

Diagnosing Pancreatic Cancer

The pancreas in human beings is a yellowish gland lying crosswise beneath the stomach and connecting to the small intestine. It secretes enzymes essential for the digestion of proteins, carbohydrates and fats. Small groups of pancreatic cells produce the protein hormones, insulin and glucagon which regulate blood-sugar levels. Most people never are cognizant of their pancreas unless it becomes diseased. Unfortunately in the case of pancreatic cancer, the signs and symptoms of the disease usually don't manifest themselves until too late.

In hopes of finding a clue to the beginnings of pancreatic cancer and a method for early detection, Bertrand Brill and the Nuclear Medicine Division of BNL's Medical Department are collaborating with Karl Hubner and his colleagues from the Medical Division at Oak Ridge Associated Universities (ORAU), and the BNL Chemistry Department. They have commenced a study of protein metabolism in the cancerous tumors of the pancreas using carbon 11 (^{11}C) produced at Chemistry's cyclotron, and employing Medical's PETT III.

Working with physicians from the Sloan-Kettering Cancer Center of Memorial Hospital and North Shore University Hospital, the collaborators are looking at the positron emissions of ^{11}C -labeled amino acids as they are incorporated into proteins synthesized by the pancreas in patients with pancreatic cancer. The researchers hope to find characteristic PETT images that will detect a pancreas tumor's presence, and will determine where it lies with respect to the normal pancreatic tissue.

"The onset of pancreas cancer is insidious, and the earliest signs and symptoms usually occur months after the disease is well established," says Brill, head of Medical's Nuclear Medicine Division. "Because the diagnosis of the disease comes so late in its course, and because the disease is highly malignant, patients with pancreatic cancer have an extremely high mortality rate.

"As a tumor enlarges, the pancreas

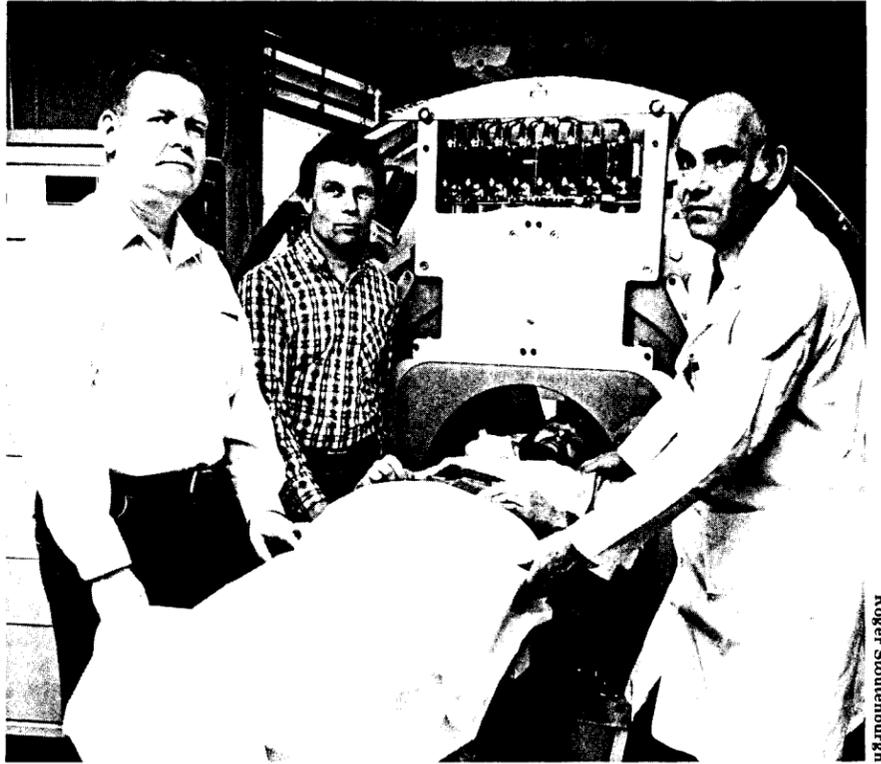
can easily expand in the abdomen without putting pressure on other vital organs and causing pain or jaundice until very late. Therefore, the signs and symptoms generated by a malignant pancreas tumor are usually less noticeable than those caused by other cancers."

To improve medical diagnosis of this disease, scientists at Oak Ridge have been working with a mixture of equal quantities of two different structures of the ^{11}C -labeled amino acids: the dextrorotatory form and the levorotatory form. The levo form is the usual structure of biologically active amino acids and proteins. In a preliminary study at Oak Ridge, scientists found that the levo amino acids are manufactured into pancreas proteins and secreted at higher rates than dextro amino acids. Dextro amino acids tend to accumulate in tumors of the pancreas.

"In our studies, we plan to administer ^{11}C -labeled levo and dextro amino acids separately, and to determine how they are incorporated into normal and abnormal portions of the pancreas," explains Brill. "From the residual positron emission activity of the ^{11}C -labeled dextro amino acids sitting in the tumor region of the pancreas, we hope the PETT scans will provide a strong positive signal which will reveal the presence and location of the tumor."

During the study, Brill would like to evaluate the use of a multi-wire proportional chamber (MWPC), a radiation detector developed at CERN which could greatly improve the resolution of medical imaging instruments suitable for use in PETT. "The resolution of PETT III is suboptimal, and would limit the ability to detect small tumors. Hence, new or improved devices are needed. The MWPC is attractive in that it has high resolution and can be produced at low cost. Techniques to increase the sensitivity of devices for imaging gamma rays exist, and are being explored at BNL and other laboratories for physics and medical applications. If they work, this could be a boon for PETT."

Since the Oak Ridge cyclotron is



Roger Stoutenburgh

Bertrand Brill (right) is assisted by Gerald Bennett (far left), who operates PETT III, and Ronald Dobert (second from left), who maintains the scanning system. They are positioning "patient" George Zubal, who writes computer programs for medical imaging, in PETT III.

currently shut down, the pancreatic cancer study is being conducted at BNL where Joanna Fowler, Chemistry, produces the ^{11}C -labeled cyanide using the JSW small cyclotron. The ^{11}C -labeled cyanide, with a half life of 21 minutes, is then rushed to Medical's hot lab, where Gregory Slovik, DNE, and ORAU chemists Lee Washburn, Tan Tan Sun and William Byrd synthesize the labeled amino acids incorporating the ^{11}C -cyanide, and separate them into the dextro and levo structures. The optically separated amino acids are then tested for their suitability for human use, and administered in Medical to a patient whose pancreas is then imaged in PETT III for 40 minutes.

