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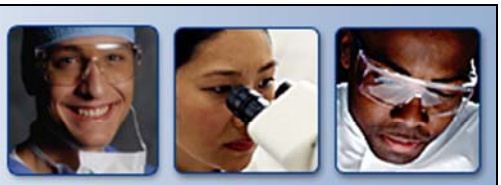

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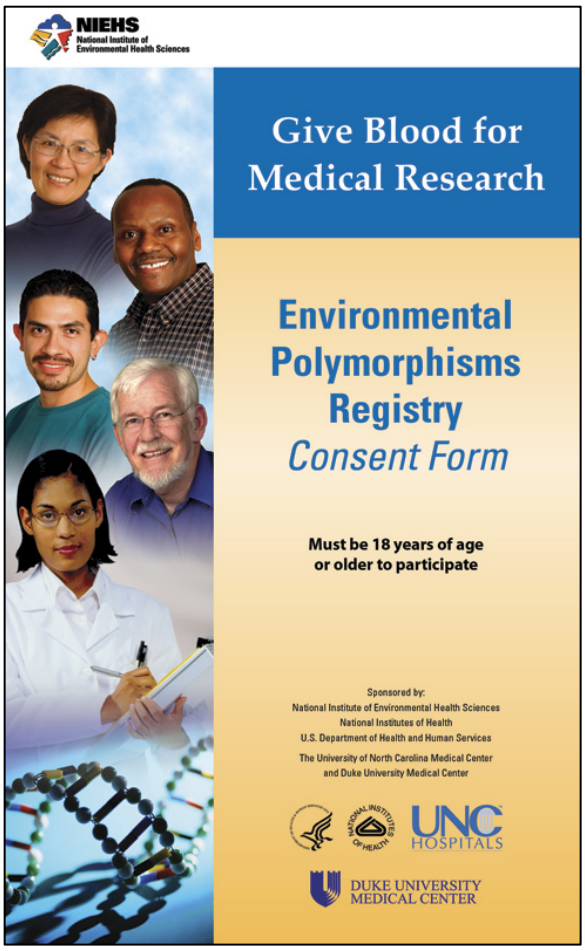
NIEHS Spotlight

DNA Registry Needs Participation by NIEHS Employees

By Blondell Peterson

All NIEHS employees will soon have an opportunity to participate in an important NIEHS research project. A study drive will be held for the Environmental Polymorphisms Registry at NIEHS Feb. 27-March 3 from 8:30 a.m. to 5:00 p.m. in the Rodbell Auditorium. This DNA registry will enable scientists to look for variations in human genes, known as polymorphisms, and then re-contact participants for future investigations based on their genotypes. Anyone who is 18 years of age or older can participate in the registry and help local scientists find the causes and cures for diseases like Alzheimer's, cardiovascular disease, cancer, diabetes, asthma and others. According to Pat Chulada, an NIEHS health scientist, this registry is unlike most other DNA registries in existence, in which participants give their blood samples anonymously.



"We're asking all NIEHS employees to volunteer for this important research program," Chulada said.

Advertisements will be posted throughout the NIEHS later this month. Participants will be required to read and sign a consent form, provide some basic information such as their birth date and race/ethnicity, and give 15 ml of blood which is about a tablespoon amount. Each donor will be paid $20.00 for participating. Back in the lab, DNA will then be isolated from their blood, coded with a personal identification number, and made available for genotyping to investigators at the NIEHS and local universities, according to Chulada. DNA samples may be decoded for future studies but only after a rigorous review process for scientific merit and design, and human research protections.

Chulada, who is also an investigator for the EPR, said she is excited about the NIEHS study drive and expects a great turnout from NIEHS employees. "Because of the nature of our work, most NIEHS employees understand the importance of this type of genetic resource regardless of their backgrounds," she said

Perry Blackshear, director of the NIEHS Program in Clinical Research, said of the EPR, "This DNA resource should provide opportunities for NIEHS scientists and other academic scientists interested in the general concept of "ascertainment by genotype." Blackshear gave the following examples:

- First, it will allow investigators to determine simple prevalence rates of a polymorphism in a relatively unselected local population.
- Second, it will allow for the possibility of identifying families in which to confirm the composition of haplotypes, which are usually predicted statistically.
- Finally, it should allow for the identification of individuals, and potentially families, in which specific polymorphisms are found. We can then attempt to correlate these genetic variants with specific diseases, with disease natural history, and with other clinical traits. So far, we have been very gratified at the willingness of the local community to participate in this long term genetic research program."

