the Bulletin

BROOKHAVEN NATIONAL LABORATORY

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BNL, Pharmaceutical Firm Develop New Boron Compounds

Potential for Better Cancer Therapy

BNL and Psimei Pharmaceuticals Limited have signed a Cooperative Research and Development Agreement (CRADA) to develop BNL-invented boron compounds for use in an experimental radiation therapy for cancer, as well as in other cancer treatments.

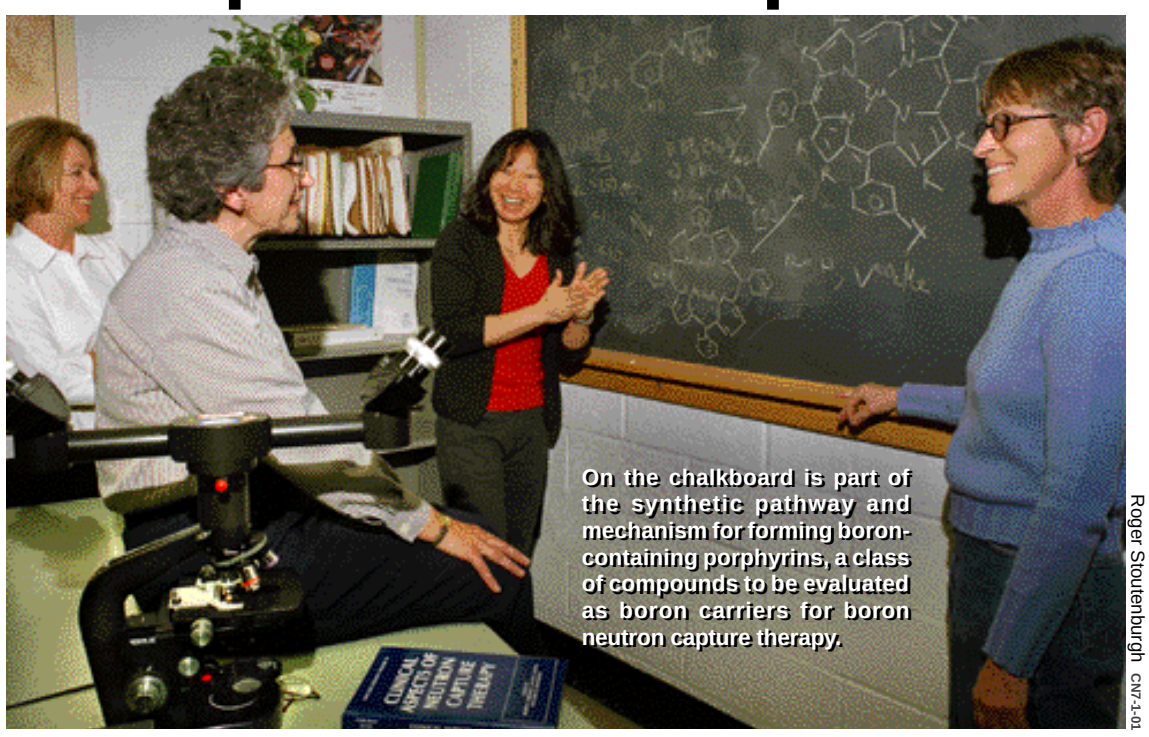
Psimei, a recently launched biotechnology company in Middlesex, England, has acquired the license to commercialize the new boron compounds from Brookhaven Science Associates (BSA), which holds U.S. patents and U.S. patent applications covering these compounds. Also, BSA has filed international patent applications, which are pending. The patents name Michiko Miura, Medical Department, and Daniel Slatkin, a Medical retiree and research collaborator, as the inventors of the compounds.

"The most promising new compound contains both boron and copper," said Miura, BNL's principal investigator in the CRADA. "So far, it looks very effective in destroying tumor tissue, while minimally affecting normal tissue."

For several years, BNL scientists led by former Medical researchers Jeffrey Coderre and Aidnag Diaz had performed clinical trials to determine the safety and toxicity limits of an experimental therapy known as boron neutron-capture therapy (BNCT). This therapy used a boronated amino acid called BPA and neutrons from the Brookhaven Medical Research Reactor to treat patients with an incurable brain cancer known as glioblastoma multiforme. Boron compounds concentrate preferentially in tumors and destroy cancerous cells when they react with neutrons in BNCT.