"Only three patients have been involved in this project so far as we are just getting started," says Brill. "We are starting with patients who have inoperable tumors so as not to interfere with the usual therapy for these people. Finding patients in the short time between diagnosis and the institution of chemo or radiation therapy is not easy. We are actively searching for such patients through the oncology services of Sloan-Kettering and North Shore, the most active cancer therapy centers in this

region. We hope to study three patients a month over the next 10 months.

"Since we have to schedule the cyclotron two weeks in advance of the time we need the ^{11}C , and since a patient who has just been diagnosed as having pancreatic cancer cannot wait two weeks before beginning therapy, we have a scheduling problem and a problem getting untreated patients. We schedule bimonthly production of ^{11}C , and leave the patient selection to the last moment so we can choose the patients most appropriate to our research protocol."

If the techniques used in this study succeed in facilitating the accurate diagnosis of pancreatic cancer, Brill and his colleagues hope to expand their use in other studies involving patients having a variety of tumors. "We would determine the protein synthetic rate before and during cancer therapy," says Brill. "We are looking at the effectiveness of the different therapies in progressive stages of treatment, and want to see if the therapeutic response that is ultimately observed can be predicted at earlier stages by the amino acid incorporation measurements."

— Marsha Belford



Roger Stoutenburgh

Robert Hughes (left), president of Associated Universities, Inc., (AUI) and Nassau Deputy County Executive Russell Service, were among those who presented awards at the First Annual Awards & Recognition Day sponsored by the Regional Industrial Technical Education Council of Long Island (RITEC). This organization is a bi-county body of high technology corporations, educational and governmental institutions, organized to promote the growth and cooperation of technology and education on Long Island. AUI is one of the corporate sponsors. As part of their campaign, RITEC provides awards and recognition to educators and students in science, mathematics and technology, and promotes exemplary programs in these fields. BNL's Donald Metz, head of the Chemical Sciences Division of DAS, is co-chairman of the awards committee. At the ceremonies on May 5 at SUNY, Farmingdale, 16 students and 14 teachers from Nassau and Suffolk Counties, received awards. Other award presentors were Martin Gelerman, Vice-President of Executone, Inc. and Peter F. Cohalan, Suffolk County Executive.

Employees Help Fight Brush Fire

Last week, during a major brush fire in the Manorville area, Plant Engineering's Charlie Botts was maneuvering a new D-7 Caterpillar bulldozer around the 4-mile perimeter. For five hours, with smoke and flames alongside him, Botts worked to clear a trench around the fire to keep it from spreading. Assisting in the clearing were two smaller bulldozers from the Town of Brookhaven which followed Bott's lead.

And keeping radio contact with the bulldozer from a Lab truck parked on the outskirts of the fire was Heavy Shop Supervisor, John Niemczyk. He kept the information flowing between the bulldozer operators and the Manorville Fire Department which was in charge of operations.

Botts was familiar with the area in which he was working, because he grew up around there. However, it is easy to become disoriented under fire conditions, he says, and radio contact is important not only to help direct the machines, but to "let us know of any danger we aren't aware of."

Suffolk County's Department of Fire Safety had called BNL's Fire/Rescue Group at 4 p.m. to see if it could help control the fire. As it turned out, Site Maintenance was prepared. "We had the 'dozer' all set to go, just in case," says Manager Jack Hennessy.

The Fire/Rescue Group also sent out three of its firefighters in a "brush truck" — a four-wheel drive fire engine with a high pressure pump. The firefighters joined in with other firefighters from around the County and fought the blaze for four hours.

The fire was adjacent to BNL, but on the other side of the expressway, and no Lab property was damaged.

BNL's Iron Men and Woman

John Brodowski, Accelerator; Pat Cahill, Safeguards & Emergency Services; Tom Clifford, Applied Math; and Ron Wittlock, Applied Math have swum en masse in open water, bicycled alone on the road, and run towards the finish, one sport after the other with no rest between. They are triathletes.

These four employees have participated in, and are in training for triathlons on Long Island during which they swim one to three miles, bicycle 15 to 25 miles, and run six to ten miles. "It takes the same amount of time to complete one of these triathlons as it does to run a full or half marathon, and the triathlon is much more interesting," says Clifford.

John Brodowski, 44, who trained for the decathlon as a schoolboy, "did not become serious about running again until I came to the Lab in 1979, and met Gus Prince [DNE] and other BNL runners." Brodowski now runs seven to 15 miles a day, 55 to 60 miles a week, running longer distances on weekends. "I got to be pretty good after my 40th birthday. Though I've run marathons, I prefer shorter distances, and like to sprint."

Two years ago while sprinting, Brodowski pulled tendons in his thigh. "Running aggravated the pull, so I started swimming." At first, Brodowski swam trudgeon style, but with lessons and practice, Brodowski changed to the crawl, and brought his time down from 48 minutes a mile to 34. He swims half a mile, two to three times a week after work. And he bikes 20 miles a day on weekends after running.

Last July, Brodowski decided to enter the Northport triathlon, his first, as "something different. Though the swim is advertised to be 2.3 miles, it is closer to three miles, and I almost drowned. I wasn't used to swimming in water with a current and a tide, so I swam out to sea instead of in a straight line along the shore."

That summer, Brodowski entered

another triathlon in Vermont and one in New Jersey, with much better results. This year he will participate in the Northport, and competitions up- and out-of-state.

Pat Cahill, 38, began running in February 1983 as a way to keep fit for her job as police captain. Her sister Denise was in training for the Montauk triathlon that June, and persuaded Pat and her husband Eddie to add swimming and bicycling to their training schedule, and enter the triathlon.

During the Montauk, "I was really hurting at the end during the run," says Cahill. "My brother came along and tried to keep me going, but people kept passing me. When the last person got up to me, he and I decided to run the rest of the race together to help each other make it to the finish." Cahill did much better in the Mighty Hamptons triathlon later that summer.

"When I enter a triathlon, all I want to do is finish," explains Cahill. "When I think I can't go any farther, I think of myself at the finish line. A triathlon is mind over matter."

In the meantime, Cahill's sister was performing so well in running races as well as triathlons, that Saucony, a manufacturer of running shoes and equipment, named her to its New York State triathlon team. After seeing the running shoes and suits Denise received from her sponsor, "Eddie sent a letter, our resumes and pictures to Saucony to see if they had room on their team for triathlons who may not win but try very hard. Two months later, we were informed that we were on the Saucony team, and received running gear as well."

