



Nora Volkow



Gene-Jack Wang

Roger Stoutenburgh CNA-4-01

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Deficits in Brain's Reward System Observed in ADHD Patients

A brain-imaging study conducted at BNL provides the first definitive evidence that patients suffering from attention deficit hyperactivity disorder (ADHD) have lower-than-normal levels of certain proteins essential for experiencing reward and motivation.

"These deficits in the brain's reward system may help explain clinical symptoms of ADHD, including inattention and reduced motivation, as well as the propensity for complications such as drug abuse and obesity among ADHD patients," said lead author Nora Volkow, Director of the National Institute on Drug Abuse and a long-time collaborator on neuroimaging research at BNL.

The study, published in the September 9, 2009, issue of the *Journal of the American Medical Association*, also has important implications for treatment. "Finding ways to address the underlying reward-system deficit could improve the direct clinical outcome of ADHD, and potentially reduce the likelihood of other negative consequences of this condition," said study co-author Gene-Jack Wang, BNL's Medical Department Chair.

Prior to this study, it was not clear whether people with ADHD had abnormalities in the brain's dopamine-mediated motivation/reward system. Previous studies were relatively small and may have been complicated by the fact that some ADHD patients had undergone treatments, or had a history of drug abuse or other conditions that can affect the dopamine system.

To strengthen the statistics and control for these factors, the current study looked at 53 adult ADHD patients who had never received treatment and 44 healthy control subjects — all of whom had been carefully screened to eliminate potentially confounding variables.

The scientists used positron emission tomography (PET) to measure two markers of the dopamine system — dopamine receptors, to which the chemical

messenger binds to propagate the "reward" signal, and dopamine transporters, which take up and recycle excess dopamine after the signal is sent.

The results clearly showed that, relative to the healthy control subjects, the ADHD patients had lower levels of dopamine receptors and transporters in the accumbens and midbrain — two key regions of the brain directly involved in processing motivation and reward. In addition, the measurements of dopamine markers correlated with measures of behavior and clinical observations of ADHD symptoms, such as reduced levels of attention as measured by standard psychological tests.

"Our findings imply that these deficits in the dopamine reward pathway play a role in the symptoms of inattention in ADHD and could underlie these patients' abnormal responses to reward," Volkow said.

"This pathway plays a key role in reinforcement, motivation, and in learning how to associate various stimuli with rewards," she continued. "Its involvement in ADHD supports the use of interventions to enhance the appeal and relevance of school and work tasks to improve performance."

"Our results also support the continued use of stimulant medications — the most common pharmacological treatment for ADHD — which have been shown to increase attention to cognitive tasks by elevating brain dopamine," she said.

The findings may also help explain why ADHD patients are more likely than control subjects to develop drug-abuse disorders and conditions such as obesity.

Said Wang, "Other studies from our group suggest that patients who abuse drugs or overeat may be unconsciously attempting to compensate for a deficient reward system by boosting their dopamine levels. Understanding how deficits in the dopamine system contribute to ADHD and finding ways...

See *ADHD* on pg. 2

Low levels
of dopamine
markers may
underlie
symptoms:
implications for
treatment

Gerald Stokes, BNL's New ALD For Global & Regional Solutions

Gerald Stokes, former President and CEO of Battelle-Japan, has been named BNL's Associate Laboratory Director for Global and Regional Solutions, effective October 1.

With an annual budget of over \$70 million and 170 employees, the newly formed directorate includes BNL's Energy Sciences & Technology Department, Nonproliferation & National Security Department, and the Office of Technology Commercialization & Partnerships. Part of the Lab's Blueprint plan (see pg. 3), the goal of the new directorate is to increase BNL's strength in applied science and engineering — especially in the areas of energy and national security — and the Laboratory's impact through the deployment of technology.

"I am delighted to have the opportunity to join Brookhaven," Stokes said. "The new directorate is in a good position to lead the way in solving some of the greatest challenges facing the nation, the region and the world in energy, security and economic competitiveness."

Gerald Stokes earned a B.A. in physics from the University of California, Santa Cruz, in 1969, and an M.S. and Ph.D. in astronomy and astrophysics from the University of Chicago in 1971 and 1977, respectively. He joined Battelle at Pacific Northwest National Laboratory (PNNL) as a postdoctoral fellow in 1976.

Stokes was the founding Director of the Joint Global



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Change Research Institute, a collaborative effort between PNNL and the University of Maryland, and he headed that facility 2000-05. He also served as the Associate Laboratory Director of the Environmental & Health Science Division, the basic research division of PNNL, and held a variety of other scientific and management positions during his 30-year tenure at PNNL. In the 1990s, he created the PNNL Global Studies Program and served as the Chief Scientist of DOE's Atmospheric Radiation Measurement Program, 1990-98.

In 2007, Stokes became President and CEO of Battelle-Japan, a joint venture of Battelle

Memorial Institute and the Mitsubishi Corporation. From 2005 until joining BNL, he was also the Senior Advisor on Energy and Laboratory Management for Battelle International Partnerships.

Stokes' research accomplishments include work in energy, climate, and design of large-scale field-research facilities. He has served on several National Academy of Sciences panels on science education, including the panel that wrote the National Science Education Standards. He is a member of Sigma Xi and the American Geophysical Union and a Fellow of the American Association for the Advancement of Science.

— Diane Greenberg

453rd BNL Lecture, 10/28

Striving Toward Energy Sustainability: How Will Plants Play a Role in Our Future?

The same technologies used to study chemical responses in the human brain of drug addicts are now being employed to study how certain hormones move through plants — with hopes of improving renewable biofuels that could power cars and trucks.