Compared to BPA, the new boron compounds are expected to deliver higher concentrations of boron to certain tumors than to normal surrounding tissues within the neutron-irradiated regions. This may make the new compounds more effective for BNCT. If preclinical studies under the CRADA agreement and subsequent clinical trials find the new compounds to be safe and effective, the compounds may well be used in BNCT for the treatment of head and neck tumors and/or brain tumors. Also, Psimei is involved in the development of a mobile neutron source so that BNCT will be available at hospitals as needed.

In addition, the new boron compounds may be useful for improving the effectiveness of conventional x-ray therapy, which kills tumors with x-rays; or for photodynamic therapy, in which lasers and photosensitizers destroy tumors.



Roger Stoutenburgh CN7-1-01

Michiko Miura (left of chalkboard) and Peggy Micca (right of chalkboard), both from the Medical Department, discuss the boronated compounds to be studied under a CRADA with Marta Nawrocky (far left) of Psimei Pharmaceuticals Limited and Margaret Bogosian (second from left) of the Office of Intellectual Property & Industrial Partnerships.

In an article published in the July 5, 2001 edition of the *Journal of Neuro-Oncology*, Miura and others report that, in initial studies of tumors in mice and rats, a new copper-containing compound delivered up to eight times more boron to certain tumors than was delivered by boron compounds used in BNCT trials to treat brain tumors.

Also, the ratio of boron concentration in tumors compared to surrounding blood was much higher with the new compounds than with those used in previous BNCT trails.

In BNCT studies performed at BNL, as reported in the April 2001 *Radiation Research*, a new compound controlled 70 percent of leg tumors in mice, with little or no normal tissue damage or chemical toxicity to the animals.

Under the CRADA, researchers will evaluate the biodistribution and toxicity of the compounds in various types of cancer in mice. If those studies prove favorable, the scientists will perform experiments to determine the therapeutic efficacy of the compounds.

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Ralph James Leads EENS

Roger Stoutenburgh CN7-10-01

Ralph James has been named Associate Laboratory Director for Energy, Environment & National Security (EENS). Internationally recognized for pioneering materials research that led to the development of a new class of radiation sensors and medical imaging devices, James comes to BNL from DOE's Sandia National Laboratories in Livermore, California.

James succeeds Teresa Fryberger, who left BNL in January. Until James' arrival on June 25, Peter Paul, Deputy Director for Science & Technology, had served as Interim EENS Director.

With a staff of 282 and an annual budget of about $78 million, EENS encompasses the Environmental Sciences, Energy Sciences & Technology, Nonproliferation & National Security Departments, plus the Center for Data-Intensive Computing, and the Research and Business Operations Offices.

In his new position, James oversees a wide range of basic and applied research — such as the study of aerosol chemistry and how it relates to global warming and air pollution; research into biological and chemical processes to produce ultra-clean fuels; and development of new technology to safeguard nuclear materials. James' directorate also includes computational and software expertise from BNL and Stony Brook University in the Center for Data-Intensive Computing, which contributes to numerous scientific endeavors.

James will encourage EENS researchers to pursue long-term projects with stable funding, and he seeks to maintain an excellent rapport with customers. "I want to think big and deliver big," he said. "I plan to increase our involvement with our customers and offer creative and comprehensive solutions to their problems." BNL's major customer is DOE, which funds more than 80 percent of BNL research.

(continued on page 2)

RHIC & AGS Users' Meeting, August 9, 10

The Relativistic Heavy Ion Collider (RHIC) and Alternating Gradient Synchrotron (AGS) Annual Users' Meeting will be held on Thursday and Friday, August 9 & 10, in the Large Seminar Room of the Physics Department, Bldg. 510.

Topics to be covered will include reports from DOE and the NSF, a look to the future, new physics at the AGS, new physics at BNL, RHIC experiments and theory, RHIC experiments in review, a poster session, and a Users' Group business meeting.

A banquet will be held on Thursday evening at the Brookhaven Center. Spouses and friends are welcome; the fee is $30 per person. Attendees are asked to register by Thursday, August 2, making checks payable to Brookhaven Science Associates and mailing them to the RHIC & AGS Users' Center, Bldg. 355.

For registration and additional information, contact the RHIC & AGS Users' Center at userscenter@bnl.gov, Ext. 5975, or visit www.bnl.gov/userscenter/.

Sambamurti Lecture, July 25

RHIC and the Quest for the Plasma

For more than two decades, physicists have been involved in a quest for a predicted new state of matter called the quark-gluon plasma, or QGP. The QGP is formed when fundamental particles of nature — called quarks and gluons — are allowed to roam free, out of the confines of the atom's nucleus.