Cahill runs three miles five days a week with five new BNL police recruits, and Bill Fox, a physical education teacher who coaches the police on their running. "Bill has gotten me to run one mile in 7:55," and has Cahill lifting weights for upper body strength.



Clockwise from top: Ron Wittlock, John Brodowski, Tom Clifford, and Pat Cahill.

In the pool, Cahill has Ernie Jochen, Accelerator, who works as a BNL lifeguard and swim instructor, coach her on her technique and training program. Cahill swims one mile three times a week in the evenings and weekends.

"I've got to work on my bicycling," admits Cahill. And she would like to find a cycling coach. During the cold months, she rides her bicycle on a wind-simulator stand for an hour three to four times a week, working on keeping up her pulse and her cadence.

Cahill has signed up for this year's Montauk. "Last year, I swore I would never do this again," says Cahill, "but here I go again."

Tom Clifford, 43, noticed a poster in building 703 for the first annual Mighty Hamptons in September 1982, and decided to attempt it since he had been bicycling to work for the past ten years, running at lunch for five years, and he knew how to swim though he hadn't done it in a while.

"When I began swimming again at the BNL pool, I discovered I could swim 1-1/2 miles," says Clifford. "I enjoyed it, and liked swimming better than running." Clifford now swims 1/2 to 3/4 of a mile twice a week at lunch.

He runs four out of the other five days, 5-1/2 miles a day during the week, and 11 to 12 miles on Saturday or Sunday. "I run to stay in shape, but I have no passion for it."

"Bicycling comes free. I use my bicycle as other people use their cars." Throughout the year, Clifford bicycles to and from work 13 miles round-trip, and stretches his commute home to put more miles in during the triathlon season.

Clifford has completed two Mighty Hamptons, both under four hours, as well as the Montauk in 1983. "I use the competitions as motivation to exercise," explains Clifford. His goal is to participate -- not win. "You have to be much more intense than I am to win -- and that is just too much work."

Ron Wittlock, 49, began working out in the BNL pool two months after he came to the Lab in 1977. "I am in better swimming shape now than when I swam on a team," says Wittlock, who placed second in the 100 meter backstroke at the All Army swim meet in 1956 which made him eligible for the Olympic trials that year.

Four days a week, Wittlock swims 3/4 of a mile in 22 minutes using the crawl stroke, and varying the workout each 1/4 of a mile with timed laps, and arm pulls. "I save my legs for bicycling and running."

"When I moved to East Hampton in 1971, I found some serious bicycle riders to train with. At first they left me in the dust, but they taught me how to keep up with them."

Wittlock gets up at 4:30 a.m. two or three times a week to ride a total of 100 miles. "As long as the roads are dry in winter, I'm out there riding. When I can't get out, I work out on rollers. I log about 3,500 miles a year on the bicycle, and bicycling has become my favorite sport."

"Two weeks before my first triathlon, I had to get in shape to run," says Wittlock, who was invited to enter the 1982 Mighty Hamptons by his former cycling companions, two Mighty Hamptons promoters. "I ran four miles the first day, and planned to get up to ten miles by the day of the event. Six days before the Mighty Hamptons, I pulled my left Achilles tendon."

Wittlock entered the competition anyway. "Out of a field of 250, I was 45th out of the water after the 1-1/2 mile swim, and moved up to 28th on the bicycle after the 25 mile ride. But after I ran several steps, I pulled up short. I couldn't finish the ten mile run because of my Achilles."

Wittlock has strained his Achilles three times since, and had to withdraw from the June 1983 Montauk triathlon because of his tendons. "Gus Prince advised me on running technique, and diagnosed my problem to be the well-worn running shoes I had been wearing since 1977, and overstriding. Though I'm running better, I still hate to run." Wittlock runs 21 miles a week, during the mornings he is not bicycling.

Wittlock was able to complete the 1983 Mighty Hamptons: he was second of the 45 to 49 year old men, and 88th of the 600 entrants. "I'll continue training for and entering triathlons until I'm first in my class, and finish in the upper 10% overall," says Wittlock, who is entered in this summer's Montauk and Mighty Hamptons. "However, spending 15 hours a week training for all three sports is too time consuming to continue for the rest of my life."
— Marsha Belford

Alex Reben

Women in Science Since WWII

Science historian Margaret Rossiter will speak on "What's Happened to Women Scientists Since 1940" at 3:30 p.m., on Tuesday, May 29 in the Hamilton Seminar Room. Rossiter chairs the International Commission on the History of Women in Science, Technology and Medicine, and is also a visiting lecturer in the History of Science Department at Harvard.

Her lecture will cover the World War II period, postwar reaction, the cold



Margaret Rossiter

war, women's liberation and the contrast between official policy about women and the reality. Her recent book, "Women Scientists in America: Struggles and Strategies to 1940," describes the formative years, and she plans to discuss later developments and the involvement of government in science, education and employment in a second volume.

Rossiter received an A.B. from Radcliffe, M.S. from the University of Wisconsin, a M.Phil. and Ph.D. from

Yale. She was awarded numerous grants and fellowships including a National Science Foundation Postdoctoral fellowship and a Guggenheim. She is the recipient of the Liebig Medal from the University of Giesen, and the Berkshire Prize for the best book in any field of history by an American woman. This month she will receive the Wilbur Cross Medal for outstanding achievement from Yale University Graduate School.

Prior to the lecture, coffee will be served at 3 p.m. After the talk, Women in Science will host Dr. Rossiter at dinner at Ships Wheel Inn in East Patchogue at 5:45 p.m. Anyone interested in attending should reserve by sending \$11.75 (check payable to cash) to Mary Kinsley, Bldg. 318, (Ext. 3064) by May 23.

WIS Dinner Meeting

Miriam Forman, a theoretical physicist at SUNY, Stony Brook, will be the guest speaker at the next dinner meeting of the Brookhaven Women in Science on Thursday, May 24. Forman will speak on "Cosmic Rays in Astrophysics and Geophysics." Cosmic rays have many applications and Forman says that "in these applications, the most exotic and mysterious matter in nature is helping us on earth to understand our environment and ourselves."

Dinner will precede the lecture at 5:15 p.m. in Room A, Berkner Hall. Reservations can be made by sending a check for \$8.75, payable to BNL-WIS, to Nancy Fallon, Bldg. 535A, before May 21. For information, call Ext. 4530.

