BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

BNL Lecture
Genetic Toxicology

Over four million chemicals have been synthesized or isolated from natural materials. Over 55,000 of these compounds are produced commercially, and nearly 1,000 new chemicals are introduced every year. It is extremely difficult to evaluate the potential of these chemicals to cause DNA damage which may result in

Peter Horton

Ray Tice

diseases such as cancer, infertility, birth defects or death. Direct data from human beings are scarce and difficult to obtain because of the complexities in determining exposure, the lag time associated with the appearance of many of these effects, and individual differences in response to the same exposure. Scientifically sound judgments are needed prior to occupational or environmental exposure regarding the risks for DNA damage associated with human exposure to these chemicals.

Since it is impossible to extrapolate human health risks from cell culture assays alone, animal studies are performed to examine the effects of factors such as age, gender, metabolism and route of exposure on the level of damage induced by harmful chemicals within a living animal. In the next Brookhaven Lecture entitled "Indentifying Genotoxic Hazards to Humans," on June 20 at 4:30 p.m, Raymond Tice will discuss the use of small mammals in genetic toxicology.

Since 1976, Tice has been conducting studies, primarily using mice, to identify chemicals which cause DNA damage in humans and to understand the mechanisms by which these chemicals are genotoxic. As well, he has worked on increasing the reliability of extrapolation from animal data to human beings. Tice has tested chemicals ranging from consumer products, like the flame retardants used in infant sleepwear, to airborne pollutants such as ozone, and industrial chemicals like benzene.

"Benzene is a human carcinogen of considerable interest," says Tice, "especially considering the federal Occupational Safety & Health Administration's current regulatory moves to review the present occupational exposure limit." Using animals exposed to benzene, Tice has made several discoveries which are being considered by occupational safety and health regulatory agencies. These results would not have been discovered through *in vitro* studies. Currently Tice is examining feral rodent populations for DNA damage indicating the presence of genotoxic environmental pollutants.

Tice came to the BNL Medical Department in 1976 from Johns Hopkins University, where he received his Ph.D. in Human Genetics. He has worked as a genetic consultant to DOE, and serves on one National Council on Radiation and two EPA panels evaluating genetic hazards and damage. With AUI consultant Alexander Hollaender, Tice has coedited several volumes of conference proceedings on genetic toxicology and has organized workshops in this field in several developing nations.

All those interested in getting together after the lecture are invited to go with the lecturer to a restaurant off-site. If you want to be part of this group, call George Latham, Ext. 3372.

Lab 'Products' on the Market

Since the establishment of BNL's Office of Research and Technology Applications, the technologies for five inventions developed at BNL were transferred to commercial corporations which wish to manufacture and market those products. Here are the most recent BNL "products" to enter the U.S. economy through their new producers.

• Touchstone Applied Science Associates of Elmsford, New York, has produced a commercial version of the PUMA emulator and is currently raising venture capital for introduction of this product. Developed by computer scientists in Applied Math at Brookhaven and the Courant Institute at New York University, the PUMA emulator of a CDC 6600 computer is a processing unit with microprogrammed arithmetic that imitates the Control Data Corporation model 6600 computer, but is less expensive, smaller, and more reliable. It was designed to replace the older 6600 without requiring the software used with the 6600 to be replaced.

According to Marcuse, it is not possible to estimate the volume and dollar value of PUMA sales at this time. "However, because savings will be made by avoiding the need to develop and purchase new software, the PUMA system has added value," Marcuse says. "These savings to the purchaser may exceed the cost of the PUMA emulator several times over.

"The PUMA technology was developed because the Lab owns obsolescent CDC 6600 equipment and has a huge investment in CDC 6600 programs," explains Marcuse. "By developing PUMA, modern minicomputers could be purchased without sacrificing the software developed for the CDC. These minicomputers are less expensive, and are more reliable than the 6600."

The CDC 6600 is about 15 years old and occupies 200 square feet of space. The PUMA emulator takes up about 12 square feet, and "you can acquire one with about half the computing power of the 6600 for about $100,000, or two to three percent of the orginal cost of the 6600," says Marcuse. "Solving the Laboratory's problem turned out to be a solution for many commercial users as well."

• Shell Oil Company and Lone Star Industries formed a joint corporation called Quazite which is producing a polymer concrete that is an improved version of the material developed by DAS at Brookhaven. "The novel aspect of this development is that it can be prepared as a wet aggregate and used for concrete repair under conditions of dampness and low temperature that precludes the use of other materials," explains Marcuse.

According to Marcuse, the Quazite company feels that this repair and replacement material will be as revolutionary as plywood and fiberglass, and it will play a major role in the renewal of the U.S. infrastructure. Quazite sales for the year are estimated at $10,000,000 and are predicted to reach $500,000,000 by 1990.

Seven hundred companies, from utilities to general contractors, have shown interest in this product, and Quazite has targeted four markets: architecture, highway construction, electrical utility, and oil and gas industry. Concrete polymer has already been used for median barriers, conduit channels, cable trays, telephone equipment, wall panels and graffiti-resistant subway furniture. State and local governments have used it for highway and bridge repair, and a version that sets quickly under damp and cold conditions is under development for the U.S. Air Force for emergency runway repair.

• RCA produces and LeCroy markets an ultra high speed memory device which was developed by the Physics Department at Brookhaven for use in the Lab's Multiparticle Spectrometer. "It resolves events separated by four nanoseconds and is twice as fast as any commercially available device," explains Marcuse. "The device has the advantage of increasing the speed of multiprocessor control and readout at a low power cost."

