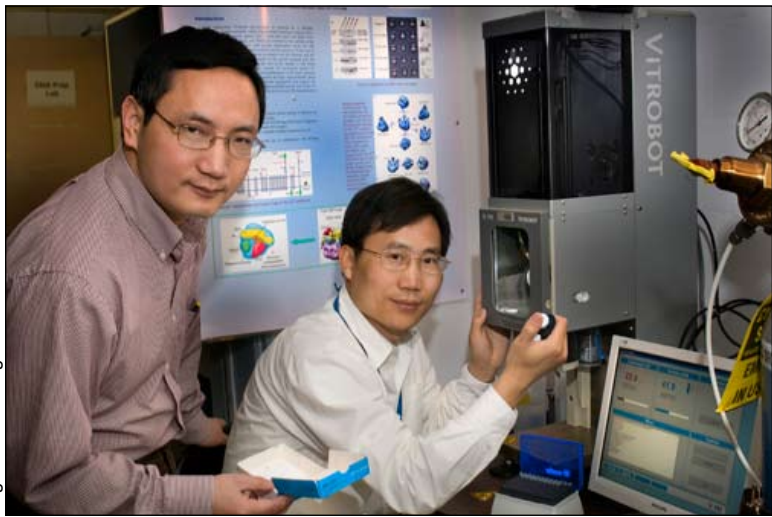


Structure Reveals How Cells 'Sugar-Coat' Proteins

Process essential to many proteins' functions can lead to disease when gone awry



Roger Stoutenburg 05/27/08

Huilin Li (left) and Hua Li

Biologists at BNL, Stony Brook University (SBU), and the University of Wurzburg (UW), Germany, have deciphered the structure of a large protein complex responsible for adding sugar molecules to newly formed proteins — a process essential to many proteins' functions. The structure offers insight into the molecular "sugar-coating" mechanism, and may help scientists better understand a variety of diseases that result when the process goes awry.

The research appeared in the March 12, 2008, issue of the journal *Structure*, authored by: Hua Li of BNL's Biology Department and SBU's Manasi Chavan, co-first authors; Hermann Schindeli of UW; William Lennarz of SBU; and Huilin Li of Biology, who holds a joint appointment at SBU and is co-corresponding author on the *Structure* paper. The research was supported by the National Institutes of Health and by BNL's Laboratory-Directed Research & Development funds.

"Proteins perform their functions by interacting at their surfaces with other molecules. So you can imagine that adding or removing sugar molecules will change the protein's surface structure, and therefore its function," said Huilin Li. "Messing up this process can lead to the production of mal-

formed proteins that are unable to do their jobs," he added.

The results can be devastating. Failure of glycosylation, as the "sugar-coating" process is known, can lead to a variety of genetic disorders characterized by neurological problems including seizures and stroke-like episodes, feeding disorders, and possibly even some forms of muscular dystrophy.

"We studied one enzyme involved in glycosylation, the one that recognizes the protein sequence and adds the sugar chains to the protein as it is being synthesized by the cell," said Lennarz. "The challenge is that the enzyme, known as oligosaccharide transferase (OT), is large by protein standards, has eight intricately linked components, and sits embedded in a membrane within the cell's protein-manufacturing machinery."

The Cryo-EM Technique

"Membrane proteins, particularly large ones, are very difficult to study structurally," said Li.

The scientists used a technique called cryo-electron microscopy (cryo-EM), which shows great promise in deciphering large membrane protein structures.

"We imaged the purified OT complex by cryo-EM and obtained a first snapshot of the

complex by computer reconstruction of the micrographs," said Li, a cryo-EM expert.

In cryo-EM, he explained, samples are frozen in vitreous ice and maintained at cryogenic temperatures (-274° Fahrenheit) using liquid nitrogen while the samples are photographed in the high vacuum of an electron microscope. The sophisticated cryo-EM machine resides in BNL's Biology Department. Li and his collaborators also measured the mass of the OT complex at BNL's Scanning Transmission Electron Microscope (STEM) facility.