Scientists at BNL are using radiotracers and positron emission tomography (PET imaging), a technique also used for addiction research, to understand how plant parts, such as leaves and roots, communicate with each other and respond to changes in their environment. By uncovering new plant signaling networks, these scientists hope to develop ways to optimize plant biomass, which would lead to more plant sugars that could be converted into renewable, sustainable biofuels.

On Wednesday, October 28, join Richard Ferrieri of the Medical Department, who will give the 453rd Brookhaven Lecture, titled "Striving Toward Energy Sustainability: How Will Plants Play a Role in Our Future?" All are invited to attend this free talk, which is open to the public and will be held in Berkner Hall at 4 p.m. Refreshments will be



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Richard Ferrieri (left) and a graduate student prepare a plant sample.

offered before and after the lecture. Visitors to the Lab ages 16 and older must carry a photo ID while on site.

During his lecture, Ferrieri will discuss biomass as a renewable energy source, how radiotracers and nuclear imaging are providing new ways to see plant processes, and new insights on controlling plant biomass.

Ferrieri earned a Ph.D. in nuclear and radiochemistry from Texas A&M University in 1978. He arrived at BNL's Chemistry Department as a research assis-

tant in 1979 and rose through the ranks to his current title of senior scientist. He also worked as a visiting scientist in the Chemistry Department at the University of California at Berkeley in 1986 and 1987.

In addition to his ongoing research at BNL, Ferrieri is currently the Site Director for DOE's Nuclear and Radiochemistry Summer School, and an adjunct faculty member at the University of Missouri. He has also won numerous awards and holds five U.S. patents.

— Joe Gettler

Wildfire Academy
At BNL, 10/23–11/1

BNL will host the 12th annual New York Wildfire and Incident Management Academy from today, Friday October 23, until Sunday, November 1. Various field-training exercises are scheduled throughout the 10-day operation. Classroom sessions and all Academy operations will occur daily from 7 a.m. to 6 p.m.

Field exercises will include demonstrations on ignition operations, portable pumps and water usage, and basic firefighting and wildland fire behavior. All field events are weather-dependent and may be rescheduled. Weather permitting, field exercises may include the lighting of an ecological “prescribed” fire. Prescribed burns are non-catastrophic fires that are set and contained by trained professionals after much planning and are used worldwide to manage the ecology of grasslands, forests, and other types of ecosystems.

Adopt-a-Platoon
Book & Bake Sale
Brings In \$1,330

The Adopt-a-Platoon fundraising committee, which is part of the Brookhaven Veterans Association, raised \$1,330 at the Book and Bake Sale held on October 1. The funds will be used toward the purchase of cold weather gear for the 29 platoon members currently being supported by the BNL effort.

“We would like to thank all the wonderful bakers that supplied us with delicious treats to sell,” says Joanne Rula, who spearheaded the organization of the sale. “We also thank most sincerely all the volunteers who helped us, not forgetting all the behind-the-scene folks who helped move, sort, organize, set up, and clean up all the books, racks and tables. We are so pleased at the generosity of the Lab community who came to buy — the results were more than we hoped for. Thank you.”

TIAA-CREF One-on-One
Retirement Counseling

A TIAA-CREF consultant will visit BNL in November, on Wednesday and Thursday, 4 and 5; Wednesday, 18; Thursday, 19, and Tuesday, 24, to answer employees’ questions about their financial matters. The consultant will help you: understand the importance of protecting your assets against inflation, find the right allocation mix, learn about TIAA-CREF retirement income flexibility, and compare lifetime income vs. cash withdrawal options. For an appointment, call 1-800-732-8353.

Arrivals & Departures

— Arrivals —

Maria Anzaldi.....Legal
Muhammad HussainNSLS-II
Hechang Lei..... CMP&MS
Shawn Perez..... C-AD
Raanan Tobey..... CMP&MS
Tong WangBiology

— Departures —

Kendall Davis.....Site Services
Patrick Gray, Jr.Site Services
Michael Silberstein.....Biology

In Memoriam: Betsy Sutherland
Pioneer in DNA Damage and Repair Studies

Betsy Sutherland, a senior biochemist in the Biology Department who achieved international distinction for her studies of ultraviolet (UV) and ionizing radiation damage and repair in human cells, died on October 7.

Born in New York City on October 19, 1943, Sutherland received a B.S. and M.S. in biology, both from Emory University in Atlanta, Georgia, in 1964 and 1965, respectively. She earned a Ph.D. in radiation biology from the University of Tennessee in 1967 and completed her postdoctoral work at the Walter Reed Army Institute of Research and the University of California, Berkeley.

Sutherland served on the faculty at the University of California, Irvine, until 1977, the year she joined Brookhaven Lab as a biochemist. At Brookhaven, she received tenure in 1980 and was promoted to senior biochemist in 1988. Since 1994, she was head of the Biology Department’s User Support Team for the NASA Space Radiation Laboratory (NSRL) at BNL, the only source in the U.S. of high-energy charged particles used to assess the effects of space radiation on biological systems, materials, and instruments. She was also the current chair of Brookhaven’s Scientific Advisory Committee for Radiation Research at NSRL.

Relevant Research Today

“The loss of Betsy Sutherland is a great loss for the Biology Department and the worldwide community of scientists who are focused on DNA damage and repair,” said John Dunn, Acting Chair of the Biology Department. “I had the good fortune to collaborate with Betsy, and I learned a great deal from her. Her work on DNA damage is still very pertinent today, since skin cancer is becoming more prevalent and future space missions may send astronauts to outer regions in space where they



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may be exposed to damaging ionizing radiation.”

Sutherland’s research was focused on the damage produced in cells by UV light and the enzymes that can repair this damage. Early in her career, Sutherland and her colleagues found that a type of DNA damage, known as the pyrimidine dimer, could be detected in irradiated human skin, even at sunlamp exposures too small to redden the skin. Also, Sutherland and her group were the first to observe the ability of UV light to transform normal human cells into cancer-like ones. Sutherland explored the biochemistry of clustered DNA damages, as well as DNA repair in human cells. Clustered damages result when several closely spaced bases are damaged and are believed to be difficult for cells to repair correctly.

