

Aging: New PET Study May Show How to Lessen the Effects

By the year 2000, some 31 million people in the United States will be over 65 years of age — and medical advances have ensured that many will

celebrate their 80th or even 90th birthdays.

But, while most people — especially the 31 million — take this situation as good news, they may also fear the future.

“... Because people like me [I was 79 last August] worry most about getting Alzheimer’s disease, . . . if your research could do anything to solve that most prevalent disability, we would all turn handsprings.”

This excerpt from a letter to Nora Volkow, a scientist in the Medical Department, from Claire Hull, a retired medical secretary who was at BNL from 1963 to 1980, gives an inside view of one major concern of old age. And, even without Alzheimer’s, the elderly can lose part of their mobility, memory or enthusiasm for life.

Yet some “superpeople” of about 80 to 95 remain alert on all fronts. They walk, swim or play golf, sing in a performing chorus — as Hull does at her home in Tacoma, Washington — or do business on the stock market.

“To understand the process of growing old and how it can change people’s quality of life, we have started a pilot study at the PET facility,” said Volkow.

The PET facility, part of the new Brookhaven Center for Imaging and Neurosciences, is headed by Joanna Fowler and Alfred Wolf, Chemistry Department. At the facility, the technique of positron emission tomography, or PET, allows areas of the brain to be imaged as they function.

BNL’s involvement with research

using this technique was initiated in the early 1960s by Wolf. Since then, improved versions of PET have been used for a variety of studies, such as the effects of brain tumors, schizophrenia, Alzheimer’s and Parkinson’s diseases, and cocaine (see sidebar) and alcohol abuse.

In the aging study, no discovery of a “Fountain of Youth” is expected, or even hoped for. But, said Volkow, “Once it is known how people age, it may be possible to prevent or delay some of the effects by using appropriate treatments.”

The study is designed to obtain preliminary data from individuals ranging in age from 20 to 80 plus. PET researchers measure various aspects of brain chemistry function and cell loss. They take data to check



Roger Stoutenburgh

Nora Volkow checks on her patient, who is about to have a brain scan in the Positron Emission Tomograph.

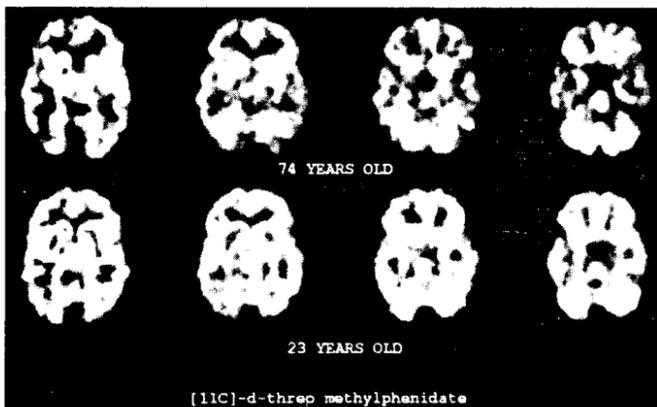
whether cognitive and motor abilities correlate with the chemical changes seen in the brain, in order to estab-

lish a baseline of what to expect in aging brains.

Window Into the Brain

When PET is used, the patient is injected with a small amount of a short-lived radioactive tracer that binds to specific brain sites. The tracer produces radiation, which is recorded by detectors that signal the subse-

(continued on page 2)



In these two sets of PET brain images, four sequential planes of the brain are shown — the upper row being from a person of 74, the lower from a 23-year-old. The gray scale indicates the amount of the dopamine transporter — important for motor function and motivation — in the brain. The scan from the 74-year-old shows much lower concentrations of dopamine transporter than is seen on the scan from the 23-year-old.

Cocaine Abuse: PET Provides New Insights

In the coming year, almost five million Americans will use cocaine. The price for abuse is high in terms of crime, drug enforcement, medical treatment and destroyed lives.

At BNL, researchers Joanna Fowler, Nora Volkow and Alfred Wolf are also using Positron Emission Tomography (see accompanying story) to study the physiology of cocaine in the human brain. As part of a larger study of substance abuse, their goals are to understand the how and why of cocaine’s addictive power, as well as the drug’s damaging effect on the brain.

Brookhaven’s PET studies have documented for the first time that cocaine causes a chemical change in the brain, affecting regions responsible for an individual’s ability to control repetitive behavior as well as impulsive behavior. Another important finding is that prolonged, heavy use of cocaine can deaden areas of the brain for a long time, possibly permanently.

For cocaine addicts, BNL’s findings may be applied in the design of treatments.

This research is supported by the Office of Health and Environmental Research, within the Office of Energy Research of the U.S. Department of Energy, and by the National Institute on Drug Abuse and the National Institute on Neurological Disease and Stroke, under the National Institutes of Health.

— Mona S. Rowe

Future Land Use Planning Seeks Community Involvement

As reported recently in local newspapers, BNL representatives have been meeting with various Long Island citizen groups to discuss how the site might be used in the future, were its present mission to end.

“However,” emphasized Mike Bebon, BNL’s Assistant Director for Management & Physical Plant, “there are no plans to close BNL.”

Bebon explained that the public meetings are being held at the request of the U.S. Department of Energy (DOE), as part of a project called Future Land Use Planning. It is designed to find out community opinions on preferred future uses for 25 DOE sites across the nation, should they ever close.

“We’re looking at two scenarios,” said Bebon. “One is how to use the site for BNL’s ongoing operations over the next 20 years. The other considers how the community might use the site should the Lab close at some hypothetical date in the future.”

At some DOE sites in the project, the work for which they were created is complete, the facilities are scheduled to close and the land is being prepared for local community use. But before that can happen, remediation may be necessary to recover land damaged by radiation or chemicals.