It is believed that the universe existed entirely in a QGP phase shortly after the Big Bang. Physicists hope to recreate those conditions on a very small scale, by heating up and pressurizing nuclear matter by colliding nuclei together using particle accelerators such as BNL's Relativistic Heavy Ion Collider (RHIC). Studying the properties of QGP will help scientists understand more about the formation of the universe and the building blocks from which it is built.

In this year's Sambamurti Lecture, to be held on Wednesday, July 25, at 11 a.m. in the Physics Department's Large Seminar Room, Bldg. 510, BNL physicist Jeffery Mitchell will describe the physics of the quark-gluon plasma, its connection to the Big

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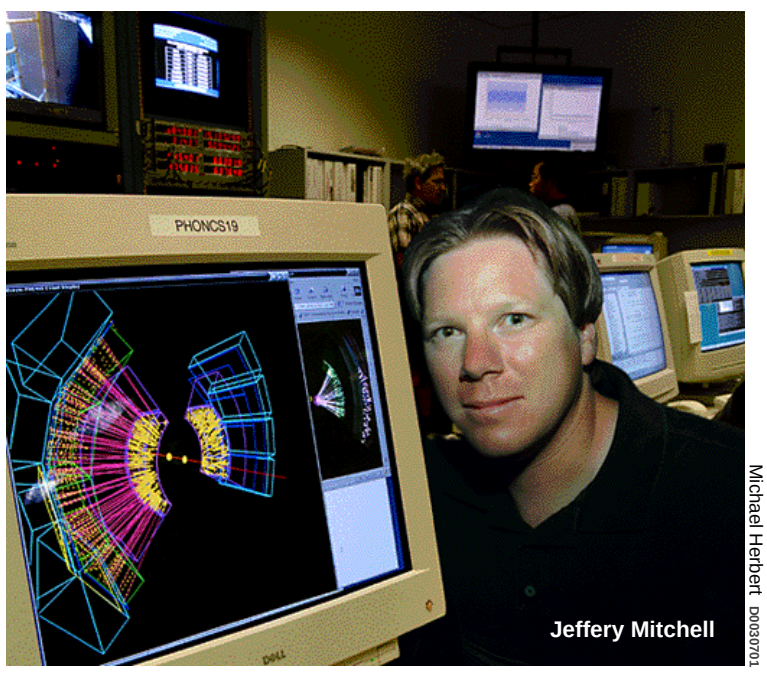


Michael Herbert D0030701

Calendar

of Laboratory Events

- *The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347; or M. Kay Dellimore, Ext. 2873.*
- *Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.*
- *The Recreation Building (Rec. Bldg.) is located in the apartment area.*
- *Contact names are provided for most events for more information.*
- *Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.*

— EACH WEEK —

Tuesdays: Welcome Coffee

10-11:30 a.m. Rec. Bldg. Meet friends. Mimi Luccio, 821-1435.— Hospitality event..

Tuesdays: Yoga Practice Sessions

12-1 p.m., Brookhaven Ctr. North Room. Free. Ila Campbell, Ext. 2206.

Wednesdays: On-Site Play Group Now Meets at Playground

9:30 a.m.-11:30 a.m. Playground in Apt. area, weather permitting. Bring drinks, snacks. Free. Monique de la Beij, 399-7656. Lisa Fugleberg, 205-5128. — Hospitality event.

Wednesdays: Weight Watchers

noon-1 p.m., Brookhaven Center South Room, Mary Wood, Ext. 5923.

Mon., & Thurs.: Cardio Kickboxing

$5 per class. Mon., Thurs., noon-1 p.m. in the Gym. Thursday eves. 5:15-6:15 p.m. in the Brookhaven Ctr. Registration required. Mary Wood, Ext. 5923, or wood2@bnl.gov.

— NEXT WEEK —

Monday 7/23

IBEW Meeting

6 p.m., Knights of Columbus Hall, Railroad Ave., Patchogue. 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, 7/25

Sambamurti Lecture

11 a.m., Large Seminar Room, Bldg. 510. Jeffery Mitchell will present "RHIC and the Quest for the Plasma."

Noon Recital

CANCELLED

Berkner Hall. Pianist Marina Co[illegible] Bach, Beethoven, and Scriabin.

BWIS Summer Reception, Chasman Scholarship

5:15 p.m., Physics Dept. courtyard. Brookhaven Women in Science (BWIS) invites Lab community to summer reception and presentation of the Renate Chasman Scholarship to the winner.

ANS Meeting

6 p.m., Brick House & Brewery & Restaurant, Patchogue Speaker: ANS President Gail Marcus, DOE. Reserve by 7/23, $25/person, Arnie Aronson, Ext. 2606.