Space Radiobiology Research

At the NSRL, Sutherland used beams of heavy ions provided by BNL’s Booster accelerator to

study the effects of simulated space radiation on biological and physical systems. The goal of the NSRL research is the development of methods and materials to reduce the risk of radiation damage that can lead to mutations, and, in turn, tumors, cancer, genetic defects in offspring, or death to astronauts on prolonged space missions.

Derek Lowenstein, Chair of the Collider-Accelerator Department (C-AD), said, “Betsy’s death is a great loss to her friends, colleagues and science. We have had a long and fruitful working relationship with Betsy and her group, and all of us at C-AD are saddened by her passing. She leaves a lasting and great legacy of groundbreaking research and excellent scientific leadership of the NSRL space radiobiology program.”

Numerous Honors

In 1985, Sutherland was the first woman to receive the U.S. Department of Energy’s Ernest

Orlando Lawrence Award for outstanding contributions to the field of atomic energy. Specifically, she received the award for developing a strategy now widely applied in the study of repair in cells containing damaged DNA.

In 1990, the Town of Brookhaven Office of Women’s Services honored Sutherland for her scientific achievements, and in 1998, she was elected to the University of Tennessee, Knoxville, Alumni Hall of Fame. In 2007, the *Times Beacon Record Newspapers* honored her as “Woman of the Year in Science” and the Rocky Point Lions and Rotary Clubs recognized her as an “Outstanding Woman Scientist.”

Sutherland won a “Best-in-Class Pollution Prevention Award” in 2008. With colleague Brigitte Paap, Sutherland developed a new technique that uses fluorescent “tags” instead of radioactive ones to monitor repair of damage to DNA, thereby reducing hazardous waste and the cost of research.

In 2009, Sutherland became a Fellow of the American Association for the Advancement of Science. She was also a member of numerous professional and academic societies, including the American Institute of Biological Sciences, the New York Academy of Sciences, and the Radiation Research Society. Sutherland held a patent issued in 2004 for “Method for Assaying Clustered DNA Damages.”

Betsy Sutherland, who resided in Wading River, is survived by her husband, John Sutherland, a senior biophysicist in the Biology Department. In lieu of flowers, donations may be made to: York Place, Episcopal Church Home for Children, 234 Kings Mountain St., York, South Carolina 29745-1131.

— Diane Greenberg

Volunteer Days Program Starts:
Will Benefit BNL’s United Way Fund

BNL’s annual Long Island United Way fundraising drive officially kicks off on November 9. As part of the drive, this year’s United Way Chair, Carol Parnell, Assistant Laboratory Director for Environment, Safety & Health (ESH), with her Co-chair, Sarah Mahler of ESH, have already announced the start of the popular Volunteer Days Program.

Many in the BNL community perform volunteer work and activities. By participating in the Volunteer Days Program, BNLeers can help the United Way fundraising effort because for every hour volunteered between October 19 and December 31, BSA will donate \$20 to BNL’s Long Island United Way campaign, with a ceiling of \$10,000. It’s as simple as filling out and submitting the volunteer work receipt form which can be found at <http://intranet.bnl.gov/unitedway>. Submitting a form for your efforts is a simple but effective way to help. If you would like information on volunteer opportunities, contact the Volunteer Days Program Coordinator, Patti Bender, Ext. 3145 or pcb@bnl.gov.

BNLeers volunteer in so many ways — as volunteer firefighters, working in soup kitchens, the meals-on-wheels program, in hospitals, church activities, Habitat for Humanity, in activities to benefit handicapped children, teaching, mentoring, lecturing, coaching, scout leaders — the list goes on, and many people volunteer year-round.

To encourage participation in a volunteer activity with supervisory approval, an employee may make a one-time request of an hour’s work time to perform volunteer work. A minimum of two hours is necessary, one work hour, and one from your own time. Thereafter, you may volunteer as many hours as you wish on your own time. Last year’s Volunteer Days Program was a tremendous success — here’s hoping and expecting that this year will prove even more successful.

ADHD from pg. 1

...to improve the functioning of the reward system could help mitigate these troubling consequences in the ADHD patient population.”

This research was supported by the National Institute on Alcohol Abuse and Alcoholism Intramural Research Program and by the National Institute on Mental Health. The Office of Biological & Environmental Research within DOE’s Office

of Science provides infrastructure support for the radiotracer chemistry and imaging facilities at BNL. Brain-imaging techniques such as PET are a direct outgrowth of DOE’s long-standing investment in basic research in chemistry, physics, and nuclear medicine.

For more information, see http://www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=998.

— Karen McNulty Walsh

In Memoriam

Frederick Gillespie, who joined the Plant Maintenance Division as a helper A on March 23, 1947, with life number 303, died on August 14, 2009, at the age of 92. He retired as a plumbing supervisor on September 27, 1982.

Albert G. Prodel, who originally served as a guest assistant physicist from October 19, 1956, to June 30, 1959, and joined the Physics Department as an associate physicist on July 1, 1959, retiring from the Collider-Accelerator Department on November 30, 1999, died at the age of 84 on September 22, 2009. After receiving tenure in 1967, he joined the Alternating Gradient Synchrotron Department in 1971, then moved to the Accelerator Development Department in 1986 and to the Relativistic Heavy Ion Collider Project in 1992. His contributions to local educational organizations, in particular to the Shoreham-Wading River School District, were recognized by the Shoreham and Wading River communities in 1994 by their renaming of the middle school as the “Albert G. Prodel Middle School.”