Since remediation standards are influenced by what the land may be used for in the future — industrial or commercial categories differ from residential or recreational, for example — knowledge of how the local community might



Mike Bebon

use the land is an important factor in remediation decisions.

While BNL and several other project sites are not preparing to close, they are now undergoing remediation. Therefore, at these sites, community participation in future land-use planning is beneficial.

“These meetings should result in advantages to both the Lab and the public,” Bebon said. “We’re not looking at this process as a narrow clean-up issue, but as a guide in decisions on how to develop the site. As in the past, the location of many future Lab projects will be driven by scientific factors, but we will have some options in certain cases. So we want to know and consider local needs. Also, the interactive dialogue we have in the meetings is an opportunity for the Lab to get a better understanding of the plans and concerns of other Long Island groups and agencies.”

BNL has taken an aggressive approach to present the land-use process to the public. First, the Lab held a kickoff meeting on December 13, individually inviting a host of Long Island organizations and groups, including town, county and state planning organizations, elected officials, economic development and regulatory agencies, representatives from organized labor, local school districts, educational institutions and research institutes, as well as BNL employee groups.

Then, on January 18, BNL hosted a roundtable with local civic association presidents. Following this well-attended event, Bebon and other Lab representatives were asked to visit civic meetings in East Yaphank, Ridge and Rocky Point.

Additional input will be sought from various “focus groups” at a workshop to be held at BNL on March 16. The workshop will be followed by meetings to present a draft of the plan in early May and a completion of the plan in early August.

The completed Land Use Plan will be presented to DOE on the target deadline, September 15.

— Liz Seubert

A Record-Setting Effort for Records Management

The small band of searchers hunted through the dusty basement, their hard hats bobbing as they ducked under the low, irregular ceiling. Finally, they found what they had come for: dozens of sealed containers and file cabinets locked behind the doors of wire-mesh cages.

The beginning of an adventure novel? No, the real-life experience of a team of BNLers in the Information Services Division (ISD). Their mission for more than a year has been to seek out and inventory the Lab's more than 1,110 cubic meters (37,000 cubic feet) of records of all kinds — including ones that had been all but forgotten.

The records-management team occasionally visits such "exotic" locales as the Medical Department basement described above. But more often, the five ISD employees fan out over the BNL site to train and assist more than 30 department and division representatives who are entering their areas' records data into the Lab's database.

The team's members are Celeste Antapli, Patricia Flood, Garfield Hawthorne and Katherine Vivirito. They are led by Corene Wood, whom BNL hired in early 1994 for her experience in devising and automating records systems in state and city government offices, as well as in private industry.

"I came in at what seemed like an explosion of records management," Wood says, with no exaggeration.

During 1994, the U.S. Department of Energy (DOE) issued mandates requiring the gathering of records pertaining to the canceled Superconducting Super Collider and to all medical studies involving human subjects done by DOE and its predecessor agencies. This was in addition to the existing DOE directive to inventory all records on site by September 1995.

Setting the Records Straight

Fortunately, the added mandates came just as the records team was provided with a new tool: a computer database program developed by ISD's Betsy Schwartz and Diane Mirvis. With the help of the representatives, who have learned to enter their information into the database on the INFORM system, the inventory is keeping pace with DOE demands.

For example, the Medical Department's records were inventoried in the first three months of 1994 to meet the requirements of the human experimentation records mandate.

"To make these records available, you need to know where they are," Wood explained.



Roger Stoutenburgh

Surrounded by only a portion of BNL's voluminous records, these members of the Information Services Division's Office of Records Management keep the Lab in compliance with records regulations: (from left) Garfield Hawthorne; Corene Wood, BNL Records Manager; Patricia Flood; Celeste Antapli; Betsy Schwartz, who created the records-management computer database; and Katherine Vivirito.

Concurred ISD Manager Mirvis, "The objective for establishing a records management function at the Laboratory is to allow individuals to find information they need to do their job more effectively.

"The representatives have done an outstanding job not only in conducting the physical inventory but in working with Corene and her records specialists to describe Laboratory information needs," Mirvis continued. "We are slowly building a program that will ensure that necessary records remain accessible regardless of staff changes and physical location."

A Grassroots Effort

The representatives are the "grassroots" contacts for records management, getting help from the ISD team in determining exactly what constitutes a record.

"BNLers must inventory anything that's considered a record in their office," explained Wood, adding that most have already done this, or will, on a form given to them by their area representative. "This means anything in any medium — electronic, paper, photographic — that has been generated by the employee during their work time, but not including personal papers."

For example, a scientist's professional correspondence or lab notebooks

would be considered records, but not, for example, his or her pay stubs. And inventory only means that the records' existence and location, and a contact name are recorded, not that the records are placed elsewhere.

Why do all of this? Three reasons. "Retrieval is the biggest factor," Wood emphasized. "But it is also important for our assessment process in establishing policy and procedures for records management. And of course there is compliance with state, local and federal regulations regarding the keeping of records and maintaining them on site."

As well, the inventory process has helped BNL cut down on duplication of records and establish which area holds the original copy and for how long. Once a record's holding time has expired, the space can be reclaimed.

And yesterday's records may be useful to BNL's work today, Wood concluded. For example, documents and drawings relating to a building's construction may come in handy when a modification is being planned.

"When we want to do something today," she said, "we want to be able to look back and see how similar situations were handled in the past, what mistakes were made and how to avoid reinventing the wheel."

—Kara Villamil

In Memoriam

Dennis Morgenthauer, who was a computer analyst in the Computing & Communications Division (CCD), died on February 7 at the age of 47.

