elevators, trains and to warehouses and parking lots, so they learn to walk on different surfaces. The U.S. Park Police take them up in helicopters so they learn not to freak out. We get them to jump obstacles, tunnels, hurdles, see-saws, just so they're not spooked." They also train at the National Institute of Standards and Technology, where robots simulate human casualties in bomb-blast mockups.

Flyer sports a state police tag and is licensed to work anywhere in Maryland. He can also cover the Mall in Washington, D.C. But why is NIH's only drug dog a Labrador retriever instead of the classic German shepherd? Dogs here are not used for "bite work," and since the Lab breed is prized for its high fetch drive, Hawkins explains, this quality made Flyer a prime K-9 candidate.

Could Hawkins train a drug pug?

"Dogs' noses are so sensitive that if you put enough time into it, you probably could train any dog, but not all dogs will follow through," he said. He can't say how old Flyer is—around 7, perhaps—because he was donated through Lab Rescue.

"Training is all play," Hawkins explains. "You work with him to find a ball, hide it in a wooden box, until he realizes what you want. Then you put the ball and the drugs or the explosives in the box together. He finds them. Then you take the ball out. Once they get the association, it clicks."

The human factor is tougher. "The officer is the hardest part of the whole thing," he quips, "getting these big manly men to get their voices way up in the air, to get their inflection up to praise the dogs. It's all about praise."

And about love? "It's the government's dog," says Hawkins, "but he's my dog. I lucked out. He's part of my life and I'm responsible for everything."

Hawkins tells a story how once, when a suspicious package was found, something curious happened. When the bomb dog got to it, he sat. The bomb squad was called in, but the package turned out empty.

"So we took it back to the other bomb dogs, and all the other dogs sat," he says. "Each one, individually, sat. Something must have been in that package at some point—I never second-guess these dogs."

So it's about play, praise, love—and respect for your partner.



NIAMS at 20



“Basic research provides building blocks. It gives us a vocabulary to start conceptualizing why things go right and how they might go wrong.”—Dr. John O’Shea, scientific director

Basic Research at NIAMS

By Dr. Stephen Katz, NIAMS director

Many of today’s advances in understanding and treating arthritis and musculoskeletal and skin diseases began in laboratories across the United States with research on basic biology supported by NIAMS. Although the benefits of basic research are rarely felt quickly and may not even seem relevant to people coping with diseases, research must be done on fundamental processes to obtain the clues that inform research in humans. For that reason, basic research has been a focus of NIAMS since its beginnings 20 years ago.

Basic research is often done in systems that are simpler than those of humans so that variables can be manipulated to observe changes in structure and function. Researchers in our intramural labs on campus, for example, studied toadfish to find design and engineering principles behind fast-twitching muscles. Basic NIAMS-supported studies in mice revealed a gene that influences bone density. And institute-sponsored fruit fly investigations led to the likely cause of sporadic basal cell carcinoma of the skin, the most common human cancer. Basic research has often resulted in models of human disease that enable scientists to study mechanisms and potential treatments before they are tried on people.

Whether it’s determining the structural basis of virus replication or discovering the inner workings of cytokines, NIAMS is proud of its support for basic research. We have every confidence that over the coming decades, such research will offer hope for millions of Americans with complex and often debilitating diseases of the muscles, skin, bones and joints.



Shown are Dr. Maryann Redford (l), NEI project officer for the ETROP study, Dr. William Good (second from l), principal investigator from study headquarters in San Francisco, and Dr. Robert Hardy (r), PI from the coordinating center in Houston, presenting ETROP Inspiration Awards to Dr. Robert Gordon (c), PI in the New Orleans study center, and Debbie Neff (second from r), New Orleans study center coordinator.

NEI Investigators Receive Post-Katrina Awards

In spite of Hurricane Katrina and its aftermath, New Orleans-based NEI Early Treatment of Retinopathy of Prematurity (ETROP) Study investigators achieved 100 percent follow-up with children in the study. Some of the children had been relocated with their families to other states such as Mississippi and California.