Memorial Dedication

The cherry trees planted as a memorial to Clarke Williams and Warren Winsche will be dedicated at a brief ceremony on Monday, May 14 at 4 p.m. All their friends are invited to attend. The trees are planted in the quadrangle in front of Berkner Hall where the ceremony will take place. A reception will follow in Berkner.

BROOKHAVEN BULLETIN

Published weekly for the employees of BROOKHAVEN NATIONAL LABORATORY

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Tea Will Feature International Exhibits

"An International Arts Festival" is the theme of the Hospitality Committee's spring Tea and Sherry Party on Thursday, May 24, from 3:30 to 5:30 p.m. at the Brookhaven Center.

On display will be American Indian jewelry, pottery, paintings, a tea service, Hummel figurines, Persian rugs, Wedgewood china, flower arrangements and other items. The exhibits are representative of many countries including Denmark, England, Finland, Germany, Holland, India, Italy, Japan, Mexico, Poland and the United States.

Tea, coffee and sherry will be served, along with a variety of homemade breads and an assortment of vegetables and dips.

Women employees and wives of BNL employees and guests are invited. Babysitting will be provided free of charge in the gymnasium.

At the Library

The Research Library now has available the complete set of Data Decisions. The four sets, with monthly updates, provide comprehensive information on computer systems, communications systems, software, and microcomputers.

MICOM Meeting

The next meeting of the MICOM Users' Group will be on Wednesday, May 16, at 3 p.m. in the conference room of Bldg. 179A, DAS. MICOM representative Ruth Stannish will be present and vocabulary will be discussed. New users are encouraged to come to this meeting. For further details, call Isabelle Harrity, Ext. 3727, or June Martino, Ext. 2933.

Arrivals & Departures

Arrivals

Rodney W. Chliek Plant Eng.
Donna M. Gusmano DAS
William T. Stuono MIS
Dorothea A. Tapp Fiscal
Robert Tooker Plant Eng.

Departures

None

Lecture Reminders

On May 16 at noon in rooms A/B of Berkner Hall, Judith Katsin, head of the Employee Assistance Program, and Chris McLaughlin of the Suffolk County Division of Drug Abuse Services, will talk on drugs in the workplace. The seminar is the second event in the Laboratory's Employee Wellness program.

The same afternoon, at 4:30 p.m. in Berkner Hall auditorium, Daniela Sciaky, Associate Geneticist, will give a Brookhaven Lecture on "Crown Gall: A System for Genetic Engineering in Plants."

Nursery School Registration

On Thursday, May 17, from noon to 1 p.m. in Berkner Hall, the Upton Nursery School will again hold registration for its 1984-85 school year for three and four year old children of BNL employees. Parents who obtained registration forms at the previous registration session are asked to complete and return them at this time, or by Friday, May 18.

The school is a non-profit cooperative, located in the Recreation Bldg. Tuition is \$35 per month for two mornings per week, and \$46 per month for three mornings per week.

To schedule a visit to the school and for more information, call Karen Mouzakes, 924-3974 (after 4 p.m.), or Sandy Andrews, 924-0425.

Search Service

A representative from the Institute for Scientific Information (ISI) will give an hour-long seminar on a new search service which presents information on new organic compounds and chemical reactions in organic chemistry. A chemical structural search can also be made on this new file.

The talk will be held on Thursday, May 17 beginning at 1 p.m. in the Chemistry Conference Room 300. Those interested in the latest developments in ISI print tools and online database search capabilities, are welcome to attend. For further information, call Judy Liu, Ext. 4926.

Free Concert

The Stony Brook String Quartet will give a free concert at Berkner Hall on Monday, May 21. The concert is open to the public and will begin at 8:30 p.m.

The program will include Mendelssohn's Quartet in A Minor, Opus 13, and Beethoven's Quartet in E Flat Major, Opus 127.

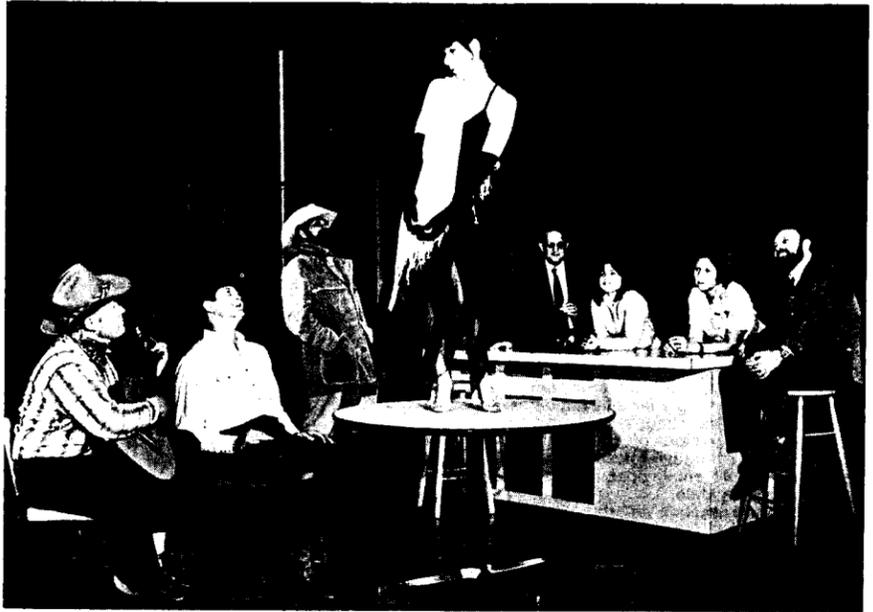
Members of the quartet are students at the State University of New York at Stony Brook. Performing will be Janice Bing-Wo, violin; Elizabeth Schulze, violin; Rachel Swerdlow, viola; and Sarah Freiberg, cello.