Thursday, 7/26

Celebration of Maurice Goldhaber's 90th Year

1:30-6 p.m., Large Seminar Room, Bldg. 510. See www.bnl.gov/nlweb/pubaf/mg90.htm.

In Memoriam

Dennis Puleston

Dennis Puleston, who retired from BNL in 1970 after 22 years of service, died on June 8. He was 95. A naturalist, author, artist, boat-builder, and sailor, he was perhaps best known as the founding chairman of the Environmental Defense Fund (EDF), which took a leading role in getting the insecticide DDT banned in the United States and in other countries.

In 1948, after he had been awarded the U.S. Medal of Freedom for his work in designing the World War II DUKW amphibious landing craft, Puleston joined the Lab. In 1954, he became Technical & Public Information Officer, later Head of the Technical Information Division.

In the 1960s, Puleston's spare-time studies of weakened osprey eggs showed the ill effects of DDT. Puleston and other BNL and area scientists battled to have the pesticide banned in Suffolk County. The group's success in 1966 led to a statewide ban of DDT in 1970, as well as the 1967 founding of the EDF, which Puleston chaired until 1972. Today, the organization has 300,000 members and an annual budget of $40 million.

In 1995, Stony Brook University awarded Puleston an honorary doctorate for his conservation efforts throughout the years, and the Suffolk County Legislature dedicated the 37-acre Dennis Puleston Nature Preserve in his home town of Brookhaven Hamlet. The Open Space Council, which he helped form in Brookhaven Town in the 1960s to preserve open space and quality of life, presents an annual award in his name.

"Because I knew Dennis as one of the great human beings of this world, the proudest moment of my life came in 1996, when I received the Open Space Council's Dennis Puleston Conservation Award," said Marty Van Lith, Physics Department. "But more important, when it was my turn to be a civic leader, I counted Dennis as a friend and colleague in the ongoing struggle to protect the Carmans River and its environs. With his best friend, Art Cooley, he mentored me through 15 difficult years of environmental activism."

During Puleston's later years, he was a lecturer and guide on almost 200 cruises all over the world, including 35 trips to Antarctica. He also authored *Blue Water Vagabond* in 1939 and *A Nature Journal: A Naturalist's Year on Long Island* in 1993.

— Liz Seubert

Boron *(cont'd.)*

The scientists will also synthesize additional compounds that will help physicians view boron concentrations in a patient's tumors and in surrounding normal tissues in a noninvasive way, which will significantly aid in treatment planning.

The CRADA research is fully funded by Psimei Pharmaceuticals and will take place at BNL and Oxford University. At the same time, the Office of Biological & Environmental Research in DOE's Office of Science will provide funding to the Lab for complementary research in this field. — Diane Greenberg

BNL To Conduct 2001 Mini-Survey 7/23 - 8/3

BNL will be conducting a two-week mini-survey from July 23 until August 3.

The survey will offer Lab employees an opportunity to express their opinions on how much progress has been made in key areas targeted for follow-up in connection with the 1998 Employee Opinion Survey. Full-time and part-time employees, and staff with term appointments are asked to take the survey.

This year, the survey is available on line via the Internet. To ensure confidentiality, BNL is again working with International Survey Research (ISR), an independent consulting firm, to conduct the survey. The survey site will be on a secure ISR server, and will be accessible at www.isrsurveys.org/bnl. For more information, call Nauman Mirza at ISR, (312) 828-9725.

Paper surveys are also available in the Diversity Office, Bldg. 185A. For more information, call Lorraine Merdon, Diversity Manager, Ext. 3318.

Service Awards

The following employees celebrated BNL service anniversaries during the month of April 2001:

35 YEARS

Robert Barone ..... Info. Tech.
Andrew T. Como ..... Info. Tech.

25 YEARS

Charles P. La Salla ..... Emg. Svcs.
Peggy L. Micca ..... Medical
Pilar Alverio ..... Central Shops
Frances A. Burr ..... Biology