Morgenthauer started his 27 years at the Lab as a computer operator II in July of 1967, in what was then the Applied Mathematics Department (AMD). In 1969, he advanced to a position as computer operator III, then a IV in 1975, and, in 1979, a principal computer operator. Nine years later, when AMD became CCD, he was made a technical specialist, then a senior technical specialist within a year. Four years ago, he was named computer analyst.



In recent years, Morgenthauer's primary focus had been on application software support. His work included installing application software packages on both VMS and UNIX platforms. He was also responsible for license management codes, software usage statistics and related reports.

Eight months ago, he took on a much larger responsibility, that of acquiring application software, and his oversight of new purchases and renewals of software packages had already resulted in savings for BNL.

Susan Sevian, Morgenthauer's supervisor in Systems Support Services, represented all in the group in saying how greatly he will be missed, both for his technical contributions and on a personal level. "Dennis was a very resourceful person who was growing rapidly in his latest role in software acquisition," she said. "He interacted frequently with the user community and many software vendors. In all situations his professionalism was surpassed only by his friendliness."

Dennis Morgenthauer was a resident of Coram. He is survived by his wife Sandra, his daughter Pamela, and Sandra's daughter Adrienne. According to the wishes of his immediate family, his corneas were donated for transplant, and both transplants were successful.

Elwood J. Barnes, who had retired from the Staff Services Division (SSD) as an auto/truck mechanic on February 22, 1980, died February 22. He was 72 years old. He had started at the Lab on May 16, 1960, as a laborer in the Plant Maintenance Division, transferring to SSD in January 1966.

PET Study on Aging (cont'd)

quent changes to a computer. The computer, in turn, translates the data into an image, providing a "window" into the subject's brain as it functions.

"In this way, we can measure the patient's brain metabolism; the concentration of receptors, which are molecules that receive messages into the brain; and the concentration of enzymes, which catalyze the chemical changes — all in comparison with the patient's age," said Volkow.

While looking to see whether the basic mechanisms of aging are visible in the brain's chemistry, the research team also takes data on other aspects that may be of special significance. For example, what differences, if any, can be observed between the aging processes of men and women? Because women tend to live longer, it may be that estrogen plays a role. Specific hormone treatments might therefore be a way to delay aging's onset.

"We're also looking very carefully

at the dopamine-producing brain cells, which are known to be important for motor function and motivation," noted Volkow. The researchers are checking to see whether an unusual decline in the number of these cells is matched by a decline in mobility, memory and liveliness of mind in an aging person.

The pilot study is now funded with seed money from the U.S. Department of Energy's Office of Health and Environmental Research. To continue work on the project, the researchers will seek funds from the National Institutes of Health. "If we're successful, it may be possible to develop drugs that increase levels of dopamine or other chemicals in the brain and, thus, improve the quality of life of elderly individuals," Volkow said.

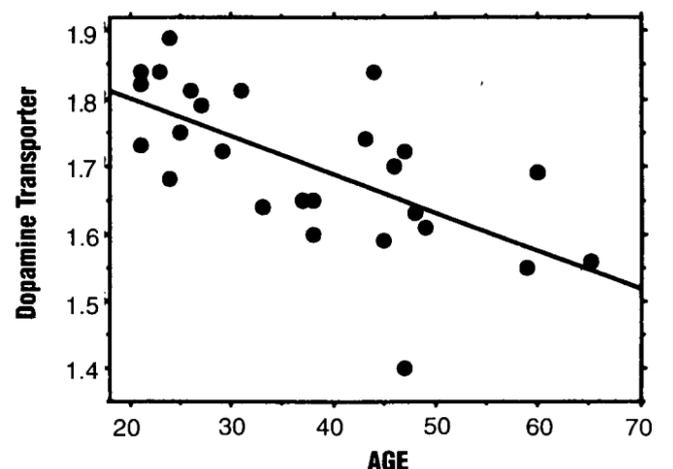
Calling Local Volunteers

Also crucial to the study are volunteers aged 20 to 80 plus. "Anyone who is healthy and expects to be a long-term resident of this area will be par-

ticularly welcome, as follow-up observations will be a valuable part of our work," Volkow said.

Volunteers will be expected to come to the PET facility at BNL for two or three four-hour days. Each volunteer will be given four radiotracer injections. Each radiotracer is labeled with a short-lived isotope. The total radiation exposure is similar to diagnostic nuclear medicine procedures. Also, the volunteers will have intravenous

These data from PET brain scans of 26 subjects show that dopamine transporter availability decreases in older people.



and arterial lines installed.

Payment for volunteers is \$100 per day. Lunch will be provided, and transportation can be arranged if it is not readily available.

Anyone interested in volunteering should call Naomi Pappas, Research Coordinator, at Ext. 2694.

—Liz Seubert

Coming Up

Brookhaven Lecture

William Studier, Chairman of the Biology Department, will give the next Brookhaven Lecture on Wednesday, March 15. His talk, entitled "DNA Sequencing for the Human Genome Project," will begin at 4 p.m. in Berkner Hall.

BERA Concert

The next BERA concert will feature promising young musicians who study at the State University of New York at Stony Brook. It will be held on Wednesday, March 15, in Berkner Hall at 8 p.m. A \$6 donation is suggested.

AUI Distinguished Lecture

Bruce Ames, Director of the National Institute of Environmental Health Sciences Center at the University of California, Berkeley, and creator of the widely used Ames test for detecting potential carcinogens, will deliver the next AUI Distinguished Lecture on Friday, March 17, at 4:30 p.m. in Berkner Hall. His topic will be "Understanding the Causes of Aging and Cancer." The lecture is free and open to the public.