Cafeteria Menu

Week Ending May 18

Monday, May 14	
Turkey noodle soup	cup .65 (bowl) .85
Turkey à la king on rice	1.90
Eggplant Parmesan w/1 veg.	2.00
Hot Deli: Baked ham w/cheddar cheese	(bread) 1.85 (roll) 2.00
Tuesday, May 15	
Cream of potato bacon soup	(cup) .65 (bowl) .85
Chicken fingers w/french fries	1.95
Stuffed turbot fillet & 1 veg.	1.90
Hot Deli: French toasted ham, cheese and tomato	1.95
Wednesday, May 16	
Pepper pot soup	(cup) .65 (bowl) .85
Top round of beef & 1 veg.	2.05
Fettucini carbonara & 1 veg.	1.95
Hot Deli: Chicken patty Parmesan	(bread) 1.85 (roll) 2.00
Thursday, May 17	
Navy bean soup	(cup) .65 (bowl) .85
Beef Burgundy over noodles	2.00
Breaded pork chop w/1 veg. & applesauce	2.00
Hot Deli: Corned beef	(bread) 1.85 (roll) 2.00
Special: Bowl of freshly steamed mussels with drawn butter	.75
Friday, May 18	
Fish chowder	(cup) .65 (bowl) .85
Macaroni & cheese w/1 veg.	1.80
Veal stew on noodles	2.00
Hot Deli: Italian meatball hero	2.00

BERA News



Roger Stoutenburgh

Cherie, direct from the Blue Dragon Night Club in Kansas City, entertains the folks stranded in Grace's Diner. You can catch her act in the BNL Theater Group's production of William Inge's "Bus Stop" which will be presented at 8:30 p.m. on Friday and Saturday, May 18, 19, 25 and 26 in Berkner Hall. The cast consists of Peggie Woody (as Cherie), Bill Love, Neil Baggett, Karl Swyler, Kurt Fuchel, Rose Milone, Jane Love, and Bob Kinsey. Advance sale tickets, which are valid for any one of the performances, can be purchased from the BERA Sales Office or members of the cast at \$3 for general admission, \$2 for senior citizens or students under 18. Tickets at the door will be \$4 and \$3, respectively.

Motorcycle Club

A meeting will be held on Monday, May 14 at 5:15 p.m. in the Recreation Bldg. New England rides during the month of June will be discussed and refreshments will be served.

Golf

The second tournament of the BGA season will be held on Wednesday, May 23, at Swan Lake Golf Course. Tee times will begin at 11:30 a.m. and may be obtained by contacting Les Lawrence at Bldg. 515, Ext. 4107. Entry fees are \$1 for BGA members and \$2 for non-members. Greens fees are \$9.00 and will be collected at the course.

Forty golfers played in the first tournament held in April at the Bellport Country Club. Bob Schuman and Dan Gates tied as winners of the Callaway competition with net 73's. Frank Lepera won the closest to the pin contest and Bob Mills won the long drive contest. The winners of the low gross (18 holes) were: Flight A - Steve Heald (76), Flight B - Eldon Schmidt (87), and Flight C - Howard Vetter (102).

Bowling

Pink League

High games were bowled by M. Reynolds 183, M. Larsen 173 and S. Asselta 172.

Red/Green League

K. Asselta rolled games of 222/200, J. Petro 208, J. Connelly 201, H. Marshall 200, L. Schairer 200.

White League

J. Austin had a 214, J. Griffin 211/204/610 scratch series, T. Erickson 200, P. Lebitski 198, K. Conkling 186, P. Manzella 186, M. Austin 184. No Cigar is in first place with the Draftees in second going into position night.

Purple League

D. Adams rolled a 246, J. Ferrante 223, E. Meier 211, B. Jones 211/201, L. Barberich 211, J. Vogel 208, J. Hanlon 207, C. MacDougall 190, G. Fales 197/196/190. The Purr Haps and Pen Macs are tied for first and the Barcons are second going into position night.

Basketball

Final Playoff Game

Coasters — 78	Longshots — 66
R. Doty 21	J. Garrison 15
M. Fulkerson 4	D. Harris 20
L. Smith 6	J. James 2
M. Williams 7	J. Gaffney 11
B. Orr 30	B. Johnson 4
B. Jasper 4	R. Seymour 3
K. D'Amico 6	

BERA Officers

At a meeting of the BERA Executive Board held last week, the following members were elected to serve as officers for the coming year: Jim Roesler, president; Sandi Lane, vice-president; Mickey Haller, corresponding secretary.

Donna Gallagher and Richard Eggert will continue as recording secretary and treasurer, respectively. Other Board members are John Connelly, Ken Sutter and Ed Taylor.

BERA Board meetings are normally held at noon on the second Thursday of each month, and are open to anyone who wishes to attend.

Quilting Club

The Quilting Club will meet on Tuesday, May 15 from 9:30 - 11:30 a.m. in the lobby of the Brookhaven Center. Work will continue on the third and final squares of the scrap quilt. Please bring all completed squares and your sewing tools. For more information, call Bernie Benz, 928-1068.

Runners' Corner

The BNL A Team captured first place and a trophy over 13 corporate teams from the N.Y. metropolitan area in the corporate division of the Dix Hills Running Club's 10 K race on April 29. A-team member Terry Sullivan, DNE, finished third overall, and first for men 26 to 30 with a 31:47, 30 seconds off the course record. Teammate Trevor Sears, Chemistry, placed seventh overall, and second for men 26 to 30 in 32:28, a personal best. Peter Boni, Physics, who came in 35th overall with a 36:20, Jerry Hastings, NSLS, who placed third for men 36 to 40 in 37:05, and Ed Gallagher, MIS, who finished fifth among men 36 to 40 with a 37:05, completed the A-team.

Other trophy winners of the 17 employees who ran the race were Don MacKenzie, DNE, who won first for men 60 and over with a 39:34, and Gus Prince, DNE, who placed second in the same category in 40:43. Jean Penoyar, DNE, placed second among women 50 and over in 54:52.

The Runner's Club will hold a meeting on Wednesday, May 16 at noon in the conference room of Bldg. 318/Technology Street, across from the bank, to finalize plans for their annual Spring 5 and 15 K Runs. Volunteers, runners and non-runners are needed to help during the races. For further information, contact Jeanne Penoyar, ext. 2614, or Gus Prince, Ext. 5079.

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.

2056. LAMP CLEANER - 2 positions (5/21/84 to 9/30/84 Plant Engineering Division.

2057. TECHNICAL POSITION - Requires AAS degree in mechanical technology or equivalent and a minimum of 5 years' experience in the installation, operation and maintenance of UHV components and systems. A thorough knowledge of the maintenance and repair of leak detectors, turbomolecular sputter ion pumps and related equipment necessary. Background in electronics desirable. National Synchrotron Light Source Department.

OPEN RECRUITMENT — Opportunities for Laboratory employees and outside applicants.

