

ABOVE • NIDA's Leslie Premo is determined to help find cures for cancer. See p. 11.

# nih record

*Plumbing the 'Behavioral Sink'*

## Medical Historian Examines NIMH Experiments In Crowding

By Carla Garnett

What happens to people who have to live in cramped quarters? From the mid-1950s to the late 1980s, a noted NIH ecologist and experimental psychologist developed a theory on crowding. To prove it, he built a community of rodents. But



Dr. Edmund Ramsden

could his animal studies tell us anything about human populations? A recent NLM History of Medicine lecture, "Finding Humanity in Rat City: John B. Calhoun's Experiments at NIMH," explored concepts—and controversies—raised by his research.

### Space, the Final Frontier

Calhoun wasn't the first scientist to wonder about the effects of overcrowding, said Dr. Edmund Ramsden of the University of Exeter and the London School of Economics. As early as the 1920s—when the number of people in American cities first outpaced population in rural areas—scientists began examining "density-dependent mechan-

SEE CROWDING, PAGE 6

## Conflict of Interest in Grand Rounds Spotlight

By Belle Waring

Recently, Ethics Grand Rounds called on NHLBI's Dr. Nancy DiFronzo and the University of Pennsylvania's Dr. Arthur Caplan to tackle, in microcosm, a topic of intense current importance to NIH at large—how to manage conflict of interest in the grantee community. The subject drew a full house in Lipsett Amphitheater.

"Questions about financial interests," said Dr. David Wendler, head of the unit on vulnerable populations in the Clinical Center's department of bioethics, "are becoming more and more prominent."

He described how, within the last decade or so, more than 70 percent of drug trials have shifted from academic settings to the private side. In this context, NIH's response to CoI is important to the scientific community.

DiFronzo is a project officer for the Blood and Marrow Transplant Clinical Trials Net-

SEE COI, PAGE 4

## Program Helps Mothers Give Babies Strong Start in Life

By Sarah Schmelling

It's not surprising to walk into a workspace at NIH and see a baby photo or two on display. But in Dr. Jane Balkam's office in Bldg. 31, Rm. B2B39, there are dozens.

For her, these happy children are more than uplifting—they're inspiration. The NIH Lactation Program, started by Balkam a decade ago, has helped a surprising number of NIH mothers successfully breastfeed, both before and after they return to work.

"I believe that breastfeeding is life-changing for both the mother and the baby," she says. "And the thought that through what we're doing, we can help hundreds if not thousands of mothers give babies a healthier start in life—that's pretty exciting stuff."

Balkam, an independent lactation consultant, first brought the idea of the program to NIH in 1998. Several institutes contributed funds to sponsor it as a pilot program, and

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NIH Record Office Bldg. 31, Rm. 5B41  
Phone (301) 496-2125 Fax (301) 402-1485

Web address <http://nihrecord.od.nih.gov>

Editor  
Richard McManus  
[rm26q@nih.gov](mailto:rm26q@nih.gov)

Assistant Editor  
Carla Garnett  
[cj9s@nih.gov](mailto:cj9s@nih.gov)

Staff Writers  
Jan Ehrman  
[je48b@nih.gov](mailto:je48b@nih.gov)

Sarah Schmelling  
[ss1116y@nih.gov](mailto:ss1116y@nih.gov)

Belle Waring  
[bw174w@nih.gov](mailto:bw174w@nih.gov)

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## briefs

### NIH 'Darwin Day' Call for Art Entries

Feb. 12, 2009, marks the 200th birthday of Charles Darwin and the 150th year since his seminal work *On the Origin of Species* was published. To recognize Darwin's scientific accomplishments, including his observations on plant and animal life, NIH is planning a variety of activities including a lecture series, film screenings and theater performances. From November 2008 through February 2009, the Clinical Center's art gallery spaces will display photographs of the Galapagos Islands, where Darwin visited. NIH employees and patients, as well as photographers from the community, may submit their photos for consideration by Aug. 29. Artists will be notified within 3 weeks if their work is selected. Contact Crystal Parmele or Lillian Fitzgerald at (301) 402-0115 with questions or submissions.

### Posters Due for 2008 Research Festival

The 2008 NIH Research Festival will be held Oct. 14-17. This year's program committee is cochaired by Dr. Lee Helman of NCI and Dr. Ira Levin of NIDDK.

The opening plenary session "Obesity: A Growing Energy Crisis" will feature presentations highlighting the cutting-edge obesity research that is being conducted in the NIH Intramural Research Program (IRP). It will be held in Masur Auditorium, Bldg. 10, on Tuesday, Oct. 14 from 9:30 to 11:30 a.m. Other events during the 4-day showcase of the IRP will include cross-cutting symposia and poster sessions; special exhibits on resources for intramural research; the job fair for postdoctoral, research and clinical fellows; the food and music fair; and the Technical Sales Association's scientific equipment tent show.

The committee is accepting submissions of poster abstracts online now through Aug. 5 by all NIH investigators and Bethesda FDA/CBER investigators. Posters in any area of research conducted within the IRP will be considered, but the committee is requesting a limit of one submission per first author.

For a preliminary schedule of events and online poster registration, visit <http://researchfestival.nih.gov>. The deadline is Aug. 5. Applicants will be notified of acceptance by email in late August.

For more information contact Paula Cohen or Amy Blackburn at [researchfest@mail.nih.gov](mailto:researchfest@mail.nih.gov).

### Principles of Clinical Pharmacology Course

The Principles of Clinical Pharmacology course, sponsored by the Clinical Center, will begin in Lipsett Amphitheater, Bldg. 10 on Sept. 4. The course will be held Thursday evenings from 6:30 to approximately 7:45 and will run through Apr. 23, 2009.