Retinopathy of prematurity (ROP) is a potentially blinding disorder that affects an estimated 14,000 to 16,000 premature, low-birthweight infants each year in the United States. The ETROP study assesses early treatment versus conventional management of high-risk ROP. Infants are examined by ophthalmologists at 6 months, 9 months and annually until 6 years of age.

Johns Hopkins Honors NHLBI’s Knutson



Dr. Jay Knutson, chief of the optical spectroscopy section of the Laboratory of Biophysical Chemistry, NHLBI, has been elected to the Johns Hopkins University Society of Scholars. He and 14 other scientists and clinicians were honored during the society’s 37th induction ceremony on May 24, and again at the university’s commencement ceremony on May 25. The society—the first of its kind in the nation—inducts former postdoctoral fellows and junior or visiting faculty at Johns Hopkins who have gained marked distinction in their fields of physical, biological, medical, social or engineering sciences or in the humanities. Knutson is a leader in the development of laser-driven high-speed optical instruments and techniques used in the life sciences.

Most recently, he applied femtosecond lasers to the study of water organization around proteins, the binding of DNA-controlling receptors inside cell nuclei and the energy production process within heart cells. Knutson’s technical innovations have allowed researchers to make advances in the fields of biology and medicine. From 1980 to 1984, he was a postdoctoral fellow in the department of biology at Johns Hopkins.

ZERHOUNI

CONTINUED FROM PAGE 1

addressing.

In a presentation he titles, “NIH at the Crossroads: Myths, Realities and Strategies for the Future,” Zerhouni puts things in perspective. First, the current success-rate pinch is nothing new under the sun. Much as the business world experiences boom-bust cycles, NIH has faced disheartening times in the past. Quoting from a gloomy assessment of high competition for limited funds, and multiple disincentives to the research enterprise, Zerhouni challenges his audiences to identify the speaker and his era: it turns out to be former NIH acting director Dr. William Raub, speaking in 1982.



Zerhouni shares a light moment at the NIA advisory council meeting with NIA director Dr. Richard Hodes (l).

PHOTOS: ERNIE BRANSON

“This has happened before—in 1982, in the early 1990’s and again now,” Zerhouni observed. “History repeats itself. But NIH is strong, and our response to the current situation suggests we’ll prevail again.”

No budget forecaster could have foreseen the “perfect storm” facing NIH in 2006, he argued: deep federal and trade deficits, rising expenditures for homeland security, the economic—not to mention physical—devastation of Hurricane Katrina, preparations for potential pandemic flu, a 3-5 percent inflation rate in research costs that is outpacing the general inflation rate and an increased federal focus on the physical sciences. Added to these factors is a sense among some legislators that, having doubled NIH’s budget, there’s nothing more we really need.

As if this situation were not harsh enough, there are current myths about NIH’s research priorities that Zerhouni took some pains to puncture: NIH is not emphasizing applied over basic research, though in 2002 and 2003—owing mainly to biodefense needs and infrastructure build-up—there were bulky one-time expenses; NIH is not shifting toward solicited research (in 1994 about 91 percent of research project grants were unsolicited vs. 9 percent solicited, and today about 93 percent are solicit-

ed vs. 7 percent unsolicited); and the Roadmap initiative is not some roadhog eating up 30 to 40 percent of the budget, as Zerhouni has heard some folks theorize—the real numbers are about 0.8 percent of the budget in 2005, maxing out at around 1.5 to 1.7 percent next year.

Furthermore, Roadmap expenditures aren’t monolithic; in FY 05, there were more than 345 individual awards (at 133 research institutions), Zerhouni reported.

“Every great institution needs a little intellectual venture space,” he said, where we can try new things that will benefit the entire research enterprise, and allow us to take risk for high impact. Far from having been concocted as a way of draining off R01 investigator-initiated grants, the Roadmap is largely an acceptance of recommendations from the Institute of Medicine and more than 300 representative scientists who contributed their opinions, Zerhouni reminded his audience. And even within the 1 percent of the budget it claims (“which really wouldn’t buy that many more grants,” Zerhouni noted), Roadmap expenses are 40 percent basic research, 40 percent translational and 20 percent high-risk (e.g., the Director’s Pioneer Awards), the latter of which addresses long-standing concerns that NIH invests too timidly in research.