2058. SENIOR SYSTEMS/DP ANALYST - Requires a bachelor's degree in a pertinent discipline and extensive relevant programming experience in COBOL. Required experience includes administrative and management systems design utilizing data base techniques. Knowledge of Hewlett Packard 3000 hardware is highly desirable. Management Information Systems Division.

2059. CLERICAL POSITION - Requires 3-5 years' experience performing complex travel reservations and related functions. A minimum of 3 years' experience utilizing a SABRE system mandatory. Staff Services Division.

Autos & Auto Supplies

75 CHEVY IMPALA - good running cond., \$1,000. 758-7365.

78 CHEVY IMPALA WAGON - excel. cond., 48K mi., a/c, \$3,200. 331-5439.

DODGE HOT DOG TRUCK - new paint inside & out. must see, \$2,000. Don, 588-0677.

TRUCK CAP - for 8' bed, new, \$200. 878-8459 after 6 p.m.

RIMS - (4) Western Cyclone, 15x8 with 4 good tires, fits Chevy 5 lug. Mike, 878-8423.

69 & 72 CHEVY BODY PARTS - for pickup truck, fenders, hoods & bumper. 732-3338.

80 HONDA ACCORD - hatchback, good cond., am/fm stereo, one owner. 929-4268.

RADIAL SNOW TIRES - 13", used one season, \$20 takes both. 744-5143.

73 FORD MUSTANG - running cond., \$350. Neva, Ext. 3395 or 286-9427 eves.

81 MERCURY CAPRI - 5 spd., 3 dr. hatch, am/fm tape, excel. cond., \$4,500. Ext. 4846 or 363-6940 after 5 p.m.

80 TOYOTA PICKUP - 4x4, with cap, extras, \$6,400. 878-8255 eves.

81 SUBARU GLS - a/c, 5 spd., black w/gray velour, 40 mpg, excel. in & out. 59K mi., \$5,000. 475-4786 eves.

74 VALIANT - 2 dr., 318-V8, p/s, p/b, a/c, am/fm, \$650. Steve, Ext. 3822 or 929-6527.

77 MONTE CARLO - all power, tilt wheel, cruise control, asking \$2,900. Laura, 928-8998.

71 VOLVO 142 - 4 spd., rebuilt eng., new paint, stereo, clean, dependable, \$800. Austin, Ext. 4662 or 363-2796.

73 DODGE STATION WAGON - good running cond., low mi., \$400. 654-9058 after 5 p.m.

80 KAWASAKI - 650 LTD, red, crash bars, excel. cond., \$1,400. Bob Johnson, 475-2305 or 283-4741 after 6 p.m.

81 KAWASAKI - 250 KDX, like new, 300 mi., \$900. Dave, Ext. 3344 or 475-7891 after 5 p.m.

71 CADDY ELDERADO - 70,000 mi., new carb., runs well, \$600. 878-4987 or 282-7672.

77 PONTIAC FIREBIRD - (limited edition Sky-bird), 42K mi., excel. cond., \$3,950. 567-8896.

81 MERCURY CAPRI - 5 spd., 3 dr. hatch, am/fm tape, excel. cond., \$4,500. Ext. 4846 or 363-6940 after 5 p.m.

77 HONDA CIVIC WAGON - CVCC, needs help, best offer. John, Ext. 3675 or 473-4043.

78 MERCURY ZEPHYR - 6 cyl., 4 dr., a/c, am/fm cass., \$1,800. 878-4285 after 5:30 p.m.

71 SUPER BEETLE VW - good transp., snow tires, \$400. Ext. 4238 or 286-3509.

DUNLOP STEEL RADIALS - (2) FR78-15 mud and snow tires mounted on five hole Chrysler rims, \$75. Ext. 7518.

VIKING POP-UP - excel. cond., sink, stove, heater, sleeps 6, dining area, \$1,200 firm. 286-8554.

74 VW S-BEETLE - good cond., rebuilt eng., radio, \$1,100. Ext. 7311 or 286-0918 eves.

73 VW - 22,000 mi., on rebuilt engine, new rear tires and brakes, am/fm radio, runs excel., \$1,200. Jim, Ext. 2050.

TIRES - (4) ER78-14 and (1) G78-14, good for spares, \$ each. Ext. 7505 or 698-8605.

79 MITSUBISHI ARROW - Hatchback, am/fm stereo, 4 spd., many extras, \$2,250. 744-6049.

72 CADILLAC SEDAN DEVILLE - all new parts, \$750. Ext. 4026 or 744-8567.

68 FORD - 6 cyl., 90,000 mi., good cond., \$500. Ext. 2751.

80 KAWASAKI - 44 LTD, black, mag wheels, \$1,000. 744-2069.

75 OLDS CUTLASS - p/s, p/b, just inspected, best offer. Ext. 7921 or 289-8145 eves.

82 KAWASAKI KDX 175 - dirt bike, excel. cond., \$950. 821-1042.

74 VW BUS - runs, make offer. 286-0975 after 6 p.m.

80 MERCURY CAPRI R.S. - 302, 8 cyl., 2 dr. hatch., auto., a/c, all power, black w/maroon int., sunroof, etc., \$4,500. Lisa, 924-3281 afternoons and eves.

73 CHEVY MONTE CARLO - V6, 19K mi., a/c, p/s, p/b, p/w, excel. cond., \$8,500. 363-6579.

75 TOYOTA COROLLA - 4 spd., 2 dr., runs, rust, high mi., \$500 or best offer. Bill, Ext. 3406 or 286-8470 eves.

CANVAS TOP - for Jeep, beige, never used, \$195 or best offer. 286-3865.

80 TOYOTA CELICA - 5 spd., am/fm, a/c, heavy hwy. mi., \$3,800. Ext. 5294.

71 TRIUMPH CLASSIC BONNEVILLE - 650CC, excel. running cond. Ext. 4288.

71 VW SUPERBEETLE - new tuneup/muffler, rebuilt engine, good body, \$850. Ext. 7709 or 929-3152 eves.

78 HONDA MOTORCYCLE - 750K, fairing, radio, 11,000 mi., excel. cond., \$1,500 firm. Ed, 929-6798 after 6 p.m.

72 FORD GALAXIE - 4 dr., auto., V8, new starter, exhaust, wires, etc., \$525. 929-8153.

VESPA SCOOTER - 200CC, white 5,000+ mi., 3 yrs. old, good cond., \$800. Nick, Ext. 2490.