The structure deciphered by the group helps to explain many biochemical phenomena observed about the enzyme complex over the past two decades. It also offers hints as to how the enzyme performs its various jobs, from recognizing the sugar molecules to be added to the protein, scanning the protein as it is formed to identify the sites where sugars should be attached, and transferring the sugar molecules to the protein at the right positions.

"OT physically associates with the protein translocation channel which moves a protein across a membrane and the cell's protein synthesis machinery, forming an efficient three-machine assembly line for protein translation, translocation, and glycosylation," Li said.

The researchers say further research is needed to illuminate the molecular mechanisms of disorders of glycosylation involving OT. For example, they would like to do structural studies of the enzyme at higher resolution in association with substrates or with the cell's protein translocation and protein synthesis machinery. It is hoped that, next year, construction will begin on the National Synchrotron Light Source II, a powerful new facility at BNL that would make possible a great increase in the precision of this work.

— Karen McNulty Walsh

2008 Joint NSLS/CFN Users' Meeting, 5/19-21



The Joint National Synchrotron Light Source and Center for Functional Nanomaterials Users' Meeting, to be held this year on May 19-21 at BNL, will provide a venue for scientists from diverse disciplines to share new research results and advances in experimental capabilities that utilize synchrotron radiation and focus on nanoscience. This year's theme, "Renewable Energy," will be highlighted during the main meeting by individuals currently involved in this area of research. All BNL employees are invited to attend the morning plenary session on Tuesday, May 20, free of charge. BNL employees and guests are also welcome to register for other sessions dedicated to scientific talks, workshops, and other events (registration and a nominal fee are required). For more information, go to www.nsls.bnl.gov/users/meeting/2008/.

Times Beacon Record Honors Two BNL Scientists

At a dinner sponsored by the Rocky Point Rotary and Rocky Point Lions Clubs on March 25, BNL scientists Walter Mangel (right) and Satoshi Ozaki were honored as Men of the Year 2007 in Health and Science, awards given annually by the *Times Beacon Record* (TBR) newspapers.



Walter Mangel, named "Man of the Year in Health," is working with a Biology Department team, seeking ways to battle adenovirus. Adenovirus, which causes viral pink eye and epidemics of colds, can also cause blindness and, in the third world, diarrhea. The virus participates in opportunistic infections, killing many AIDS patients. As *TBR* noted in an December 2007 article on Mangel and his work and pastimes, he spends some of his free time as an artist. His work has been displayed in Long Island galleries and at the Lab.

Satoshi Ozaki, named "Man of the Year in Science" by *TBR*, was recognized for his leadership in the development and implementation of the Lab's successful Relativistic Heavy Ion Collider, a forefront particle accelerator designed to study matter as it existed fractions of a second after the birth of the universe. In 2006, Ozaki was named a Senior Project Advisor for the Lab's newest facility on the horizon — the National Synchrotron Light Source-II. In describing Ozaki's leisure-time interests, *TBR* reports that his major hobby is cabinet making.

— Jane Koropsak

Grollman to Speak on 'Unraveling the Mystery of an Environmental Disease,' 5/15



Arthur Grollman

Arthur Grollman, Director of Stony Brook University's Leo and Judy Zickler Laboratory of Chemical Biology, will give a BSA Distinguished Lecture titled

"Unraveling the Mystery of an Environmental Disease," on Thursday, May 15, at 4 p.m. in Berkner Hall. BSA Distinguished Lectures are sponsored by Brookhaven Science Associates, the company that manages BNL, to bring topics of general interest before the Lab community and the public. The lecture is free and open to the public. Visitors to the Lab age 16 and over must bring a photo ID.

For many years, residents of farming villages along the Danube River basin suffered from a fatal kidney disease and an associated urinary tract cancer. The cause of the disease remained a mystery for more than 50 years. Recently, however, Arthur Grollman and his colleagues have deter-

mined that home-baked bread is implicated in the disease, known as Balkan endemic nephropathy.

Suspecting that a specific environmental toxin might be causing the disease, Arthur Grollman and his colleagues began epidemiological and clinical studies that solved the mystery. They discovered that home-baked bread, a dietary staple of farm families living in the affected area, was contaminated with aristolochic acid, a powerful kidney toxin and human carcinogen that is found in *Aristolochia* weeds that grow in many of the wheat fields of the Balkans.