The course covers topics such as pharmacokinetics, drug metabolism and transport, assessment of drug effects, drug therapy in special populations and drug discovery and development.

The faculty, led by former course director Dr. Arthur J. Atkinson, Jr., has also prepared and edited a textbook, *Principles of Clinical Pharmacology*, Second Edition (2007) which follows the sequence of the course lectures. This textbook is highly recommended and is available in the Foundation for Advanced Education in the Sciences, Inc. Bookstore in Bldg. 10 and through Amazon.com.

Since the course was first offered 11 years ago, it has expanded beyond the CC to include a number of off-site partners. Last year there were approximately 225 students from 15 long distance partners in addition to the nearly 375 enrollees at NIH.

Registration is open to all interested individuals at no cost unless the course is being taken for graduate credit. The course may be taken for credit through the Foundation for Advanced Education in the Sciences as PHAR 500 I and PHAR 500 II; contact FAES directly at (301) 496-7976 before Aug. 22. Certificates of participation will be awarded at the end to all students who attend 75 percent of the lectures. More information is available at [www.cc.nih.gov/training/training/principles.html](http://www.cc.nih.gov/training/training/principles.html) or by calling Donna Shields, (301) 435-6618.

### NCBI's Lipman Is Award Finalist

*Dr. David Lipman, director of the National Center for Biotechnology Information at the National Library of Medicine, is a finalist for a "Service to America Medal," for leading the development of the PubMed Central*



*database. The non-profit organization Partnership for Public Service presents the medals annually to federal workers who make "high-impact contributions critical to the safety, health and well-being of Americans." PubMed Central is a digital archive of biomedical literature that provides the public with free, online access to the full text of journal articles. Partnership for Public Service said PubMed Central "enhances biomedical research in a way that is accelerating scientific discovery and increasing public knowledge." Lipman is one of 29 finalists for eight awards that will be announced in September.*

nih record



## NICHD's Spong Honored for Maternal-Fetal Medicine Research

By Robert Bock

"It's the only field of medicine where you can witness pure joy," said Dr. Catherine Spong about her decision to specialize in obstetrics and gynecology. She became chief of NICHD's Pregnancy and Perinatology Branch in 2001. She said that being part of a childbirth is a great privilege, as the event often is among the happiest times in a person's life. When she came to NIH in 1998, she began a research career that paralleled her work in the delivery room. By focusing on maternal-fetal medicine research, she could work toward the goal of ensuring a healthy birth for all new mothers and their infants.

Recently, the Society for Maternal-Fetal Medicine (SMFM) acknowledged Spong for that career with its most prestigious award. The SMFM Achievement Award is presented each year to a leader who has made outstanding contributions to the field.

The society cited Spong's work on Down syndrome and fetal alcohol syndrome. She began this research soon after coming to NICHD, when she joined the section on developmental and molecular pharmacology. She was interested in a substance called vasoactive intestinal peptide (VIP).

"The literature showed that fetal animals deprived of VIP had a lot of problems," she said.

VIP was first isolated from the digestive tract. Early studies revealed that the substance was abundant in the nerve bundles that permeate the intestines. It has since been found throughout the nervous system.

"If you deprived pregnant animals of VIP at a critical time during pregnancy, you saw a syndrome very much like fetal alcohol syndrome," Spong said, referring to earlier work done under the direction of then section chief Dr. Douglas Brenneman. He and his colleagues also had learned that VIP protected brain and nerve cell cultures from injury.

In her early work at NICHD, Spong discovered that for the first 10 days of life, the

fetus couldn't produce VIP and instead relied on VIP from the mother. She explained that VIP doesn't exert its protective effect directly. Rather, it stimulates cells of the nervous system to release other substances. From these substances, Brenneman's group isolated two proteins. Fragments of these two proteins were found to have biological effects. These protein, or peptide, fragments were named NAP and SAL, for the first letters in the amino acid sequences that comprise them.

Spong, who became chief of the NICHD unit on perinatal and developmental neurobiology in 2004, has continued to investigate the protective effects of these two substances during her years at NIH. She and her coworkers learned that the two proteins could prevent alcohol-induced birth defects and learning deficits in baby mice. They have since found that NAP and SAL given at the same time prevent alcohol-induced learning deficits by protecting the NMDA receptor. The receptor, found on the surface of brain cells, plays a key role in long-term memory and learning.

Recently, Spong and her coworkers have begun studying the effects of the two compounds in a mouse model of Down syndrome. When given in fetal life, NAP and SAL prevented some of the developmental delay otherwise seen in the mice. Moreover, the two peptides also appear to increase learning in healthy mice. In fact, NAP and SAL boosted learning not only when given to fetal mice, but also when given to adult mice.

Spong joined the NICHD Extramural Pregnancy and Perinatology Branch in 2000, to serve as program scientist for the Maternal-Fetal Medicine Units Network. The network of 14 research hospitals conducts studies on childbirth, with a particular emphasis on reducing premature birth. Infants born prematurely are at increased risk of death and lifelong disability.

"Under her stewardship, the many talented and strong-willed researchers who are part of the MFMU Network have worked together efficiently and cordially, and have completed several practice-changing trials," wrote Dr. Katherine Wenstrom, SMFM's immediate past president, in a letter to NICHD director Dr. Duane Alexander.

During Spong's tenure, the network made the first real breakthrough in reducing the risk of preterm birth, a problem that has long confounded researchers and public health officials. In 2003, a large network study found that the drug 17-alpha hydroxyprogesterone caproate reduced the chances of giving birth prematurely by 34 percent in a large category of at-risk women—those pregnant with a single child and who had previously given birth prematurely. A follow-up study revealed that the treatment did not reduce the risk of preterm delivery in women pregnant with twins.