76 BUICK REGAL - Landau, 350 auto., p/s, p/b, p/w, a/c, new brakes, exhaust, clean, \$2,700. Jim, Ext. 2808.

77 MERCURY COUGAR XR7 - good cond., V8, auto., p/s, p/b, Mark, 286-4150.

73 BUICK CENTURY - good engine, \$250. 654-1854.

TIRES - All Terrain, 10-15LT on rims for Ford truck, Jeep, IHC, V.G., \$250. Joe, Ext. 3464.

81 HARLEY DAVIDSON - 1000CC Sportster, like new, only 3,000 mi. 929-3455.

74 HORNET - auto., sedan, 55,000 mi, good cond. Kale, Ext. 4224.

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

70 VW - Squareback, auto., \$500. 289-8253.

80 FORD BRONCO - 302, a/t, am/fm stereo, low mi., \$8,495; 71 VW BUG - 10K on engine, good tires, garaged, \$1,350. 924-5419 eves.

72 FORD TORINO - 2 dr., \$300; cap for 8' box, \$100. Ext. 2023.

Boats & Marine Supplies

16' WINNER - 1973, fiberglass hull only, I/O, no engine, excel. cond., \$495. 924-3082.

19' SILVERLINE - 1976, 85 HP Mercury, full canvas, depthfinder, extras, all in excel. cond., \$4,000. 567-9214.

14' MFG - fiberglass, 40 HP Johnson, O/B, Hols. Claw trailer. 698-2696.

26' DODGE CRUISER - 105 HP Nordberg FWC, sleeps 4, equipped, ready to go, \$2,100. 286-1192.

27' OWENS SEDAN - very good cond., in water, 305 Chevy, CB, DF. 744-2552.

12' CANOE - fiberglass, birch bark look, very good cond., \$135. 924-6751 eves.

ZINC SHAFT COLLARS - rudder buttons, outdrive anodes, Mercury, OMC, Volvo, etc. Ext. 4662 or 298-4089.

38' CHRIS CRAFT - FWC engines, double cabin, clean. Joe, Ext. 7961 or 369-0432, eves.

21' STARCRAFT - 1975, w/motor and trailer w/electric winch. 744-9475 eves or weekends.

27' SAILBOAT - 1974, Catalina, diesel, wheel dodger, many extras, excel. cond., located in Babylon, \$19,000. 785-7195, eves.

14' GLASPAR - with 1971 Evinrude 40 HP motor and Highlander trailer, \$500. 286-1213 eves and weekends.

BIMINI VHF MARINE RADIO - 25W, 6 channel, crystal controlled, brand new, \$125. Ext. 2423.

17' LYMAN - 1960, runabout, 50 Evinrude, excel. cond., \$1,100. 878-8847.

19' SAIL BOAT - outboard, Al. mast, S.S., rigging, fiberglass over wood, sails, anchor. 929-8475 eves.

71 COBIA - fiberglass Bowrider, 82 trailer, 40 HP Evinrude, all access. incl., \$1,250. Rick, Ext. 2907 or 924-5543.

Miscellaneous

GARDEN SUPPLIES - plant trellace, tomato stakes, 10-6-4 fertilizer, flower pots, garden sprayer; Coleman lantern, concrete bird bath; hanging wicker lamp; small toaster oven; canning jars; freezer containers. Ext. 7509 or 924-0569.

LAWN MOWER - 18", twin blade, B&D elec., \$50; leaf shredder, \$100. Ext. 2051 or 689-8685.

KITCHEN DINETTE SET - French Prov., antique white w/leaf, 4 padded cane back chairs, \$100. 744-3639.

COAL STOVE - ceramic, excel. cond., \$225. 878-8459 after 6 p.m.

REFRIGERATOR - side by side, gold, 21 cu. ft., excel. cond., \$200. 878-1325.

MOBILE KITCHEN UNIT - oven, counter, sink, refrigerator, must see, \$700. Don, 588-0677.

BICYCLE - ladies 26", girl's 20", \$10 each. Divadeenam, Ext. 5076.

MAGNAVOX STEREO - Hi-Fi console, good cond., nice piece of furniture, good sound, \$150. Lloyd, Ext. 3381 or 286-1024.

BABY CARRIAGE - \$40; kitchen table w/4 chairs, \$50. Ext. 2386.

ANTIQUE VISE MOUNTS - in concrete, excel. cond., \$65; electrostatic copier machine, \$100 or best offer; antique ironing board, \$20. 732-3338.

SEARS PAK-A-POTTI - \$25; 8x10 camping fly, \$25. Ext. 4846.

PANASONIC COMPACT RECORDER - am/fm radio, cassette, battery & ac. 120 or 240 volts, suitable for Europe, \$65. 727-3608 after 5.

SOFA - 4 seat, floral pattern, soil resistant, excel. cond., \$175. 363-2070 eves.

VICTORIAN BUREAU - oak, curved front, 35" high x 45" wide, refinished, very good, \$65; Victorian sewing machine cabinet, oak, elec. Singer head, refinished, very good, \$75; Victorian pine table, 25"x16", \$20. 234-8229.

MOTOROLA PHONOGRAPH - large cabinet, \$40; bathroom sink, black marbleized, new with cabinets, \$125. Lola, Ext. 2265 or 289-0567 after 6 p.m.

COLOR TV - 25", Zenith, console, all wood cabinet, \$200; rug, 12'x15", beige tweed, available 5/15, \$100. 281-6026.

SINGLE BED & MATTRESS - foam, compl., good cond., clean, \$30. 281-2002.

POOL TABLE - with all access. 281-7654.

HAMMOND SOUNDER ORGAN - electronic rhythm section, \$300; Ben Franklin wood stove, \$75. 758-7365.

OVAL BRASS TEA CART - \$30; modern lounge, sleeps 2, corner table, \$50. 758-7365.

WESTINGHOUSE REFRIGERATOR - 18 cu. ft., harvest gold, like new, used 1 yr., new \$900, sell for \$375. George, Ext. 7956 or 281-7110.

WEEDWACKER - Craftsman, gas powered, used once, cost \$169, sell for \$90, warranted. 281-8274.

FRUITWOOD DINING TABLE - 2 leaves, 11 chairs, asking \$750; walnut desk, 3'x5', with chair, \$200. 475-5820 eves.

GIBSON UPRIGHT FREEZER - 19 cu. ft., excel. cond., \$125. Don, Ext. 2043.

PAINT - Sears Low Luster, 7 gal., coffee beige, \$55. Ext. 2957.