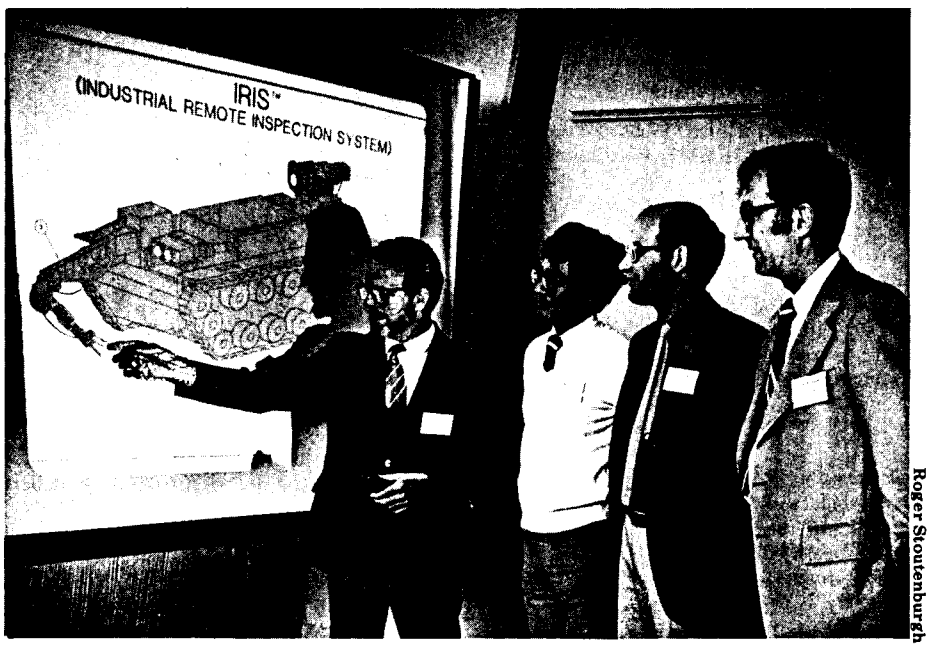
Initially, the device will be sold to a small market of experimental scientists, but it has commercial potential for use in digital oscilloscopes.

•The Gilian Instrument Company of Wayne, New Jersey, is manufacturing and selling a programmable atmospheric sampler, which is modeled after a device developed by the Department of Applied Science at Brookhaven. This portable product is used to study general air pollution, profile industrial plant effluents, monitor pollution from chemical dumps, etc. The device holds sampling tubes for heat desorption, solvent extraction or color

(Continued on page 2)

Peter Horton

Over 250 present and prospective users of the National Synchrotron Light Source turned up at their annual meeting on June 4 and 5. This number included a large contingent from the x-ray community who become more involved as they come closer to actual x-ray beam line operations. At the meeting, user policy was discussed and recommendations received on future instrumentation. Outside Berkner Hall are: (rear, from left), Gwyn Williams (BNL), John Morar (IBM) and Edward Walters (U. of New Mexico); (front) Martin den Boer (Polytechnic Institute of New York), Roger Klaffky (BNL) and Steven Kevan (Bell Labs). Morar, Walters, den Boer and Kevan were invited speakers; Klaffky was meeting chairman and Williams chaired a session on "Science at the NSLS."



Roger Stoutenburgh

Fifty health physicists and nuclear engineers from ten countries met at BNL May 29 - June 1 to exchange information and hold discussions on "Historical Dose Experience and Dose Reduction (ALARA) at Nuclear Power Plants." Emphasis was placed on understanding causes for wide variations in radiation exposure from plant to plant and country to country, and on the radiation protection principle, ALARA, which stands for keeping worker exposures "as low as reasonably achievable." Important parameters which were identified as contributing to differences were : plant vintage, design and layout; primary water chemistry (purity and pH); amount of cobalt in primary system components; years of operation; and management support. Above, Alan Roecklein of the Nuclear Regulatory Commission points out an exhibit at the robotics and remote tooling session to Paul Shen, Taiwan Power Co., Krister Egner, Swedish State Power Board and John Baum, BNL organizer of the conference. The robotics exhibit was developed by Bruce Dionne, S&EP.

Sunday Tours

Continuous tours of the Laboratory every Sunday, except Labor Day weekend, from 10 a.m. to 3 p.m., through September 30. The free tours include a guided bus ride around the site and a guided walking tour of the Exhibit Center. The complete program takes about two-and-a-half hours.

Roll Up Your Sleeves

Summer is here, time for enjoying sunny skies . . . and, at BNL, a time for donating blood. On Wednesday, June 20, and Thursday, June 21, employees will have a chance to roll up their sleeves and help offset the typically heavy blood demand of the July 4 weekend. The Long Island Blood Services of the American Red Cross will be in the gymnasium from 10 a.m. to 3 p.m. for the 14th annual BNL summer blood drive.

Donating blood requires only a half hour of your time. In addition to a few brief questions about your medical history, a drop of blood is analyzed, and your temperature, pulse and blood pressure are taken. The actual blood donation takes just five to ten minutes, and, after some refreshments, you're free to resume your normal activities. The added satisfaction is knowing you have contributed to the BNL summer blood drive goal of 600 pints which will directly help injured members of our community.

The hospitals served by the Long Island Blood Services use 600 pints of blood every day. For every ten patients entering a Long Island hospital, one is in need of a blood transfusion. Since the human body is the lone human blood manufacturer, volunteers are needed to build an adequate supply and prevent emergency calls for help.

Prospective donors are asked to mail completed pledge cards to L.C. Emma in building 460 before June 13 for scheduling of appointments. If you have any questions, please ask your blood drive captain (see below), or call Ext. 3331.

Blood Captains

Accelerator, William Leonhardt
Applied Math, Catherine Henderson
Applied Science, Joan Taylor
AUI/Fiscal, Mark Israel
Biology, Richard Sautkulis
Central Shops, Christine King
Chemistry, Sophie Kostuk
Contracts and Proc., Richard Chester
Department of Energy, Clare Gash
Director's Office, Edith Thornhill
High Energy Facilities, Vera Mott
Instrumentation, Pat Gilleeny
MIS, Jim Birtle
Medical, Elliott Levitt
NSLS, Susan White Depace
Nuclear Energy, Calvin Brewster
Personnel, Marsha Kipperman
P&GA, Karen Adelwerth
Physics, Barbara Still
Plant Engineering, Bruce Medaris
Reactor, Berthel Becton
Safe. & Emerg. Serv., Smith Pearsall
S&EP, Charles Flood
Staff Services, Nick Pisco
Supply and Materiel, Lou DiCarlo
Technical Information, Marilyn Galli

Speaking Out

Reporter: Anita Cohen
Photographer: Roger Stoutenburgh

The National Highway Traffic Safety Administration (NHTSA) reports that 50,000 people die each year in traffic accidents, and another one million are seriously injured. NHTSA estimates that regular use of seat belts by everyone in this country would reduce traffic deaths by at least 14,500 per year. On the other hand, most of us know someone who has been in a serious automobile accident, who wasn't wearing a seat belt and who walked away unscathed. To find out how employees feel about seat belts, we posed this question:

Do you wear a seat belt when you ride in a car?