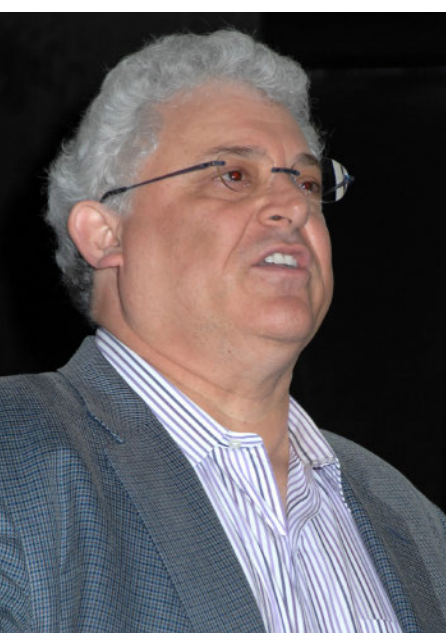
Another network study under Spong's direction found that a prior Cesarean delivery poses few risks for women who deliver vaginally in subsequent pregnancies. Still another study evaluated a monitor for measuring blood oxygen levels of a baby during labor. The expensive monitor—expected to provide information useful for preventing birth complications—was found to offer no apparent benefit.

When she's not busy with her research at NICHD, Spong spends time with her husband and three small children. "The most important thing in life is family," she said. She's also a staff perinatologist at the INOVA Alexandria Hospital, in Alexandria, Va. Once a week, she performs ultrasound exams and consults with patients and families. She also sees high-risk patients on an on-call basis.

"The SMFM Achievement Award is the kind of award that most individuals receive at the end of their career," Wenstrom wrote to Alexander. "The fact that Dr. Spong has already made the monumental contributions to our society and our specialty that qualify her for this award illustrates her tremendous talent and sterling character. The NIH is fortunate to have such a superstar among its family." 📌

## COI

CONTINUED FROM PAGE 1



*Dr. Arthur Caplan, chair of Penn's department of medical ethics, spoke recently at a Grand Rounds session on conflict of interest.*

work, which sponsors clinical trials in non-NIH institutions. She reviewed the facts of the case for rounds.

"Let's call it the Wonder Study," she said. "It was to be conducted at 35 clinical sites around the country."

As a randomized phase III drug trial, the primary objective was "to determine whether the Wonder Drug improves overall survival for patients receiving a stem cell transplant for the treatment of their hematological malignancy."

The drug was previously tested in a phase I trial, which evaluates safety in humans, and phase II clinical trials, which measure therapeutic efficacy. Based on encouraging findings from these studies, the drug was selected for further evaluation. Now on the cusp of phase III, it would compare the drug's results with standard treatments in a relatively large group of patients whose malignancies had previously failed multiple different therapies.

But there was a problem. "One of the sites," DiFronzo said, "revealed that the institution and one of the co-investigators were partial owners of a patent related to a drug used in the study."

NIH policy states that extramural institutions participating in NIH-funded studies must have policies for disclosing and managing CoI. But NIH (as of this Apr. 2 session of rounds) hadn't specified how their conflicts should be managed or disclosed.

This was an extramural study and DiFronzo turned to the Bioethics Consultation Service for advice.

The scientist/patent-owner—"Let's call him Dr. No," said DiFronzo—had not designed the study, nor would he be involved in data analysis. Yet he planned to make referrals, so he might be involved in obtaining patients' informed consent.

Meanwhile, the network data coordinating center, which reviews materials for studies and manages the clinical trials, noted that the consent included a section titled "Who could benefit financially from the study?"

This portion explained that both Dr. No's institution and Dr. No had partial ownership of the patent. But DiFronzo still needed to know:

- Is it appropriate for a patent holder to be a co-investigator?

- If so, is disclosure in the consent form sufficient for managing the conflict?

- Is it appropriate for a co-investigator who partially owns patents to refer patients for enrollment in the trial? Or to obtain informed consent for the trial?

In his response, Caplan, chair of Penn's department of medical ethics and director of the Center for Bioethics, defined CoI as:

- Any factor, interest or incentive that diverts a physician or scientist from his/her primary duty.
- Any factor or incentive that negatively impacts expected impartiality.

When we look at this case, he said, we're asking: "Are there going to be diversions—because of patents and ownership interests—from the duty to protect subjects and generate new knowledge?"

"I think [scientists with an equity or patent interest] can be involved in the design of the study," he said. "In some situations they have to be because no one else [understands] what the technology is."

Should they assess the results?

"No," Caplan said. "There we do have the perception, if not the reality, that financial interest may distort your role in trying to protect the subject...I think you do need an independent assessment."

Can the individual be involved in subject recruitment and can his patients then be referred?

"His patients have every right to be referred," Caplan said. "It is unjust and unfair to exclude them...Yet somebody else on the site should be doing the recruitment just to keep the roles clear...some kind of informed consent advisor who is not paid just to recruit subjects."

During Q&A, Caplan suggested modernizing the consent process with modules that are image-oriented and interactive, accompanied by patient quizzes to assess comprehension.

To stay abreast of NIH-wide policy on conflict of interest, visit <http://grants.nih.gov/grants/policy/coi/index.htm>. 🔍

## VRC Launches Mobile Clinic

If the presence of a large purple, red, white and blue truck parked near Bldg. 40 on June 6 didn't indicate that something was happening, the announcements over the bullhorn did. Turns out, the bullhorn was an appropriate symbol for the event—the launch of a mobile clinic by NIAID's Vaccine Research Center and the Clinical Center.

Dr. Barney Graham, a senior investigator and chief of the clinical trials core and the viral pathogenesis laboratory, said that's how it's done in Tanzania. There, health educators attract thousands to HIV/AIDS workshops by driving down the street and calling out with a bullhorn. The new mobile clinic will serve a similar purpose much closer to NIH—facilitating community involvement and clinical research education in the Washington, D.C., area.