Colleagues and family members who would like to contribute more information or interesting stories about BNL retirees who have died, to be posted on that retiree’s page in the Bulletin Obituary section, www.bnl.gov/bnlweb/pubaf/bulletin/obit/, are asked to contact Liz Seubert, lseubert@bnl.gov or Ext. 2346.

BLUEPRINT UPDATE

On October 1, the two new science directorates — Environment & Life Sciences (ELS) and Global & Regional Solutions (GARS) — were established. These are among the first elements of the Blueprint to have emerged. Gerry Stokes, the ALD for GARS, has arrived at the Lab (see story, pg. 1), and we have commenced a new search for the ALD for ELS, which is presently being led by Fritz Henn and Creighton Wirick. Other searches for key personnel related to the Blueprint are also under way — including the ALD for Finance,

where Mark Israel is currently serving as interim ALD, and the manager of the Office of Technology, Commercialization and Partnerships — a component of GARS. The Blueprint Steering Group is working on a Blueprint schedule for FY2010 and on responding to feedback, which is continuing to come in from staff across the Lab. More information on Blueprint projects can be found on the Blueprint website: <http://intranet.bnl.gov/blueprint/projects.asp>. — Sam Aronson



Roger Stoulenburgh DRI/SL/05

Benefits: Open Enrollment Begins 10/28

Open enrollment for medical and dental benefits, the health care and dependent day care reimbursement accounts, and the vacation buy plan will begin on October 28 and will continue through November 10. All changes made during the open enrollment period are effective January 1, 2010. For a list of changes/enhancements that have been made for 2010, see the October 16 issue of The Bulletin, or the Monday Memo published on October 12, <http://intranet.bnl.gov/memo/>. For more information, call the Benefits Office, Ext. 5126/2877.

Retiree Mike Reynolds Prepares for 2nd Leg Of Voyage 'Around the Americas'

BNL retiree Mike Reynolds is serving as chief scientist on a yearlong expedition aboard a 65-foot, single mast, steel-hulled yacht that is sailing around the Americas. Its mission is to bring awareness to people about the conditions of the oceans. One of the jobs for the expedition scientist is to meet with local people along the way to discuss the scientific program. The voyage of Ocean Watch began in Seattle around Memorial Day and the ship arrived in New York Harbor on Saturday, October 3. The rest of the voyage will take the yacht and its crew around North America — down the east coast of the Americas, around Cape Horn, up the west coast of the Americas, and back to Seattle sometime next year. In the meantime, you can follow the crew's progress and read about this great adventure on their daily blog with pictures at www.aroundtheamericas.org. The Ocean Watch's crew had a hair-raising trip around Cape Hatteras recently. Watch Captain Herb McCormick blogged that it was the "worst night/day of trip so far. Since Seattle. Bar none. There is no second." In Charleston, Ocean Watch was hauled out of the water for maintenance and to have the large, fixed propeller — which the crew opted for during the Arctic portion of the voyage through the ice — exchanged for a more efficient prop that will be useful during the long offshore sailing passages to come. The team has now set sail for its final stop on its current U.S. East Coast tour: Miami, Florida. The interview below was conducted before their adventure in the Gulfstream unfolded, but you can read all about it on the Crew Log for Saturday, October 10, at the expedition's website (link above).

Q&A With Mike Reynolds Aboard the Ocean Watch In New York Harbor, October 6, 2009
Q. How did you get involved with the Ocean Watch project?
A. I started working on this project a year ago. I have an instrument, Infrared Seasurface Temperature Autonomous Radiometer (ISAR) that was originally developed at BNL with the Univ. of Miami. I've been working with ISAR for 8 years or so. It's a high quality infrared thermometer that measures the skin temperature of the ocean. My friend from the University of Washington's Applied Physics Lab, Andy Jesup, said we're having a meeting about a cruise that you might be interested in, and maybe you could deploy your ISAR data for the cruise. In the course of the meeting, I realized that this was not just a cruise. This sailboat was going to be sailing 25,000 miles, stopping 31 times, and delivering a very important message about the health of the oceans. The more I listened, the more excited I got.
Q. What do you hope to get out of participating?
A. I'm very interested in giving back. I'm semi-retired, although I have some projects under small contracts. At this time in my life, I'm interested in doing some volunteer work, and I thought this cruise would be perfect. I get to talk about the things I like and do work that I like, and it also

allows me to do something for the world. I said I'd be happy to build other instruments, so now there's what might be called the meteorological/climate package that sits at the very tiptop of the mast, and when we're underway, I do some water sampling and things like that. And by golly, before I knew it I was the chief scientist. That's what happens when you volunteer.
Q. Will you be on the entire voyage?
A. I won't be on the whole cruise, but I chose three long segments for various scientific reasons. The first was from the departure in Seattle to Barrow, Alaska. That segment took about two months. The ship then went on through the Northwest Passage. But I also selected the segment from Boston to Buenos Aires — that's the one I'm on now. I am very interested in aerosols because I did a lot of work with ARM (Atmospheric Radiation Measurement program), and the east coast gets a plume from Africa known as the African Plume, actually two plumes, one from burning of biomass and one from the desert. I'm getting off in Buenos Aires and will pick it up again in Lima. From there we'll go to the Galapagos and up that way. That leg is also very important for the ARM project; it's called the Eastern Ocean Margins up the west coast of South America and the west coast of the US.
Q. What are some of the projects you will be working on?