Leonard Mausner (Medical) — I do, all the time. I was in an accident many years ago, and I was hurt because I wasn't wearing my seat belt. I was rear-ended, and the back of my head hit something. If I had been tied in, I wouldn't have been hurt.

Denise Monteleone (Biology) — No I don't, not in my car. I have a very small car, and I feel like I'm trapped in there, so I don't like wearing it. But in other people's cars I don't mind. And my boyfriend won't let me go in his car without it.

Eloise Gmur (Public Relations) — Yes, I do. Partly to keep me safe, and partly because I have a three-year old daughter who screams, "Put your seat belt on!"

Harvey Wegner (Physics) — I always wear my seat belt. When seat belts were first invented, back in the late 50's, I bought them and installed them in my station wagon and forced my children to wear them. And for the first time, they all sat where they were supposed to in the station wagon, instead of playing games. My wife and I have worn seat belts ever since. We sort of feel undressed if we don't have them on.

Abass Wessen (Plant Engineering) — I'm supposed to, but normally I don't. I guess the reason is I only live a couple of miles from here. For long distances, I always put it on, because it saves lives.

Michael Rowe (Applied Science) — We always wear our seat belts. But we tend to fasten them after we're in motion. The fastening is potentially very dangerous because of the inattention during that time. We should put them on before we're in motion.

Otto White, (S&EP) — Oh yes. I think that the statistics are convincing. When accidents involving wearers of seat belts and non-wearers of seat belts are compared, the wearers of seat belts fare far better. Therefore, the decision to wear seat belts should be obvious.

Rosa Palamore (Applied Science) — No, I do not. I never really even think about it when I get in the car. The buzzer goes on, but then it goes off so quickly it's not even annoying enough to make you put the seat belt on. But I should. I teach my kids to, but I don't.

Market (Cont'd)

detection. "It can be programmed to provide a pre-selected number of samples, up to 23, for a pre-selected sampling time on pre-selected days and in a given sequence," explains Marcuse.

The product sells for about $6,500 and has been well received, according to Marcuse. "There has been a surprising response from overseas buyers, particularly from Chile, Europe and the Orient." He adds that the company cannot estimate the market at this time since it has just introduced the device.

• A fast closing valve developed for the National Synchrotron Light Source is being produced in limited quantities by Vacuum Generators of Hastings, Sussex, England, for other light sources. In event of a sudden leak or accident, this device will close a large aperture in three to five milliseconds by sensing a pressure rise in the system, thereby protecting a storage ring from sudden vacuum failures in experimental beam lines.

"At present, the valve does not to have a substantial market," comments Marcuse, "although it may find a place in chemical and biological containment systems which maintain ultra clean environments."

MICOM Meeting

The MICOM Users' Group will hold two meetings on Wednesday, June 20: at 2 p.m. for new users and at 3 p.m. for experienced users. Both meetings will be in the Conference Room of Bldg. 179A (Department of Applied Science). MICOM representative Ruth Stannish will be present. Topics at the 2 p.m. meeting include pagination, headers and footers, footnotes and tables; at 3 p.m. the topic will be sort and locate. For further details call Isabelle Harrity, Ext. 3727, or June Martino, Ext. 2933.

News on Nutrition

Dr. Ashok Vaswani, Medical Department, will discuss "Nutrition: Facts and Fallacies" at the next noontime wellness program on Wednesday, June 20. He will outline the basics of sound nutrition and the scientific pros and cons of various nutritional practices.

The vast array of diets and dietary supplements on the market and the advertising claims that are advanced on their behalf often confuse the consumer, usually involve unnecessary expense and occasionally lead to adverse health effects. Many employees are concerned with receiving correct information about such things as special reducing diets, hair analysis and vitamin and mineral supplementation. It is expected that the seminar will increase their understanding of nutrition and their ability to interpret marketing information wisely.

As with previous seminars in the Employee Wellness Program, approval from supervisors is required prior to attending.

Arrivals & Departures

Arrivals

John J. Barry ..... DNE
Huaiyu Chen ..... DAS
Ren Iwata ..... Chemistry

Departures

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

Thomas F. Delasant ..... MIS
David T. McGrath ..... Plant Eng.

WIS Meeting

WIS will hold a business lunch meeting at noon on June 11 in Room A, Berkner Hall. On the agenda: July cocktail party; joint AWIS-WIS meeting on June 26; election of nominating committee; other business. All are welcome to attend. Bring your own lunch.

Pick Your Own Strawberries

The rain has delayed the strawberry season and local growers say the berries will be at their peak by the weekend of June 16. But some say they have strawberries ready for picking now. To be sure, call ahead.

The annual Strawberry Festival and Country Fair sponsored by the Mattituck Lions Club will be held on June 16 from noon to 5 p.m. at Mattituck High School (Rte. 25 east of Mattituck). This popular event will include the High School band, coronation of the Strawberry Queen, a raffle, arts and crafts exhibitions and sales, live entertainment, karate demonstrations, amusement rides, games of skill and, of course, mountains of local berries for homemade strawberry shortcake. Admission is $1 for adults and 50¢ for children. All proceeds will go to charity.