Zerhouni said there are “three drivers behind the current sense of pain, and by far the largest ones are capacity-building, and the increase in tenure-track faculty.” The doubling of NIH’s budget prompted a building boom on extramural campuses. The increase in capacity was an appropriate response to the growing needs of medical research and public health problems. The difficulty now, however, Zerhouni pointed out, is that the timing of this boom is no longer concurrent with the availability of funds.

The issue of congressional appropriations is the second worry on the minds of NIH and its constituency, and is “a long-term issue,” Zerhouni said.

The third main driver of the current crunch—and the biggest reason for declining success rates—is the dramatic upsurge in grant applica-

tions: almost the same number arrived in the 2 years following the doubling than occurred during the entire 5-year doubling process itself. “There is no magic or shadowy manipulation behind the current crisis—it’s just supply and demand. Basically, the demand for NIH grants took off just as the budget was coming in for a landing. The two should be taking off together, not landing.”

Zerhouni is assuring each audience that “we clearly understand the pain of supply and demand. We want to return to an era of reasonable success rates. Right now, we are in a period of readjustment.” He also emphasizes that, although getting grants is more competitive nowadays, many more scientists are receiving funds due to the large increase in faculty at institutions. “More than 10,500 new applications arrived in 2005,” he reported.

He offered a four-part prescription: know the facts; develop adaptive strategies (he emphasized the core mission of protecting knowledge and discovery, increasing the number of competing grants via management of supply-demand issues, and supporting new investigators through new programs such as the Pathway to Independence Program, thereby preserving the future); convey a unified message to the public at the local, regional and national levels about the benefits of medical research (“I’ve been very aggressive recently, and very explicit,” Zerhouni said); and always emphasize NIH’s exciting vision for the future.

“People not only support you for what you did,” he explained, “but also for what they hope you will do.”

In the next 15-20 years, he said, the paradigm in medicine will shift “from a curative approach to a pre-emptive one.” He outlined the “four P’s” that will characterize medicine’s future: predictive, personalized, pre-emptive and participatory.

The last fact in his presentation put matters in perspective: the nation invests \$95 per year, per person, on NIH science while the cost for health care per person each year is \$7,000. “Unless we transform medicine through discovery, the game will be lost,” Zerhouni concluded. “There is no better investment than biomedical research.”

Audience Members React To Director’s Remarks

There are few more critical audiences for an NIH director than the institute and center advisory councils, and the scientific societies, each of which is studded with opinionated members. NIH director Dr. Elias Zerhouni has been earning high marks with many owing to his frankness.



Zerhouni makes a point at the NIA advisory council meeting.

“I was impressed by Dr. Zerhouni’s presentation regarding the current status of NIH, particularly after seeing the facts regarding the research portfolio, including the funding of new initiatives balanced with continued R01 support,” said Dr. Mary J.C. Hendrix, president and scientific director at Children’s Memorial Research Center, Northwestern University, who sits on NHGRI’s council. “Furthermore, I have a better perspective now with regard to the global reality of our current funding situation and the strategies for the future. Without question, we scientists need to be more proactive in expressing our appreciation and need for continued support of the research enterprise.”

Observed Geoff Duyk, another advisor to NHGRI: “The director’s presentation provides important context for understanding the return on investment as well as the tangible benefits that have been and will be derived from the support of innovative health care research as a result of the growth of the NIH budget.”

Said Dr. Peter Spencer of Ohio State University, who serves on the NIEHS council: “The increase of 40 percent in the past 5 years in the cost of doing research suggests an unsustainable enterprise that will demand innovative solution, including increased outsourcing of research to less expensive parts of the world. I respectfully suggest this is a very important topic to debate in some depth at some future time.” He added, “The Roadmap was billed as 1 percent of the NIH budget, which is a correct statement, but this is 1 percent of the overall NIH budget, not the extramural program budget that university scientists focus on.”