Scientist Michael Reynolds shoots the sun with the sun photometer supplied by the Joint Institute for the Study of the Atmosphere and Ocean (JISAO) while aboard Ocean Watch.
A. We have a project with NASA doing cloud observations. We have an instrument called MicroTops to study aerosols optical depth. We have other projects, including a very interesting one studying jellyfish populations. There seems to be quite an epidemic of jellyfish in overfished areas so we're looking at that, taking samples.
Q. What's your sailing background?
A. Primarily on the Great South Bay. As an oceanographer, I have been out on larger ships. But in terms of sailing, I was pretty much a day sailor. I know what the lines are; I know the different halyards and the sheets. I know what they all are, just on this ship they're a lot bigger.
Q. Has anything surprised you?
A. Nothing has been totally surprising. I spend a lot of time at sea trying to keep all the instruments running. I try to take data, and there are a lot of areas where we take a lot of spot samples like jellyfish. I spend a lot of time recording all that. In those ways I'm sort of a proxy for other scientists. It's my job to collect the data, then provide all the related data around it. But as any

scientist at Brookhaven will tell you, you don't reach conclusions while you're collecting the data. There are a few things like the African Plume that I can talk about as something concrete that we're looking at, but from that data we haven't reached any hypotheses.
Q. Anything else you'd like to say about the expedition?
A. I would like to say something about the people who had the vision to do this — the captain, Mark Schrader, who has completed two round-the-world solos and is probably one of the most experienced sailors in the country; David Rockefeller Jr., who is a sailor and a very strong environmentalist; and David Treadway, who is a therapist and chairman of the board of Sailors for the Sea. Also Tiffany Trust and Unilever are major contributors. These people have come forward in hard economic times and put quite a bit of money into this thing and I think it's pretty remarkable. In addition, a host of companies such as Helle Hanson, Raymarine, Nobeltek, and Stratos Iridium have donated essential equipment to the project. — Kay Cordtz See more detail at www.bnl.gov/today/story.asp?ITEM_NO=1451.

CALENDAR

— THIS WEEKEND —

Today, Friday, 10/23

Body & Soul 5K Run
Noon. Outside Biology, Bldg. 463. Pre-registration required: <https://intranet.bnl.gov/body/soul/reg/default.asp>. Organized by BERA Running & Cycling Club.
Saturday, 10/24
***Beatles Tribute Band Concert**
8 p.m. Berkner Hall. Rock band "Mostly Moptop" will perform. For ticket information, see pg. 4.

— WEEK OF 10/26 —

Monday, 10/26

IBEW Meeting
6 p.m. Centereach Knights of Columbus Hall, 41 Horseblock Rd., Centereach. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes regular business, committee reports, and the president's report.

Wednesday, 10/28

Body & Soul 400-Yard Swim
11 a.m.-1:30 p.m. Organized by BERA Swim Club. Register at www.bnl.gov/bera/activities/swimming/.
***453rd Brookhaven Lecture**
4 p.m. Berkner Hall. Richard Ferreri, Medical Department, will talk on "Striving Toward Energy Sustainability: How Plants Will Play a Role in Our Future." All are welcome to this free talk. Visitors to the Lab of 16 or more must carry a photo ID. See pg. 1.

Women's Table Tennis Tournament
5 p.m. Bldg. 317. Register at Body & Soul, <http://intranet.bnl.gov/body/soul/>.

Friday, 10/30

Body & Soul Biathlon 800-yd Swim
11 a.m.-1:30 p.m. Swim pool. Organized by BERA Swim Club. Part of split biathlon or just for great workout. Register at www.bnl.gov/bera/activities/swimming/.

— WEEK OF 11/2 —

Saturday, 11/7

Celebrate Diwali, Festival of Lights
3 p.m. Berkner Hall. The BERA Indo-American Association will hold Diwali to showcase the culture of India through music, dance, and the arts. Indian snacks and an Indian dinner after the show will be served. Adults, \$15; and children under 12, \$9. After 10/31, adults/\$17, children/\$10. To reserve and pay through PayPal go to www.bnl.gov/bera/activities/iaa/diwali2009. Tickets are refundable until 11/4. Visitors to the Lab of 16 and over must bring a current photo.

BERA Updates

Buy tickets weekdays, 9 a.m. – 3 p.m., at the BERA Store, Berkner Hall.
Foxwoods Casino: Saturday, 11/ 7. Leave BNL 7:45 a.m., take 8 p.m. ferry home. \$35/person, for bus, ferry, \$30 match play, lunch buffet, three \$5 slot plays.
Rangers: Thursday, 11/12, vs. Atlanta Thrashers, 7 p.m. Sect. 348/349, 40 tickets only. \$75/person for game and bus. *Save the following dates, tickets will be sold from 10/30:*
Radio City Christmas Spectacular: Sunday, 12/6, 50 tickets only. 11:30 a.m. show; 2nd mezz, sect. 500. \$85/person.
Seiskaya Ballet, Nutcracker Suite: Saturday, 12/12, 2 p.m., Staller Center, Stony Brook. 20 discount tickets available, \$29 each. No bus.
BERA Holiday Party: Friday, 12/11, at waterfront Miller Beach Surf Club. Details to follow.

Can you spare a can? Please contribute to the BNL Food Drive.

Classified Advertisements

Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present benefits-eligible employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present benefits-eligible employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status. Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people. Except when operational needs require otherwise, positions will be open for one week after publication. For more information, contact the Employment Manager, Ext. 2882. Access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/.

To apply for a position, go to www.bnl.gov. Select "Job Opportunities," then "Search Job List."

OPEN RECRUITMENT – Opportunities for Lab employees and outside candidates.