Ames will also give a Biology Department Seminar at 11 a.m. that day, on "Oxidants, Antioxidants and the Degenerative Diseases of Aging," in the Biology seminar room, Bldg. 463.

Sixgun Concert

Original music, popular country and country rock songs and bluegrass, an exciting stage show — you'll get it all with tickets to the Sixgun concert on March 17, at 8:15 p.m. in Berkner Hall.

The concert is sponsored by BERA, and tickets cost \$9 for adults, and \$5 for children under 12 and senior citizens. Purchase them at the door, or in advance from the BERA Sales Office, 9 a.m. to 1:30 p.m., weekdays, or from any of the following:

| | Bldg. | Ext. |
|------------------|-------|------|
| M. Kay Dellimore | 185 | 2873 |
| April Donegain | 134A | 2459 |
| Andrea Epple | 750 | 5943 |
| Haskell Frei | 750 | 5651 |
| August Hoffmann | 510C | 3884 |
| Elliot Levitt | 134 | 2495 |
| Lois Marascia | 460 | 3315 |
| Virginia Morante | 460 | 3555 |
| Luis Nieves | 179B | 5350 |
| Rosalie Piccione | 355 | 3160 |
| Bridget Ramos | 197 | 3452 |
| Edward Sperry IV | 902A | 2697 |
| Arlene Wolochuk | 902C | 3428 |

Weight Watchers

Registration for the next Weight Watchers at Work program will be held on Wednesday, March 8, from noon to 1 p.m. in the Brookhaven Center dining room. The fee is \$89 for either eight or ten sessions, depending on the number of registrants. For more information, call Mary Wood, Ext. 5923 or 4567.

BROOKHAVEN BULLETIN

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Open Meeting: Breast Cancer Study Project

As participants in the Long Island Breast Cancer Study Project, BNL Medical Department researchers will be among the scientists to be introduced at an open town meeting, on Monday, March 13. Sponsored by the National Cancer Institute and the National Institute of Environmental Health Sciences, the town meeting will run from 7 to 9 p.m., at the Marriott's Wind Watch Hotel, 1717 Vanderbilt Motor Parkway (LIE Exit 57), Hauppauge.

The study project is evaluating the possible contributions of various environmental and occupational factors to the cause of breast cancer. BNL is one of several New York institutions participating in the project.

The BNL team includes epidemiologist and principal investigator Jerome Barancik; coinvestigators Caroline Kramer and Henry Thode; and research intern Jennifer Summer. Their main goal is to develop a geographic information system — a computer-based technology, which, in this instance, will be used to identify, analyze and visually display in map format complex environmental exposures and interactions.

Attn: Women Re-Entering School

If you're a woman who had to interrupt formal studies in science, engineering or mathematics, but who is now back to the books, you may be eligible to win the Renate W. Chasman Scholarship for Women.

This one-time, \$2,000 award is given annually by Brookhaven Women in Science to a woman who is currently enrolled or has been accepted in a degree program at an accredited institution. To be considered for the 1995 scholarship, you must be studying for 1995-96 at the junior or senior undergraduate level or first-year graduate level on a half-time or greater basis. You must also be a U.S. citizen or permanent resident alien who lives in Nassau or Suffolk County or the boroughs of Brooklyn or Queens. If you're the winner, the award will be presented to you in August, and you will be expected to complete at least two consecutive school terms in good academic standing.

For application forms and more information, write to: Chasman Scholarship Fund, P.O. Box 183, Upton, NY 11973. The deadline for applying is May 1.

First awarded in 1986, the scholarship honors the late Renate Chasman, a noted BNL nuclear physicist and accelerator theorist. She co-designed the Lab's National Synchrotron Light Source, and her work influenced the design of other synchrotrons around the world.

Four Nominated for BERA Board

The BERA Nominating Committee has selected the following slate of candidates for the 1995 BERA Board election: Jay Adams, Department of Advanced Technology; Patti Bender, Plant Engineering Division; Rich Eggert, Division of Contracts & Procurement; and Bob Marascia, Alternating Gradient Synchrotron Department.

From March 27 through March 31, all eligible BERA members, including all employees of BNL, AUI, DOE and all other permanent on-site employees, may cast their ballots to elect two of the four candidates to serve on the BERA Executive Board.

Look for more about the candidates and the election in future Bulletins.

Women's History Month: Focus on Women in America

Women's History Month is being celebrated throughout March at BNL, with some related activity to be found going on almost every workday this month. The events are not for women only — they are open to the entire Lab community.

Next week's theme is "Women in America," and the agenda includes:

- **"The Politics of House and Home"** — a talk by Barbara Kelly, Curator of Special Collections at Hofstra University; Wednesday, March 8 (International Women's Day), noon, Berkner Hall, Room A (see box for more information).
- **"Stress Management for Women"** — an Outreach workshop by clinical psychologist Susan Dermitt; Tuesday, March 7, noon, Berkner Hall auditorium (see box for more information).
- **"Women in American Life" videos** — produced by the Women's His-

tory Project, this five-part series, which began yesterday, continues. The following videos will each be played three times, at 11:40 a.m., 12:10 p.m. and 12:30 p.m., in Berkner Hall:

- **Today, March 3** — "1880-1920: Immigration, New Work and New Roles," Room C.
- **Monday, March 6** — "1917-1942: Cultural Image and Economic Reality," Room B.
- **Thursday, March 9** — "1942-1955: War Work, Housework and Growing Discontent," Room D.

The series concludes on Monday, March 13.

• **"Through Her Eye" Photography Exhibit** — Outside the Cafeteria all month, BERA Camera Club display featuring works by women.

• **Prominent Women Exhibit** — This display in the Berkner Hall lobby changes weekly, and next week will feature woman who have been prominent in human rights.