The EPR is a collaborative effort between the Office of Clinical Research at the NIEHS and the General Clinical Research Center at the University of North Carolina at Chapel Hill. The EPR DNA samples are now available for genotyping to all NIEHS researchers and requests should go through Chulada or Michael Spencer, Clinical Research Administrator for the OCR.

As to the importance of this resource, Chulada said, "DNA banks are essential to human genomics research. Many of the genetic risk factors for common disease have not yet been identified, and the interactions of genes with other genes and with our environments are not clearly understood. DNA banks with linked identifiers, such as the EPR, give scientists the ability to study groups of people who have the same genetic variations, and their clinical traits, lifestyles, and potential risk factors. These types of studies, however, require large numbers of people with the same genetic variants, and achieving these numbers is possible only with resources like the EPR."

Other investigators working on the registry are Paul Watkins, director of the GCRC at UNC Hospitals and Susan Pusek, director of Training and Career Development at the GCRC at UNC Hospitals. Heather Vahdat, assistant manager of the Clinical Research Program at Integrated Laboratory Systems, Inc., is the study manager and oversees day to day logistics.

In spite of the relatively short existence of the EPR, more than 2,300 people have already been enrolled, according to Vahdat. The goal is to recruit 20,000 individuals from the NC triangle region in a 5-year period. Recruitment began at two UNC outpatient clinics, the Family Practice Clinic and Ambulatory Care Center, but was shortly expanded to other UNC clinics, Rex Hospital and local businesses in the RTP. Chulada said participation rates at the various locations have been high, with about 80% of the individuals being asked, agreeing to participate. Future EPR recruitment sites will include clinics within the Duke Healthcare System, the EPA, other universities and some major corporations, according to Chulada. "Recruitment venues also will be diversified in order to reach minorities and other groups with historically low rates of participation in research," Chulada said.

For the EPR study drive at NIEHS, a phlebotomist/recruiter will be available to take blood samples in the Rodbell Auditorium from 8:30 a.m. to 5:00 p.m. on the following days:

- Feb. 27 – Auditorium C
- Feb. 28 – Auditorium C
- March 1 – Auditorium A
- March 2 – Auditorium C
- March 3 – Auditorium C

For more information on the EPR and how to participate, visit the NIEHS website at http://dir.niehs.nih.gov/direpr/ or contact Vahdat at (919) 281-1110, extension 706 or hvahdat@ils-inc.com.

Chris Portier Named Associate Director for Risk Assessment

By Robin Mackar and Colleen Chandler

Christopher Portier, Ph.D., who served as associate director of the National Toxicology Program, is now associate director for risk assessment at NIEHS.

Chris Portier
(NIEHS file photo)

NIEHS Director David Schwartz initiated the change, saying it is in keeping with the Institute's renewed interest in using environmental health sciences to understand human disease and improve human health.

Meanwhile, Allen Dearry Ph.D., who most recently served as the director of the NIEHS Division of Research, Coordination, Planning and Translation, will act as the interim associate director of the NTP. A national search for a permanent NTP associate director will begin in the next three to six months.

In his new position, Portier will oversee and coordinate risk assessment activities within NIEHS, working to ensure the availability of toxicological study results for use in national and international efforts to assess human health risks of chemical, drugs, and physical agents.

"Dr. Portier has done an extraordinary job in overseeing the activities of the National Toxicology Program, and has developed strong relationships with scientists all over the world. This new NIEHS leadership role will allow him an opportunity to merge the fields of toxicology and environmental health sciences and prepare the world for tomorrow's health challenges," Schwartz said.