Osborn Farm: Main Street, Wainscott (537-1323), 8 acres. 7 a.m.-7 p.m. Prices not available, includes container. Children especially welcome.
Lewin Farms: Sound Avenue, Wading River (929-4327). Next to Wildwood State Park, 50 acres 8 a.m.-8 p.m. 65¢/qt. Containers available.
Fritz Lewin Farm: Corner of Sound and Edwards Avenues, Calverton (727-3346). 7:30 a.m.-6 p.m. 70¢/qt. Containers may be purchased.
Sabat Farm: 116 Sound Avenue, Baiting Hollow (727-2426) 7 a.m. Prices not available. Containers may be purchased.
William J. Polak, Jr.: Church Lane, Aquebogue (722-3049). 4 acres. 7 a.m.-6 p.m. Prices not available. Containers available at cost.
Ferdinand Schmitt Farm: 26 Pinelawn Road, Melville (423-5693). 10 acres 8 a.m.-4 p.m. Prices not available. Including container.
Kenneth Glover: 633 Horse Block Road, Brookhaven (286-8721). 50 acres. 8 a.m.-8 p.m. 75¢/qt. Containers may be purchased. At least one adult for every two children.
Sep's Farm Stand: A.P. Sepenoski, Jr. Route 25, East Marion (323-3612). 5 acres. 8 a.m.-5 p.m. Prices not available. Containers may be purchased.
Henry Schwenk: Montauk Highway, Bridgehampton (537-1377). 2 acres. 7:30 a.m.-6 p.m. Prices not available. Containers may be purchased.
Young's Orchard: 54 Sound Avenue, Riverhead (727-5363). 4 acres. 8 a.m.-6 p.m. Prices not available. Containers may be purchased.
R. Hogner: 120 Dayton Avenue, Manorville (878-1774). 2 acres. 8 a.m.-8 p.m. Prices not available. Containers 5¢ extra.
Edwards Farm: N. Edwards Avenue, Calverton (727-0472). 9 acres. 7:30 a.m-6 p.m. 60¢/qt. Containers available.
South Breeze Farm: 260 Old Country Road, Huntington (423-5914). 8 a.m. Come early. 90¢/lb. Container included.
John Berezny: Sound Avenue, Riverhead (727-4661). 2 acres. 8 a.m.-6 p.m. Prices not available. Containers may be purchased.
Wickham Fruit Farm: Main Road, Cutchogue (734-5637). 9 a.m.-5 p.m. Mon.-Sat. Prices not available. Bring your own qt. containers.
Green Thumb: Montauk Highway, Water Mill (726-4989, 10 acres, 8 a.m.-5:00 p.m. Prices not available. Bring your own containers. Please call ahead.
Hodun Farms: River Road, Calverton (727-2816). 6 a.m.-5 p.m. 50¢/qt. Containers available at cost.
van der Grinten Farm: Montauk Highway, South Haven (286-1257). 4 acres. 8 a.m.-5 p.m. 70¢/lb. Containers provided.

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BERA News

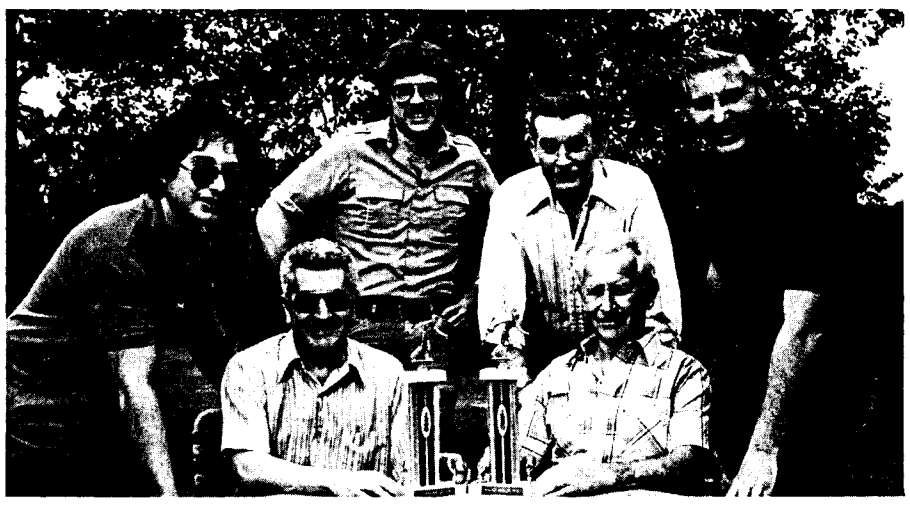
1983-84 Bowling Champs

—photos by Rosen

Pink League — SURVIVORS — (from left) Betty Jellett, Maryann Larsen, Sandy Asselta and Maryann Reynolds.

White League — NO-CIGAR — (from left) Steve Gushue, Kathy Griffin and Jim Griffin. Not present for photo: Kay Conkling.

Purple League — PEN-MACS — Caryl MacDougall and Jeanne Penoyar. Not present for photo: Ed MacDougall and Dave Penoyar.



Red and Green League — DESIGNERS — (standing, from left) Sonny Dimaiuta, Ed Sperry IV, Ed Sperry, Al Pinelli. Seated, Joe Ferrante and Charlie Tomesch.

An African Experience

Operation Crossroads Africa (OCA), a private organization along the lines of the Peace Corps, will be described from personal experience by Ross Burkhardt, in a slide-show lecture presentation sponsored by the Afro-American Culture Club. Burkhardt, an English-Social Studies teacher at the Shoreham-Wading River Middle School, will speak on June 14, at 5:15 p.m. in Room B, Berkner Hall.

OCA, now in its 26th year of operation, offers summer jobs primarily to American and Canadian college students for the purpose of living and working with Africans; in particular, helping them with the construction of community buildings. Burkhardt was the leader of a group who went to Sierra Leone in the summer of 1964. There, they took an old flying boat base and turned it into a school. He returned to Africa with OCA in 1967 and their project was the roofing of a school for illiterate adults in the Upper Volta.

In addition to his own experiences, Burkhardt will give an overview of West Africa and will accompany his lecture with slides and music. A question and answer period will follow. Refreshments will be served.

NBI Users

The next meeting of the NBI system users will be on Friday, June 15 at 10:30 a.m. in Bldg. 197D. An NBI representative will be present and discussions will be held on information processing, word processing future at BNL, new features and training. For further details, call April Donegain, Ext. 2903, or Mary Cooper, Ext. 4105.

NYC Train Trips

The Hospitality Committee is planning two group railroad trips to the city in the next two weeks.