Outreach Workshop

Managing Stress for Women

Because women still take more responsibility for household chores, raising families and keeping the home fires burning, working women suffer far more stress, according to psychotherapists, than do men. Women will more readily admit that they are stressed out — and drive themselves to distraction if they aren't performing perfectly in all areas of their lives.

So what do working women need? More hours in a day? A computerized daily planner? Try "A New Approach to Managing Stress for Women."

That will be the subject of the next Outreach workshop, sponsored by the Employee Assistance Program (EAP) of the Occupational Medicine Clinic. This presentation will be given by clinical psychologist Susan Dermitt on Tuesday, March 7, in Berkner Hall. All are invited, and the talk will be available afterwards on cassettes in the Research Library.

As Dermitt will explain, this approach to stress management does not require improved time management; rather, it is a learning process, through which women can increase their self-awareness, and improve the harmony and flow of their lives.

Susan Dermitt, Ph.D., has extensive experience in the behavioral treatment of medical illnesses and a full-time private practice in Port Jefferson. She has frequently been invited to lecture on anxiety, depression and stress management.

To register for this workshop, return the bottom portion of the Outreach flyer sent to all employees to EAP Staff Psychologist Dianne Polowczyk, Bldg. 490. For more information about EAP, call Ext. 4567.

The Politics Of House And Home

Hofstra University historian Barbara Kelly believes that domestic space — the actual design of houses — reinforces cultural values, and that this is evident in homes dating from the Colonial era to the development of Levittown. She will share her insights into the ways that houses both reflect and impose values on their residents in her talk on "The Politics of House and Home."

Kelly first gathered her ideas for this subject for her dissertation, which led to a Ph.D. in American history from the State University of New York at Stony Brook, in 1988. She had completed her undergraduate work at St. Joseph's College in 1976.

In 1985, Barbara Kelly joined Hofstra University as Curator of Special Collections, which encompasses the Long Island Studies Institute and such topics as "The Art of the Book." She is also an adjunct professor in Hofstra's History Department.

Hospitality News

As a follow-up to a discussion last month on Lyme disease, Robert Selvey, Safety & Environmental Protection Division, will speak on "Tick Recognition" at the next Hospitality Committee get-together. It will take place on Tuesday, March 7, at 9:30 a.m., in the Recreation Building.

Spouses of Lab employees and guests are invited. Bring the children, but also bring some toys. Coffee, tea and pastry will be provided.

Note to Employees:

Attendance at lectures, meetings and other special programs held during normal working hours is subject to supervisory concurrence.

Rifle & Pistol Club

The Rifle & Pistol Club holds its meetings on the second Wednesday of each month, so the next is March 8, Room 202, Bldg. 911B, at noon. All those interested in the club may call Otto Jacobi, Ext. 3471.

Volleyball

Standings as of February 28

| Open League | League 1 | League 2 | League 3 |
|-----------------------|--------------------|-----------------------|------------------------|
| The Men & Me 42-15 | Rude Dogs 41-19 | Fossils 37-11 | Silver Bullets 44-7 |
| GTEAM 41-16 | Koopas 41-22 | Mon. Night Live 31-17 | Take Five 42-9 |
| Farside 34-26 | Network News 39-21 | Safe Sets II 31-17 | Upton-Ups 29-22 |
| The Roofing Co. 23-34 | Underdogs 20-40 | Net Wits 27-21 | High Volley'em 28-22 |
| Bud Men 4-53 | Safe Sets 12-51 | Jolly Veggies 22-26 | DO-DAT 22-29 |
| | | Nuts & Bolts 21-27 | For Play 18-33 |
| | | Spiked Punch 18-30 | Bonnie's Bombers 10-40 |
| | | Night Court 5-43 | Harlem Knights 10-41 |

Bowling

Red and Green League

R. Mulderig Sr. 258/234/206/698 scratch series, R. Larsen 243/603 scratch, R. Wiseman 236/216/635 scratch, K. Koebel 234/217, J. Griffin 226/223/216/665 scratch, S. DiMaiuta 226/206, R. Mulderig Jr. 223/218/204/645 scratch, B. Giuliano 210, A. Warkentien 208, R. Raynis 206, K. Asselta 204, J. Goode 203, K. Riker 203, H. Arnesen 202.

Purple and White League

S. DiMaiuta 225/189, P. Wynkoop 211, J. McCarthy 205/185, A. Warkentien 200/182, D. Klein 199, K. Batchelor 192, M. DiMaiuta 190/177, P. Pozzoli 190, J. Cuccia Jr. 189, E. Sperry IV 187/182, Doug Fisher 184, R. Picinich 185, G. Munoz 183, I. Sperry 182, M. Addressi 180, M. Reynolds 177/176, C. MacDougal 171, M. Haller 170.

Basketball

Games of February 23

| Scram | 57 | Air America | 52 |
|-----------------|----|------------------|----|
| Dennis Wallace | 17 | Doug Aichroth | 19 |
| Al Boerner | 11 | Louis Lalor | 12 |
| Tim Powers | 9 | Kevin Woodson | 11 |
| Jim Rank | 8 | Angelo Bosco | 6 |
| John Duggan | 6 | Jeremy Middleton | 4 |
| Victor Cassella | 4 | | |
| Joe Barkwill | 2 | | |

Three-point shots: Aichroth, Boerner, Lalor (3), Wallace (2), Woodson

| Deep Six | 60 | Mustangs | 51 |
|------------------|----|------------------|----|
| Tracey Fountaine | 17 | Charlie Edwards | 16 |
| Neil Tyler | 12 | Greg Mack | 10 |
| Charles Bennett | 11 | Rich Domenech | 7 |
| Calvin Butts | 11 | Lars Furenid | 7 |
| Dwayne Eleazer | 5 | Steve Springston | 6 |
| Jim Garrison | 4 | Hal Van Deroef | 3 |
| | | Jerry Cook | 2 |