20 YEARS

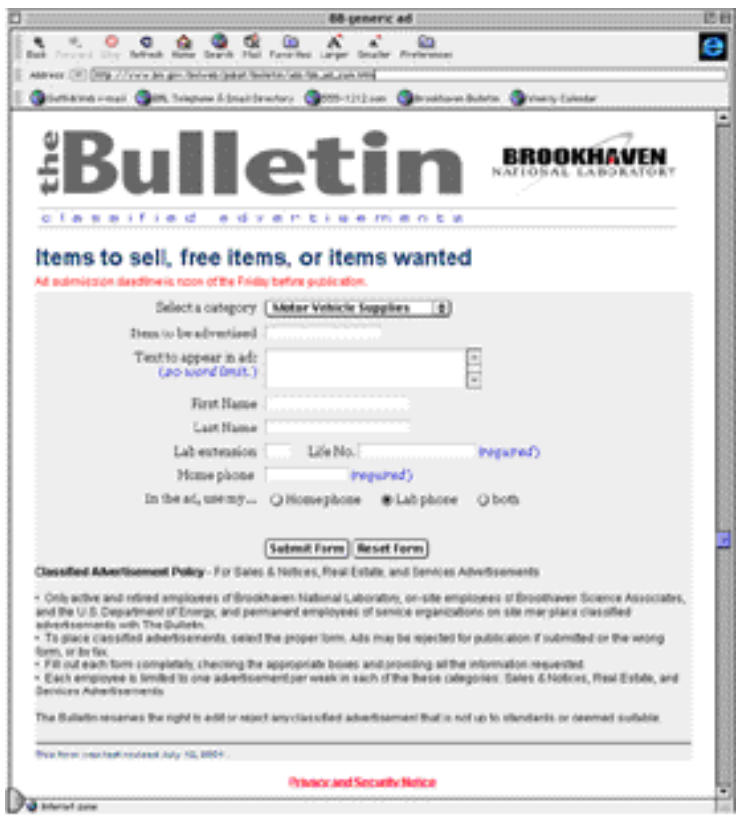
Sharon S. Reeve ..... Physics
Thomas C. Roberts ..... Env. Sci.
Rita Kito ..... Budget

10 YEARS

Susan M. Perino ..... Fiscal
James H. B. Nemeth ..... Training
Nathaniel D. Foster ..... Rad. Ctrl.
Rosalbino A. Grandinetti ..... C-A
Clifford J. Ostarch ..... Plant Eng.
Eric B. Blum ..... NSLS
Steven F. Kane ..... Physics
Richard J. Chylinski ..... Plant Eng.
George A. Goode II ..... Env. Services
Joseph Musorrafiti ..... SSD
Brian R. Karpin ..... C-A
Timothy Lehn ..... C-A
Andrew W. Sauerwald ..... Magnet
Starr E. Munson ..... H.R.
Phillip A. Kuczewski ..... Physics
Robert M. McCarthy ..... C-A
Charles S. De La Parra ..... C-A
Robert Hoade ..... Magnet
Robert J. Duffin ..... C-A

Classified Ads Hit the Web

Thanks to Webstorming by Gary Schroeder, the Community Involvement, Government & Public Affairs' Webmaster, BNL employees and retirees can now submit classified advertisements electronically. Classified ad forms are available at www.bnl.gov/bnlweb/pubaf/bulletin.html. Just fill in the applicable information and submit it. Ad forms may still be sent by mail to the Bulletin Office, Building 134, or dropped in the box in Bldg. 134 lobby. Remember that the deadline is noon on the Friday prior to publication.



Ralph James Leads EENS *(cont'd.)*

James hopes to expand EENS's interactions with universities, and to bring in more students and summer faculty. He also wants the number of patents and licensing opportunities at the Lab to increase. He commented, "Science-based technology can improve the lives and livelihoods of Long Islanders and people elsewhere in the nation."

James earned a B.S. in engineering physics from the University of Tennessee at Knoxsville in 1976, an M.S. in physics from the Georgia Institute of Technology in 1977, another M.S. in applied physics from the California Institute of Technology (Caltech) in 1978, and a Ph.D. in applied physics from Caltech in 1980.

He was a Eugene P. Wigner Fellow at Oak Ridge National Laboratory, 1981 to 1984, then joined the technical staff of Sandia National Laboratories.

James holds nine patents, has authored more than 280 scientific publications and 11 book chapters, and has edited ten books. In addition, he is recognized for a long history of dedicated mentorship and for leadership contributions to professional societies, including serving as chair of 15 international conferences sponsored by both scientific and engineering societies.

Among his honors, James won *Discover* magazine's 1997 "Innovator of the Year" award for developing radiation detection devices. He also is a three-time winner of *R&D Magazine's* R&D 100 Award, which honors the top 100 inventions of the year. In 1998, 2000, and 2001, he won the awards for developing various compact sensors to detect and image radiation and a new method to grow semiconductor crystals. The detectors have numerous applications, particularly in the field of high-resolution imaging for medical uses.