Aristolochic acid is also found in herbal remedies used for centuries in Europe, Asia, and the Americas. Now, these popular herbal remedies are implicated as the cause of aristolochic acid-induced kidney

disease and associated cancers. This finding may lead to the development of new therapeutic agents to treat common diseases similar to those caused by the toxin. The strategies used by Grollman and colleagues to trace the cause of a local disease also provide a model for investigations of environmental diseases around the world.

In addition to directing the chemical biology laboratory at Stony Brook University, Arthur Grollman is the founding Chair and Distinguished Professor of Pharmacological Sciences, and Evelyn G. Glick Professor of Experimental Medicine at the university.

Grollman has published more than 200 papers in molecular biology and cancer research. He is an expert in the clinical pharmacology of herbal medicines and has testified on this subject before the

White House Commission on Alternative and Complementary Health Policy and other governmental committees. He has also served on numerous scientific editorial boards and advisory committees.

After earning a B.A. in chemistry from the University of California at Berkeley, Grollman received his M.D. from the Johns Hopkins School of Medicine, where he did his internship and residency in internal medicine. He then conducted research at the National Institutes of Health before joining the faculty of Albert Einstein College of Medicine. He began his career at Stony Brook in 1974. Grollman was elected to the Johns Hopkins Society of Scholars, and he received two Cancer Society Scholar Awards and a MERIT Award from the National Cancer Institute.

— Diane Greenberg

CALENDAR

OF LABORATORY EVENTS

- The BERA Store in Berkner Hall is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347, or Christine Carter, Ext. 2873.
- Additional information for Hospitality Committee events may be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building #317 (Rec. Hall) is located in the apartment area.
- Contact names are provided for most events for more information.
- Events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.

— EACH WEEK —

Weekdays: Free English for Speakers Of Other Languages Classes

Beginner, Intermediate, Advanced classes. Various times. All are welcome. Learn English, make friends. See www.bnl.gov/esol/schedule.html for schedule. Jen Lynch, Ext. 4894

Mondays: BNL Social & Cultural Club
Noon-1 p.m., Brookhaven Center, South Room, free beginners dance lessons. Rudy Alforque, Ext. 4733, alforque@bnl.gov

Mondays & Wednesdays: Pilates
5:15-6:15 p.m. Rec. Hall. Ext. 5090

Mondays & Thursdays: Kickboxing
\$5 per class. Noon-1 p.m. in the gym. Registration is required. Ext. 8481

Mon., Thurs., & Fri.: Tai Chi
Noon-1 p.m., B'aven Cntr N. Rm. Adam Rusek, Ext. 5830, rusek@bnl.gov

Tuesdays: Hospitality Coffee
10:30 a.m.-noon, Rec. Hall lounge. All welcome. Ext. 5090

Tuesdays: BNL Music Club
Noon, B'aven Center, N. Room. Come hear live music. Joe Vignola, Ext. 3846

Tuesdays: Knitting Class
2 p.m. Rec Hall. All levels of skill. Ext. 5090 for information.

Tuesdays: Toastmasters
1st & 3rd Tuesday of month, 5:30 p.m., Bldg. 463, Rm 160. Guests, visitors welcome. www.bnl.gov/bera/activities/toastmasters/

Tue., Wed. & Thu: Rec Hall Activities
5:30-9:30 p.m. General activities, TV, ping pong, chess, games, socializing. Christine Carter, Ext. 5090.

Tue., Thurs. & Fri.: Ving Tsun Kung Fu
Noon-1 p.m., B'aven Center, North Room. Taught by Master William Moy. Scott Bradley, Ext. 5745, bradley@bnl.gov

Tuesday & Thursday: Aerobic Fitness
5:15 p.m., Rec. Hall. 10 classes for \$40 or \$5 per class. Pat Flood, Ext. 7866, flood@bnl.gov

Tuesday & Thursday: Aqua Aerobics
5:30-6:30 p.m., Pool. Ext. 5090

Wednesdays: On-Site Play Group
10 a.m.-noon. Rec. Hall. Infant/toddler drop-in event. Parents meet while children play. Petra Adams, 821-9238.