Portier came to NIEHS as a post doctoral student in 1981, and in 25 years held a number of positions within the Institute. He led the Environmental Systems Biology group in the Laboratory of Molecular Toxicology. Most recently, he served as the associate director of the National Toxicology Program and as director of the DIR Environmental Toxicology Program.

The culmination of Portier's efforts at the NTP is exemplified by his role in developing the landmark document "A National Toxicology Program for the 21st Century: A Roadmap for the Future," which was released in 2005 as part of the NTP 25th Anniversary Celebration in Washington, D.C. The NTP

Roadmap outlines a framework by which the NTP will modify, adapt, and improve its programs to better address its mandate in providing scientific information for protection of public health.
Some of the many other accomplishments achieved by Portier while at the NTP include developing the first-ever evaluation guideline for non-cancer endpoints as part of the NTP's Center for the Evaluation of Risks to Human Reproduction. The NTP also played a lead role in developing a High Throughput Screening Initiative, which will enable large numbers of environmental substances to be screened for potential health hazards.

The NTP is an interagency program whose mission is to coordinate, conduct, and communicate toxicological research across the U.S. government. It is administratively housed at the NIEHS and issues the biennial *Report on Carcinogens*. The NIEHS director dually serves as the director of the NTP.

Former Student Worker Wins High Honor

By Colleen Chandler
A 16-year-old high school student who spent the summer of 2004 at NIEHS was named a 2005 Davidson Fellow. The award carries a $25,000 cash award. John Zhou of Northville, Mich., won the science award for his project, “A Study of Possible Interactions Among Rev1, Rev3 and Rev7 Proteins from Saccharomyces Cerevisiae.”

His project used yeast cells to study the role of proteins in DNA with results that suggest a new molecular model for proliferating cell nuclear antigen (PCNA) of translesion DNA replication, according the to Davidson Fellow web page. His research indicates the same molecules that have the ability to let the DNA replication process occur may also be a source of mutations. The results of his study not only impressed the contest judges, but will help scientists learn to enhance or suppress the function of these molecules, which is important in a wide variety of cancer treatments.

Zhou was a special volunteer in Tom Kunkel’s lab under the supervision of Sean Zhong. During the five weeks he worked at NIEHS during the summer between his sophomore and junior years in high school, he conducted hands-on lab research related to DNA replication fidelity, learning technical procedures such as PCR, electrophoresis, restriction enzyme digestion, ligation, transformations, desphosphorylation and DNA sequencing. The objective of the project he worked on at NIEHS was to examine molecular mechanisms under which Polymerase Zeta, composed of subunits of Rev3 and Rev7, and Rev1 protein interact to replicate DNA past lesions.

Zhou said Kunkel, Zhong and the other lab members taught him the ropes of their research, showed him lab techniques and taught him how to use equipment, all the while making him feel at home. “As a result of the exposure to molecular biology and the expert guidance from NIEHS, I have developed a keen interest towards the biomedical sciences and plan to pursue that area at Harvard, where I will most likely be attending next year. The laboratory skills and research fundamentals at NIEHS have been a tremendous factor in the other research that I have pursued in the past year and will continue to be important in college and beyond,” Zhou said by e-mail.

After his stint at NIEHS, Zhou was off to math camp, where he focused on abstract algebra and topology, working on his research project, “DNA Sequence Alignment with Hidden Markov Models.” At math camp, he studied the algorithm for Markov models in a computer simulation to model DNA sequence and expected probabilities.

The whiz kid carries a perfect grade point average. In his sophomore year in high school, he aced the final exams in his advanced placement courses, which included calculus, chemistry, physics and statistics. As a junior, he took six advance placement courses. He was a silver medalist at the Michigan Math Competition and served on the student council and president of his school Science Olympiad Club. He was a varsity member of the school "Tests of Engineering Aptitude, Mathematics and Science Competition" team. He won first place in the state competition and eighth place nationally. He also finds time to volunteer, working with the homeless and teaching English to Chinese people.

Zhou said he hopes to work at NIH again in the future to continue building his knowledge and skills in biology. That interest, he said, has "already been fostered so thoroughly by the NIEHS experience."