The mobile unit is an extension of the VRC's vaccine clinic at the Clinical Center, according to Graham. Currently located on 12W in Bldg. 10, the clinic will eventually move to 5NES. Until then, the clinic team will use the mobile unit to raise awareness about HIV vaccines, increase the capacity for enrolling healthy adults into outpatient studies and make participation in clinical trials easier. "These volunteers are typically employed, busy people and we hope the mobile clinic will make enrollment in trials more convenient, and at the same time extend the visibility of NIH and the Clinical Center," he said.

VRC staff plan to take the clinic anywhere they are currently involved in HIV/AIDS and other infectious disease outreach, including neighborhoods in Baltimore, Frederick and the District. They will continue to work with HIV/AIDS organizations, city health departments, churches, colleges and outreach-event organizers, but in an expanded capacity. The van's first community appearance was June 15 at the 33rd annual Capital Pride Festival, the fourth largest lesbian, gay, bisexual and transgender celebration in the U.S. with more than 200,000 attendees and more than 200 community organizations, local businesses and corporations participating.—  
Jenny Haliski

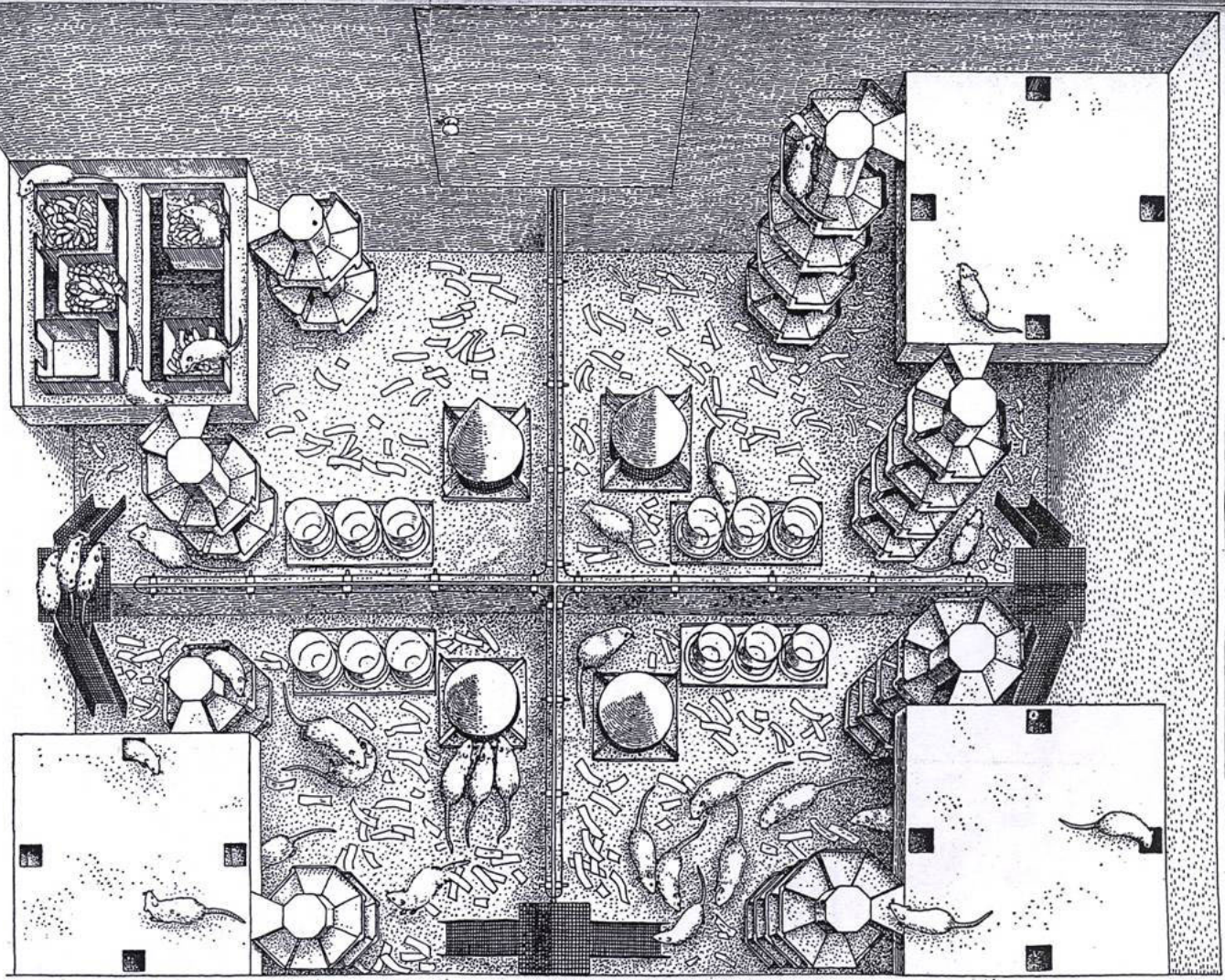


*Standing in front of the mobile clinic are VRC team members (from l) Julie Martin, Dr. Barney Graham, Rhonda Washington-Lewis, Brenda Larkin, DeAngela Hamilton, LaChonne Stanford, Pamela Costner, Ingelise Gordon, Tierra Burrell, Sandra Sitar, Sarah Hubka, Laura Novik, Alexis Seguin, Diane Johnson, Yesenia Merino, Olga Vasilenko and Ravenna Motil-McGuire.*



*An interior view of the patient care area inside the mobile clinic*

PHOTOS: JOHN CRAWFORD



## CROWDING

CONTINUED FROM PAGE 1

**Above:** Calhoun's "rat utopia" experiments were conducted at a Montgomery County farm. In the graphic above (from Ramsden's lecture slides), rodents are shown in four pens separated by electrified partitions. As the population grew past capacity, Calhoun observed a developing social hierarchy with toxic pathologies.

isms." By 1930, sociologist Louis Wirth had described urban life as one of continuous aggression, frustration, interference and conflict as a consequence of an overload of social interaction leading to depleted social relations, personal grief and personality disorders.