One is a special on Saturday, June 16, leaving at 8:31 a.m. Round-trip fare is $6.50, and must be received no later than Wednesday, June 13. Reservations will be accepted on a first-come, first-served basis.

The second is a regularly scheduled trip on Wednesday, June 20, leaving at 7:55 a.m. The round-trip fare is $5.00 and must be received by Thursday, June 14. Refunds will be made only if cancellations are received by the Monday morning preceding the trip.

Children under five years ride free on both trips. All departures are from the Patchogue LIRR station. To reserve a ticket send your fare through the U. S. mail to BNL, P.O. Box 322, Upton, New York 11973. Checks or money orders should be made payable to BNL. Do not send cash. Put the date of the trip your telephone number and BNL life number on the check. Tickets will be given to you on the train.

Children's Summer Program

This summer's recreation program will begin on Monday, July 2.

Swimming classes
Place: BNL Swimming Pool
Activities: Each child will be scheduled for one lesson each week for eight consecutive weeks. American Red Cross certificates will be awarded to those children who qualify.
Time: Monday through Friday — 1:30 to 3:00 p.m.
Fee: $15 for each child upon registration. Also, each child will pay the daily admission fee of $1.25, or present a season ticket.
Participation: Children of all Laboratory employees. A minimum height of 48" is a participation requirement.

Registration applications may be picked up at the Recreation Office between the hours of 8:30 a.m. and 5:00 p.m.; the BERA Sales Office in Berkner Hall between 9:00 a.m. and 1:00 p.m.; and the swimming pool during open hours. Mail or deliver applications with registration fees (checks payable to BERA) to Recreation Office, Building 185, no later than June 22.

Tennis Program
Place: BNL Tennis Courts
Activities: Basic tennis instuction
Time: Monday through Thursday — 3:00 to 4:00 p.m.
Fee: No fee or registration required.
Participation: Children of all Laboratory employees. Children will provide their own racquets and balls.

Children who wish to play in the end-of-season tournament will be asked to pay a $2 entrance fee.

Friday Pool Specials
Place: BNL Swimming Pool
Activities: Water games and contests
Time: Each Friday — 3:15 to 4:30 p.m.
Fee: $1.25 daily pool admission or present a season ticket. No registration is required.
Participation: Children of all Laboratory employees.

Golf

The third tournament of the BGA season will be held on Monday, June 18, at the Timber Point Golf Course in Great River. The tournament will be run as a Stableford competition, but team league matches may still be played. Tee times may be obtained by contacting Jon Nagy, Ext. 2667 (Bldg. 475). There is a $1 entry fee for BGA members and a $2 entry fee for non-members. Greens fee for Suffolk County residents is $6.50.

Fifty-four golfers played in the second tournament held at Swan Lake. Winners of the flag competition were: Flight A - Ron Webster, Flight B - George Vineyard, and Flight C - Otto Kammerer. Other winners were: low gross for 18 holes; Flight A - Jim Phelin (84), Flight B - Jim Morris, Art Dick and John Scharpeger (92), and Flight C - Howard Vetter (103). George Speidell won the closest to the pin contest and Mike Zguris, Jr. won the longest drive contest.

Softball

Games for week of 5/21

League I
Moles 16 — Big Sticks 2
Ravens 14 — Blue Jays 2
Six Pax 19 — Renames 9
Phoubars 12 — Ice Pops 4

League II
Dirty Sox 18 — Random Errors 1
Magnuts 13 — Medical 5
Lights Out vs. Scram
No score reported.
Faze II vs. Titans
Game called due to rain.

League III
The Source 6 - NADS 5
Farm Team 12 — No Names 10
Survivors 10 — E-Z Riders 9

League IV
TNT 11 — Kidz-R-Us 8
Underalls 11 — Septembers 10
Mole-Esters 16 — Turkeys 7

League V
Mudville Sluggers 13 — Foul Ups 9
No Feedback 19 — Erasers 11
Space Kadets 7 — Who Cares 5

Tennis

Two tennis court reservation systems will go into effect Monday, June 11. The rules for court use are posted at courtside and in the BERA Sales Office, Berkner Hall.

Under the advance reservation system (A), three of the courts may be reserved for weekday play the day before play (thus Friday for Monday play). On-court scheduling (system B) offers the three remaining courts on a first come-first served basis to players who sign the blackboard at courtside at the time of play.

Reservation sheets for system A are held at the BERA Sales Office from noon to 1 p.m. on the day preceding play. Reservation sheets for the day's play will be posted at courtside in the morning, where players may reserve any courts that remain open. Only group 1 from the priority players list below may use system A. Only groups 1 and 2 may use system B.

1. Laboratory employees, including Visiting and Guest appointees.
2. Laboratory employees playing with family members or personal guests.
3. Immediate family members of Laboratory employees.
4. Personal guests of Laboratory employees.

Note: It is against Laboratory policy for anyone to use Lab facilities for profit. This includes use of the tennis courts for conducting paid, private tennis lessons.

Pool/Gym

Through September 2, the gym will be closed on Saturdays and Sundays, but the pool will remain open.

Motorcycle Club

A meeting will be held on Monday, June 11, at 5:15 p.m. at the Recreation Bldg. To be discussed will be the Massachusetts ride and the hosting of guests at the BNL picnic grounds.

Cafeteria Menu

Week Ending June 15

Monday, June 11

Turkey noodle soup	(cup)	.65
	(bowl)	.85
Eggplant Parmesan w/1 veg.		1.95
Western omelet & hash browns		1.85
Hot Deli: Pastrami round	(bread)	1.85
	(roll)	2.00

Tuesday, June 12

Cream of potato bacon soup	(cup)	.65
	(bowl)	.85
Braised short rib of beef & 1 veg.		2.25
Turbot Florentine & 1 veg.		1.90
Hot Deli: Italian-style sausage hero		2.00

Wednesday, June 13

Pepper pot soup	(cup)	.65
	(bowl)	.85
Turkey a la king on rice		1.90
Corned beef & cabbage w/ parsley potatoes		2.20
Hot Deli: Top round of beef	(bread)	1.95
	(roll)	2.10

Thursday, June 14

Navy bean soup	(cup)	.65
	(bowl)	.85
Beef Burgundy on egg noodles		2.00
Kielbasi & sauerkraut		1.90
Hot Deli: French bread pizza special Top your own pizza		2.15

Friday, June 15

New England clam chowder	(cup)	.65
	(bowl)	.85
Macaroni & cheese w/1 veg.		1.80
Beef hash & 1 veg.		1.90
Hot Deli: chicken patty club	(bread)	2.15
	(roll)	2.30

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position, with consideration given to candidates in the following order of priority: (1) present employees within the department, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants. In keeping with the Affirmative Action plan, selection decisions are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all non-scientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment.