Wednesdays: Ballroom Dance Class
B'aven Center, N. Ballroom. Instructor: Giny Rae. Starts September 12 and 19. Ext. 3845.

Wednesdays: Weight Watchers
Noon-1 p.m. Michael Thorn, Ext. 8612

Wednesdays: Yoga
Noon-1 p.m., B'aven Center. Free. Ila Campbell, Ext. 2206, ila@bnl.gov

Wednesdays: LabVIEW
1:30-3 p.m., Bldg. 515, 2nd fl. Seminar Rm. Free technical assistance from LabVIEW consultants. Ext. 5304.

Thursdays: BNL Cycletrons Club
Noon-1 p.m., Only on first Thurs. of the month. Berkner Hall, Room D. Toni Hoffman, Ext. 5257

Thursdays: Reiki Healing Class
Noon-1 p.m., Call for location. Nicole Bernholz, Ext. 2027

Fridays: Family Swim Night
5-8 p.m. BNL Pool. \$5 per family

Fridays: Family Gym Night
5-8 p.m. Family gym activities. Free.

Fridays: BNL Social & Cultural Club
Noon-1 p.m., B'aven Center, South Room, free beginners dance lessons. 7-11:30 p.m. North Ballroom, Dance Social, workshops. Rudy Alforque, Ext. 4733, alforque@bnl.gov

CIGNA Representative

A CIGNA Healthcare representative is available as needed in Human Resources, Bldg. 400, or by phone to assist with claims issues you have been unable to resolve yourself through CIGNA's Customer Service number (1-800-CIGNA24). Mary Beth Kivlen will be available by appointment only. You will need to provide all pertinent documentation. To schedule, call the Benefits Office, Ext. 5126.

Lab Seeks Input on Commute Alternatives At least 1,300 survey answers needed for an analysis

Does the skyrocketing cost of gasoline get you down? Are you looking for a better way to commute to work? Recognizing the economic impacts employees are now feeling due to record gas prices and the stresses placed on the environment from vehicular travel, the Lab is taking a fresh look at the commute options currently available to employees to see how they might be improved or enhanced.

BNL is applying for a Long Island Regional Improving Commute grant available through Long Island Transportation Management (LITM). The application process has begun with the distribution of an online survey developed by LITM with input from the Lab. The survey can be found at <http://www.custominsight.com/start/?bnl08>.

"The survey asks about your current commute practices, your degree of interest in various commute alternatives, and whether various services and incentives would prompt you to use the commute alternatives," said Lanny Bates, Assistant Laboratory Director for Facilities & Operations. "Your participation in this survey is crucial, since LITM will not analyze the responses and share the results with us unless at least 1,300 employees complete it."

As of April 28, approximately 600 employees had taken the survey. To encourage participation, the Environmental Services Division will give away several prizes, including a mountain bike, a \$75 gasoline gift card, and a \$25 Aid Auto Store gift certificate. The prizes will be awarded randomly to employees who complete the survey.

Employees should complete the survey even if they have no interest in carpooling or other commute alternatives, and include any comments or suggestions regarding commute alternatives in the spaces provided.

"I thank everyone for taking part in this effort to develop a plan to reduce the number of drive-alone trips to and from the Laboratory," said Bates. "Together, we can reduce traffic congestion and vehicular pollution during peak commuting periods."

Supervisors of employees who do not have access to a computer can print a downloadable pdf version of the survey at <http://intranet.bnl.gov/esd/docs/BNLCommuterSurvey.pdf>. Completed paper surveys should be returned to Jeff Williams, Bldg. 120.

— Peter Genzer

BSA Noon Recital: String Quartet, 5/7



The Hofstra String Quartet is the faculty quartet in residence at Hofstra University in Hempstead, New York. Since 1998 the quartet has performed highly acclaimed concerts at Hofstra's Monroe Theater, the Museum of the City of New York, the Huntington Museum of Art, and other venues, including BNL. On May 7, they will perform String Quartet no. 1 "From the Salvation Army" (1896), by Charles Ives (1874-1954); and String Quartet no. 1 (1934), by Michael Tippett (1905-1998). Quartet members Alexander Sharpe, Matthew Lehmann, Todd Low, and Benjamin Wolff are also in demand as orchestral, chamber and solo artists. They appear regularly in concert at Carnegie Hall, Merkin Hall, Alice Tully Hall, Avery Fisher Hall, and elsewhere throughout New York City.