But were there identifiable factors that prevented species from overpopulating their space? Concerned with the effects of the physical environment on human behavior, health and well-being, Calhoun turned to the lab "to gain a better understanding of the processes that govern population dynamics," Ramsden said.

### Paradise for Mice

Working at NIMH in 1954, Calhoun launched several experiments with rats and mice. In his first series of tests, he placed 32 to 56 rodents in a 10- by 14-foot case in a barn on a Montgomery County farm. Using electrified partitions, he divided the space into four rooms. Each was designed to support 12 adult brown Norway rats. Rats could move between the rooms only via the ramps he built. Because Calhoun provided unlimited water and food as well as protection from predators, disease and

weather, the critters were said to be in "rat utopia" or "mouse paradise," Ramsden explained.

"The one thing they did not have was space... He allowed the population to grow to 80 in the first instance."

As the scientist observed, a social hierarchy developed: One despot male and 9 females claimed the two defensible pens with only one ramp provided; 60 others crowded into the other 2 pens with two ramps. Calhoun found that "rodent utopia" rapidly became "hell."

He described the onset of several pathologies: violence and aggression, with rats in the crowded pen "going berserk, attacking females, juveniles and less-active males." There was also "sexual deviance." Rats became hypersexual, pursuing females relentlessly even when not in heat.

The mortality rate among females was extremely high. A large proportion of the population became bisexual, then increasingly homosexual, and finally asexual. There was a breakdown in maternal behavior. Mothers stopped caring for their young, stopped building a nest for them



and even began to attack them, resulting in a 96 percent mortality rate in the two crowded pens. Calhoun coined a term—“behavioral sink”—to describe the decay.

### Too Close for Comfort

“He clearly saw these rats and mice as models for man,” Ramsden explained. “Life in an unnatural urban environment of ever-increasing density could result in the complete devastation of humanity.” Calhoun discussed his findings in a widely referenced paper, “Population density and social pathology,” published in 1962 in *Scientific American*, and would continue his experiments for several more decades. He noted that even when population levels dropped and more space became available, the community never recovered. “Even when healthy rodents are placed in the new environment,” Ramsden said, “they never breed successfully again.”

Partly because of the era, his studies hit home. “Calhoun’s rats seemed to mirror a number of social ills and concerns in a very eventful period in American history,” Ramsden said.

From anthropologists and city planners to landscape architects and lawmakers—all paid close attention. The term “behavioral sink” leaked beyond academia, becoming part of pop culture. Writers on both sides of the Atlantic—from journalists to comic book authors—used the phrase as a synonym for the pitfalls of city life.

### Abandoning the Rat Race

Making the leap from mouse to man, however, was not so simple. “This is where it gets controversial,” Ramsden said, describing how other scientists tried to replicate Calhoun’s results in human populations.

“How do you map Calhoun’s pathologies onto human society? How do you measure sexual deviancy? [Researchers] chose venereal disease, illegitimacy and divorce. That stirred up some controversy. How do you measure breakdown

in maternal behavior? They chose public welfare and child assistance rates.”

Others turned to the laboratory. The psychologist Jonathan Freedman recruited high school and university students to carry out a series of experiments that measured the effects of density on behavior. He measured their stress, discomfort, aggression, competitiveness and general unpleasantness. When he declared to have found no appreciative negative effects in 1975, the tide began to turn on Calhoun’s utopia.

Freedman’s work, Ramsden noted, suggested that density was no longer a primary explanatory variable for society’s ruin. A distinction was drawn between animals and humans.

“Rats may suffer from crowding; human beings can cope...Calhoun’s research was seen not only as questionable, but also as dangerous.”

### Crowd Control

Freedman suggested a different conclusion, though. Moral decay resulted “not from density, but from excessive social interaction,” Ramsden explained. “Not all of Calhoun’s rats had gone berserk. Those who managed to control space led relatively normal lives.” Striking the right balance between privacy and community, Freedman argued, would reduce social pathology. It was the unwanted unavoidable social interaction that drove even fairly social creatures mad, he believed. Culture and upbringing also play key roles in adapting to environment, others suggested.

Further studies of space design seemed to prove this. One such study compared students living in two different styles of college dormitory—corridor versus a suite style. Those in the corridor perceived the environment as crowded and exhibited increased stress levels. Those in the suite style, where the dormitory was partitioned into a series of separate communal areas, fared better, even though the level of density was similar, Ramsden said. “By comparing the two, [researchers] were able to provide evidence both of pathology and its amelioration through more effective design.

“Calhoun’s studies remained influential in places,” Ramsden concluded, “but for the social sciences more generally, it seemed that simply associating Calhoun’s rodent universes with pathology instead of its amelioration was an opportunity considered too attractive or perhaps too convenient to miss.” ●

### Left:

*Medical historian Ramsden explored concepts of overcrowding in a recent NLM History of Medicine lecture, “Finding Humanity in Rat City: John B. Calhoun’s Experiments at NIMH.”*

PHOTOS: MICHAEL SPENCER

## LACTATION

CONTINUED FROM PAGE 1

it was almost immediately successful. “What we found after 2 years is that we had rates of breastfeeding duration that were well above the national and state averages,” she says. After that trial period, the Office of the Director decided to make it an ongoing program, and it’s now a part of the Work/Life Center.