Concluded another NIEHS council member, Dr. David Christiani, professor of occupational medicine and epidemiology at Harvard School of Public Health, who is also a professor of medicine at Harvard Medical School: “[It was an] excellent presentation by a very competent NIH director and advocate...we are in tough times, and Dr. Zerhouni discussed how we need to adapt. We stand to lose our world leadership in biomedical research; hence, the director needs to advocate, with our support, for increased support from Congress, even (especially!) in tough times.”



PROTÉGÉS

CONTINUED FROM PAGE 1

Top, l:

Partnering organizational leaders pause for a photo at the dinner symposium. They are (from l) Dr. Bruce Fuchs, director, NIH Office of Science Education; Sandra Shmookler, STIP director, MCPS; Gloria Seelman, master teacher and OSE STIP coordinator; and Dr. Peter Bruns, vice president for grants and special programs, HHMI.

Top, r:

Interns and friends socialize before science presentations begin. They are (from l) Thoi Ngo (Walter Johnson High School), Christopher Hill (John F. Kennedy High School), César Baëta (Wheaton High School), Dipankar Dutta (Paint Branch High School) and Belachew Telahun (Wheaton High School).

school year, students go to their normal classrooms in the morning and spend their afternoons in the lab for up to 20 hours per week.

The “key [to the program’s success] is the mentored research,” said Dr. Peter Bruns, HHMI vice president for grants and special programs. “It is clear to me that many of the students gained a real sense of ownership in their projects. Students were on top of the science behind the projects and understood the goals of their experiments.” Gloria Seelman, STIP coordinator in the NIH Office of Science Education, credits the students with the program’s success. The “students are motivated and choose to be in the program knowing how much work it will take,” she said.

The dinner was held on the HHMI campus to honor this year’s interns, 22 students and 11 teachers. Those who arrived early took advantage of the terrace views and garden setting to snap photographs with friends and family. Following the welcoming reception, students split into several conference rooms to give 15-minute PowerPoint presentations and answer questions from the audience. Each mini-symposium was led by a program scientist-advisor. After dinner, people gathered in the auditorium for a graduation-like ceremony where interns were called one by one to receive a certificate. Long-time volunteer scientists and others were also honored.

Under the guidance of senior scientists, interns contributed to an array of basic science and clinical research projects at NIH. Most came away with more than new lab skills. In the NIMH Molecular Imaging Branch, César Baëta

worked on a project to develop radiotracers for use in positron emission tomography (PET) imaging of brain lesions associated with Alzheimer’s disease. “I have a new perspective in chemistry that I hadn’t seen before,” he said.

Intern Dipankar Dutta says he “wasn’t sure what to major in and was considering engineering” when he first came to work in an NICHD laboratory. His project involved understanding how microtubules (tubular structural units in the cell) remain stable in destabilizing environments. Since completing the internship, Dutta has decided to major in biochemistry and biomedical engineering at the University of Maryland.

The experience “taught me to deal with time management,” observed Thoi Ngo, who worked in the Laboratory of Gene Regulation and Development, NICHD. His project centered on the interaction between ribosomes (the cell’s protein-assembly units) and factors that initiate protein synthesis. Results could translate into new therapies for illnesses caused by problems in protein synthesis.

“It was phenomenal to experience the world of science and the people in it,” noted Belachew Telahun, who worked in the section on molecular virology, NIMH. His project focused on identifying regions of the koala endogenous retrovirus (KoRV) envelope that are responsible for its infection in diverse species. He says it was a chance to “test out the career and see things that otherwise would not be possible.” Telahun, a recent graduate of Wheaton High School, plans to major in biochemistry at Princeton,



Interns gather at the reception. They include (from l) Everis Clarke Jr. (Walter Johnson High School), Grace Han (Thomas S. Wootton High School) and Namisha Dhillon (Northwest High School).

where he won a full scholarship.

Ernika Quimby of Sherwood High School also won a full scholarship. She plans to major in biology and an interdisciplinary program that combines philosophy, neuroscience and psychology at Washington University in St. Louis.

"This is the most amazing science program for high school students anywhere in the world," said Sandra Shmookler, director of STIP and special assistant to the MCPS superintendent. "They get to spend a year at the NIH and many of them get published. They really become scientists."