MLK Observance

By Blondell Peterson

James Jay Rogers, a retired history teacher for the Durham School District, was the guest speaker at the NIEHS Martin Luther King, Jr. celebration on Jan. 23 at the Rodbell Auditorium. His presentation was titled, "The Content of Their Character.

Thomas Bullock, left, a former high school student of James Rogers in 1972, reunites with his former teacher. Bullock was one of approximately 800 students at Durham High School who voted for Rogers at the local level. Rogers went on to become the National Teacher of the Year. (Photo by Steve McCaw)

Rogers was invited to speak because in 1972, while teaching at Durham High School, Rogers was named the first African American National Teacher of the Year. He received his award during a ceremony at the White House, said Gordon Flake, chairman of the Diversity Council.

At the beginning of his speech, Rogers took off his rose-colored sunglasses, and asked the pointed questions, "If Dr. King were alive today, what would he think of us? "What is character? We all say it, but do we know what it means?

Rogers quickly stepped from behind the podium, and without the aid of a microphone, put all attendees on notice that character is lacking in many young people today. But, it is not just the responsibility of parents to teach character. He said the lack of character in the youth is the fault of government officials, teachers, parents and all adults who are not leading children, and teaching them character by example.

"How are you going to examine the content of their character when they have never learned it?" he asked. "Judge them by the content of their character if you can find it!"

Rogers went on to ask, "When Enron can get away with what it did, and when a United Airlines can get away with taking people's pensions, where is the character of the nation?"

Reminding everyone of the quote, “It takes a village to raise a child,” Rogers talked about the way children were raised in his generation. “You know when I was in school they used to teach character building,” he said. “The parents reinforced it, and the church was right there giving it to you on Sunday. Think about the lives we are leading. We can work and make money and have fine cars, but if the world is going to hell, we aren’t going to be safe!”

He gave several examples of how some of his friends and relatives have disciplined their children in order to teach them character. Some of his illustrations drew howls of laughter from the crowd. For example, a friend in Virginia Beach had a son who didn’t want his father coming into his room. The father told the boy, in no uncertain terms, that he paid the mortgage and the child would not lock him out. To further illustrate his point, the father took the door off the hinges. He did this to teach his son to respect authority, Rogers said.

Throughout his presentation, as he talked about the undesirable way that some young people speak, dress and conduct themselves, Rogers continued to ask the audience, “What are we not doing?” He also stressed that there are many well-behaved young people who should be commended for their efforts.

“There are some wonderful kids out there, but you don’t hear about them because the bad apples are hogging the press,” Rogers said. “So we need to go out there and confront the bad apples, and start doing something for the good ones. Join an organization to help the good ones, so they get the message that there are rewards for being good. Let’s show them by example by volunteering to help the young people who are trying so hard.”

In regards to judging young people by the content of their character, Rogers emphasized that it is important that young people conduct themselves in a respectable manner, and dress neatly, but he told the audience that racism does still exist. “We say that racism is gone, but that is a bald faced lie. Those that say it are deaf, dumb and blind. And, don’t say you are colorblind. We see color, but what we should not do is allow it to become a negative [perception]. See me! ‘I don’t want you to go out and say, I don’t know what color the speaker was.’ I’m Black! Just don’t make negative assumptions about me based on my color.”

After the stirring message, Rogers received thunderous applause and a standing ovation. He then invited the audience to ask questions. Some parents made comments or gave examples of issues with the school system not meeting the needs of their children, or children being allowed to misbehave repeatedly and not be punished appropriately.

Laura McGrew, a contract specialist, said Roger’s speech was “right to the point.” She got involved and went to school when her son’s behavior changed. After some investigation, she found that her son had Audio Processing Deficiency, and he was not learning because the teacher was lecturing and not using props or visuals that he needed.

“I was informed that I should get a 504 Plan to put in my son’s file, which means that the public, grade, middle, high and college schools anywhere in the U.S. have to teach him the way he learns,” McGrew said. “Being equipped with these tools and knowledge has made his quality of life much better. It has made a great difference in his self esteem and motivation toward school.”