DESKTOP MANAGEMENT ENGINEER/SENIOR TECHNOLOGY ENGINEER (I-8) (REPOSTING) – Requires a bachelor's degree and/or minimum of eight years experience in advanced desktop administration. Experience in systems management tools (SMS, SCCM 2007, LanDesk or Altiris) and application packaging and advanced scripting experience (e.g., Wise Installation Studio, Inno Setup, VBScript, Powershell) required. Superior technical and analytical skills, excellent communication and writing skills and the ability to work well in a team-oriented environment a must. Knowledge of Active Directory Group Policy and knowledge of Microsoft operating systems, desktop applications, VMware ESX and related technologies required. Experience with the Microsoft Operations Framework, ITIL, SQL reporting and virtual desktop infrastructure, Linux and Mac OS X is a plus. The Desktop Management engineer will manage and execute projects independently, configure, deploy, report on and troubleshoot desktop applications and policies, monitor client health issues and analyze trends in client behavior in order to configure the appropriate policies. Information Technology Division. Apply for Job ID #15014.

MATERIALS SCIENCE ASSOCIATE II/ (P-5/P-8, reposting) – Responsibilities include the set-up and operation of a state-of-the-art crystal fabrication lab as part of the R&D effort to develop x-ray optics for achieving the 0.1meV energy goal. Will work closely with the research group in the design and fabrication of the x-ray optics. Requirements include a minimum of BS degree in material science or related discipline plus a minimum five years of relevant experience in x-ray crystal optics fabrication, including cutting, polishing and chemical etching of high-quality silicon crystals. Must have excellent written and oral communication skills and be able to interact effectively with a diverse group of scientists, technical staff and users. Preferred requirements include a Master's degree, experience in supporting synchrotron x-ray beamline optics development, and experience using state-of-the-art instrumentation, including superfine CMP polisher and high-precision diamond wheel dicing saw for crystal fabrication. Position reports to the Inelastic X-ray Scattering Group Leader, NLSLS-II. Candidate will be placed at the Materials Science Associate II or I level dependent upon depth of experience specified. ERAP eligible \$1000. Apply to Job ID #14709.

SCIENTIFIC ASSOCIATE II (P-5) – Will provide technical expertise in the R&D, design, measurement, installation, and commissioning of NLSLS-II insertion devices. Responsibilities will include designing and testing the electrical systems and controls interface for insertion device magnetic measurement facility. Will report to the NLSLS-II Insertion Devices Group Leader. Qualifications required: BS degree in Physics or Electrical Engineering and minimum of five years of progressively responsible related work experience in DAO, UNIX, C/C++ programming and other scripting languages. Qualifications preferred: Advanced degree in physics or electrical engineering; knowledge and experience in magnetic field measurement using coils and Hall probes, EPICS, and motor controls. National Synchrotron Light Source II. ERAP Eligible \$1000. Apply for Job ID #15076.

Motor Vehicles

04 TOYOTA SOLARA – 32K mi. 3.3 l. V6, a/t, loaded, m/roof, leather, clim cntr, heated seats, 5 disc CD, rem strt, immac. gar, kbb value \$14,160. ask. \$13,200. 839-5831.

03 FORD ESCORT ZX2 – 46K mi. 4cyl, AC, am/fm/CD, AT,PS great cond, good gas milage. \$4,900 neg. AI, Ext. 7859 or farland@bnl.gov.

03 DODGE NEON – 79K mi. 4cyl., 2L, 4spd., a/t, a/c, am/fm, p/b, p/s, excel. cond., non-smkr, avail end Oct. \$4,695, neg. Ext. 4924 or smonchy@bnl.gov.

99 LINCOLN CONTINENTAL – 59K mi. loaded, well maint. \$4,800 neg. Bob, 724-4481 or bogieandbacall@optonline.net.

97 CHEVROLET CORVETTE – 49K mi. Silver w black int, C-5, a/t, loaded, mint; no adjustment for suspension; Pic on request. \$17,500. 275-0694 or irachel@bnl.gov.

92 BMW #735 – 170K mi. white 4-dr sedan, clean in/out, eng, exhaust, brakes in fine cond, needs transmission work. \$1,200 neg. michael, 298-9300.

82 MERCEDES-BENZ 300 TD – turbo diesel, good cond. asking. \$2,750 neg. 576-5102.

Marine Supplies

SAILBOAT JACK STANDS – Used Brownell model SB-3FL stands; adjustable from 36"-55" w/flat swivel top. Ext. 2788.

Furnishings & Appliances

BABY CHANGING TABLE – quality solid wood, on rollers, with utility drawer and a mat, \$30. Ext. 3621.

CHILD BED/DESK – all wood bunkbed w/ latter, desk below, pull out bed, storage behind desk, will help assemble, \$100. Ron, 379-0742 or edwardsr@bnl.gov.

CLOCK – Wall clock - Heirloom Quartz, oval with light oak trim, gold hands - 10 1/2 W x 12 Long - \$25. 281-4459.

MICROWAVE CABINET, STORAGE – wood w/wheels, 52.5hx17.5dx24"w; towel rack, drwr, top shelf + shelf/opening 20.5wx18h, photo avail, \$40, 591-1183. lysik@bnl.gov.

PIANO – Upright. Needs tuning. Can help move. A steal at \$200. Lynda or Michael, Ext. 7235, 286-1018 or fitz@bnl.gov.

PRINT – Abstract print in peach, pink, white & teal - professionally framed, peach frame, white mat, - 46 1/2w x 34 1/2h, \$50. 281-4459.

RECLINER – Leather recliner - sand color, 1 yr old. Pd. \$800, asking \$250. (Excellent Condition). 281-4459.

TABLE 6 CHAIRS & HUTCH – light wood table, 6 chrs w/matching hutch, b/o. Richard, Ext. 7129 or rlagattolla@bnl.gov.

Audio, Video & Computers

PRINTER – HP DeskJet Printer 842C. Excellent condition, asking \$20. 281-4459.

SONY DRU-800A DVD RW DRIVER – for PC, has everything, work excel/\$5; Linksys RT31P2 Router, has everything, work excel/\$5. Ext. 5049 or fu@bnl.gov.