For more information, online applications and deadlines for the 2007-2008 school year, visit <http://www.mcps.k12.md.us/departments/intern/stp/>.

NIH Director's Awards Ceremony, July 12

All employees are invited to the 2006 NIH Director's Awards ceremony on Wednesday, July 12 at 12:30 p.m. in the Natcher Bldg. main auditorium. Awards will be presented in five categories: Director's Award, Mentoring Award, Director's Award for the NIH Roadmap for Medical Research, Commissioned Corps awards and EEO awards. Seating is on a first-come, first-served basis. Sign language interpreters will be provided. A reception will be held after the ceremony in the Natcher cafeteria. Individuals with disabilities who need reasonable accommodation to participate in the event should contact Tammy McClure, (301) 594-1460 or mclure@od.nih.gov.

NIGMS Adds Three to Scientific Staff

Three scientists recently joined NIGMS to manage grants on aspects of genetics, physiology and chemical biology.

Dr. Charles Dearolf, a program director in the Division of Genetics and Developmental Biology, is responsible for research grants on DNA replication and transposable elements as well as a range of postdoctoral fellowships. Before joining NIGMS, he was a scientific review administrator in the Center for Scientific Review. Earlier, Dearolf was an associate professor of pediatrics at Harvard Medical School, where he conducted research on the developmental and molecular genetics of *Drosophila*. He earned a B.A. in natural sciences and a Ph.D. in biology, both from Johns Hopkins University.

Dr. Sarah Dunsmore, a program director in the Division of Pharmacology, Physiology, and Biological Chemistry, is handling grants in the areas of inflammation and innate immunity, sepsis and cellular signaling. She comes from Brigham and Women's Hospital in Boston, where she studied epithelial cell function in the mammalian lung. Dunsmore earned a B.S. from Vanderbilt University with majors in molecular biology and mathematics and a Ph.D. in physiology from Pennsylvania State University.

Dr. Miles Fabian, also a program director in the Division of Pharmacology, Physiology, and Biological Chemistry, is managing research grants in the areas of bioorganic and medicinal chemistry, as well as some of the division's postdoctoral fellowships. He comes from Ambit Biosciences in San Diego, where he was a founding scientist and where he developed a bacteriophage display-based drug screening platform targeting eukaryotic protein kinases. Fabian earned a B.S. in chemistry from the University of Nebraska and a Ph.D. in biophysical chemistry from the University of California, San Diego.



Dr. Charles Dearolf



Dr. Sarah Dunsmore



Dr. Miles Fabian

NIH Training Center Classes

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

Buying from Businesses on the Open Market	8/8
Scientific and Technical Writing	8/9
NIH Foreign Travel (NBS) Travel System	8/15
Acquisition Refresher	8/21
Delegated Acquisition Training Program	8/22
Computer Skills Refresher	8/24
Budget Planning and Execution Refresher	8/25
Property Management Principles Refresher	8/25

Turkeltaub Named NIAMS Deputy Extramural Director



Dr. Madeline Turkeltaub has been appointed deputy director of the NIAMS Extramural Program. Previously, she had been clinical research project manager for NIAMS, as well as coordinator of the Office of Research on Women's Health's Specialized Center of Research program. She came to NIH from the Health Resources and Services Administration in July 2004.

Firoved To Serve as Science Policy Fellow



NIAID's Dr. Aaron Firoved has been chosen through a competitive application process as the 2006-2007 American Society for Microbiology (ASM) congressional science policy fellow. He currently is a postdoctoral Intramural Research Training Award

recipient working in Dr. Stephen Leppla's laboratory on anthrax toxin-mediated pathology. The ASM fellowship is designed to provide a public policy learning experience, to demonstrate the value of science-government interaction and to bring technical backgrounds and external perspectives to the decision-making process in Congress. In September, Firoved will enter a program administered by the American Association for the Advancement of Science in which fellows undergo orientation, attend weekly seminars and are assisted in finding placement as a special legislative assistant within a congressional office or committee. Fellows then spend 1 year working in legislative and policy areas.