The core facets of the program have remained the same since the start: prenatal breastfeeding classes, telephone support for employees on maternity leave, return-to-work consultations and 26 onsite lactation rooms in multiple buildings. Balkam says the telephone consultations—starting just after a baby is born—come at a particularly crucial time, when difficulties with breastfeeding can cause a mother to stop trying.

“With the short stays new mothers often have in the hospital, they don’t always get the instruction or support they need,” she explains. “So a lot of times we can help them over what seems like an insurmountable issue...with a little bit of coaching.”

This advice, given in a timely fashion, “can be the difference between somebody giving up, and somebody continuing to feed the baby and being successful for a long period of time.”

Then, as the time for the mother’s return to NIH approaches, Balkam, along with her fellow consultant, Colleen Prorok, help “strategize” how the woman will continue to provide breast milk after her work resumes.

“If the new mother knows how she’s going to support her milk supply when she’s separated from her baby, where she’s going to go, what type of equipment is the most effective, how often she should pump, how to store and handle the milk appropriately in a workplace situation, those things can go a long way toward helping her be successful.”

And why is it so important to breastfeed successfully? According to HHS’s Office on Women’s Health, breast milk contains more than 200 infection-fighting agents that cannot be replicated. Research shows that babies who aren’t

breastfed exclusively for their first 6 months are more likely to develop allergies and obesity later on, and are more likely to suffer from colds, flu, ear infections and other respiratory illnesses, and to make more trips to the doctor. On top of this, Balkam says there are interpersonal benefits for both the mother and baby. “One can certainly bond with a baby when they’re formula feeding,” she adds. “But I do think a very special bond is made with a baby when new mothers nurse their babies.”

Balkam came to this career for both professional and personal reasons. As a pediatric nurse practitioner, she would often work with new mothers who would say things like, “I’d like to breastfeed, but I know I have to go back to work in a few weeks, so I’m not going to bother.” At the same time, as a mother of four sons, she saw firsthand how difficult it could be to try to breastfeed while working. When her oldest son was born 25 years ago, “you were on your own, hiding out in the restroom” using inferior pumping equipment, she says. When she heard about lactation programs being developed in California, she quickly began her training.

Even though workplace lactation programs are no longer unusual, Balkam believes NIH’s is a particularly strong one. They work with more than 300 women per year on average, and in a recent survey of participants, 96 percent of respondents said they’d recommend the program to a coworker and 97 percent said the program improved the quality of worklife here.

The program also benefits NIH, she believes. “The payoff to the organization is that when more mothers breastfeed, the results are healthier babies. That means less time that a mother needs to take off to take care of a sick baby, and lower health care costs,” she says.

Many women have gone through the program more than once, she notes. Others, who have had babies while working elsewhere, come to her raving about how much better the NIH program is than at other worksites. But Balkam, who says marketing isn’t her strong suit, isn’t as interested in going out to tout the program’s successes as she is in participating in it every week.

“My thing is really working with mothers and babies,” she says. “That’s what gets me up and going in the morning.”

For more information, go to <http://hr.od.nih.gov/worklife/lactation>. 📍



*Dr. Jane Balkam pioneered the NIH Lactation Program a decade ago and says it still “gets me up and going in the morning.”*



## Small Business Office Holds Monthly Outreach

The HHS Office of Small Disadvantaged Business Utilization director, Debbie Ridgely, has an office in the NIH Office of Acquisition and Logistics Management. The office collaborates with NIH contracting chief Diane Frasier to promote implementation of small business regulations and the achievement of small business goals.

The office holds monthly vendor outreach sessions at HHS headquarters, weekly vendor counseling sessions and training and monitoring of program and contracting officials to promote the small business program.

In an effort to support acquisition planning, they developed and manage an electronic market research database titled E-Portals in Commerce (e-PIC), <http://epic.od.nih.gov>, which maintains capability statements for small and large businesses.

When forecasting your program requirements, the OSDBU suggests considering Vantus Technology Corp., currently developing a system for design, virtual validation and production of orthopedic implants for soldiers and aging veterans. Vantus has secured partnerships with academic and commercial collaborators and hopes to transfer its leadership in advanced manufacturing applications of medical devices to NIH's advancement of translational research as it relates to telemedicine, osteosarcoma/osteoarthritis, pediatrics and gerontology.

While the NIH small business goal is 27 percent for FY 2008, the OSDBU welcomes all requests for assistance from program and contracting personnel to increase partnership with industry through use of small and disadvantaged businesses. For more information call (301) 496-9639 or send email to [sbocalendar@mail.nih.gov](mailto:sbocalendar@mail.nih.gov).



*The winning weight-loss team—Four Girls and a Guy—including (from l) Beth Levy, Brooke Sydnor, Troy Naecker, Shukriyah Satterfield and Holly Thorpe.*

## Child Care Center Staff Loses Big, Deliberately

The staff of the NIH Executive Child Development Center decided to take the President's Challenge seriously this year.

Twenty women and men at the off-campus NIH child care center on Executive Blvd. formed teams and competed in a "Biggest Loser" contest as part of the NIH fitness challenge. For 12 weeks, each staff member participated in a Monday morning weigh-in. Teams wrote slogans, created logos, made T-shirts and planned activities to help lose pounds. This was in addition to their regular responsibilities of indoor and outdoor learning activities with the 260 children enrolled in the center.

The Office of Research Services salutes the winning team "Four Girls and a Guy" and congratulates the entire staff who lost a total of nearly 300 pounds, with the individual winner losing 15 percent of her body weight. The staff celebrated with a "Bring your favorite healthy food" potluck, the first of its kind for the center. They plan to continue the effort until December under the guise, "The Biggest Maintainer."