Three-point shots: Bennett, Butts (2), Domenech, Eleazer, Fountaine, Tyler

| Magic | 50 | Runaways | 45 |
|----------------|----|----------------|----|
| Troy Mayo | 19 | Chris Ingoglia | 13 |
| Terry Buck | 9 | Jim Desmond | 7 |
| Pat Browne | 7 | Jerry Gaeta | 7 |
| Ray Jackson | 6 | Ed Meier | 5 |
| Mitch Williams | 5 | Pete Ratzke | 5 |
| Ed Gregory | 2 | Neil Donahue | 4 |
| Al Langhorn | 2 | Bob Wells | 4 |

Standings as of February 23

| | | | |
|----------|-----|-------------|-----|
| Magic | 5-1 | Deep Six | 2-4 |
| Mustangs | 5-1 | Runaways | 2-4 |
| Scram | 4-2 | Air America | 0-6 |

Cafeteria Menu

Monday, March 6

| | |
|--------------------------------------|----------|
| Soup: Three-bean w/turkey | .90/1.20 |
| A la Carte: Steak w/black-bean chili | 3.95 |
| Lite: Ham & mushroom crepes | 3.85 |
| Deli: Leg of lamb | 3.20 |
| Grill: Eggplant Parmesan | 3.30 |

Tuesday, March 7

| | |
|--------------------------------------|----------|
| Soup: Steak & vegetable | .90/1.20 |
| A la Carte: Turkey Parmesan | 3.65 |
| Lite: Stir-fry curried shrimp & rice | 3.95 |
| Deli: BBQ brisket of beef | 3.20 |
| Grill: Turkey steak | 3.30 |

Wednesday, March 8

| | |
|------------------------------------|----------|
| Soup: Roasted tomato | .90/1.20 |
| Display Cooking: Fresh pasta sauté | 4.75 |
| Deli: Pork w/rum-lime glaze | 3.20 |
| Grill: French dip | 3.30 |

Thursday, March 9

| | |
|------------------------------------|----------|
| Soup: Cream of corn | .90/1.20 |
| A la Carte: Shepherd's pie | 3.65 |
| Lite: Vegetable lasagna | 3.65 |
| Deli: Turkey w/apple-mustard sauce | 3.20 |
| Grill: Tuna Nicoise | 3.30 |

Friday, March 10

| | |
|--------------------------------|----------|
| Soup: Winter vegetable | .90/1.20 |
| A la Carte: Spiced chicken | 3.95 |
| Lite: Shrimp & mushroom quiche | 4.10 |
| Deli: Pastrami | 3.20 |
| Grill: Tex Mex taco bar | 3.30 |

CPR for Kids

A six-hour course on the cardiopulmonary resuscitation (CPR) of infants and children will be given on two Saturdays, March 18 and 25, from 9 a.m. to noon, in the Recreation Building. Sponsored by the Upton Nursery School, the course costs \$35 per person, and those over age 14 are eligible to attend. To register, call Cindy Salwen, Ext. 3461 or 874-3652.

Arrivals & Departures

Arrivals

Humberto M. Calvani AGS
Samuel D. Hoblit Physics
James E. Pearsall Saf. & Env. Prot.

Departures

This list includes all employees who have terminated from the Lab including retirees:

Timothy J. Anderson Plant Eng.
Helen M. Baker Budget
Ronald R. Davis Adv. Tech.
Andrew N. Gifford Medical
Leslie L. Lawrence Comp. & Comm.
Chu Ng Physics
Elizabeth A. Pergan App. Science
Peter E. Pyne Physics

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position. Consideration is given to candidates 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, handicap or veteran status.

Each week, the Personnel Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Personnel, and second, for general recruiting under 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, or call the JOBLINE, Ext. 7744 (282-7744), for a complete listing of all openings.

SCIENTIFIC RECRUITMENT - Doctorate normally required. Candidates may apply directly to the department representative named.

POSTDOCTORAL RESEARCH ASSOCIATE - Trained in plant physiology and molecular biology, to conduct research investigating mechanisms by which C-uptake by plants adjusts to increasing atmospheric CO₂ concentration with respect to temperature and the relationship of the adjustment to nitrogen supply. Experience in protein analysis and a strong interest in photosynthesis are desirable. Contact: George Hendrey, Department of Applied Science.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

NS 6449. ACCOUNTING POSITION - Requires a bachelor's degree in accounting, finance or business administration, plus two years' professional accounting experience and knowledge of generally accepted accounting principles (GAAP). Knowledge of spreadsheet programs (LOTUS/EXCEL) is essential. Duties include analyzing complex accounting transactions; preparing financial reports and maintaining and controlling routine accounting records. Fiscal Division.

LS 5555. PROGRAMMING/ANALYST POSITIONS - (term appointments) Requires a BSCS or equivalent, MS preferred, and several years' experience developing tools and programs for a distributed computing environment. Must have experience in UNIX, shell and C, and have demonstrated the ability to work with scientific staff on mathematical and scientific issues. Experience with motif tool-kit programming, C++, PERL and client-server systems is desirable. Responsibilities include the development of scientific applications and computer visualization. Computing & Communications Division.

LS 5558. COMPUTING POSITION - Requires a BSCS or equivalent, and several years' experience with WAN and LAN routing (preferably CISCO), TCP/IP and SNMP protocols. Knowledge of FDDI, ATM and experience administering firewalls preferred. Programming experience with C, C++, and PERL desired. Responsibilities include router configuration, technology evaluation and network monitoring. Computing & Communications Division.