NIAAA's Holmes Honored



Dr. Andrew Holmes received the 2005 Young Investigator Award from the International Behavioral and Neural Genetics Society on May 22. The award recognizes the contributions of exceptional young scientists to the field of behavioral and neural genetics. Holmes is chief of the section on behavioral

science and genetics in the Laboratory for Integrative Neuroscience, NIAAA. His principal area of research interest is studying how stress affects risk for neuropsychiatric disorders, including addictions. As part of the award ceremony, he gave a lecture titled, "The ascent of mouse: using mice to understand the causes and cures of neuropsychiatric disease," at the society's annual meeting in Vancouver.



Healthy Volunteers Needed for Dopamine Study

Healthy men and women ages 18-45 are needed for a dopamine imaging study. The study is designed to measure the concentration of dopamine in the brain through PET scans (using Fallypride tracer) and an MRI scan. Compensation is provided. Call 1-800-411-1222 (TTY 1-866-411-1010).

HIV-Positive Volunteers

HIV+ volunteers who are off anti-HIV medications and who have a CD4+ count of 300 or greater are needed for a research study. Compensation is provided. For more information on study 05-1-0123 call 1-800-444-2214 (TTY 1-866-411-1010).

Muscular Leg Pain?

If it is caused by blocked arteries and it occurs with activity but improves with rest, call NIH at 1-866-444-2214 (TTY 1-866-411-1010) for more information on a new study.

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.

Follicular Lymphoma Vaccine Study

Your own body may be your best defense. Patients age 18 and older who have not had chemotherapy and are diagnosed with stage II bulky or stage III or IV follicular lymphoma may be eligible for this study. Patients will receive chemotherapy then be randomly selected to receive a vaccine (created from the patient's own cells) that may eliminate tumor cells that remain after chemotherapy. Call 1-866-444-2214 (TTY 1-866-411-1010).

Healthy Volunteers Needed

NICHD is seeking healthy volunteers, ages 18-45, to participate in an investigational typhoid fever vaccine study (06-CH-0070) conducted at the Clinical Center. Compensation is provided. Call 1-866-444-2214 (TTY 1-866-411-1010).

Thyroid Cancer Study

An NIDDK study seeks individuals recently diagnosed with thyroid cancer. Call 1-866-444-2214 (TTY 1-866-411-1010) for details.

Siblings, One with Rheumatic Disorders and One Without

Siblings with systemic rheumatic disorders (one who has it, one who doesn't) are invited to participate in NIH study 03-E-0099. Compensation is provided. Call 1-866-444-2214 (TTY 1-866-411-1010).

Siblings, One with Rheumatoid Arthritis and One Without

Siblings, one with rheumatoid arthritis and one without, are invited to participate in NIH study 03-E-0099. Compensation is provided. Call 1-866-444-2214 (TTY 1-866-411-1010).

Former NIMH Psychologist Rubinstein Is Mourned

Dr. Eli A. Rubinstein, a scientist who was an authority on the effects of TV violence on children, died in Chapel Hill, N.C., on May 15. He was 87. He served for 20 years in various senior research and administrative positions in federal agencies in Washington, D.C., including the National Institute of Mental Health from 1958 to 1971.

At the time he left federal service, Rubinstein was assistant director for extramural programs and



behavioral sciences at NIMH and the highest ranked psychologist at the institute. One of his last responsibilities there was coordination of a 3-year national program of research on television and social behavior. The results were summarized in 1972 in a report by the Surgeon General's office.

Over his career, he published more than 100 articles and books on such topics as research in psychotherapy, the status of mental health manpower, the qualities of science administration and developments in the behavioral sciences. His major publications since 1975 were on policy issues relating to findings on the effects of television on the viewer. He co-edited the book *The Media, Social Science and Social Policy for Children* (1985) and *Big World, Small Screen* (1992). He also testified before various congressional committees on the effects of televised violence.

Born in New York City in 1919, Rubinstein received his Ph.D. in psychology at Catholic University in 1950. His last formal position was as adjunct research professor of mass communications at the University of North Carolina, Chapel Hill, from 1971 to 1978. His federal career was distinguished by the fact that he began in 1940 as the lowest grade clerk and ended his service, 30 years later, at the highest grade level, GS-18. He is one of only a handful of civil service employees ever to have accomplished that feat.