Except when operational needs require otherwise, positions will remain open for one week following publication date.

For further information regarding a placement listing, contact the Personnel Placement Supervisor, Ext. 2882.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

2073. TOOL AND INSTRUMENT MAKER, Group Leader - (Instrumentation Division Staff Shop) Central Shops Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2074. SYSTEMS/DP ANALYST - Requires a bachelor's degree in a pertinent discipline and 2 years' relevant experience in COBOL. Required experience includes programming on-line data base business systems. Knowledge of Hewlett Packard 3000 hardware is highly desirable. Management Information Systems Division.

Autos & Auto Supplies

81 BUICK SKYLARK LTD - 4 dr., V6, a/c, p/b, p/s, p/w, auto., am/fm stereo, orig. owner, midnight blue, mint cond., must see to appreciate, $4,990. 286-4652 after 7 p.m. (all day wkends).

72 TOYOTA COROLLA - 4 dr., auto., good running cond., $575. Roy, 654-3250.

81 HONDA MOTORCYCLE -CM400T, 2,500 mi., excel. cond., $1,075. 289-0413.

76 ELDORADO CADILLAC - excel. cond., silver, 80,000 mi., 2nd owner. 732-1913.

74 CHEVY IMPALA WAGON - good body and engine, babied by owner, $800. 475-8494 after 5 p.m.

81 CHEVETTE - 4 dr., sedan, good cond., low mi., tan, asking $2,500. 736-5743.

VESPA BRAVO MOPED - Super Deluxe, Class B, excel. cond., used very little, $500. Lloyd, Ext. 3381 or 286-1024.

68 TROTWOOD TRAVEL TRAILER - Tandem axle, 21 ft., sleeps 6, 8x12 add-a-room, $2,300 or best offer. 363-6845.

75 FORD PINTO - 4 spd., 69K, reliable transp., asking $450. 331-3766.

81 KAWASAKI - CSR 650, 5,000 miles, $1,125. 757-1380 after 6 p.m.

74 TOYOTA COROLLA DELUXE - 2 dr., sedan, 1600 cc engine, $750. Ext. 2423.

78 CHEVY SUBURBAN - 9 passenger, p/s, p/b, am/fm, good cond., $3,600. Ext. 3923 or 689-9797 after 4 p.m.

74 CHEVY VAN - good running cond., $1,000. 286-0248 after 6 p.m.

79 KAWASAKI - 750, elect. start, good cond., asking, $1,000. 399-1995.

69 CHEVY NOVA - 6 cyl., running, $300. 289-2920.

TWO TIRES - new, (1) shell belted, H78-14, w/w; (1) Firestone transport, wide oval, 8.75-16.5LT, make offer. Fred, Ext. 7947 or 588-2268.

76 DATSUN B210 - hatchback, good engine, trans., body rust, needs minor work, $700. 289-6982.

TIRES - (2), 18" Tiempo, all weather, mounted on Vega sport rims, very good, $55. Duke, Ext. 2957.

80 TOYOTA CELICA - 5 spd., std., a/c, am/fm, high mileage (highway), $3,800. Ext. 5294.

70 SAAB - 96-V4, interior good, body needs work, runs well, $700. 751-8423 eves.

71 COMET - 302 cu., auto. trans., needs muffler and alternator, $225. Jim, 878-8984 after 2:30 p.m.

77 OLDS CUTLASS SUPREME - new paint, brakes, tires, battery, excel., $2,750. 363-7032.

73 HONDA MOTORCYCLE - CB350, runs well, $350. Joe, Ext. 3464 after 5:30 or 281-7683 wkends.

76 AUDI FOX - 2 dr., 4 spd., new engine and many parts, must sell, best offer. Ext. 2435 or 473-6183.

77 MARQUIS BROUGHAM - all power, cruise control, CB, white, clean cond., $2,000. 734-7496 eves.

78 KAWASAKI - KZ400, 14K, saddle seat, roll bar, rack, recently serviced, new battery, tires, chain & sprockets, asking $950. Ext. 7148.

82 KW400 MOTORCYCLE - like new, low mileage, $1,100 or best offer; 73 Fiat engine, excel. cond., $128. 924-0960.

67 CADDY - Sedan deVille, mechanically good, body fair, $200. Ext. 3828 or 751-7250.

Boat & Marine Supplies

15' BOW RIDER - 40 hp, gal. trailer, excel. cond., $1,400. Ext. 2951 or 281-5827.

15' SEASPRITE - 1982 w/83 35 hp Johnson, 83 shoreline trailer, asking $3,800. 331-9424 after 6 p.m.

23' BROADWOOD - cabin cruiser, inboard, needs painting, $600. Tony, 281-0350.

TUNNEL STERN SKIFF - carvel planked, new atomic 4 and Sendure unit, $2,300. 286-0248.

20' COBIA - 85 hp, Johnson and trailer, many extas, $3,900. 744-5855 after 6 p.m.

Miscellaneous

STRAWBERRIES - pick your own, top quality, large, juicy strawberries on weed free patch in Center Moriches. Barbara or Chris, 878-0621.

OFFICE DESK - 5 drawer; aquarium access.; umbrella type clothes line; wooden crutches; 3 gal. garden sprayer; tomato stakes; heavy duty bumper jack; 18 assorted flower pots. Ext. 7509.

BEDROOM SET - white provincial, 6 pc., asking $200. 475-5820 eves.