James is a Fellow of both the American Physical Society and the International Society for Optical Engineering.

— Diane Greenberg

Sambamurti Lecture — Mitchell on QGP Quest *(cont'd.)*

Bang, details about how it can be produced and measured, and why its discovery has been elusive. He will also review the most intriguing results from the first year of data-taking at RHIC.

The quest for the plasma began at the Lawrence Berkeley National Laboratory's (LBL) Bevelac accelerator, which began accelerating nuclei to relativistic speeds in 1974.

The quest then continued on Long Island at BNL's Alternating Gradient Synchrotron (AGS) and at the Super Proton Synchroton (SPS) at CERN, the European laboratory for particle physics research, both experiments starting up in 1986.

The quest now returns to Long Island at RHIC, whose four major experiments (named BRAHMS, PHENIX, PHOBOS, and STAR) all began taking data in June, 2000.

Mitchell has been involved in the quest for the QGP from its early stages. After receiving his B.S. degree at Louisiana State University in 1986, he worked on experiment 814 at the AGS as a Yale University graduate student. After earning his Ph.D. in 1992, he took a post-doc position at LBL, where he worked on experiment NA35 at the CERN SPS and the RHIC experiment STAR while its primary detector was being tested and assembled in Berkeley.

In 1994, he came to BNL to work on analysis and pattern recognition software for the PHENIX experiment while remaining involved in AGS experiment 896.

A member of the RHIC & AGS User's Executive Committee, Mitchell has also produced several educational animations to help illustrate the physics of relativistic heavy ions and is involved in BNL's new online classroom project.

The Sambamurti Lecture was established in 1992 to commemorate the life of Aditya Sambamurti, a BNL physicist who succumbed to cancer in 1992, at age 31. Each year, an outstanding young physicist whose professional interests overlap those of Sambamurti is selected to deliver the lecture.

— Karen McNulty Walsh

Ayuda, Por Favor

September is Hispanic Heritage Month. The Diversity Office is looking for volunteers to help coordinate special events during the month. Contact Rosa Palmore, Ext. 2703, if you would like to help.

Arrivals & Departures

Arrivals

Jody M. Mitchell ... Proc. & Prop. Mgmt.
Brian E. Murfin ..... CIGPA

Departures

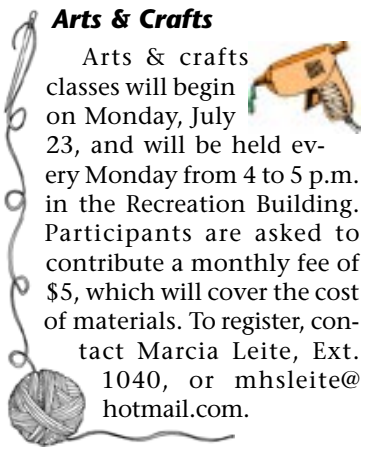
Paul Bezler ..... Eng. Sci. & Tech.
Christopher J. Hanley ..... Plant Eng.

Science Museum Will Open Today

The BNL Science Museum, Bldg. 935, will be open to the Lab community, 11:30 a.m.-1:30 p.m. 7/20 & 27, 8/3, 10, 17, & 24. Children under 14 must be accompanied by an adult.

Hospitality Programs

Arts & Crafts



Arts & crafts classes will begin on Monday, July 23, and will be held every Monday from 4 to 5 p.m. in the Recreation Building. Participants are asked to contribute a monthly fee of $5, which will cover the cost of materials. To register, contact Marcia Leite, Ext. 1040, or mhsleite@hotmail.com.

Cooking Exchange

The Hospitality Committee's Cooking Exchange begins on Wednesday, July 25 and will be held each Wednesday from 5 to 6 p.m. in the Recreation building. The cost of $1 per evening covers ingredients.

To register, contact Marcia Leite, Ext. 1040, or mhsleite @hotmail.com.

Gauley River Rafting Trip

There is still room available for the Gauley River Rafting Trip on Friday, September 28 through Sunday, September 30. The bus leaves at 6 a.m. on Friday. The cost of $300 includes bus from BNL, rafting, hotel, most meals, lunch on the river, and refreshments on the bus.

Remember: the balance of $200 is due for those who have already paid the $100 deposit. For more information, contact Wally Hughes, Ext 4180, or Bozie Sing, Ext. 5350.

BNL Retiree Update

Michael Herbert D0010701

Several of the "BNL Retirees' Get-Together Lunch" movers-and-shakers: (from left) Betty Pergan, Alys Daly, Barney McAlary, Sonia Santos, Graham Campbell, and Marge Stoeckel are seen pictured against the background of another photo, which shows many of the 230 BNL retirees who attended the event.