Rubinstein is survived by three children—NCI's Dr. Lawrence V. Rubinstein of Rockville as well as former NIH'ers Dr. Donald H. Rubinstein of Guam and Betsy Rubinstein of Chevy Chase—and three grandchildren.

NIH Colleagues Mourn Former Institute Director Whedon

By Jane DeMouy

Dr. G. Donald Whedon, who directed the institute known today as the National Institute of Diabetes and Digestive and Kidney Diseases from 1962 to 1981, passed away May 4 at his home in Clearwater, Fla. He was 90. Whedon's 19-year tenure made him one of the longest serving institute directors in NIH history.

"He was terrific, a very scholarly man, and very hard-working," Dr. Ruth Kirschstein said of her old friend. Now senior advisor



to the NIH director, Kirschstein recalled an incident when she and Whedon both headed institutes. The NIH director had called a Saturday morning meeting of institute and center directors that Whedon missed because he could not be reached at home. Later, Kirschstein noted, attendees discovered that Whedon was unreachable because he had

been in his NIH office all that morning. "He was a very good director," she remembered.

Established in 1950 as the National Institute of Arthritis and Metabolic Diseases, NIDDK became the National Institute of Arthritis, Metabolism and Digestive Diseases in 1972, then the National Institute of Arthritis, Diabetes and Digestive and Kidney Diseases in 1981, reflecting the expanding research mission and growing budget Whedon oversaw. The institute became NIDDK in 1986.

A widely respected expert in calcium metabolism, Whedon left Cornell University Medical College, where he was studying calcium balance in polio patients, to become chief of the Metabolic Diseases Branch of NIAMD's intramural program in 1952. As a researcher, he contributed to the knowledge that loss of calcium was responsible for osteoporosis. In 1956, he was appointed assistant director of NIAMD and became director in 1962.

"Don Whedon presided over the formative years of NIDDK," said Earl Laurence, a retired NIDDK deputy director. When Whedon retired in 1981, the institute's budget was four and a half times larger than in 1962. As the Space Age blossomed in the early 1970s, Whedon became a key advisor to NASA on potential metabolic changes that space travel might engender. He and his colleagues conducted the first studies to evaluate the effects of weightlessness and confinement on Gemini VII astronauts before any other country examined these issues. He

later was principal investigator in a series of Skylab studies that showed that lengthy exposure to weightlessness resulted in significant loss of calcium.

"Don was one of the pioneers in understanding the effects of space flight on bone metabolism," said Jay Shapiro, professor of physical medicine and rehabilitation at the Kennedy-Krieger Institute of Johns Hopkins and a former colleague of Whedon's. NASA awarded Whedon its Exceptional Scientific Achievement Award in 1974 and an Award of Merit in 1996. "He was a very nice guy, and a careful scientist," said Dr. Ed Rall, an NIDDK scientist emeritus and former NIH deputy director for intramural research.

During his nearly two decades of service, Whedon guided the institute through important developments in disease management and treatment. He recognized and promoted the significance of nutrition and developed the metabolic chamber for use in obesity research. He worked for the establishment of dialysis for people with end-stage renal disease and the funding to support it. "He was very direct, but reserved," observed Shapiro. "He was widely admired."

Under Whedon's watch, the institute initiated research and development contracts to support studies of chronic renal disease, according to former NIDDK director Dr. Phil Gordon. "Don recognized the need to develop mechanisms to support these innovative forms of research," he added. During Whedon's tenure, the institute also established its Epidemiology and Clinical Research Program in Phoenix as well as Clinical Research Centers for diabetes research.

Whedon wrote papers on bone metabolism in patients who were immobilized by convalescence or paralysis and numerous others on metabolic and kinetic studies of bone disorders, human energy metabolism and space medicine. In addition to his NASA awards, he received a PHS Superior Service Award in 1967 and honorary Sc.D. degrees from his alma maters. He graduated from Hobart College in 1936, and from the University of Rochester School of Medicine in 1941. Hobart honored him in 1967 and the University of Rochester did so in 1978. He is survived by a daughter, a son and two grandchildren. 🍎