Cafeteria Closed This Saturday, 5/3

To accommodate BNL's annual Elementary School Science Fair, the Berkner Hall Cafeteria will be closed on Saturday, May 3. However, the Center Club in the Brookhaven Center, Bldg. 30, will be open, 7:30 a.m.-2 p.m., serving a continental breakfast in the morning and cold sandwiches at lunchtime.

Talk: Healthy Travel for Business, Pleasure, 5/7

On Wednesday, May 7, noon-1 p.m., all are welcome to a talk by the Occupational Medicine Clinic Staff on how to stay safe and healthy while traveling for business or pleasure. The talk will be held in the Medical Department Large Conference Room, Bldg. 490.

Input Sought on Deer Management Proposals, Two Meetings Will Be Held, 5/6 & 5/7

Under BNL's Natural Resource Management Plan, the Lab proposes to establish an on-site deer management program to help maintain the deer population at a level the site can support. A "white paper" describing several options for deer management was recently forwarded to the Policy Council, and the Lab is now collecting input from the BNL community before making a final decision.

Members of the Lab community are invited to attend either of two meetings next week to hear about the options being considered and provide input on deer management in general and BNL's specific proposal. The meetings will be facilitated to capture as much information as possible and identify any issues and concerns.

The meetings will be held on Tuesday, May 6, from 11:30 a.m. to 1:30 p.m. in Berkner Room B, and on Wednesday, May 7, from 3:30 to 5:30 p.m., also in Berkner B. All are welcome to attend.

Top Honors at BNL's Maglev Contest Go To Center Moriches Students



Roger Stoutenburg D3630408

Center Moriches Middle School students were the champions of the annual Maglev Contest held on April 16 at BNL, earning five out of a total of 21 prizes. Robert Moses Middle School students were the second-place winners with four prizes.

Brookhaven Lab scientists Gordon Danby and James Powell, now retired, invented Maglev — the suspension, guidance and propulsion of vehicles by magnetic forces — and patented it in 1968. Danby and Powell were honored guests at the contest, and they were delighted with the students' enthusiasm about Maglev, which might one day be the remedy for soaring gas prices.

Over 200 students from 12 Long Island middle

schools entered the contest, in which they were required to design and construct model Maglev vehicles according to engineering specifications in their choice of six categories: electrified track, wind power, gravity, self-propelled, futuristic, and scale-model design. Judging was based on speed, efficiency, and the appearance of the vehicles and the students' written design process.

Albert G. Prodel Middle School, Alfred G. Berner Middle School, East Northport Middle School, Great Neck South Middle School and Mineola Middle School each won two prizes. Longwood Junior High School and Northport Middle School each won one prize. All winning students received trophies.

'Compassion, Selfless Service: Pathway to Peace' Talk by Dayamitra Chaitanya, 5/8

Dayamitra Chaitanya, a disciple of Mata Amritanandamayi, or Amma, will give a talk on "Compassion and Selfless Service: Pathway to Peace," on Thursday, May 8, from 4 to 5:15 p.m. in Berkner Hall. Sponsored by BERA's Indo American Association Yoga Club and Asian Pacific American Club, the talk is free and open to the public. Visitors to the Lab age 16 and older must bring a photo ID.

Amma is widely regarded as one of the world's foremost humanitarian leaders, dedicated to alleviating suffering through personal outreach. Currently, she helps those in need through a network of charitable organizations. As manager of Amma's activities in the U.S., Canada, and Latin America for the past 14 years, Dayamitra is one of Amma's senior disciples, spreading her teachings of love and compassion. For more information, visit: <http://geocities.com/aumamma/Info.html>. — Diane Greenberg

Join the BNL Veggie Club!

Fresh organic produce from a local farm on Long Island is available, delivered to BNL, for those who wish to join the Community Supported Agriculture (CSA) at BNL. Members receive fresh organic produce from the Green Thumb Organic Farm in Water Mill, where the Halsey family has been farming their land since 1644. The Halseys grow over 350 varieties of fruits and vegetables, picked daily for delivery to provide the highest nutritional content.