DOUBLE WALL OVEN - stove top and double sink unit without faucet, $30, $20 and $8. Trevor, Ext. 4374 or 744-7831.

MICROWAVE OVEN - good cond., $150. Ext. 2877 or 289-8428.

BEDROOM SET - 5 pc., Med.; coffee table; bookcase; window air conditioner. 744-4838 after 6 p.m.

DRESSER/DROP LEAF DESK - maple, 4 drw., $20; 30" w/int. flush door/frame & hardw., $15. 286-0795.

HOUSEHOLD ARTICLES - bureau; vanity; couch; kitchen table, chairs; bedframes; misc. articles. Ext. 3929 or 475-0140.

CHEST OF DRAWERS - painted, $20; vinyl sofa, $25; dinette set, $25; exercise bike, $10. 878-6637.

BAR - 6' w/4 stools, $100; Atari 2600, new w/4 cart., $50; Atari 2600 games; Garrard turntables, $15. Richie, Ext. 2175 or 734-7342.

CURIO - lighted, closed bottom, walnut, sacrifice, $300. 924-6354.

SWIVEL ROCKERS - spice, $300/pr.; upholstered chairs, w/slipcovers, $100/pr.; oil drums, $10; mason jars, $3/doz.; full size maple headboard, reasonable. 325-1961.

MINI BIKE - 4 hp, B&S engine, needs minor hook up, runs well; used engine for parts, $15. Ellen, Ext. 4486 or 878-0480 eves.

TRAILOR POPUP - Starcraft, hydraulic brakes, $1,450. 757-1380 after 6 p.m.

DEHUMIDIFIER - 744-6148.

LOVE SEATS - (2) custom, contemporary, excel. cond., $425/pr. Ext. 3923 or 689-9797 after 4 p.m.

WASHER & DRYER - apt. size, Sears Kenmore, excel. cond, $325/both. 475-0583.

DOCK SPACE - private, Center Moriches, Orchard Neck Creek, now to Nov., $11/ft. Ext. 5288 or 878-8177.

TV - Sylvania 19", color, $100; ladies bicycle, 3 spd., Raleigh, excel. cond., $80. Ext. 3105 or 282-3105.

STEMMLER BOW - 40-60 lb. pull, 6 custom cut arrows, $150/firm. 475-4270 after 5 p.m.

ALUM. STORM DOOR - 32" w., complete w/screens and all hardware. Roman, Ext. 3751.

JADE COMMODE - w/new ball cock, $35; 2 glass shower doors, $25. Jerome, Ext. 4337 or 286-2680.

PANASONIC COMPACT RECORDER - am/fm radio, cassette, battery & ac, 120 or 240 volts, suitable for Europe, $55. 727-3608 after 5 p.m.

TENT - 10x13, like new; cot, $15. 744-9677.

DOUBLE CASSETTE RECORDER - Sharp 575, 4-band stereo radio, battery & ac volt, 120 & 220, almost new, $195. Ext. 2225.

GARDEN HERB PLANTS - culinary and old-time, over 40 varities, for delivery June 15 or 22. 924-0092.

APPLE IIe - w/acecessories. Scott, 472-9772.

WATER TANK - 40 gal., galvanzied, good for solar use, $10. Duke, Ext. 2957.

TWO BEDROOM DRESSERS - good cond., $50; L.V. glass tables, end & coffee table, chrome frame, $50. 924-8224 after 5:30 p.m.

KEY FOR OBI - free admission on Tuesday's, "25 and over nights", $5. Pete, Ext. 7627.

PAPAGALLO SHOES - open heel, black patent, 2-½ heel, size 7-½, never worn, orig. $60, now $25. Ext. 7196 or 286-2505.

DINETTE - w/4 chairs, very good cond., best offer. Ext. 3565 or 924-8594.

PVC DARKROOM SINK - 72" x 27", splashboard, print drying racks, cabinet underneath, excel. cond., $250. 732-6822.

DINETTE SET - Hodor, bamboo wood, new covered chairs, leaf, like new. 924-6883 after 5 p.m.

BIKE - men's 10-spd., 21-inch Miyata frame, off-white, very good cond., asking $140. Danny, 286-1278.

HIKING BOOTS - women's size 7-½, vibram sole, leather upper, used only 2 wks., cost, $70, sell for $20. Ext. 7196 or 286-2505.

19" COLOR TV - w/extras, 6 mos. old, $300. Lou, 698-6585 after 5 p.m.

SUITCASE - 9x19x28, blue/red trim, new cond., $10; GE portable hair dryer, model VH10, w/bonnet, white carry case. Lou, Ext. 4364.

SEARS WASHER & DRYER - 18 lb. capacity, used 1 yr., white, excel. cond., $600/pr. Ellen, Ext. 4486 or 878-0480 eves.

TAPE RECORDER - Tandberg, model 64, ¼ track open reel deck, $230; violin, ¼ size, Suzuki made, case, and bow, $150; piano bench, adjustable height, Ext. 3828 or 751-7250.

RUG - 9'x12', dark gold, used 8 mos., $45. Bruno, Ext. 3369.

MAGNAVOX STEREO - hi/fi console, good cond., good sound, $150; Wurlitzer organ, spinet, solid cherry, model 4300D, multimatic percussion, excel. cond., $900. Lloyd, Ext. 3381 or 386-1024.

COFFEE TABLE - new, never used, oval, colonial type, $75. 589-0643.

LUGGAGE - 6 pc. set, 3 hard cases, garment, vanity, carry-on, good cond., $60. Judy, Ext. 2590.

PIANO - Straube, spinet, excel. cond., $500. Alan Rosenberg, Ext. 2671.

FURNITURE - Italian Prov., cut velvet loveseat, couch, hi-back chair, lamps, tables, excel. cond., $1,000/firm. 363-6130.

SPEAR GUN - pneumatic, Jaguar, never used, $45; (3) box springs, twin size, good and clean, $10/ea. Ext. 3589.

Free

DOG - very cute, friendly and loving, long haired terrier (Cairn) has adopted us, but we can't keep her, she's had 1 litter, is frisky and playful, badly needs loving home. Ext. 4771 or 286-8747.