## NIDA Council Welcomes Five New Members

*Five members were recently named to the National Advisory Council on Drug Abuse. NIDA deputy director Dr. Tim Condon (l) and NIDA director Dr. Nora Volkow (fifth from l) welcomed (from l) Dr. Hazel Szeto, professor, department of pharmacology, Weill Medical College, Cornell University; Dr. Steven Childers, professor, department of physiology and pharmacology, Center for Investigative Neuroscience, Wake Forest University School of Medicine; Dr. Xavier Castellanos, Brooke and Daniel Neidich professor of child and adolescent psychiatry, department of child and adolescent psychiatry, Child Study Center, New York University School of Medicine; Dr. Anita Everett, section director, commu-*



*nity and general psychiatry, Johns Hopkins Bayview Medical Center; and Dr. Thomas Crowley, professor, department of psychiatry, and director, division of substance dependence, University of Colorado Health and Science Center.*

## NIDA Studies Exercise as Addiction Prevention Tool

It is well known that exercise is an important part of a healthy lifestyle, but can it prevent addiction too? The National Institute on Drug Abuse held a conference in June to explore the possible role for physical activity in substance abuse prevention. As part of this effort, NIDA announced a \$4 million grant initiative to spur further research in this emerging area.



Organizers of the recent NIDA meeting on exercise and substance abuse included (from l) Drs. Augie Diana, Aleta Meyer and Marsha Lopez.

More than 100 scientists from around the country gathered for the 2-day conference to: share the state of the science in epidemiology, basic science and intervention research focused on physical activity as a strategy to prevent substance abuse; facilitate the development and testing of new paradigms for prevention; and promote future research in these areas.

“Exercise has been shown to be beneficial in so many areas of physical and mental health,” said Dr. Nora Volkow, NIDA director.

“This cross-disciplinary meeting was designed to get scientists thinking creatively about its potential role in substance abuse prevention.”

Presentations targeted the importance of the social context in which physical activity occurs, including school and the natural environment, as well as the relationship of physical activity to physical disorders (obesity), social reward structures (motivation), cognition (attention, impulse control and other motor skills) and mood disorders (depression, stress), all of which may play a role in substance abuse. To facilitate research on the role of exercise, attendees learned about and saw demonstrations of tools that assess physiological responses to exercise and physical activity.

On the second day of the meeting, Sally Squires, the reporter of the *Washington Post’s* Lean Plate Club, shared insights and feedback from her column on what the public wants to know about physical activity and health.



VCU’s Dr. Steve Woolf at NCCR workshop

## NCCR Workshop Links Translational Medicine, Community Engagement

Partnerships among researchers, health care providers and patient communities are helping to bring research advances to the people who need them. By engaging these groups in this two-way mutually beneficial communication process, researchers are better able to translate discoveries made in the lab and then apply this knowledge to improving patient care.

The National Center for Research Resources recently held a workshop to discuss this topic. Titled “Accelerating the Dissemination and Translation of Clinical Research into Practice,” the event drew more than 400 participants from 34 states, 2 Canadian provinces and South Korea. Topics included defining translational medicine, public-private collaboration, the importance of addressing health disparities and the role of information technology.

Speakers from numerous government and health-related organizations and many others from universities and private physician practices shared examples of successful research collaborations and the importance of community-engaged research.

Dr. Steve Woolf, professor of family medicine at Virginia Commonwealth University, was one of three keynote presenters. He emphasized the importance of bringing a variety of stakeholders to the table—not just traditional researchers and clinicians.

Woolf said translational medicine is “like an orchestra.” The music, he noted, comes from getting a variety of talented musicians out on stage along with a conductor. “The same is true in research where everyone needs to be present for health to really improve.”



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

### Dry Mouth

Do you have dry mouth after treatment for head and neck cancer? Participate in an NIH clinical research study.

### Asthma Study

NIH is seeking adults 18-75 years old with asthma to participate in a research study. Compensation is provided.

### Are You a Working Breast Cancer Survivor?

Women breast cancer survivors, 1 to 10 years after primary cancer treatment, whose breast cancer has not spread and women without cancer history are needed for online study on cognitive function and work. Must be currently working full-time, ages 18 through 65, and without a history of adult ADHD (prior to cancer), dementia, brain injury, epilepsy, drug or alcohol abuse. You will need Internet access with connection speed faster than dial-up. Study includes completing questionnaires and a short online test of memory. The study will take about 60-75 minutes to complete. To see if you are eligible, go to <http://cim.usuhs.mil/cancerstudy>. For more information, call Lisseth Calvio at (301) 295-9660 or email [cogworkstudy@gmail.com](mailto:cogworkstudy@gmail.com).

### Fraternal Twins Needed for Study of Brain Development

Same-sex fraternal twins ages 5-25 are needed for an NIMH study of typical brain development. Participants must be in good overall physical and mental health. Study participation includes several hours of cognitive testing and a structural MRI scan. Monetary compensation is provided. If interested, contact Catherine Weddle at [twinstudy@mail.nih.gov](mailto:twinstudy@mail.nih.gov) or (301) 435-4515.

### Heart Disease Risk Factors Study Recruits

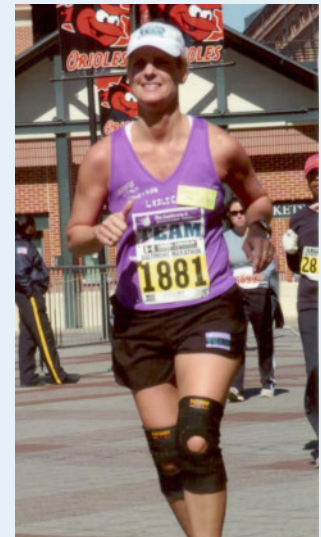
Healthy black African volunteers are needed for a study investigating the relationship of obesity to heart disease risk factors. Volunteers must be born in Africa, non-diabetic and between ages 18-49. There will be 3 outpatient visits to NIH. Compensation is provided. Call (301) 402-7119 for information. Refer to protocol 99-DK-0002.