As a CSA member, each week, for 26 weeks, a selection of freshly picked organic produce will be delivered to BNL for you to pick up. The selection is based upon whatever is in season that week. Often the produce will be accompanied by a recipe giving ideas for preparing that week's specials. The fee for a season of produce is \$410, which may be paid immediately or in installments of \$275 on sign-up, by May 31, with one post-dated check for: \$135 for July 14. The first delivery is in early June, continuing through November. For more information, including a list of the fruits, herbs, and veggies that the Halseys grow, or to join CSA, contact Ruth Comas, comas@bnl.gov or Ext. 3545.

LabVIEW on Wednesdays

Every Wednesday, 1:30-3 p.m. in the Bldg. 515 2nd floor Seminar Room, a certified LabVIEW developer from ALE System Integration and/or an engineer from NI will be available for free technical assistance and consultation on automated test, control, and measurement applications. Bring any and all of your LabVIEW questions. "Pick me up" refreshments — coffee/soda and donuts/cookies — will be provided by ALE System Integration.

Arrivals & Departures

— Arrivals —

Jun-Sik Lee..... NSLS

— Departures —

Susan Centore.....ITD

Service Anniversaries

The following BNL employees celebrated a service anniversary during February 2008.

— 40 Years —

Frank Kito.....Biology

— 35 Years —

William Casey.....NSLS-II

— 30 Years —

Leif Ahrens..... C-AD

William Chaloupka..... Plant Eng.

Keith Radich..... Plant Eng.

Robert DiNardo.....Instrum.

George Ganetis.....NSLS-II

Gerard Van Derlaske.....NSLS-II

Maria Apelskog..... Medical

Alexander Mallen..... ES&T

Edward Hoey, Jr.NNS

Walter Ducoing..... CFS

— 20 Years —

Frank Scheifele..... C-AD

Daniel Wilson..... C-AD

Vito Graziano..... Biology

CherylAnn Kuhn..... Fac.&Ops.

Phyllis D'Avanzo..... Plant Eng.

Thomas Kim..... NSLS

— 10 Years —

Michael Sivertz..... C-AD

Robert Karl..... C-AD

Joseph Nasta..... BSD

Charles Weilmminster Plant Eng.

Kenneth Galan.....Fiscal

Donald Olsen.....Rad. Contr.

William Zak.....Rad. Contr.

The following BNL employees celebrated a service anniversary during March 2008.

— 40 Years —

Satoshi Ozaki.....Dir.'s Office

— 35 Years —

Rippie Bowman..... C-AD

— 30 Years —

Frank Terrano..... NSLS

Robert Sabatini.....CMPMS

— 25 Years —

Louis Cannizzo..... C-AD

Robert Eich..... C-AD

Thomas Boucher..... Plant Eng.

George Elias..... Plant Eng.

Henry Hauptman..... Staff Serv.

— 20 Years —

Bert Haug..... C-AD

Gary McIntyre..... C-AD

Wahfun Ng..... C-AD

David Pate..... C-AD

Paul Sampson..... C-AD

Sung-Leung So..... NSLS

JoAnn Totans..... ES&T

Richard Sanniola..... SSD

Michael Timm..... SSD

— 10 Years —

Terence Higgins..... C-AD

Frank Quarant, Jr.....ITD

Gregory Fess.....Dir.'s Office

Margaret Randall..... Plant Eng.

BREA Luncheon, 6/4

The Brookhaven Retired Employees Association (BREA) will hold the fifth Annual BREA Luncheon on Wednesday, June 4, at the Three Village Inn in Stony Brook. All are invited to enjoy good conversation with old friends, make new friends, and eat delicious food. The cost of \$35 per person includes a half-hour of hors d'oeuvres and wine, noon-12:30 p.m., a three-course meal, with cash bar, soft background music played by Roger Colleo. By May 28, send your reservation with name, address, and telephone number, and a check made out to BREA to cover \$35 for each person in your party, to BREA, BNL, P.O. Box 5000, Bldg. 475, Upton, NY 11973-5000.