Chris Alston, a management support specialist, said “Mr. Rogers gave an inspiring lecture on the content of character. His lecture should have made every one of us stop and take a look at how we are

handling or portraying character in our lives. What are people thinking about us? Are we dependable and honest in our dealings with others? Are we thoughtful, trustworthy and committed to what we believe in?"

Flake was stirred by Roger's question, "Why are our young people rejecting education? And, what do you do with the bad apples?" Flake said, "Mr. Rogers challenged us all to become involved in the problems with our youth in some way. I think that we need to revive the alternative schools, or votech schools, that were an option for all high school age students when I was growing up. Not all kids want to go to a regular high school or to college. With votech as an option, they could learn auto mechanics, electronics, carpentry, etc., and then be employable. Why should every kid have to follow the same route and study biology, algebra, etc. when they are not interested and may end up dropping out?"

Approximately 75 people attended the event. A reception was held in the lobby after the program.

Science Notebook

Exploring Gender Differences in Lung Function

By Colleen Chandler

Research in Darryl Zeldin's lab focusing on gender differences in lung function and response to environmental agents raised some interesting questions for researchers within the Laboratory of Respiratory Biology.

Darryl Zeldin
(NIEHS file photo)

Analyses of data from the National Health and Nutrition Examination Survey III, conducted between 1988-1994, and the National Health Interview Survey in 2001, show that asthma is more prevalent in males during childhood and adolescence, but more prevalent in females from about age 20 until very old age, when men, again, have a higher rate of asthma than women.

The numbers, Zeldin said, "reek of hormonal influence." He presented some research findings Dec. 16 at NIH for the Women's Health Special Interest Group.

The age of decline for women seems to coincide with the onset of menopause, suggesting a protective quality of estrogen. Around age 80, the higher prevalence of asthma switches back to males. Analyses

of other data on women who take birth control or hormone replacement therapy seem to confirm the protective effect of estrogen, Zeldin said.

However, some of the research done in Zeldin's groups suggests androgen provides protection for male mice. Asthma is a complicated disease with many contributing factors, including environmental factors and genetics, Zeldin said. It appears that sex hormones are important in both mice and humans, but there is yet much to be discovered about their specific roles and mechanisms, he said.

Gender differences in lung function and airway responsiveness in mice may provide a means to better understand gender differences in humans, Zeldin said. The basic mechanisms underlying gender differences in lung function and airway response to environmentally relevant stimuli are poorly understood, he said.

Overall and including both genders, 11 percent of people will have asthma during their lifetimes. That's 30.8 million people, of which more than 4,200 will die, according to 2002 data. Yet, very little research has been done on gender differences in asthma.

A videocast of Zeldin's presentation on Dec. 16 can be found by going to http://videocast.nih.gov/PastEvents.asp?c=998.

Director Challenges DIR Investigators

By Blondell Peterson

NIEHS Director David Schwartz invites all Institute Intramural investigators to participate in a new program called the Director's Challenge to DIR Investigators: Program in Integrative Research. This program is designed to encourage integrative research between clinical and basic scientists. The main objective of the program is to develop new interdisciplinary research programs whose focus is designed to understand human disease and improve human health.

Investigators will form research teams made up of intramural experts who are basic scientist, physician scientists, public health scientists, toxicologists and scientist National Toxicology Program. According to the Request for Application, each team will collaborate to determine the biological and environmental influences in:

- Evaluating the impact of environmental and biological exposures on human pathophysiology and disease
- Identifying the underlying physiological mechanisms in disease pathogenesis and progression,
- Understanding the exogenous and other endogenous factors that affect the distribution of disease in populations, and
- Applying the knowledge gained to develop therapeutic, diagnostic, prognostic and preventative environmental public health strategies.

Schwartz released the Request for Applications on Jan. 6, and held an informational meeting for the Division of Intramural Research investigators on Jan. 17. Applicants may request up to $1,000,000 per year in direct costs for a period of up to 6 years. According to Schwartz, it is expected that each program will last 10 years, but will require a review and competitive renewal every 3 years.