Motor Vehicles & Supplies

94 HONDA ACCORD - all options, 4-dr., 12k mi., gar., \$15,500; sideboards for Chevy pickup or S10 Blazer, alum., diamond plated, excel. cond., \$50. 289-8105.

92 GEO - 16k mi., 5-spd., 45 mpg, 1 yr. left on bumper-to-bumper warr., \$5,500. Joe, Ext. 4496.

91 MITSUBISHI ECLIPSE - a/t, ac, runs well, many new parts, 63k mi., mint cond., \$7,300 neg. 754-8486.

91 OLDS CUTLASS SUPREME - 2-dr., 53k mi., red, moonroof, extras, mint., \$8,800. George, 472-1479.

90 DODGE RAM VAN 250 - high-top conversion, loaded, high mi., runs well, \$3,950. John, 696-2961.

The Brookhaven Bulletin is printed on paper containing at least 50 percent recycled materials, with 10 percent post-consumer waste.



89 JEEP CHEROKEE - 4-dr., 4.0L, 4wd, a/t, p/s, ac, roof rack, 83k mi., new tires, batt. & exhaust, excel. cond., \$8,500. Chris, Ext. 2022 or 395-6112.

88 HYUNDAI - a/t, ac, 101k mi., very clean in/out, eng. needs work, \$700. John, Ext. 2769.

87 NISSAN STANZA - good body, for parts, 1 1/2-yr-old tires, blown motor, neg. Kiesha, Ext. 4401.

87 ISUZU TROOPER II 4x4 - 135k mi. runs well, asking \$2,000. John, Ext. 7313 or 395-5922.

86 BUICK REGAL LTD. - 4-dr. sedan, full power, \$2,500. Leo, Ext. 2952 or 289-1855.

86 MUSTANG - T-top, loaded, 5-spd., high mi., \$2,500; '79 International Scout w/plow, 304V-8, a/t, p/s, p/b, solid frame, body rust, \$1,500 neg. Rich, 744-4974.

86 JEEP COMANCHE PICKUP - 4wd, cap, V-6, m/t, 135k mi., v.g. cond., asking \$2,500. Mike, Ext. 4061.

86 OLDS 98 BROUGHAM - top of line, every option, V-6, 27 mpg, a/t, fwd, orig. owner, gar., immac. cond., \$3,100. Rich, 929-8514.

85 FORD MUSTANG LX - 4-cyl., a/t, p/s, p/b, p/l, 85k mi., mint eng., needs body work, \$600; 2 P225/75R14 Goodyear tires, new, \$40 ea. 368-7207.

84 AUDI 5000 - runs well, good station car, \$350. Glenn, 821-5165.

83 GMC S-15 PICKUP - supercab, 80k mi. many new parts, \$2,300 neg. John, 345-5537 after 6:30 p.m.

83 CHEVY S-10 PICKUP - long bed, 4-cyl., 4-spd., \$1,275. 325-0447.

82 HONDA CIVIC - excel. running cond., must see or drive, excel. gas mi., \$725 or best offer; '85 VW Jetta, moving, \$2,600. Mark, 924-0960 or leave message.

82 TOYOTA CELICA - h/b, a/t, cruise, new trans., sunroof, am/fm, R-22 engine, 4-cyl., \$1,450. Jack, Ext. 4037.

79 CHEVY PICKUP - 3-spd., m/b, m/s, runs well, cap. Bob, Ext. 5314.

75 CHEVY C30 - dual wheels, stake body, lift gate, good work truck, \$500. Rich, Ext. 3354 or 589-9103.

63 STUDEBAKER CHAMP PICKUP - 8' bed, w/cap, 6-cyl., 3-spd., w/o.d., daily driver, \$750 neg. Frank D., Ext. 2022 or 399-4480.

47 DE SOTO - sedan, ready to drive, v.g. cond., \$4,500; Grumman alum. step van, very clean, needs eng. work, Ford, 6-cyl, \$500. H. Sauter, Ext. 3783.

TIRES - 4, Wrangler Jeep, Goodyear, white letter tires w/rims, P205/75R15, \$125. Donna, Ext. 2826.

TIRES - Classic 78llm, P195/75B14 plus rims, \$20/4; Goodyear polysteel radials, P205/75R14, \$100/4; fog lamps, Hella 155, ask. \$30. 878-1617 after 6 p.m.

Boats & Marine Supplies

21 1/2' PURSUIT - 1991, deep V cuddy, 150-h.p. Yamaha, 140 hrs., o/b, loaded, 1993 E-Z trailer, full canvas, mint cond., \$18,000. Lloyd, 587-7876.

20' IMPERIAL - fg, cuddy cabin, 100-h.p. Johnson galv. trailer, needs TLC, \$995 or best offer. Frank D. Ext. 2022 or 399-4480.

Furnishings & Appliances

BED - queen, 1 yr. old, like new, orig. \$600, sell for \$100, you pick up in Shoreham. Ext. 2776.

BEDROOM - French Provincial, white, bed, hdbd., dresser, hutch, night table, \$300. 588-3331.

BOOKCASE - stroller, b&w TV, new bird cage, end table, \$18/ea. Kathy, 744-2203.

CHAIRS - Ethan Allen, solid cherry, country style, 4 side, orig. \$199/ea., now \$125/ea., 2 arm, black. orig. \$249/ea., now \$175/ea. Eric, Ext. 5875.

COMPUTER DESK - slide-out keyboard & printer trays, oak finish, 8"x25"x25", new, \$40; anchor, 6 lb., v.g. cond., \$10. 929-8409.