Diversity Education Talk, 5/6

To celebrate May as National Asian Pacific American Heritage Month, the Diversity Office and the BERA Asian Pacific American Association will present a diversity education talk: "Unintentional Intolerance," in Berkner Hall on May 6, from 10 a.m. to noon. The presenter will be Steve Robbins, Ph.D., Chief "What If" officer at S.L. Robbins & Associates. All are welcome, with supervisory approval.

As Robbins will explain, research and experience tell us that we all have biases that we are often unaware of, or think little about. Yet, these biases guide our decision-making behavior and attributions on a daily basis. Could we be making "bad" decisions and engaging in exclusive behavior without knowing it? The answer is "Yes."

Robbins' powerful concept of "Unintentional Intolerance" has helped people to a better understanding of complex cultural competency issues in a safe and nonthreatening manner. In his talk, he will explore the "hows" and "whys" surrounding unintentional intolerance. An expert communicator, he engages his audiences with

a dynamic blend of humor, stories and in-depth knowledge. Working with numerous individuals and organizations across the country, he has inspired and motivated listeners to be more mindful about inclusion and valuing others for their unique gifts, skills and experiences. Those who have heard his talks leave with greater curiosity, motivation and intentionality about creating inclusive environments.

For more information visit www.slrobbins.com/ or call Rosa Palmore, Ext. 2703.



Steve Robbins

BNL 'Virtually Swims' to the Bahamas



Roger Stoutenburgh D0990408

Following last year's successful "Virtual Swim around Long Island," this year, 94 BNL swimmers — including 10 retirees — took on the more ambitious goal of virtually swimming to the Bahamas. The event was sponsored by BERA, the BNL Health Promotion Program, and the BNL Swim Club.

Starting after the New Year, the swimmers collectively logged over 1,500 miles in three months. The accumulative miles were summed weekly and tracked on a 3-foot by 4-foot map of the East Coast provided by Victor Cassella of Meteorology and placed in the pool area. The "virtual" swim traveled from Smith Point, LI along the shoreline all the way to Florida before heading out to sea to the final destination of Nassau, Bahamas. Robert Todd of the Collider-Accelerator Department logged just under 100 miles during the swim, and swimmers burned enough calories to lose over 150 pounds over the three-month period!

Each week, the nearest coastline city and state was identified on the map. Upon completion, the swimmers enjoyed a lunchtime party sponsored by BERA including certificates, BNL Virtual Swim

T-Shirts designed by Graphic Arts and donated by Michael Thorn of the Health Promotion Program in the Human Resources & Occupational Medicine Division, and a group photo.

Said Peter Heotis of the Radiological Control Division, who was a lead organizer of the event, "The BNL Swim Club thanks BERA and, in particular, Chris Carter and Joanne Rula for their enthusiastic support. In addition, the club thanks Sue Dwyer and Denise Jennings and all the lifeguards who participated and cracked the whip to assure we met our goal. A special thanks also to swim club member Ian Ballantyne for developing and tracking the data base for the swim."

Use the Pool! Join the Club!

The BNL Swim Club was established in 1984 to promote swimming and use of the Lab pool. "Watch for future club events including health-fest swims and an event to coincide with the Summer Olympics," says Heotis. "We are in the process of trying to revitalize the club and looking for new members." To get more information on the club, contact Heotis, Ext. 7461 or phoetis@bnl.gov.

Register for BERA Swim Program, 6/30-8/22

BERA will offer a swim program with a limited number of places outside the BERA summer camp for children or grandchildren of all BNLers. The child must be able to stand flat-footed in the shallow end of the pool, with mouth above the water, i.e., approximately 42 inches tall. It is requested that bathing suits be modest and in good taste, and that girls wear one-piece bathing suits or a T-shirt top.

Each child will be scheduled for one swimming lesson every week for a total of eight lessons. American Red Cross certificates will be awarded to those children who qualify. Classes will be held Monday through Friday, 2:15 to 3:15 p.m. Children should arrive at the BNL pool at 2 p.m. for preparation. The registration fee per child is \$80, with no make-up classes for missed swim lessons. Register with the Recreation Office, Building 400, with an \$80 check made payable to BERA. Payment in full is due on or before June 6. For more information, call the Recreation Office, Ext. 2873 and see www.bnl.gov/bera.