"We had 230 BNL retirees to enjoy cocktails, a delicious buffet, a musical comedy by Primrose Productions about growing older in America — and a heaping portion of nostalgia," said Barney McAlary, Brookhaven Retired Employees' Association (BREA) president.

McAlary was describing the very first "Retirees' Get-Together Luncheon," which was held at the Villa Lombardi in Holbrook on June 28. He extends the BREA members' warmest thanks to the social events committee for their expert efforts in making the event such a success.

Formed by McAlary to coordinate the luncheon, the social events committee is chaired by Marge Stoeckel. Other members are: Graham Campbell, Alyce Daly, Trudi Neuhof, Betty Pergan, George Rabinowitz, Sonia Santos, and Pat Towey.

About that event, says Stoeckel, "So many people were meeting other people whom they hadn't seen since they'd left the Lab that, at first, we had a hard time getting anyone to move out of the lobby!" McAlary reports that, since the luncheon, about 30 new members have joined BREA. "It's a great organization for helping one keep in touch," he said. "The more members we have, the better it is for everyone." — Liz Seubert

To join BREA, send for an application: BREA, Bldg. 475, BNL, P.O. Box 5000, Upton, NY 11973-5000.

BERA Has Discounts On Balloon Tickets

BERA Sales Office in Berkner Hall has discounted tickets to the Waldbaum's Balloon & Music Festival to be held at Calabro Airport on William Floyd Parkway north of Sunrise Highway, Friday to Sunday, August 17-19.

On Friday, 1-10 p.m., see the Balloon Glow, hear Jethro Tull; on Saturday, 6 a.m.-10 p.m., hear the Doobie Brothers, see Grucci fireworks; on Sunday, 6 a.m.-10 p.m., enjoy the WBLI Summer Concert bash. Buy BERA's tickets at $10/adults ($15 at gate), $5/children of 4-12 ($10 at gate).

N.Y. Yankees Bus Trip

Join BERA on Friday, September 7, for a bus trip to see the New York Yankees take on the Boston Red Sox.

The bus leaves the Brookhaven Center at 4 p.m. Tickets at $55 per person are available at the BERA Sales Office, weekdays, 9 a.m. - 3 p.m. For more information, contact Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

BNLers Win Medals at L.I. Senior Games

Several BNLers finished way ahead of the crowd in their respective age groups at the Long Island Senior Games, held at Suffolk Community College in Brentwood on May 16-20.

- The BNL men's volleyball team won the gold medal for the third year in a row; team members were: Bill Kropp, Jim Higgins, Walt Reames, John Usher, Gene Schumacher, and Kevin Buckley.
- Jean Spears brought home a gold medal for her performance on the winning women's volleyball team.
- John Usher received a bronze for a low net score in men's golf, ages 50-54.
- John Milner and Barry Karlin won a gold and bronze, respectively, for low net score in golf, ages 55-59.

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 employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present 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; call the JOBLINE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at www.bnl.gov/JOBS/jobs.html.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

MK2213. POSTDOCTORAL RESEARCH ASSOCIATE - applications for postdoctoral position in a new DOE-funded effort in nanoscience related to surface chemistry and catalysis. Areas of concentration include atomic-scale imaging (STM), surface spectroscopy (IR, Raman), x-ray probes of structure (XRD, EXAFS) and reactivity (XANES, XPS, high pressure kinetics), molecular beam scattering, supported-nanoparticle synthesis, and theory application and development. Recent Ph.D.s with strong backgrounds in experimental surface science and catalysis, or theory involving extended systems are encouraged to apply. The successful applicants will work in a coordinated effort involving principle investigators in surface chemistry, structure, chemical dynamics and theory (see www.chemistry.bnl.gov/default.html. Under the direction of M. White, Chemistry Department.

MK2073. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in physics with experience in modeling, beam simulation, generation and propagation of pulsed high voltage, electron beam transport in high field gradients and short pulse laser systems. Research is aimed at studying the interaction between short electron bunches and lasers and solid targets to generate and characterize ultrashort, high-brightness x-ray pulses. Will also work on developing high quality photocathode materials to produce the electron beams. Under the direction of T. Srinivasan-Rao, Instrumentation Division.

Calendar

(continued)

— WEEK OF 7/30 —

Wednesday, 8/1

Divorced & Separated Support Group
noon-1 p.m., Berkner Hall, Room D. Mary Campbell, Ext. 4776, maryc@bnl.gov.