SONY VAIO FW SERIES LAPTOP – 4g ram 320g HD w/Blu Ray player, HDMI hook up, 1080p resolution, 1200/neg. Michael, 719-492-8229 or mcross@bnl.gov.

VINTAGE DRUM MACHINE – Roland R-5, collectable, with user manual and PSU, MIDI in/out. \$75 OBO . Ext. 3621.

Sports, Hobbies & Pets

PIANO – 6 ft Lester grand piano. Mature instrument but with almost completely rebuilt mechanism, great sound. \$2,000, neg. Ralph, Ext. 4373 or weston@bnl.gov.

RABBIT FOOD – 2/25 lb Kaytee supreme daily blend rabbit Pellets, sealed bags, \$20/ea. Warren, Ext. 2080, 751-5245 or amyhaw8@yahoo.com.

TREADMILL – Older model, works great! Ext. 7007.

WILSON SOCCER BALL – PINK – like new, size 5. pale pink color, artificial leather. \$5. Jo, Ext. 5068 or jonlien@bnl.gov.

Tools, House & Garden

AIR COMPRESSOR – air compressor [gasoline powered] for rent to winterize your sprinkler system. Michael, Ext. 5262, 284-2277.

CRAFTSMAN TOOLS – 50s, 10" radial arm saw w/table \$100; 10" table saw w/36" table on stand \$75; 18" scroll saw \$50, Dunlap Drill Press, 6", flr model 5'h, \$50. Kathleen, Ext. 7114.

DUMP CART – Craftsman metal dump cart for tractor 1"x2.5"x4" in excel. cond.. \$90. Shigeki, Ext. 2635 or misawa@bnl.gov.

FIREPLACE LOG HOLDER – brass, brand new, basket style/\$20; heavy duty router/50; antique blow torch/35. Ext. 7114.

POTS AND PANS – new, non-stick, 1 skillet, 3 pots (\$40). Yvette, Ext. 5591 or malavet@bnl.gov.

SNOW THROWER – TROY built, 8.5 H.P., 4 cycle, brand new \$699. Ron, 379-0742 or edwardsr@bnl.gov.

WOOD FLOORING – Partial box of Bruce flooring, 3/4 x 2 1/4 in Gunstock finish, with nails. \$20. Ext. 3884.

Free

2 WHITE RABBITS – spayed/neutered, male/female need gd home. Warren, Ext. 2080, 751-5245 or amyhaw8@yahoo.com.

ASSORTED WOOD – 5 sheets plywood sheathing 4'x4'x15/16;" assorted 5/4" & 1" cedar planks from new, disassembled playground set. Ext. 2635, misawa@bnl.gov.

FIGURE SKATES – youth girl's, 2pr, sizes 2 & 3. Kenneth, Ext. 4660.

Miscellaneous

A/C COMPRESSOR FOR CENTRAL AIR – Going Solar/Geothermal - no longer need outdoor 5 ton A/C Compressor for Central Air. Like new. Only \$500. Ext. 3173.

CASSETTE DECK – Pioneer CT-F9191, \$25. Stephen, Ext. 4477.

CHRISTMAS TREE – 12' artificial, pre-lit w/white lights, 4 sections, looks real, pd/\$1,000, ask/\$300, excel cond. 727-6180.

HALLOWEEN COSTUME – White Chick so adorable size 18-24 mos. fit 2 yr. old child. worn 1x. Ext. 7007.

MAN'S MOTORCYCLE JACKET – Stein Mark – Sz 44, Removable Liner Zipper pull tab missing; picture upon request. \$60. Cheryl, 399-5738 or irachel@bnl.gov.

NEW DGB CD AT BERA STORE – The new Doug Gordon Band CD "SPIN" is available for purchase at the Bera store. \$10. dgbdoug@gmail.com.

OIL BURNER – forced hot air, Going Geothermal 87000-117000 Btu, 1 Gph, oil burner, like new, \$1,000. Jill, Ext. 3173.

PORTABLE GARAGE – 14'x14'x28' industrial grade, assembd 1ce for 3 mos. Pd \$2,500. \$1,900. neg. Hi qual., v. lge, grt for mtor home. 655-4924, rlevsque@bnl.gov.

PUPPIES! – Pit Bull, 5 girls & 4 boys, ready to be taken home to their new loving family. \$200, Shavonne. 433-0429.

Yard & Garage Sales

PATCHOGUE – Movg Sale, 73 Buckley Rd, Sun, 10/25, 9 to 5, all must go, make offer on anything, furn/tools/garden/household/athletic/camping. Ext. 7517, 741-2190.

Happenings

MIRACLE OF CHRISTMAS SHOW – 11/27, bus to Sight & Sound Theatre, PA. cost for bus, show, Good & Plenty Restaurant meal: age19&up, \$110, dep.\$50; 13-18, \$90, dep.\$40; 4-12, \$65, dep.\$30. Deposit due now. William, 369-0627.

NFCT PRESENTS "RABBIT HOLE" – Pulitzer prize winning drama, at N. Fork Community Theatre, Mattituck. Fri, Sat, Sun, 11/6-11/22. All tickets \$15 at <http://www.nfct.com> or 298-NFCT. Laura, Ext. 2520.

Farewell Gathering

RALPH GARAPPOLO - POST OFFICE – Farewell party for Ralph Fri 10/30 at the Rec Hall 5-9pm. \$30dinner/drinks/gift -RSVP by 10/26 to Jeanine @the PO, OR come by the PO for coffee & cookies 10/30 11am-1pm!. Christine, Ext. 5090.

Wanted

ADOPT-A-PLATOON – Monetary donations gratefully accepted towards mailing shipments to military overseas. Thank you. Joanne, Ext. 8481.

BNL FAMILY MEMBERS IN MILITARY – If you have a family member that has been deployed overseas, please contact Adopt-a-Platoon. Joanne, Ext. 8481.