### Study of Pre-Menopausal African-American, Caucasian Women

Healthy African-American and Caucasian women volunteers are needed for a study investigating the effect of the American diet on vascular disease risk. The study will look at the effect of fat in the blood before and after a meal. Volunteers must be non-diabetic, pre-menopausal women between the ages of 18-49 years. The study requires 3 outpatient visits followed by a week of daily visits to NIH for breakfast, weight measurement and meal pick-up. Compensation is provided. For information call (301) 402-7119 and refer to protocol 07-DK-0163.

### It's Personal NIDA's Premo Races to Raise Awareness About Leukemia

Leslie Premo will be thinking of her cousin, Scott Dale, when she takes on the Leukemia and Lymphoma Society's Triple Crown Challenge on Sept. 14. As Animal Care Program coordinator for the National Institute on Drug Abuse's Intramural Research Program, she is used



to challenging work. But the Triple Crown is part of the largest endurance sports training program in the world—the society's Team in Training program.

According to her colleagues, Premo's participation with the Leukemia and Lymphoma Society has been longstanding and heartfelt. Her cousin Scott succumbed to leukemia and died 8 days after his daughter, Jamisyn, was born. He was 43, and left behind not only Jamisyn, but also his parents, sister Shawna and two nieces, his wife, a 15-year-old son and two stepdaughters. Scott's leukemia was undiagnosed until several days before his death.

In order to fulfill the requirements for the Triple Crown, Premo needs to complete a marathon, century (100-mile) bike ride and a triathlon. In 2006, she completed the Baltimore Marathon and in 2007, she biked 100 miles in Salisbury, Md. After finishing the Nation's Triathlon in Washington, D.C., in the fall, Premo will become a member of an elite group of athletes that is leading the way to a cure for blood cancers. No matter where she places in the event, Premo feels she is already a champion.

"Participating in Team in Training has been a rewarding experience for me," she said. "The commitment by team members and coaches is outstanding and I suggest participation by anyone who aspires to make a difference in not only cancer patients' lives, but also their own. My triple-crown challenge will be completed at the Nation's Triathlon in September, but I anticipate many more events on my horizon. I am relentless. Until there is a cure, there is no finish line."

Premo has been a NIDA employee for 7 years. In her current post, she is responsible for regulatory compliance to ensure laboratory animals are utilized and cared for in a humane manner. She previously worked for the U.S. Army, both as a contractor and as a member of the Armed Forces, and is working on her Ph.D. in public policy (with a concentration in health policy) at the University of Maryland, Baltimore County.

For more information on Premo and other Team in Training participants, visit [www.teamintraining.org](http://www.teamintraining.org).



## Senators Tour New NIH Research Facility

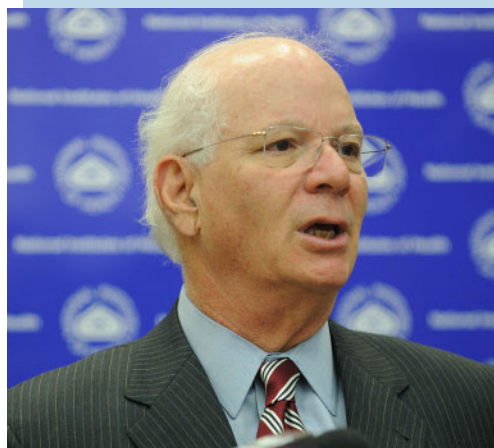
U.S. Senators Barbara Mikulski (D-MD) and Benjamin Cardin (D-MD) on June 2 visited NIH's newest research facility, the Biomedical Research Center (BRC) in Baltimore, to support and promote scientific research.

Led by NIH director Dr. Elias Zerhouni, with NIA director Dr. Richard Hodes and NIDA director Dr. Nora Volkow, the senators entered the BRC atrium and spent the morning discussing the scientific research taking place in the new venue. The session featured a briefing by Dr. Mark Mattson of NIA on studies in Alzheimer's and other neurodegenerative diseases; Dr. Elliot Stein of NIDA on imaging of brain changes due to drug abuse; and Dr. Samuel Durso of Johns Hopkins on Hopkins' "Senior Strategy" program to improve health outcomes for older people.

The approximately 500,000-square-foot, two-tower structure is a leased building on the Johns Hopkins Bayview campus, where NIA and NIDA have long conducted intramural research in other facilities. The new structure allows expansion and updating of key research labs and houses laboratory, vivarium and administrative activities. Zerhouni noted that challenges in constructing the building for state-of-the-art experiments have been met and the ability of approximately 800 scientists to work in the new facility "will be second to none."

The senators' visit was a celebration of the BRC, and, more broadly, the NIH scientific enterprise. In remarks to scientists, administrators and media, Mikulski and Cardin praised the work of NIH researchers and the significance of studies to address the needs of an aging population and the issues of drug abuse.

"We've got to do things differently," Cardin noted, in meeting these challenges in the future. He said the work being done at BRC will play a critical role. Mikulski, who was active in the development of the site, praised the facility. However, she stated, "It's not about the building. Our job is to save lives," she said, highlighting NIH's importance in helping Americans to live longer, better and healthier lives. "We're going to win Nobel prizes here."



### Top:

*The Biomedical Research Center (BRC) in Baltimore, an approximately 500,000-square-foot, two-tower leased facility, sits on the Johns Hopkins Bayview campus, where NIA and NIDA have long conducted intramural research in other facilities. The new building allows expansion and updating of key research labs and houses laboratory, vivarium and administrative activities.*

### Above:

*U.S. Senators Barbara Mikulski (D-MD) and Benjamin Cardin (D-MD) discuss NIH's newest research facility during a June 2 celebration of the structure's opening.*

PHOTOS: ERNIE BRANSON