Thursday, 8/2

BERA Bridge Club
7 p.m., Berkner Hall cafeteria Morris Strongson, Ext. 4192.

— WEEK OF 8/6 —

Friday, 8/10

BERA Summer Bash
6 p.m., Rock Hill Country Club in Manorville. $15 per person includes hot buffet from 7-8:30 p.m., DJ, and cash bar. Contact Andrea Dehler, Ext. 3347; John McCaffrey, Ext. 2075; Lou Nieves, Ext. 4897; or Laurie Pearl, Ext. 5520.

– WEEK OF 8/13 —

Wednesday, 8/15

Divorced & Separated Support Group
noon-1 p.m., Berkner Hall, Room D. Mary Campbell, Ext. 4776, maryc@bnl.gov.

Thursday, 8/16

Brookhaven Advocacy Council Meeting
Open Session, 12:30-1 p.m., Berkner Hall, Room D. Nancy Warren, Ext. 7548.

BERA Bridge Club
7 p.m., Berkner Hall cafeteria Morris Strongson, Ext. 4192.

Friday - Sunday, 8/17-19

***Balloon & Music Festival**
BERA offers discounted tickets for the Waldbaum's Balloon & Music Festival at Calabro Airport. Tickets available in the BERA Sales Office, Andrea Dehler, Ext. 3347.

Saturday, 8/18

Foxwoods Casino Trip
Bus leaves Brookhaven Center at 8:15 a.m. and returns at approximately 8:15 p.m. $39 per person includes bus, SeaJet Ferry, $10 food voucher, two free Keno plays, and a $10 match table play. Pre-paid reservations can be made at the BERA Sales Office, weekdays, 9 a.m.-3 p.m.

— WEEK OF 8/20 —

Wednesday, 8/22

Apheresis Blood Drive
Brookhaven Center. BNL volunteers from the previous apheresis drive are scheduled to donate platelets. Sue Foster, Ext. 2888, or foster2@bnl.gov.

Note: This calendar is updated continuously and will appear in the Bulletin whenever space permits. Submissions must be received by the preceding Friday at noon to appear in the following week's Bulletin. Please enter the information for each event in the order listed above (date, event name, description, and cost) and send it to bulletin@bnl.gov. Write "Bulletin Calendar" in the subject line.

Summer Sundays

This Sunday Visit Brookhaven Laboratory And the National Weather Service Facility

This Sunday at BNL there will be a groundwater model on display in Berkner Hall, showing the different strata of Long Island's unique aquifer, and how they function to filter and purify groundwater. Summer Sunday Tours continue this week with guided bus tours of the Lab site, which run continuously throughout the day. The Whiz Bang Science Show, a lively, interactive demonstration of basic science principles, including the Van de Graaff generator (see picture at right), will be presented four times between 10 a.m. and 3 p.m.

Everyone is also invited to attend this Sunday's free tour of the National Weather Service facility located at BNL. Come visit the Weather Service Forecast Office where all of the day-to-day forecasts and warnings are issued. The Doppler radar is sure to be of interest to tour participants, as well as the weather balloon site, and all the computer technology that makes weather forecasting possible.

Visitors may also see a "live" launch of a weather balloon at 1:30 p.m. and stop in under the tent to learn about hurricanes and thunderstorms, their climatological frequencies, the hazards they produce, how they are forecast, and what actions can be taken to prepare for them.

The Camp Upton Historical Collection, located in the Camp Upton chapel, contains the history of the BNL site in its pre-Lab days as a U.S. Army camp during World Wars I and II. Organized by BNL's Museum Programs in the Community Relations Office, BNL Summer Sunday tours run from 10 a.m. to 3 p.m., but visitors must arrive before 3 p.m. The tours are free, open to the public, and no reservations are required. ■

Roger Stoutenburgh

Community Involvement

SEA CADET UNIT - forming for boys and girls ages 11 to 17. For more info., call Lisa at 281-2746.

the Bulletin

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LIZ SEUBERT, editor
JOHN GALVIN, reporter
ROGER STOUTENBURGH, photographer

On the World Wide Web, the Bulletin is located at www.bnl.gov/bnlweb/pubaf/bulletin.html. A Weekly Calendar listing scientific and technical seminars and lectures is found at www.bnl.gov/bnlweb/pubaf/calendar.html.

Bldg. 134, P.O. Box 5000
Upton NY 11973-5000
phone (631)344-2345, fax (631) 344-3368
e-mail: bulletin@bnl.gov