FURNITURE - sofa, chair, love seat, black background w/mauve, blue, green, 3 glass tables, 6 mos. old, all \$500. Gary, 727-3612.

HEADBOARD - & frame, queen, fruitwood, \$45; queen brass hdbd., \$30; all good cond., Jack, Ext. 4411.

LIVING ROOM COUCH - 2 chairs, coffee table, end table, Scotchguarded, mint cond., must sell, \$275. 928-7042.

LOVE SEAT - antique, wicker, table, chair, \$120. Glenn, 821-5165.

SOFA BED - full size, 6" innerspring mattress, beige, Scotchguarded, \$425 or best offer. Denise, Ext. 5873 or 878-1303.

TABLES - l/r, end table, glass & chrome, \$60/pair; Lane coffee table, excel. cond., \$60. 929-3235.

Tools, House & Garden

GAZEBO - sun blocker, Solartex fabric, portable, east setup, like new, \$40. 929-8409.

Sports, Hobbies & Pets

CAMERA - Kodak disk 6000, w/film, zoom adjustment, \$15. 653-8251.

EXERCISE BICYCLE - DP, hardly used, speedometer, odometer, timer, speed control, excel. cond., \$50. Lisa, 467-8185.

EXERCISE BIKE - w/computer display, low mi., asking \$75. 543-4820.

EXERCYCLE - American Tourister luggage, 5-pc., new, 3-pc. Christmas set; large collection Avon; new, twin sheets. 286-0376.

ORGAN - Conn Electric, 2 keyboard, automatic one-touch, bench, books, \$300. 588-3331.

PLAYER PIANO - needs repairs, 25 rolls of music, \$300. 286-1474 after 6 p.m.

Audio, Video & Computer

COMPUTER - 128PC, 2 disk drives, 1541, 1571, VGA color mon., Star NX10 printer, extras. Pete, Ext. 5320.

Miscellaneous

GOWNS - spring/summer, for proms, weddings; coat, women's, beige; shoes, high-heel. Ext. 5938.

JACKET - New York Islanders, pullover jacket, w/hood, logo on back, made by Starter, large, \$80. Mike, 744-7360.

WEDDING DRESS - Eve of My Lady, size 10, used once, orig. \$2,500; blue gown, size 16; leather jackets, 2, size 11/12, 13/14. Mike, Ext. 2052.

Free

FIREWOOD - many hardwood trees stacked up some pine, lots of kindling, bring saw, backhoe to help you load. Frank, 234-0538.

Car Pools

LIE EXIT 36 - fourth needed. John, Ext. 5181.

Wanted

BRIDGE PLAYERS - for after hours, on-site game. Morris, Ext. 4192.

DRAWING TABLE - all wood, Anco, 38"x48" w/parallel edge, if possible. Frank, Ext. 3120.

FOREIGN ACCOMMODATIONS - sudden opportunity to visit Paris & Italy for 2 weeks, need ideas on where to stay, March 15-28. Sharon, Ext. 3505.

HOUSEMATE - to share 5-bdrm., waterfront home w/2 others, lg. prv. bdrm., priv. study/den, priv. bath, share kit., l/r, d/r. Skip, Ext. 3806.

HOUSE TO SIT - summer 1995, retired couple w/excel. refs., north shore pref., reliable, trustworthy, clean. Linda, Ext. 5763.

JUNK CARS/TRUCKS - free removal, money paid for running late models. Steve, 924-8741.

PEOPLE TO JOIN - nondenominational Christian fellowship group, every Thurs., Snyder Conf. Rm., Bldg. 911A at noon. Pete, Ext. 3297.

SKIERS - to ski Hunter 3/8, send \$42 for bus & lift to Augie Hoffmann, Bldg. 510C.

USED FURNITURE - don't throw it out, desperately needed, greatly appreciated, immediate pickup. Margaret, Ext. 2529 or 588-7989 eves.

Services

Services are listed in the first Bulletin of every month as a courtesy to BNL employees. They are neither screened nor recommended by the Bulletin. Services forms are available in the Bulletin lobby, Bldg. 134.

BABY-SITTER - experienced mother willing to watch your child/children at my N. Shirley home, reasonable, refs. Lynn, 281-3585.

BRICKWORK - masonry, patios, walks, swimming pools, retaining walls, landscaping/ties, Belgium block, 25 yrs. exp., Lab disc. Tony, 698-9274.

CHILD CARE - mature, responsible mother will care for your child along w/2 yr. old. daughter, ages 2-5 pref., Wading River. Mary, 929-8613.

CHILD CARE - mature, responsible mother will care for your infant or toddler in my Ridge home, pt/ft. Judy, 924-9332.

CHILD CARE - by licensed, loving mother, impeccable refs. provided by BNL employees, located close to BNL. Robin, 345-0298.

CHILD CARE - experienced, caring, available immediately, your home or mine. Wei, Ext. 3370 or 632-2487.

CHIMNEY CAPS - stainless steel or copper, all sizes, lifetime guarantee, pre-fab caps avail., fp & oil flue sweeping. Mike, 821-5526.

COMPUTERS - installation, repairs, tutoring, reasonable prices, all done in your home. Steve, 698-5260.

DRAFTING - architectural house, com. plans, bldg. manager, etc. Rich, 929-8514.

FINANCIAL EVALUATION - of your life insurance and retirement program options for future pension maximization, tax savings. Rich, 744-4816.

FLOWER ARRANGEMENTS - silk flower baskets, bouquets for Easter, Mother's Day, get ready for spring. Andrea, 399-4596.

GUITAR LESSONS - your home. Brian, 475-7664.

HOME IMPROVEMENTS - carpentry, complete service, roofing, siding, windows, doors, decks