"The program is an attempt to bring together the different disciplines that are represented in the Institute," said NIEHS Scientific Director Lutz Birnbaumer. "The idea is to generate grassroots enthusiasm and to think broadly in terms of solving major problems such as inflammation, epigenetics

and obesity. We have many experts with varied scientific disciplines at the Institute; therefore, I think we stand a chance of making inroads in any one of these areas."

Some questions that were asked at the informational meeting were, "How important is high risk and how do you define high risk? How important is the synergy, or working together to accomplish a goal that would not be possible to achieve as an individual? Schwartz said high risk is not as high on his list of priorities as synergy.

Deputy Director Sam Wilson said the synergy within the groups in the program will allow scientists to tackle high impact problems successfully beyond the scope of what they can achieve individually or in smaller groups within their single disciplines. "Synergy is a really important part of the program that we are trying to achieve."
Another question asked at the meeting was, "Is the program only limited to NIEHS scientists?" Schwartz said he encourages investigators to look outside NIEHS for collaborators. The core personnel should be inside NIEHS, but there are ways to support the efforts of the investigators outside of the Institute.

Anyone who has questions concerning the DIR Director's Challenge Program in Integrative Research, should contact Joan Packenham, the program's Director and administrator, at (919) 541-0766, Mail Drop A2-09 Room A232 or packenhm@niehs.nih.gov. Packenham requests that each application be preceded with a letter of intent by March 1, 2006. The deadline date for receipt of applications is June 1, 2006.

Soy Products May Cause Reproductive Problems

Genistein, a major component of soy, was found to disrupt the development of the ovaries in newborn female mice given the product. This study, published in the January issue of *Biology of Reproduction*, adds to a growing body of literature on potentially adverse consequences of genistein on the reproductive system.

News articles on the study appeared in web, electronic and print publications across the United States and in some international media. United Press International circulated the story to news organizations.

Genistein is the primary naturally occurring estrogen in plants, called phytoestrogens, and can mimic the effects of estrogen in the body. It is found in soy-based infant formulas and over-the-counter dietary supplements.

NIEHS researchers collaborated with an investigator at Syracuse University. The study found effects at all exposure levels. Mice injected with the highest dosage were infertile, and mice receiving the lowest doses had fewer pups and fewer pregnancies.

NIEHS researcher and lead author Wendy Jefferson said the study suggests genistein inhibits egg cell separation.

Papers of the Month

By Jerry Phelps

1) Sun Q, Wang A, Jin X, Natanzon A, Duquaine D, Brook RD, Aguinaldo JGS, Fayad ZA, Fuster V, Lippmann M, Chen LC, Rajagopalan S. Long-term Air Pollution Exposure and Acceleration of Atherosclerosis and Vascular Inflammation in an Animal Model. JAMA. 2005;294(23): p. 3003-3010.

   Implications: The results suggest particulate air pollution is more dangerous to the heart and circulatory system than previously known. The authors conclude that identification of the mechanisms and specific particle components responsible for these atherosclerotic effects could lead to the downward revision of particulate matter air quality standards.

2) Walisser JA, Glover E, Pande K, Liss AL, Bradfield CA. Aryl hydrocarbon receptor-dependent liver development and hepatotoxicity are mediated by different cell types. Proc Natl Acad Sci U S A. 2005 Dec 6;102(49):17858-63.

   Implications: These data demonstrate that receptor signaling in specific cells is responsible for the generation of distinct Ah receptor-dependent physiological outcomes. These findings aid in the understanding of Ah receptor function and could have implications in the treatment of dioxin toxicity and the rare condition of a patent ductus venosus.

3) Rampersaud E, Bassuk AG, Enterline DS, George TM, Siegel DG, Melvin EC, Aben J, Allen J, Aylsworth A, Brei T, Bodurtha J, Buran C, Floyd LE, Hammock P, Iskandar B, Ito J, Kessler JA, Lasarsky N, Mack P, Mackey J, McLone D, Meeropol E, Mehltretter L, Mitchell LE, Oakes WJ, Nye JS, Powell C, Sawin K, Stevenson R, Walker M, West SG, Worley G, Gilbert JR, Speer MC. Whole genomewide linkage screen for neural tube defects reveals regions of interest on chromosomes 7 and 10. J Med Genet. 2005 Dec;42(12):940-6.