FREE KITTENS - 6 wks. old, very charming. Johanna, Ext. 4571 or 928-8616 after 6 p.m.

Yard Sale

LAKE PANANOKA - craft sale, birdhouses, feeders, lawn ornaments, planters, wall plaques, June 9-10, 32 Cherokee Trail. 929-3455.

Car Pools

E. NORTHPORT/COMMACK - 3 person pool looking for 2 drivers or merger. Paul, Ext. 4156.

BABYLON/W. ISLIP - driver needed for on-time car pool, 8:30-5:00. M. Tesla, Ext. 3284/2705.

Lost & Found

LOST - camouflage hat at Center, 5/31. Ken, Ext. 4514.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed or national origin of the applicant.

For Rent

YAPHANK - room to rent in large 5 bedroom house, $200 + util., 10 min. from Lab. Wolfgang, 924-3669.

WADING RIVER - sublet, 4 rm apt., 1 person, non smoker, Aug. 1 thru Nov. 30, $375/mo. Janet, Ext. 2345 or 929-8152.

MASTIC PARK - 1 bdrm. apt., all private, single, security and references, $275 plus utilities. 281-7844.

For Sale

STONY BROOK - 4 bdrms., two full baths, cape, w/w, new floor, Three Village School, walk to University, $109,500. 689-9409 eves.

WESTHAMPTON VICINITY - mother/daughter, maintenance free ranch, 4 bdrms., 2-½ baths, near school and shopping, approx. 2/3 acre. 325-1961.

SHOREHAM NORTH - 4 bdrms., living room, den w/brick f/p, 2-½ baths, 2 car garage, ¾ acre, profess. landscaped. 821-0080.

CORAM - Birchwood at Bretton Woods, condo, Dalton Model, 3 bdrms., den, l.r., formal d.r., 1-½ baths, patio, gas heat, cenhtral air, like new, many extras, ½ block to clubhouse. 732-6822.

SHORIDGE HILLS - waterfront house, 5 rooms, low, Bermuda like, white, large porch overlooking the Sound, quite, residential setting, gardens, trees, shrubs, beach assoc. membership, $160,000. 744-9749 or Box 609, Shoreham.

CONNECTICUT - lake front cottage, 2 bdrms., will hold mortage, $24,000, 757-1380 after 6 p.m.

COOPERSTOWN VIC. - 190 lush acres, adjacent to state forest, $88,000. 363-7032.

Wanted

APT. OR HOUSE TO RENT - professional couple, mature, no children, no pets, seeks long-term rental of 2 bdrm. unfurnished apt. or 3 bdrm. house, will consider option to buy, within commuting distance of BNL, min. one year lease desired. Ext. 7959 daily, or 282-3116 after 7 p.m. weekdays only.

APARTMENT - 1 or 2 bdrm. apt., reasonable. 567-8492.

SPEAKER - 12 in., round, 50 watt, for guitar amp. Fred, Ext. 7947.

USED SUNFISH - in good cond., or fiberglass Day Sailer. 286-012i6 after 7 p.m.

HOMES FOR KITTENS - long and short hair. Ext. 2959 or 751-0023.

NATIONAL GEOGRAPHIC - Feb. 1970 issue. Gordon, Ext. 4095.

CREW - for 42 ft. sailboat, leave July 5 for Newfoundland, 5-6 wks. Ext. 4676.

REFRIGERATOR - cannot be larger than 30" wide by 64" high. Ext. 44526 or 473-2821 eves.

2-3 BEDROOM HOUSE - for working couple to purchase, in the Patchogue, E. Patchogue, Bellport area, $70,000 to $90,000 range. Pam, Ext. 4303 or 289-6081 after 5 p.m.

HOUSE TO SIT - free, responsible and caring, any period, any duration, July 30 to Nov. 1. J. Allentuck, Ext. 2412.

APARTMENT - or small house to rent from July 1 to Sept. 30 for single male scientist. Ext. 7509.

HOUSE AND AFFECTIONATE DOG SITTER - week of June 24-30. Andy, Ext. 4210 or 821-1759.

HOUSE - 2-3 bdrms., furnished if possible, to rent by July 1st, 2 females. Debbie, Ext. 3420.

HOUSE - to rent, 2-3 bdrm., for very responsible couple w/one child, references. 929-3566.

PLAYPEN - Raul, Ext. 4331 or 924-1425.

HOMES - warm and loving for 2 Swedish boys, exchange students, June 30 to July 28. Stefan loves flying, Jonas loves computers. Janice, Ext. 3332.

In Appreciation

The lovely pink dogwood which you gave to honor the memory of your colleague and friend arrived yesterday and was planted in our yard. I want you all to know how deeply I appreciate your thoughtfulness and generosity. Your beautiful gift will help keep memories of John warm and alive and help ease the heart's burden. — Claire Pukit

Classified Ad Policy

Deadline is 4:30 p.m. Friday for publication Friday of the following week.

1. The Brookhaven Bulletin's classified section may be used only by active and retired Laboratory employees.
2. All items for sale or rent must be the advertiser's property.
3. Ads for material acquired for resale in association with a full or part-time business cannot be accepted.
4. Ads for the sale or trade of firearms will not be accepted.
5. Ads not carried because of space restrictions will be held for publication in the next issue.
6. Ads are run only once and must be resubmitted if they are to be repeated. One ad per person per week.
7. **Property for sale or rent cannot be accepted on this form. Special Real Estate Ad Forms are available at the office of the Brookhaven Bulletin, Building 134.**

☐ For Sale: Autos & Auto Supplies
☐ For Sale: Boats & Marine Supplies
☐ For Sale: Miscellaneous
☐ Car Pools
☐ Lost & Found
☐ Wanted
☐ Free
☐ _____

Please print your ad below in 15 words or less using one word per block. Include name and phone number to call.

Note: The following must be completed for your ad to appear.

NAME (Please Print) .....

Employee's Signature ..... Life No. ..... Ext. .....

Send to: Brookhaven Bulletin, Building 134 (Ext. 2345).

Classified Ad Policy Deadline is 4:30 p.m. Friday for publication Friday of the next week.