GIRL'S BIKE - Huffy Sweet Thunder, \$10; (2) Rawlings little league baseball mitts, both fit right hand, never used, \$10 ea. Mary, Ext. 2926.

PROM GOWN - Worn once as bridesmaid, junior size 3-7, best offer. 744-3298 days and weekends or Ext. 2926 eves.

CAMPING FLY - 8x10, \$25. Ext. 4846.

REFRIGERATOR - excel. cond., white, 6 ft. high, 12 cu. ft., Frigidaire, apt. size freezer comp. Roy, Ext. 4664 or 331-2401.

GARAGE DOOR - industrial grade, wood with one glass row, 10 ft. wide by 10 ft. high, very good cond., \$75 complete. Tom, Ext. 4084 or 878-1060.

PERM-A-GRILL-BRICK BBQ - \$15; 1980 wheel horse mower, snow blade/lawn sweeper, \$800. Ext. 3084.

FLOWERS & VEGETABLES - 4 and 6 pack, large selection, delivery week of 5/14, \$75/pack. Ray, 727-6818.

DINING ROOM SET - moving must sell; mohogany desk, colonial sofa, end tables, etc. June, 475-1250 after 7 p.m.

MOTORCYCLE HELMET - large, white; heavy-duty bumper jack; office desk, swivel chair; wood storage shelves, 72"x45"x12", hanging fluorescent lights, 4 ft. Ext. 7509.

CAPTAIN'S BED - \$100; (2) twin size beds, incl. box springs, mattresses, frames, \$40/set. Ext. 2341 or 331-4282.

CASTRO CONVERTIBLE SOFA - brown and yellow plaid, excel. cond., \$200. Ext. 7798 or 929-8179.

DINETTE - round w/leaf and 4 chairs. Ext. 3565.

REFRIGERATOR - 12 volt DC, 115 volt AC, Norcold, under counter, excel. cond. \$200. Joe Bush, Ext. 4638, beeper No. 572.

KEROSENE DRUMS - 55 gal., \$10 ea. Ext. 7505 or 689-8605.

TRUMPET - used six months, excel. cond., \$200. Ext. 7672 or 727-1667.

JANSSEN UPRIGHT PIANO - 35 years old, \$600. Bob, Ext. 7785.

CASEMENT WINDOWS - heavy duty, aluminum, screens, incl., various sizes, \$20 ea. Niels, Ext. 4124.

ZENITH TV - 19" b&w, 3 years old, orig. \$175, asking \$50. 289-8212.

RECORDS - Messiah, 78 rpm, 2 albums, Columbia Masterworks, Liverpool Philharmonic Huddersfield Choral Society, Malcolm Sargent conducting. Janet, Ext. 2345.

FOOD PROCESSOR - steam iron; (3) rugs; washer/spinner; color TV, leaving country, reasonable offers. Janet, Ext. 2751.

DINING TABLE - (4) chairs. 928-6930.

KITCHEN DINING TABLE - \$20; (2) wicker chairs w/small table, \$45; (2) white aluminum framed patio chairs w/ottoman, excel. cond.; metal wardrobes. 878-0717.

SEARS TREADMILL - \$50. Janice, 281-4080 after 5 p.m.

GOLF CLUBS - Haig ultra woods, 1, 3, 4, 5, \$65. Jack, Ext. 3040.

GINGERBREAD SHELF CLOCK - antique, oak, 8 day with chime, \$125. Eileen, Ext. 3051.

ICE CREAM FREEZER - old, works well, \$75. J. Medina, Ext. 7636 or 924-6971.

WASHING MACHINE - \$75; dryer, \$25; wall oven, \$25; range top, \$25; Mitsubishi microwave oven, \$150. Ext. 2877 or 289-8428.

TRAYS - for slide projector, each holds 60 slides. Ext. 4970.

GE CIRCUIT BREAKER BOX - capable of handling 14 breakers, \$25; 30 amp 220V fuse switches, \$5. Ext. 4532.

PORCH STORM WINDOWS - (9) 92"x32", each with (8) 18-3/4"x12" glass panes, make offer. Ext. 3568 or 286-0428.

VIDEO DISK PLAYER - with (23) movie albums, incl. Officer and a Gentleman, Poltergeist, Star Wars, \$225. Frank, Ext. 4113 or 399-1307.

RATTAN SETTEE - and springback rocking chair, walnut, \$100. Janice, 281-4080 after 5 p.m.

TENT - Sears, 10x13, sleeps 8, new cond., \$150; (2) cots, \$20 each. 744-9677.

SONY STEREO - am/fm record changer, ideal for teens. Paul, Ext. 7760.

FURNITURE - (2) breakfronts or secretaries, dark mahogany, good cond., small \$250, large \$400. Ext. 2423.

COLONIAL ENDTABLES - with lamps, excel. cond., \$200. Ext. 7146 or 924-5422.

SCENTED GARDEN HERBS - scented geraniums, primroses, violas, potpourri, essential oils. 929-8475.

Yard Sales

RIDGE - household items, railroad ties, furniture, May 11 & 12, 10 a.m.-4 p.m., 117 Lakeside Trail, Lake Panamoka.

Free

KITTENS - ready for adoption about mid-May, make your selection early. John, Ext. 3292 or 286-1348.

GUINEA PIG - 10 gal. tank, water bottle. 878-8847.

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

MASTIC - 4 bdrms., den, sunken l/r, d/r, eik, 1-1/2 baths, 5 min. from BNL, \$650/mo. plus util. R. Bergoffen, Ext. 2760 or 281-1998.

CENTER MORICHES S. - 3-1/2 large rooms, carpet, refrigerator, full kitchen, full bath, private entrance, no children, no pets, 1 mo. security, avail. June 1, \$475/mo. includes all, must see. Ext. 4486 or 878-0480 eves.

WADING RIVER - sublet, 4 rm. apt., 1 person, non-smoker, no pets, Aug. 1 thru Nov. 30, \$400/mo. Janet, Ext. 2345 or 929-8152.

SAINT JAMES - 1 bdrm. apt., l/r, large kitchen, full bath, carpeted, \$400/mo. includes all. 862-6970 eves.

VIENNA, AUSTRIA - 3 bdrm. apt., 15 min. from city center, avail. June-July, (or exch. for similar accom., vic. Pt. Jeff.). Bernie, Ext. 4842.

E. PATCHOGUE - June to early July, 300 m from Great South Bay,