   Implications: These researchers plan to add additional families to their analyses as they are identified and become available. They are also contemplating expanding the neural tube disorder classification to increase the sample size and integrating other data such as those from mouse models of neural tube defects. The data in the present study represent an important step in narrowing the search for the gene or genes responsible for neural tube defects and bring the medical community closer to the day when individual predictions of neural tube defect risk may be possible.

4) Blask DE, Brainard GC, Dauchy RT, Hanifin JP, Davidson LK, Krause JA, Sauer LA, Rivera-Bermudez MA, Dubocovich ML, Jasser SA, Lynch DT, Rollag MD, Zalatan F. Melatonin-depleted blood from premenopausal women exposed to light at night stimulates growth of human breast cancer xenografts in nude rats. Cancer Res. 2005 Dec 1;65(23):11174-84.

   Implications: This study could have far reaching implications for the prevention and treatment of breast cancer. It could encourage trials that test whether breast cancer can be slowed down by altering a woman's light environment or by using melatonin supplements. These researchers state that women should avoid even short exposures to bright light at night. They also point out that blue or white lights suppress melatonin more effectively than red or yellow; therefore, lights could be designed to filter out the more offending wavelengths. Similar studies could show whether nocturnal light exposure is associated with increased risk for prostate cancer in men as some researchers suspect.

After Hours

Stretching and Toning

By Colleen Chandler

The oldie song, “Spinning Wheel,” starts the Stretch and Tone class in the NIEHS exercise room. The music, says instructor Gina Goulding, is important in setting the pace for the class, making it fun instead of work, a pleasure instead of a “must do.”

“If it’s not fun, I’m not going to do it,” Goulding states. She is a biologist in the Laboratory of Reproductive and Developmental Toxicology at NIEHS.

Conversations that started before class continue as class begins. Small talk and casual chit-chat bounce back and forth between members of the group, but the conversations slowly dissolve into an easy silence as the stretching continues.

Goulding, a 34-year veteran at NIEHS, describes the class as “half exercise, half social.” It is a tradition of sorts, started in the early 1990s by a group of middle-aged employees who wanted a form of exercise that was low impact. It began as a group of “squatters” who held class wherever they could find space: in the lobby, in the library, in buildings that at the time were unoccupied, and on the patio.

Above, Betsy Kennington, left, and Jane Tuttle, center, both from the Laboratory of Neurobiology, and Jack Bishop, research geneticist, tone their arms with light weights.

On left, Gina Goulding, a biologist and 34-year veteran of NIEHS, has been leading the Stretch and Tone class since 1995.

(Photos by Colleen Chandler)

Goulding and Jack Bishop, a research geneticist in the Toxicology Operations Branch, were among the original members of the exercise group. Now, the class has younger members as well as middle-aged members, and maintains a core of about ten people, with an average of six to seven at each class.

Noriko Nakamura, a visiting fellow, alternately works her abs and obliques with feet in the air, all the while bantering with Jack Bishop. Xiao-Ping Yang is in the background.

"The stretch and tone classes are easy enough to be enjoyable, but hard enough to help keep you fit," said Betty Mills, who has been coming to the class for two years.

When the exercise room was established by remodeling existing storage space, the Stretch and Tone class began to include hand weights from the exercise room. Goulding laughs as she describes other changes to the class. "We steal [moves] from Stephanie with some regularity," Goulding said. Stephanie Bullock-Allen is the fitness room manager and teaches a number of exercise classes.

Bishop talks about the social aspects of the class: "In addition to the physical exercise, the class also provides psychological therapy. Sometimes we laugh so much it hurts. Of course, it is the building of fantastic bods us 50+ guys are hoping for, but in the end we are well satisfied to just keep our weight and flab down a little and our spirits up," Bishop said.

Bishop says that besides the camaraderie, it is Goulding's dedication and commitment that keep him coming back. The class is so much fun, he says, that the pushups, crunches and bicycles are a pleasure. Well, almost.

Class always begins with a series of stretches followed by weight-bearing toning exercises, then more stretches. Overhead, just loud enough to set the pace, Rick James, Stevie Wonder and Michael Jackson keep the group in sync as Goulding leads the group, working and stretching muscles from head to toe.