Spring Ahead With BERA: Baseball, Plants

Baseball: Yankees & Mets tickets for games on various dates, and Long Island Ducks tickets are on sale from today, Friday May 2, at the BERA Store store, Berkner Hall, weekdays, 9 a.m.-3 p.m.

The Annual Plant Swap will be held at noon outside Berkner Hall on Friday, June 6. Bring your spare plants and swap for others.

Coming Up, 5/28

Brookhaven Lecture

On Wednesday, May 28, Walter Mangel, Biology Department, will give the next Brookhaven Lecture on a topic to be announced.

Bus Trip to NYC, 6/1

The Hospitality Committee is sponsoring a "do-as-you-like" trip to Manhattan on Sunday, June 1. The coach will leave from the Recreation Building in the apartment area at 9 a.m., with the drop off point in the Bryant Park area, and will leave Bryant Park at 6 p.m. The cost is \$10 for adults, \$5 for children up to 12. Advanced reservations are a must. Email Joanne Rula at jrula@bnl.gov or stop at Staff Services in Bldg. 400.

CALENDAR

Friday, 5/2

Workshop: Biodiesel Status in U.S.
8:30 a.m.-3:30 p.m. Brookhaven Center.

Symposium: Neutrino Helicity at 50
9 a.m.-5 p.m. Large Seminar Room, Bldg. 510. All are invited. Contact dkerr@bnl.gov.

BJ's Wholesale Club Display
11 a.m.-2 p.m. Berkner Hall lobby. Representatives of BJ's Wholesale Club will discuss savings for BNL employees.

***Summer Dance Party**
7:30 p.m.-midnight. Brookhaven Center. Sponsored by the BNL Social & Cultural Club. Kane Daly Band. See notice, p. 4.

Saturday, 5/3

***Cafeteria Closed for Science Fair**
7:30 a.m.-2 p.m. The Center Club at the Brookhaven Center will be open. See p. 2.

— WEEK OF 5/5 —

Mon. & Tues., 5/5 & 6

Book Fair (Two Days)
10 a.m.-2 p.m. Berkner Hall. Gifts, best sellers and children's books at discount prices.

Tuesday, 5/6

***Diversity Education Talk**
10 a.m.-noon. Berkner Hall. Steve Robbins to talk on "Unintentional Intolerance." All are welcome, with supervisory approval. See notice, left.

Book Fair (2nd. day)
10 a.m.-2 p.m. See above.

Wednesday, 5/7

Perks Discount Cards
11 a.m.-2 p.m. Berkner Hall lobby. Perks discount Cards will be available with a representative to explain the benefits to many of your shopping needs.

***Talk: Healthy Travel Habits**
Noon-1 p.m. Medical Department Large Conference Room. Occupational Medicine Clinic staff talk on staying safe and healthy while traveling for business or pleasure. See p. 2.

***BSA Noon Recital, String Quartet**
Noon-1 p.m. Berkner Hall. The Hofstra String Quartet will perform, sponsored by BSA. All are welcome to this free event, open to the public. See p. 2.

Thursday, 5/8

***Talk on Pathway to Peace**
4-5:15 p.m. Berkner Hall. Sponsored by BERA's Indo American Association Yoga Club and Asian Pacific American Club, Dayamrita Chaitanya will speak on "Compassion, Selfless Service: Pathway to Peace." All are welcome. See notice, p. 2.

Friday, 5/9

Costco Shopping
11 a.m.-2 p.m. Berkner Hall lobby. A Costco representative will discuss the benefits of discount shopping at Costco.

— WEEK OF 5/12 —

Thursday, 5/15

Sam's Club Shopping
11 a.m.-2 p.m. Berkner Hall lobby. A Sam's Club representative will discuss the benefits of BNL employees' discount shopping at Sam's Club.

— WEEK OF 5/19 —

Monday, 5/19

6 p.m. Centereach Knights of Columbus Hall, 41 Horseblock Rd., Centereach. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes nominations for union president and officers.