FAMILY WHO BOUGHT FISHTANK – 3 gal, about 1 mo ago, found filter cartridges, pls contact me. Kathleen, Ext. 7114.

SKIERS – To join sharehouse in a Vermont close to Okemo and Killington resorts. Alistair, Ext. 2948.

For Rent

KISSIMMEE, FL – Condo-3 bedroom condo, 2 baths, fully furnished, 4 miles to DisneyWorld. \$700/wk. John, 732-2472.

NAPLES, FL – 2br/2ba fully furn condo in gated golf comm, seasonal rate for Jan/Feb or Mar. \$2,600/mo. 523-7870.

MASTIC BEACH – lg eik, l/r, loft bdrm, off st prkg, 1 mo sec, no pets, 7 mi to Lab. \$1,000/mo. Jim, 300-7361.

MILLER PLACE – Furn. Col. house in prof. resid area. Internet, TV, heat, AC. Full kitchen. Furn. own bdrm. 8 mi. to Lab. Responsible non-smoker. \$675/mo. All incl. 744-8386.

N. SHIRLEY – 1 bdrm apt, grd flr, furn, quiet area, pvt ent/yd, util incl, walk to stores, 5 min to Lab. \$800/mo. Ganga, Ext. 3849, 281-3479.

Wanted: BNL Art, Photos, Crafts for Fall Show

BNL artists, photographers, sculptors, and crafters – your most beautiful creations are needed for the BNL Art Society's upcoming Art & Crafts Exhibit to be held at Berkner Hall, Monday-Wednesday, November 23-25, 11:45 a.m.-1:30 p.m. An evening reception with refreshments will be held on Monday, November 23, 5-7 p.m. BNL employees, retirees, facility users, guests of BNL, and family members 15 years and older, may all contribute. More than one piece may be entered by an exhibitor, to be shown as space

permits. Pictures and photos can only be accepted if they are fully ready to hang.

Bring exhibits for the show to Room C, Berkner Hall, on Friday, November 20, 2-4:30 p.m. To be included in the program, complete a form for each work entered and return it by Monday, November 9, to Bob Chrien, Bldg. 510A, or e-mail your information to chrien@bnl.gov. Your name can only be on the program if information is on time, so please do not forget. We are looking forward to seeing your work.

Entry Form for BNL Art, Craft Exhibit, November 24-26

Name: _____ Home Phone: _____

BNL Contact: _____ BNL Ext: _____

Type of art/craft (painting, sculpture, photo, pottery, quilting, etc.): _____

Title of Work (if there is a title): _____

Description (medium, material, size, etc.): _____

Please return to Bob Chrien, Bldg. 510A, or send the same information to chrien@bnl.gov, both by 11/9.



Beatles Tribute Band 'Mostly Moptop' Recreate Fab Music Tomorrow, 10/24

The classic rock band Mostly Moptop will perform on Saturday, October 24, at 8 p.m. in Berkner Hall. Sponsored by the BNL Music Club, the event is open to the public. All visitors to the Lab 16 and older must bring a photo I.D.

Mostly Moptop derived their name from pop culture's famous bowl-style haircut first sported by the Beatles in the early days of their fame. Formed in 1995, Mostly Moptop performs music from the Beatles repertoire as well as other classic rock songs from the 1960s to the early 1980s. Their playlist features renditions of well-known Beatles tunes, as well as some solo work of the famed "Fab Four."

The seasoned band members of Mostly Moptop are: Anthony Pomes, rhythm and lead guitar, bass, piano; John Tabacco, drums, piano, bass; Eddie Franz, rhythm and lead guitar, bass; and Paul Michael Barkan, bass, keyboards. On occasion, fifth Moptop Don Larsen, a freelance percussionist, will perform with the band. The band members, recognized for their strong vocals, songwriting, and production talent, have performed with well-known musicians including Micky Dolenz of the Monkees, Petula Clark, and Doc Severinsen. In addition to performing at local venues, they have also performed with the Beatles Magical Orchestra conducted by noted American composer David Amram.

Tickets for the show are \$15 in advance at the BERA Store, and \$20 the day of the show. For more information on the band go to www.myspace.com/mostlymoptop.

— Jane Koropsak

For Sale

EAST YAPHANK – 3 bdrm, 3 bath, oversize garage. 1/2 acre. Newly redone & landscaped. CAC, fp, income producing potential. Nr Lab. \$329,990 neg. 516-383-7006.

PATCHOGUE – 3 bdrm 2 bath ranch, cac, l/r w/fp, d/r, eik, full bsmt, ose, 2-zone oil heat,.93 acre, priv, low taxes, Pat-Med SD. \$339,000 neg. Ext. 7517, 741-2190.

RIVERHEAD – 2-3 bdrm, 2 bth condo, Saddle Lakes 55+ gated communit, clubhse, in/out dr pool, tennis, theatre, more, fin bsmt, cac/gas, wtrview, \$360,000 neg. 905-9617.

SHIRLEY – 5 bdrm ranch, 1 bath, fen .5 acre, l/r, eik, den, fam rm, new paint/carpet, move-n-cond, 10 min to Lab, beach, nr LIRR/buses. \$260,000. 793-8684.

SHOREHAM – 4 bdrm., 2.5 bath Col., fmlr l/r, d/r, den w/fp, fin bsmt, 12x20 deck, igs, new granite counters, SWRSD, much more, 7 mi to Lab. \$479,000 neg. 821-3320.

ST JAMES – Condo, Fairfield 55, gated com, 2 bdrm, 2 full bath w/gar, near Lake Grove shopping ctr, pool/tennis courts & clubhouse. \$300,000 neg. 281-4459.

For a list of employee-provided services, call 344- 2346.