"Ready? Lift," Goulding says. "One, two, three, four, five, six…" Goulding leads members of the group through a set of leg lifts, pulsing slightly bent legs upwards while lying on their sides.

Goulding teases Bishop. "Jack, you are so quiet. What's the matter? Not feeling well today?"

Michelle Campbell biologist, left, Betty Mills, secretary, center and Xiao-Ping Yang, biologist, are class regulars.

(Photos by Colleen Chandler)

The Stretch and Tone class is held on Mondays and Thursdays from 5:15-6:30 p.m. in the exercise room located near the lakeside entrance to the library.

Did You Know?

Calling all Musicians

The NIEHS band is seeking new members. The group is informal, and meets as needed to rehearse. The band has been playing for more than 12 years, when it started under Richard Griessemer. The band performs at events such as Presidents Day, Earth Day, Memorial Day, July 4 events, Labor Day, and the NIEHS Holiday Celebration. It also performed at the 2004 SmartCommute celebration in Research Triangle Park.

The band accepts all musicians and all instruments. For more information contact Dick Sloane at 541-2947 or Doug Bristol at 541-2756.

Arts and Photography Returns to Original Location

The Arts and Photography office renovation is complete, and the two staff members who occupied it have returned to their spaces in room E138. The rest of the Arts and Photography staff remain in their off-site location, 615 Davis Drive, suite 600.

New Phone Books Available

New Verizon phone books are available for pick up at all NIEHS locations. Old phone books should be placed in the recycling containers marked specifically for phone book recycling. The new directories are available at:

- Rall Building, C mall
- Building 102, near the mail drop boxes
- East Campus, third floor lobby
- Nottingham Hall, in the copy room.

Up and Coming

- The area from the Library exit near the Fitness Center will be under construction **Feb. 6-March 8** to improve accessibility to the Fitness Room and improve the climate control in the library. Call Carol Bennett at 541-3763 or e-mail at bennett6@mail.nih.gov for questions or comments.
- The Health and Safety Branch will be offering the American Red Cross Adult CPR/AED Training Course on **Feb. 7**. The course includes cardiopulmonary resuscitation and automated external defibrillator skills that can help save lives from sudden cardiac arrest. The course will be in the Rodbell Auditorium, conference room C. Participants who complete the course will be certified by the Red Cross for one year. To register, call HSB at 541-3384. The class is limited to 12 people.
- Blacks In Government and the Diversity Council will sponsor an Obesity Forum **Feb. 14** from 2-4 p.m. in the Rodbell Auditorium. The program is in observance of Black History Month.
- The EPA Legacy Luncheon will be held on **Feb. 16** at the Radisson Hotel from noon to 1:30 p.m. The 2006 Black History Month theme is, "Celebrating Community: A Tribute to Black Fraternal, Social and Civic Institutions." The speaker is Freddie Parker, a North Carolina Central University professor. The event is sponsored by the Research Triangle Park chapter of Blacks in Government. Tickets for the buffet lunch are $22. To purchase tickets, call one of the following NIEHS employees:

East Campus	Veronica Godfrey, 541-2238
Main Campus	Kim Peterson, 541-3120
	Annette Rice, 541-4410
	Margaret George, 541-4592

- Cecil Pickett, Senior Vice-President of Schering-Plough Research Institute, will be the guest speaker at the Rodbell Auditorium **Feb. 23** at 2 p.m. in observance of Black History Month. Blacks in Government and the Diversity Council will co-sponsor the event.
- The NIEHS and University of North Carolina will sponsor an Environmental Polymorphisms Registry recruitment drive to collect blood samples from 8:30 a.m.-5:00 p.m**. Feb. 27-March 3** in the following Rodbell Auditorium rooms:

  Monday, Feb. 27 – Rodbell C
  Tuesday, Feb. 28 – Rodbell C
  Wednesday, Mar. 1 – Rodbell A
  Thursday, Mar. 2 – Rodbell C
  Friday, Mar. 3 – Rodbell C

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